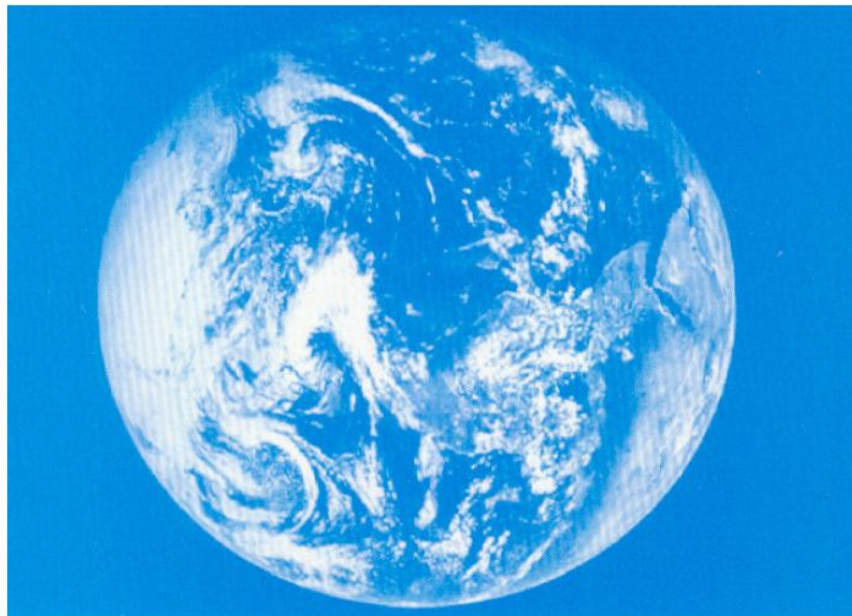


**GLOBAL BUSINESS AND TECHNOLOGY  
ASSOCIATION**

**EVOLUTION AND REVOLUTION IN THE GLOBAL  
KNOWLEDGE ECONOMY: ENHANCING INNOVATION AND  
COMPETITIVENESS WORLDWIDE**



**Editors:**

**Leonora Fuxman, Ph.D.**

**Nejdet Delener, Ph.D**

**F. Victor Lu, Ph.D.**

**Luis Eduardo Rivera-Solis, Ph.D.**

**GLOBAL BUSINESS AND TECHNOLOGY  
ASSOCIATION**

**TENTH INTERNATIONAL CONFERENCE**

**READINGS BOOK**

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The last but not the least important acknowledgement goes to all these who submitted their work to be considered for presentation at the conference. Also, special thanks to the session chairs and discussants for taking the extra time to make this conference a success.

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# Table of Contents

| Author(s)   | Title   | page |
|---|---|------|
| Parul Acharya,<br>Elizabeth Milmine,<br>Eric Lewis, Sneha<br>Patel, Shonta<br>Chambers, Renee<br>Hotchkiss and Gerald<br>Ledlow | ➤ The Economic Menace of Diabetes in the 21 <sup>st</sup><br>Century  | 1    |
| Slobodan Acimovic,<br>Jelena Acimovic   | ➤ Complexity of Privatization in Kosovo-Serbia  | 12   |
| Ozlem Kacar Akman<br>and Ozgur Kokalan  | ➤ Museum Marketing - A Case Study from Turkey   | 21   |
| Eleuch Amira  | ➤ Satisfaction with Health Care Services Experience:<br>Japanese Patients   | 29   |
| Özlem Atalık, Emin<br>Özel  | ➤ Passengers' Importance and Satisfaction Level of<br>Low Cost Airlines: A Case Study Pegasus Airlines  | 36   |
| Susana Garrido<br>Azevedo and João<br>Ferreira  | ➤ The Role of an Identification Technology on Firm<br>Performance: A Conceptual Model Proposal  | 44   |
| Mladenka Balaban  | ➤ Prospects of Insurance Market Development in<br>Serbia  | 54   |
| Luigino Barisan   | ➤ Worldwide Wine Systems: Comparing Yarra Valley<br>and Doc Conegliano Valdobbiadene Companies<br>Organizational and Supply Structure             | 61   |
| Francisco Marcelo<br>Barone, Deborah<br>Moraes Zouain and<br>Fatima Bayma de<br>Oliveira  | ➤ The State Function As Inducer And Formulator of A<br>Public Policy of Credit Access as A Tool Of Combat<br>Against Poverty and Social Inclusion | 69   |
| Sara Bassani and<br>Daniele Toninelli   | ➤ Country Tourist Appeal and Country Image – The<br>Case of Italy   | 79   |

|   |   |     |
|---|---|-----|
| Ünal Battal   | ➤ Risk Management In Airlines: Financial Risks At Turkish Airlines  | 88  |
| João Renato de Souza<br>Coelho Benazzi  | ➤ Memories of the Past, Consumption and Consumer Behavior: Exploring the Origins and Limits of the Nostalgic Trend Trough Life Stories in Brazil                | 97  |
| Cristina Bettinelli, Lal<br>Chugh   | ➤ Comparative Analysis of European Board of Directors   | 106 |
| Cristina Bettinelli, Lal<br>Chugh   | ➤ Changing Organizational Models of Corporate Governance : An Empirical Case-Study of Italian Corporations  | 114 |
| Larry W. Boone, Geno<br>Chou and Chi Ho<br>Cheng  | ➤ Littlepaw® Skateboards Case Study   | 122 |
| Ana Cristina Valente<br>Borges, Carolina<br>Rolim, Osmar Pancera  | ➤ Cross Sector and Cross Organizational Coordination for Local Sustainable Development: A Study in Araçuaí, Minas Gerais, Brazil                                | 130 |
| Nerine Bresler  | ➤ On Safari In Botswana; Describing the Product   | 139 |
| Amanda Breytenbach<br>and Geoff A Goldman   | ➤ Strategic Alignment And Management of Faculty Programme Offering to State Higher Education Regulation: A Faculty Case Study at the University of Johannesburg | 147 |
| Pawan S Budhwar,<br>Ingmar Bjorkman,<br>Virender Singh  | ➤ Human Resource Management in Foreign Firms Operating in India: Issues and Learning  | 158 |
| André M. Caldeira and<br>Helberte B. Oliveira,<br>Walter Gassenferth<br>and Maria Augusta<br>Soares Machado | ➤ Submitting Vehicle Claims for Auditing  | 167 |
| Guy Callender   | ➤ Five Thousand Years of Organization Change: The Impact of Procurement   | 175 |
| Dragana Camilovic   | ➤ A Call Detail Analysis - Getting Insight into Customer Behavior   | 183 |

|  |   |     |
|--|---|-----|
| C. Chailan, P. Braun   | ➤ Marketing of Technological Projects in Their Upstream Phase   | 191 |
| Chiang-nan Chao,<br>Robert J. Mockler,<br>Leonora Fuxman,<br>Larry Wander,<br>Dorothy Dologite | ➤ Music Shopping Online and Offline   | 198 |
| Lee Shiu Chen and<br>Railton Hill  | ➤ Understanding Taiwanese Business Leadership Styles  | 206 |
| Hsin-hui Chou and<br>Judy Zolkiewski   | ➤ Gaining Sustainable Momentum in Marketing Technological Innovations: Insights From A Network Approach to Strategy           | 214 |
| Dababrata Narayan<br>Chowdhury and Lynne<br>Butel  | ➤ Knowledge Transfer through Networks: The Case of Turkish Small and Medium Sized Enterprise (Smes) Development and Survival. | 222 |
| Mona Chung, Bruno<br>Mascitelli  | ➤ The Role Of Sister City Relationships in the Enhancement of Trade: Latrobe City (Australia) and Taizhou (China)             | 232 |
| Marcos Cohen and<br>Jorge Ferreira da Silva  | ➤ Evaluation of Collaborative Strategies Used in the Management of Environmental Parks in Rio De Janeiro                      | 239 |
| Lenise Saraiva de<br>Vasconcelos Costa,<br>Marcos Cohen and<br>Graziela Xavier<br>Fortunato    | ➤ Valuation of Strategic Alliances through Real Options   | 247 |
| Max Coulthard  | ➤ Increasing Service Exports: A Key Contributor in the Growth of The Global Knowledge Economy                                 | 255 |
| Gerard Danford   | ➤ The Growing Level of Ict Use During Internationalization  | 265 |
| Elif Dayar   | ➤ Excerpts From Digitally Divided Lives in Turkey   | 274 |
| Zarina Denan and<br>Noraini Ismail   | ➤ Absorptive Capacity and Firm Operational Performance: The Moderating Role of Strategic Planning Formality                   | 281 |
| Zeynep Deniz   | ➤ A Comparison of Irish and Indian Growth and The Role of Usa Via Fdi and Outsourcing   | 289 |

|   |   |     |
|---|---|-----|
| Manilall Dhurup   | ➤ Customer Value Starts From Within: Determinants of Internal Customer Service Quality  | 297 |
| Antonie Drotsky, Ben Janse van Rensburg and Johan de Jager      | ➤ The Branding of Cellular Telephones to Tertiary Students  | 307 |
| Vildan Durmaz, Mufide Banar, Mustafa Ozen, and Hatice Kucukonal | ➤ Evaluation of Environmental Effects of Airport Operations: The Case of Turkey   | 315 |
| Nikolay Filinov   | ➤ On the Convergence of Decision-Making Style Typologies  | 320 |
| Bjørn-Tore Flåten and Rotem Shneor                              | ➤ Strategic E-Hr: Matching E-Business Value Drivers and Hr Management Tasks   | 328 |
| Paulo Gustavo Fuchs, T. Diana L. van Aduard de Macedo Soares    | ➤ Corporate Climate Strategy: Proposal for a Formulation and Assessment Model Based on International Benchmarks                       | 340 |
| Leonora Fuxman  | ➤ Challenges of Online Advertising and Marketing in Ukraine   | 351 |
| Andrea Garnett, Dylan Garnett                                   | ➤ The Verification of Customer Perceptions of Queue Management to Achieve Business Imperatives  | 358 |
| Remigiusz Gawlik  | ➤ Preliminary Criteria Reduction for the Application of Analytic Hierarchy Process Method   | 366 |
| Gbolahan Gbadamosi, Johan de Jager                              | ➤ Measuring Service Quality in South Africa Higher Education: Developing a Multidimensional Scale                                     | 375 |
| Anna Gogoleva   | ➤ Studies of Cultures and Subcultures   | 385 |
| Emanuel Gomes and Marcel Cohen                                  | ➤ Acquisition Pitfalls in Developing Countries: A Case Study of The Acquisition of Congolese Wireless Networks (Cwn) by Vodacom Group | 391 |
| Patricia Grossi, Paulo C. Motta, Luis F. Hor-Meyll              | ➤ Risks the Poor Perceive When Shopping for Food  | 401 |

|  |  |     |
|--|--|-----|
| Sezer Günaydın<br>Çalışkan                         | ➤ The Effect of Leader Member Exchange Quality on Employee's Perception of Politics And Organizational Citizenship Behavior: The Moderating Role of Organizational Justice | 410 |
| Sezer Günaydın<br>Çalışkan, Aslı Erim              | ➤ The Impact of Paternalist Leadership on Resistance to Change: The Moderating Affect of Lmx And Political Skill   | 422 |
| Costas<br>Hadjicharalambous                        | ➤ Entering Strategies for Private Label Brands In Emerging Asian Markets   | 428 |
| Natasja Holtzhausen                                | ➤ The Evolution of the Whistle Blower into a Protected Discloser- Public Policy and Ethical Considerations   | 433 |
| Frédéric Jallat,<br>Kathleen Park                  | ➤ Capturing Value by Controlling Key Relationships: How Successful Companies Maintain Privileged Positions in Crucial Business Interactions                                | 441 |
| Pierre Joubert                                     | ➤ Developing an Effective Sexual Harassment Policy for Higher Education Institutions in South Africa   | 450 |
| Jong Kun Jun, Thae<br>Min Lee, Seong Tae<br>Hong   | ➤ Dyadic Adaptation in Online Marketing Alliances of Korean Firms  | 457 |
| Burhan Can Karahasan<br>and Mehmet Hakan<br>Sengoz | ➤ Fdi and Economic Growth Nexus Evidence From Seven Emerging Economies   | 463 |
| Nur Esra Kardeş &<br>Hande Kimiloğlu               | ➤ Consumers' Perceptions of Technology and the Benefits of Technologically Improved Marketing Activities   | 470 |
| Natalia Khutorova and<br>Alexander Samoldin        | ➤ The Double Diploma in Ave as the Tool of Integration of Russia in the European Educational Space   | 480 |
| Stephen Ko   | ➤ Thinking Styles of Entrepreneurs Matter in Innovation: A Study of Technology-Based Firms in China  | 484 |



|  |   |     |
|--|---|-----|
| Krisitijan Kolakovic   | ➤ Position of Leaders in the Process of Transition Towards Market Economy in Serbia                             | 494 |
| Thomas Kollars and Gerald Ledlow                             | ➤ International Initiative in Biological Medical Supply: A Partnership in Intravenous Immunoglobulin Production | 501 |
| Yamen Koubaa, Rim Methamem Boudali, Fatiha Fort              | ➤ The Structure of Country And Brand Images and Their Impacts on Product Evaluation                             | 508 |
| Yamen Koubaa   | ➤ Reconsidering Country of Origin Effect  | 516 |
| Engin Kucukkaya, Kursat Durmaz                               | ➤ Credit Risk Management: A Practical Examination of Turk Eximbank  | 524 |
| Pedro Reinares Lara and Luis M <sup>a</sup> García Bobadilla | ➤ From Anthropology To the Point of Sale: Toward a Marketing Concept Based on “Place / Non-Place” Principles.   | 532 |
| Violet Lazarevic, Sonja Petrovic-Lazarevic                   | ➤ Raising Brand Equity to Generation Y  | 538 |
| Frank Paul Le Veness and Patrick Flanagan                    | ➤ The Economic Future of Puerto Rico: The Need for Radical Change   | 546 |
| Yun Jung Lee and JungKun Park                                | ➤ Customer Complaints Via E-Contact Centers: The Role of Communication  | 565 |
| Auke R. Leen   | ➤ Pushing Limits  | 572 |
| Tatiana Leonova, Anna Legeeva and Natalia Malanicheva        | ➤ Social and Economic Development: Russian Priorities   | 578 |
| LiLi Li, Zhuhai, Shaukat Ali                                 | ➤ The Determinants of Hong Kong Fdi in China: Locational Change From Pearl River Delta to Yangtze River Delta   | 583 |
| Yaonan Lin, Hsueh-Chih Chen                                  | ➤ A Comparison of Information Privacy Concerns in the U.S., China, and Taiwan                                   | 595 |

|  |   |     |
|--|---|-----|
| Yaonan Lin, Ching-Yi Lai   | ➤ The Dimensional Development of Chinese Aesthetic Preferences for Product Appearance   | 603 |
| Grace T.R. Lin, Yung-Chi Shen, Chia-Chi Sun, and Hsiao-Chen Yu   | ➤ Assessing National Innovation Policy: A Comparative Study   | 611 |
| Ana Lisboa and Carmen Lages  | ➤ Relative Role Of Relationship Intensity And Contract On Firm Performance  | 631 |
| Inês Lisboa, José Paulo Esperança,   | ➤ Does Ownership Influence Performance? Evidence From Europe  | 638 |
| T. Diana L. van Aduard de Macedo-Soares, Alessandra de Carvalho Aragão, Marina Fernandes de Oliveira, Renata Céli Moreira da Silva | ➤ Strategic Alliances in the Oil Upstream Sector: Case of Royal Dutch Shell Plc   | 649 |
| Pauline Magee-Egan   | ➤ The Dilemma in Measuring Ethical Thinking Leads to A Dilemma In Management  | 662 |
| Antanas Makštutis, Aleksejus Malovikas, Rasa Smaliukienė, Juozas Vijeikis and Aleksas Domarkas                                     | ➤ Harmonious Development of Lithuania Economy and Market Today: Theory and Practice   | 666 |
| Sirli Mändmaa and Jaan Vainu   | ➤ Distributing the Increase of a Phenomenon Among Factors and Constructing of Factor Indices                                    | 673 |
| Andrea Manzoni, Alessandra Tzannis   | ➤ The Company as an Integrated Marketing System: A Shared Approach of Knowledge, Competences and Goals                          | 681 |
| Michael J. Maran   | ➤ An Essay on the Challenge Of Innovation in the Software Industry  | 690 |
| Giuseppe Marelli, Alan B. Flaschner and Catherine Goodwin  | ➤ An Exploratory Study of the Influence of Ethnocentrism, Self-Efficacy, And Involvement on Perceived Reliability of Technology | 709 |

|  |   |     |
|--|---|-----|
| Thomas J. Maronick   | ➤ The Role of the Internet in Survey Research: Guidelines for Researchers and Experts                   | 717 |
| Bruno Mascitelli and Simone Battiston  | ➤ The Challenges and Dilemmas Embedded in the Expatriate Vote: the Case Study of Italians Overseas      | 728 |
| Kgomotso Masilo and Edward Rankhumishe                                       | ➤ The Capacity of City of Tshwane Metropolitan Municipality in Addressing Unemployment                  | 736 |
| Alexei V. Matveev, Ann Bracken, Richard G. Milter                            | ➤ Reflection in Active Learning: Does the Open Reflection Really Work?                                  | 744 |
| Laurence Mauer, Neil D. Holden   | ➤ The Prospects for Optional Federal Chartering of Insurance Companies in the United States             | 751 |
| Borisas Melnikas   | ➤ Baltic Countries in the Context of Globalization: Regional Integration And The New Form Of Transition | 757 |
| Maciej Mitreęa, Sue Vaux Halliday  | ➤ Getting Closer to Business Customers in the Eye of Sales Staff  | 768 |
| Philip Myburgh, Jan Grundling and Lizl Steynberg                             | ➤ An Evaluation of South Africa's Ability to Host the 2010 World Cup Soccer                             | 774 |
| Graham Myers, Geoff Goldman  | ➤ Mergers in Higher Education in South Africa Through the Eyes of the Staff Involved.                   | 784 |
| Aslihan Nasır and Hakan Uyanık   | ➤ Consumer Satisfaction, Loyalty and Switching Behavior in Airline Industry                             | 792 |
| Larissa Nikovskaya, Vladimir Yakimets  | ➤ New Approach to Studying And Measuring a Public Policy Status   | 801 |
| Fatima Bayma de Oliveira, Deborah Moraes Zouain and Francisco Marcelo Barone | ➤ Distance Learning and Corporate Training in Brazil: The Importance of Educational Technology          | 808 |
| Aslı Gül Öncel and Ömür Sür  | ➤ Foreign Bank Entry And Evolution of Efficiency: Evidence from Turkish Banking Sector                  | 815 |

|  |   |     |
|--|---|-----|
| Akmal Aini Othman  | ➤ Marketing Resources, Supply Chain Coordination And Business Performance in the Construction Industry: A Proposed Conceptual Paper | 823 |
| Taina Paju   | ➤ Outsourcing Product Development Internationally – Location and Objectives   | 827 |
| Kathleen Park  | ➤ Value Creation in Metamorphic Merging? Acquirer Returns in Transformational Mega-Deals of the 1993-2000 Merger Wave               | 833 |
| Lorenzo Petretto   | ➤ The Relationship Between Education Business Programs and New Entrepreneurship: An Overview of the U.S. Situation                  | 839 |
| Kullapapruk Piewthongngam, Supachai Pathumnakul, Sakda Khamjan | ➤ Managing Supply Uncertainties: A Case of Thai Shrimp Industry   | 847 |
| Mario Pinto  | ➤ Communion Economy Project: Joining Ethics and Competitive Advantage   | 855 |
| Filipe Pinto, Alzira Marques, Manuel Filipe Santos             | ➤ Data Mining Approach in Relationship Marketing Database   | 862 |
| Andries J du Plessis, Andrew E Marx, Gregory Wilson            | ➤ Do Your Employees' Ideas Enhance Innovation and Competitiveness in the Global Economy? Some Empirical Evidence                    | 869 |
| Thérèse du Plooy, Hennie Visser                                | ➤ Billboards Advertising in South-Africa: An Exploratory Study  | 877 |
| Rudra Prakash Pradhan  | ➤ Trade Openness and Economic Growth: Evidence from Trivariate Causality  | 885 |
| Anna Putnová, Libor Žák, Pavel Seknička and Pavel Uhlář        | ➤ Corporate Social Responsibility As a Tool of Corporate Governance in Global Economy   | 892 |
| Kugyte Ramune, Sliburyte Laimona                               | ➤ A Modified Model of Service Provider Selection Criteria for Different Service Types   | 900 |

|  |   |     |
|--|---|-----|
| Peter J Ras , Claribel Muller, Walter J Vermeulen  | ➤ Organising a Supply Chain And Its Participants in Order To Address Long Term Sustainability: An Exploratory Study of the Table Grape Industry                     | 908 |
| James Reardon, Vilte Auruskeviciene, Laura Salciuviene, Denny McCorkle, Vida Skudiene  | ➤ The Effect of Culture on Consumer Intellectual Property Theft: An Exploratory Analysis  | 917 |
| Nichola Robertson and Robin N Shaw   | ➤ Consumer Dissatisfaction with Self-Service Technolgies: An Empirical Exploration of Its Antecedents   | 923 |
| Eduardo Peixoto Rocha, José Antônio Arantes Salles   | ➤ Managers´ Conceptions on Organizational Strategy in A Brazilian Firm In Telecommunications  | 931 |
| André L. P. da Rocha, Caio A. Grynberg and Sergio F. Campos  | ➤ Characteristics and Return Assessment of Sponsorship Projects: Propositions for New Approaches  | 942 |
| Sandra Regina da Rocha-Pinto and Gisele Rosenda Araujo Mello Del Carpio  | ➤ Lessons Learned through Balanced Scorecard Implementation   | 957 |
| Jorge Augusto de Sá Brito e Freitas and Ana Christina Celano Teixeira  | ➤ Organizational Communication, Internationalization Process, and Construction of Organizational Identity   | 967 |
| Alexander Samoldin   | ➤ Basic Stages of Marketing Development at Russian Enterprises  | 976 |
| Birgitta Sandberg and Leena Aarikka-Stenroos   | ➤ Network Utilisation in the Commercialisation of Radical Innovations   | 980 |
| Sílvia Cavadinha Cândido dos Santos, Ilsa Maria Araújo Galvão, Gilson dos Santos, Antonio Inocêncio Lima and Fátima Bayma de Oliveira, Fundação Getúlio Vargas | ➤ From The Global To the Local: The Interiorization of the Social Tourism of the Sesc in the Hinterland of State Of Pernambuco - Brazil. A Case of Social Inclusion | 988 |

|   |   |      |
|---|---|------|
| Rodrigo Costa dos Santos , Walter Gassenferth and Maria Augusta Soares Machado                            | ➤ Systems Usability Evaluation Metrics Review   | 996  |
| Eduardo Guilherme Satolo, Felipe Araújo Calarge, José Antonio Arantes Salles, Luis Eugenio Carretero Díaz | ➤ The Implementation of Lean Production Principles in Spanish Companies: An Exploratory Research in the Automotive Industry | 1004 |
| Leon G. Schiffman, Elaine Sherman, Deborah Y. Cohn  | ➤ “Looking-In” on Global Consumer-Users: To Develop Better Product Feature Sets   | 1012 |
| Pinar Sener   | ➤ As A Misconduct Indicator: Corruption and Its Effects on Turkish Economy  | 1020 |
| Sununta Siengthai, K. Joanna Zaleska, Saranya Kantabutr   | ➤ Closing the Performance Evaluation Gap in Smes in Thailand: What Matters?   | 1028 |
| Rita Gonçalves Ferreira da Silva  | ➤ Some Brief Considerations about Transparency in the Financial Markets   | 1035 |
| Vladimir I. Soloviev  | ➤ Duopoly of Linux and Microsoft As Competing Server Operating Systems  | 1041 |
| Alla N. Sterligova  | ➤ Comparative Analysis of Results of Integrating an Activity as A Subject of Enterprise Control                             | 1045 |
| Sonia Swanepoel   | ➤ The Predictive Validity of The Discus For Academic Success of Students  | 1052 |
| Vilaiwan Thiangtong   | ➤ Economic Impact of Cross-Cultural Marriage on The Northeast of Thailand   | 1062 |
| Kaya Tokmakçioğlu   | ➤ Financial Crises and Early Warning Systems: An Application for Turkish Economy  | 1066 |

|  |   |      |
|--|---|------|
| Rubião Gomes Torres<br>Júnior, Camila Raemy<br>Rangel Torres, Walter<br>Gassenferth and Maria<br>Augusta Soares<br>Machado | ➤ Using Artificial Neural Networks and Adaptive<br>Neuro-Fuzzy Inference Systems in Faults Predicting<br>Models                                     | 1079 |
| Igor Tsarkov   | ➤ Using of Project Management Theory for Improving<br>Budgeting System in Companies   | 1087 |
| A.Vasilopoulos   | ➤ Some Specific but Important Non-Linear Models,<br>Their Applications In Regression Analysis and How<br>Minitab Can Be Used to Solve Such Problems | 1093 |
| Prakash Vel, George<br>P. Moschis  | ➤ Effects Of Family Structure And Socialization on<br>Materialism: A Life Course Study In Malaysia  | 1110 |
| Anandasothy<br>Vignarajah  | ➤ Languages of The Future   | 1115 |
| Prasert Vijitnopparat,<br>Kullapapruk<br>Piewthongngam   | ➤ Economic Impact of Hard Disk Drive Cluster on The<br>Thai Economy   | 1123 |
| Marcos Vianna Villas<br>and T. Diana L. v. A.<br>de Macedo-Soares  | ➤ Dynamic Strategic Management of Ict: Focusing<br>Firms in Strategic Alliance Networks   | 1130 |
| Nina Vladimirova   | ➤ Role of Scenario Planning in Company's Strategy<br>Map Development  | 1137 |
| Demetris Vrontis,<br>Stanley J. Paliwoda   | ➤ Wine Branding: Developing A Framework for The<br>Cyprus Wine Industry   | 1145 |
| Budsakorn<br>Watcharasriroj  | ➤ An Analysis of Investment Behavior of Potential<br>Clients of Securities Firms in Thailand  | 1153 |
| Yakovleva Anna   | ➤ Characteristics of Innovation Planning in Russian<br>Small and Medium Venture Enterprises   | 1160 |
| Sibel Yamak and<br>Yeşim Bükür   | ➤ Exports and Corporate Social Performance  | 1168 |

|                                |  |      |
|--------------------------------|--|------|
| Elvin Yelgecen                 | ➤ An Investigation into Promotional Practices of Turkish Pharmaceutical Industry in The Wider International Context          | 1173 |
| Hülya Zaralı & Hande Kımiloğlu | ➤ Understanding The State of Customer Relationship Management Practices of Internet Businesses in Turkey                     | 1183 |
| Anna N. Zhilkina               | ➤ Enterprise Financial Monitoring in the Global Knowledge Economy  | 1194 |
| Anne Marie Zwerg-Villegas      | ➤ Business Gaming Simulations in International Business Education, Approaching Learning to Realities: A Colombian Case Study | 1201 |



# **THE ECONOMIC MENACE OF DIABETES IN THE 21<sup>ST</sup> CENTURY**

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## **ABSTRACT**

*Diabetes is one of the most challenging and demanding public health problems of this millennium affecting both the developed and developing economies of the world. The health care expenditures spent on diabetes poses considerable economic burden for the patients. In this paper, cost of six countries on diabetes was compared. The proportion of Gross Domestic Product spent on healthcare and percentage of total healthcare expenditures spent on treatment of diabetes were investigated. Various studies conducted on per capita and health care expenditures attributable to diabetes were analyzed. The social factors that affect diabetes care were also examined. Finally, a cost-benefit analysis model was utilized to create cost estimates for assessing economic burden of diabetes. Result shows all countries spent almost 50% of their per capita health care expenditures on diabetes and the high income group people had lower costs of diabetes as compared to middle income and low income groups.*

## **INTRODUCTION**

Diabetes is a major worldwide public health problem and one of the leading causes of death in both developed and developing nations of the world. There is substantial evidence that it is an epidemic in numerous developed and newly industrialized economies of the world. It is estimated that around 194 million people worldwide (5.1%) in adult population have diabetes and the diabetic population will increase to 333 million (6.3%) by 2025 (International Diabetes Federation, 2003). Predicted increase in the prevalence of diabetes worldwide emphasizes the fact that economically productive age groups within society will be particularly affected (Tuncell, Bradley, Nerenz, Williams, Pladevall & Lafata, 2005). Various studies provide evidence that diabetes affects employers and society not only by reducing employment but also by contributing to work loss and health related work limitations for those who remain employed (Bjork, 2001). This leads to an increase in the total health care expenditures spent on diabetes. In 2007, the world has spent an estimated \$215-375 billion for diabetes care and its complications. This figure will rise to \$234- 411 billion in the next 20 years. Diabetes is growing fastest in low- and middle-income countries. Hence, the developing countries will face the spiraling costs in the near future (Diabetes Atlas, 2003).

By taking all these facts into consideration, the primary objective of this paper was to make a comparison with respect to direct and indirect cost involved in the treatment of diabetes in five developed and one developing economy. Six countries with a high prevalence of diabetes were selected. These include the United States of America (USA), Canada, United Kingdom (UK), Germany, Australia (developed) and India (developing). Data on the medical, health care and per capita expenditures in the treatment of diabetes was collected. Percentage of GDP spent on health care and total health care expenditure spent on diabetes treatment was calculated and compared. Information about the social factors that affect diabetes care was compiled. All this data assisted in the development of conclusions about the social and economic factors affecting diabetes treatment in these countries that could be extrapolated and applied on a worldwide basis. Finally, an economic model adopted from the World Diabetes Foundation was utilized to calculate the health care costs of diabetes among the various income groups (low, middle, and high) in the selected countries.

# LITERATURE REVIEW

The economic consequences related to diabetes can be calculated in two ways: direct costs and indirect costs. Direct cost is calculated based on the number of physician visits, home nursing visits, medicines used and transportation costs. The indirect costs represent the total loss to society due to morbidity and premature mortality; the loss is calculated on the basis of sick-leave days, employment situation, income, family home care and transportation costs. These costs are generally borne by the patients and their families (Bjork, 2001).

Diabetes affects all people in society. According to the International Diabetes Federation (IDF, 2006) more than 80% of expenditures for medical care for diabetes are made in the world's economically richest countries. Less than 20% of expenditures are made in the middle- and low-income countries, where 80% of people with diabetes will live in the future. The proportion of the world's healthcare budget being spent on diabetes care will range from 7% to 13% in 2025 (IDF, 2003). United States is home to about 8% of the world's population living with diabetes and spends more than 50% of all global expenditure for diabetes care. Europe accounts for another quarter of spending on diabetes care. The remaining industrialized countries, such as Australia and Japan, account for a significant portion of the remaining expenses. In industrialized countries, about 25% of medical expenditures for diabetes is spent in treating elevated blood sugar; 25% is used for treating long-term complications, largely cardiovascular disease, and 50% is consumed by additional general medical care that is associated with diabetes (IDF, 2006).

The World Health Organization (WHO) estimates (between 2005 and 2015) that diabetes, heart disease and stroke together will cost about \$555.7 billion in China, \$303.2 billion in the Russian Federation; \$336.6 billion in India; \$49.2 billion in Brazil and \$2.5 billion even in a very poor country like Tanzania over the next 10 years. Diabetes is costly even before it is diagnosed. This is true in both developed and developing countries. In the world's poorest countries, not enough is spent to provide even the least expensive life-saving diabetes drugs. If nothing changes, the disparity in spending for diabetes care between the industrialized countries and the rest of the world will only increase (IDF, 2006). A study was conducted a review of the cost of diabetes complications in Australia, Canada, France, Germany, Italy and Spain in 2005. These cost data could be utilized to create models of diabetes that may accurately simulate the cumulative costs associated with diabetes and its complications (Ray, William, Secnik, Oglesby, Cordony, Gordoys, Davey & Palmer, 2005).

Among all the industrialized nations of the world, United States of America (USA) has the highest health care expenditures. According to the Organization for Economic Development (OECD) health data (2007), USA spends 15.3% of its GDP on health care in 2005 and ranks far ahead of other OECD countries in terms of total health spending per capita. In 2005, the total health care expenditure amounted to \$2.02 trillion (Borger, Smith, Truffer, Keehan, Sisko, Poisal, & Clemens, 2006). The American Diabetes Association published a report on the economic costs of diabetes in 2007. The total estimated cost of diabetes in 2007 was \$174 billion, including \$116 billion in excess of medical expenditures and \$58 billion in reduced national productivity. The actual burden of diabetes is likely to exceed the \$174 billion estimation. In 2007, per capita annual costs of health care for people with diabetes were \$11,744 a year, out of which \$6,649 (57%) was attributed to diabetes. One out of every five health care dollars is spent caring for someone with diagnosed diabetes while one in ten health care dollars is attributed to diabetes (Dall, Mann, Zhang, Martin, Chen & Hogan, 2008).

When compared to US, diabetes is also a major public health problem in Canada in terms of economic, clinical and humanistic outcomes. As the prevalence and severity of diabetes increase with age, the ageing population will increase the economic burden of diabetes to the society. The total health care costs were projected to increase from \$7 billion in 2000 to \$6.48 billion in 2005. The per capita average total cost for incident and prevalent cases of diabetes was \$3877 and \$3715 respectively. The health care costs of diabetes will increase by 75% between 2000 and 2015 (Ohinmaa, Jacobs, Simpson & Johnson, 2004). The Institute of Health Economics at Edmonton, Canada conducted a study on health care costs and mortality for Canadian urban and rural patients with diabetes. Total per capita costs were \$5422 for large urban, \$5448 for small urban, and \$5229 for rural dwellers (Pohar, Majumdar & Johnson, 2007).

Similar studies on health care costs attributable to diabetes were conducted in Europe. The first one was the Cost of Diabetes in Europe-Type II (CODE-2), which provided a comprehensive and practical insight into the direct costs of Type II diabetes across eight European countries including UK and Germany. The total direct medical cost was estimated at \$28.7 billion a year (1999 values). The estimated yearly cost per patient was \$2805 a year (Jonsson, 2002). The second study was conducted in UK. The Type II Diabetes Accounting for Major Resources Demand in Society (TARDIS), examined the direct and indirect costs of Type II diabetes in UK. The results were similar to the CODE-2 study (Williams, 2005). The UK Prospective Diabetes Study provided estimates of the immediate and long-term healthcare costs associated with seven diabetes complications (Clarke, Gray, Legood, Briggs & Holman, 2003). The net annual excess cost attributable to Type II diabetes was approximately \$1.01 billion 2000 (Bagust, Hopkinsont, Maslove & Currie, 2002). Five per cent of the National Health Service (NHS) budget is currently spent on treating diabetes and its complications such as Cardio-Vascular Disease (CVD) which is equivalent to \$2.38 billion a year. These costs are expected to increase by more than 25 per cent in the next 20-30 years (Diabetes Heartache, 2007). In the coming years, diabetes is going to inflict a serious clinical and financial challenge on the NHS (Bagust, Hopkinsont, Maslove & Currie, 2002).

The Cost of Diabetes Mellitus (CoDiM) was the third study that provided comprehensive estimate of costs associated with diabetes care in Germany in 2001. Direct costs of diabetic patients accounted for 14.2% of the total health care costs. Annual direct and indirect costs per diabetic patient were \$5,912 and \$5,639 respectively. The direct cost of diabetes was estimated to be \$34,400 million. Analysis of cost components revealed that high costs associated with the care of the diabetic patients could be largely attributed to inpatient care and overall medication costs (Koster, Ferber, Ihle & Schubert, 2006). A study conducted in 2005 revealed that the total cost of diabetes from a societal perspective was calculated at \$4.83 billion (Stock, Redaelli, Wendland, Civello & Lauterbach, 2005).

The Australian Diabetes study, performed in Australia in 2003, was the first large scale primary study to comprehensively describe costs related to diabetes treatment. The average annual cost per person with Type II diabetes was \$3912 of which \$3109 was from direct costs and \$25 was indirect costs. Government subsidies from pensions accounted for \$4044. Adding these costs raises the total of all costs for a person with Type II diabetes to \$7957 per year. The Direct health care costs for people with both microvascular and macrovascular complications were \$5292 (Colagiuri, Colagiuri, Conway, Grainger & Davey, 2003). The Fremantle Diabetes Study predicted that the financial burden of treating Type II diabetes could quadruple by 2051 unless more is done to prevent Type II diabetes and its complications (Davis, Knuiman, Hendrie & Davis, 2006). A study conducted in Australia concluded that majority of the excess costs were due to increased frequency of disease requiring hospitalization rather than intensity of treatment. People with diabetes cost on an average \$793 annually or 38% more than those who do not have diabetes. The majority of the excess costs are due to increased frequency of disease requiring hospitalization rather than intensity of treatment (Clarke, Kelman & Colagiuri, 2006).

Diabetes is a serious public health problem which poses a major clinical, economic and public burden in India. Health resources in India and other developing countries are very limited with only 5% of the GDP (\$23 per capita) being spent on health care. The estimated direct costs and indirect cost of diabetes in India were \$95 and \$283 per individual per annum respectively. The estimated total costs of diabetes in India were \$442 per person per annum (Bjork, Kapur, Sylvest, Kumar, Nair & Kelkar, 2005). The Cost of Diabetes in India (CODI) study revealed that many socio-economic factors like poverty, access to health resources, lack of health education and unemployment exacerbate the problem of limited health care in India (Kapur, Bjork, Nair, Kelkar & Ramachandran, 2004). A study conducted in Southern India concluded that uneducated, unemployed people, especially those living in semi urban or rural areas, who cannot afford or do not have access to even bare minimum health care facilities, are likely to be diagnosed late of diabetes related complications (Rayappa, Raju, Kapur, Bjork, Sylvest & Kumar, 1999). According to WHO, 80% of the people in developing countries like India pay directly for some or all of their own medicine. For a low-income Indian family with an adult with diabetes, as much as 25% of family income maybe devoted to diabetes care (IDF, 2006).

## METHODOLOGY

This study examined and compared the cost of treating diabetes in the USA, UK, Canada, Australia, Germany, and India. The total health care expenditures on diabetes, obtained from the IDF (2005) website, were updated from 2003 to 2005 U.S. dollars using the market basket projection as the inflation factor (Zaretsky, 2002). This involved an inflation factor of 1.071. The total health care expenditures as % of GDP and the per capita health care costs were taken from the Organization from Economic Cooperation (OECD) website (OECD Health Data 2007). The proportion (percentage) of health care expenditures spent on diabetes was calculated by dividing the total health care expenditures spent on diabetes by the total health expenditures. The total health care expenditures and per capita diabetes costs were taken from various journal articles, reports and fact sheets that have conducted studies on the costs of diabetes.

This study utilized the World Diabetes Federation's (WDF, 2002) economic model of diabetes in order to generate estimates for the total cost of treating diabetes as well as the cost per individual resource groups. The model employs a cost-benefit method that consists of five parameters: Total population; Overall prevalence of diabetes; Percentage of patients who are diagnosed / receiving treatment; Percentage of those in each of three resource consumption groups or income groups – low, medium, high; and Average annual cost of treatment for each resource consumption group. The model computes cost estimates in United States (U.S.) dollars based on 2005 exchange rate for the six countries. The model can be manipulated by adjusting the percentage of persons receiving treatment in different resource groups and / or the average annual treatment cost for each resource group. These manipulations facilitate an assessment of economic burden of diabetes in each country and in each income group. It also assists in making comparisons of diabetes costs per person per year for a particular income group among the various countries.

There was lack of adequate and appropriate data regarding the percentage of people falling into various income groups and the average annual costs of treatment in each of the income groups- low, middle and high. Therefore, some approximations were done to use the model. The total (direct and indirect) annual cost of diabetes for a particular country was taken. The census data contains information on the various income groups in a particular country. These income groups were then categorized into low, middle and high- income groups. The census data was utilized to calculate the percentage of population in each income group. The percentage was multiplied by the total population to obtain the total number of people in each income group. The total cost of diabetes for the entire country was divided by total number of people in each income group to estimate the cost per person per year (in thousands) for a particular income group.

All these values were then inserted into the model to get the cost estimates for not only the entire country but also for the various income groups. Comprehensive estimates of the costs would not only help in framing efficient and effective public health policies but also assist in formulating high-quality clinical and medical practices which can reduce the avoidable burden of diabetes and its complications around the world.

## **RESULTS AND DISCUSSION**

Table 1 provides the data for healthcare expenditure involved with diabetes care in 2005. The USA has the highest total health care expenditure followed by Germany, Canada, UK, Australia and India. The total cost of diabetes in the selected countries was \$151.7 billion in 2005. This represents 5.4% of the total health care costs in these six countries. When the per capita health care and per capita diabetes costs were compared, then it was observed that more than 50% of the per capita health care costs were devoted to the treatment of diabetes and its complications in these countries. The per capita cost spent on diabetes was highest for US (\$6401) followed by Canada (\$3326), Germany (\$3287), Australia (\$3128), UK (\$2724) and India (\$417). USA spent 15.3% of its GDP on health care, out of which 5.7% was spent on diabetes. Similarly, Australia spent 8.8 % of its GDP on health care, out of which 7.3 % was spent on diabetes. The per capita cost of diabetes was highest in US followed by Canada, Germany, Australia, United Kingdom and India. However, if the percentage of health care expenses spent on diabetes was compared, it was seen that Australia spent 11.8% of its total health care expenditures in the treatment of diabetes. Australia was followed by USA (5.77%), Canada (4.3%), India (3.9%), Germany (3.6%) and UK (2.6%). It can be concluded that the prevalence of diabetes is increasing in these nations at a phenomenal rate. This is especially true for countries like India, where rapid urbanization and industrialization has already contributed to a substantial rise in diabetes.

Developing countries accounted for 84% of global population, 90% of the global disease burden, 20% of global GDP but only 12% of global health spending (World Bank, 2008). It could be observed that there is a wide difference between health care spending of USA and India. India is now the Diabetes Capital of the world but it spends only \$1.3 billion on diabetes care as compared to \$116.7 billion in the USA. Similar trends could be seen when the per capita diabetes costs were compared. India spent only \$417 per person on diabetes treatment as compared to \$6401 for USA, \$3326 for Canada, \$3287 for Germany and \$3128 for Australia in 2005. India has the highest number of diabetics in the world and is ahead of China and USA (which are in second and third place respectively) (Mohan, Madan, Jha, Deepa, Pradeepa, 2004). This means that in the near future the per capita costs of diabetes would increase and would consume a greater proportion of the country's total health care expenditure.

**Table 1: Health Care Expenditure in the Six Countries in 2005**

| Country   | Total Health Expenditures (billion \$) | Total HC as % of GDP | % of HC spent on diabetes | Total HC Expenditure on diabetes (USD) | Per capita HC costs (USD) | Per capita HC costs on diabetes (USD) |
|-----------|--|----------------------|---------------------------|--|---------------------------|---------------------------------------|
| USA       | 2020                                   | 15.3                 | 5.7                       | 116.7                                  | 8833                      | 6401                                  |
| Canada    | 142                                    | 9.8                  | 4.3                       | 6.1                                    | 4590                      | 3326                                  |
| UK        | 186.4                                  | 8.3                  | 2.6                       | 4.8                                    | 3759                      | 2724                                  |
| Germany   | 324.4                                  | 10.7                 | 3.6                       | 11.8                                   | 4536                      | 3287                                  |
| India     | 33.6                                   | 5.0                  | 3.9                       | 1.3                                    | 645.8                     | 417                                   |
| Australia | 140.3                                  | 8.8                  | 7.3                       | 10.3                                   | 4121                      | 3128                                  |
| Total     | 2846.7                                 | 57.9                 | 27.5                      | 151.7                                  | 26484                     | 19283                                 |

Therefore, diabetes would be one of the major concerns for the public health departments in the developing economies. The government has to prioritize the limited medical and health resources in the treatment of diabetes and its complications. Therefore, it is very essential and crucial to make comprehensive estimates of the costs so that pragmatic and effective decisions can be made.

## Economic Model

The cost estimates of USA, Canada, UK, Germany, India and Australia were calculated with the help of the economic model found on the World Diabetes Foundation website. Table 2 presents the total cost of diabetes in each of the income groups - Low Income Group (LIG), Middle Income Group (MIG), High Income Group (HIG). It can be seen from the table that USA (\$83.2 billion) has the highest expenditure for diabetes followed by India (\$23 billion), Canada (\$4.39 billion), Germany (\$3.06 billion), Australia (1.53 billion) and UK (\$1.3 billion). In USA, Canada and India the LIG spends more on diabetes treatment and care than the MIG and HIG. Poverty, illiteracy, ignorance to health care education, inadequate access to hospitals, lack of health insurance and poor health consciousness among the LIG people are the socio-economic factors responsible for the high cost of diabetes in this group. In India, free health care facilities are available for the economically backward classes, but due to the low level of education and occupational problems, the facilities are not always used (Ramachandran, Snehalatha, Vijay & King, 2002). In developing countries people living with diabetes bear the

brunt of the medical costs out of their own pocket because many countries lack an adequate healthcare infrastructure and have limited health care and medical resources. Those who need expensive care for diabetes-related complications are often the people who are poor and cannot afford the treatment costs. In the poorest countries, people with diabetes and their families bear almost the entire cost of whatever medical care they can afford.

**Table 2: Total Costs of Diabetes by Income Group**

| Country   | Total Expenditure (billion \$) | LIG (Billion \$) | MIG (Billion \$) | HIG (Billion \$) |
|-----------|--------------------------------|------------------|------------------|------------------|
| USA       | 83.23                          | 33.3             | 41.6             | 8.32             |
| Canada    | 4.39                           | 2.4              | 1.64             | 0.35             |
| UK        | 1.3                            | 0.58             | 0.65             | 0.02             |
| Germany   | 3.0                            | 0.39             | 1.62             | 0.99             |
| India     | 23.0                           | 10.8             | 9.2              | 2.3              |
| Australia | 1.53                           | 0.54             | 0.65             | 0.34             |

In developed countries like Germany and Australia the proportion of people living in the MIG (almost 50%) is high as compared to the LIG. The income inequality is less in these countries as compared to USA, Canada and India. The European countries (UK and Germany) and Australia has universal health insurance and, hence, people have access to health care. But in countries like USA (developed country) and India (developing country), such insurance schemes are not available. A developed economy like USA, which on one hand, has the highest expenditures on health care in the world; on the other hand, has the third largest population of diabetics in the world. This is because a portion of American population does not have health insurance.

If comparison is made between the HIG, MIG and LIG, then it can be inferred that, on an average, the HIG spends less as compared to the MIG and LIG on diabetes in all the countries. Various studies have indicated that those on a higher socioeconomic status according to income or education level have a lower prevalence of diabetes and, therefore, have less health care expenditures on diabetes care and treatment (Diabetes and Socioeconomic Factors in South Australia, 2003; Ramachandran, Snehalatha & Viswanathan, 2002; Rabi, Edwards, Svenson, Sargious, Norton, Larsen & Ghali, 2007; Rabi, Edwards, Southern, Svenson, Sargious, Norton, Larsen & Ghali, 2006). Therefore, in order to make a social and economic impact on the burden of diabetes, resources need to be efficiently and effectively allocated to offset costs in other areas so that the individual and the family do not have to face the financial burden of diabetes.

Figure 1, 2, 3, 4, 5 and 6 depicts the total cost of diabetes in USA, Canada, Germany, UK, India and Australia by utilizing the economic model.

## CONCLUSION AND FUTURE WORK

The burden of diabetes is imposed on all sectors of the society in the form of higher insurance premiums paid by employers and employees, reduced earnings through productivity loss and deterioration in overall quality of life for people with diabetes (Diabetes Heartache, 2007). Action taken early in the course of diabetes is more beneficial in terms of quality of life and is more cost effective, especially if it can prevent hospitalization. Complications have a substantial impact on the costs of Type II diabetes. Prevention of diabetic complications will not only benefit patients, but potentially reduce overall health care expenditure (Dall, Mann, Zhang, Martin,

Chen & Hogan, 2008). Proper management requires investment in awareness, education and better care. This seems to be the trend among the international health policy makers with the WHO and IDF in the forefront (IDF, 2001). It can be concluded that intervention should be made from the beginning so that the exorbitant costs of treating complication of diabetes could be minimized. This would lead to increased health status and quality of life among the population, which at the end of the day will optimize the usage of resources in the national health care budgets. Effective prevention measures needs to be introduced so that the expenditures devoted to the treatment of diabetes and its complications would not dominate the health economies of many countries by the end of the first quarter of the current century.

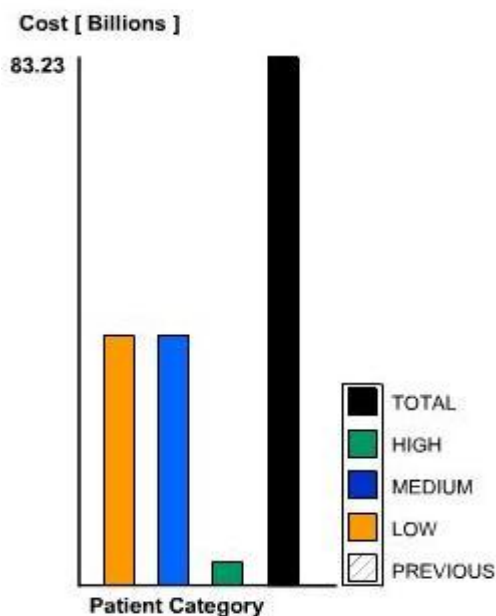


Figure 1: USA

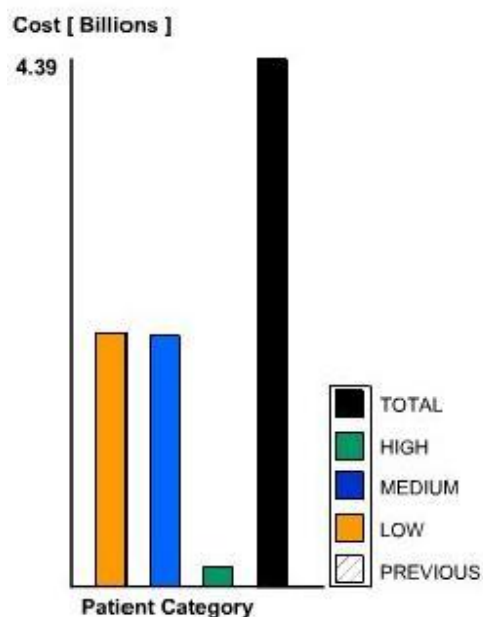


Figure 2: Canada

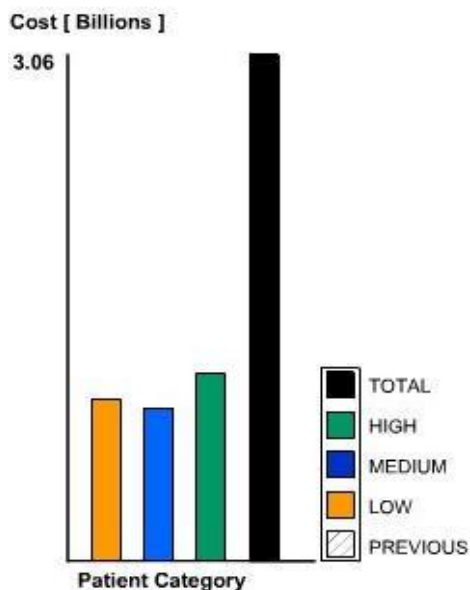


Figure 3: Germany

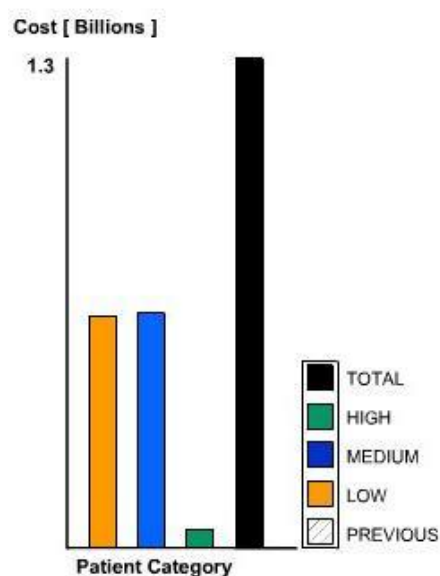
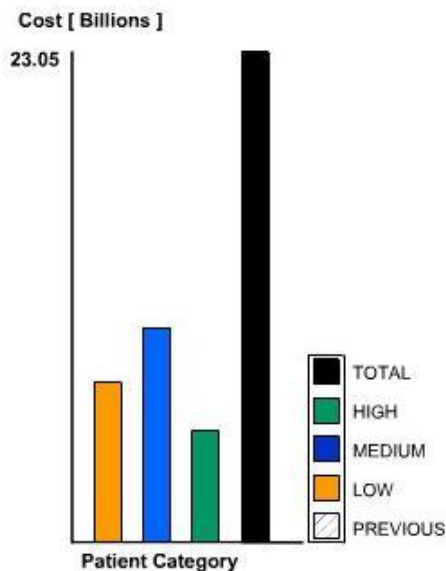
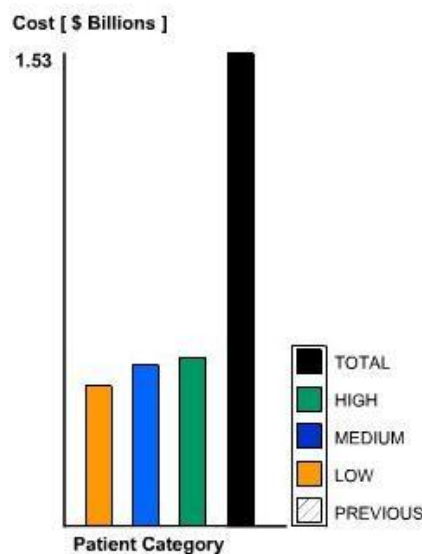


Figure 4: UK



**Figure 5: India**



**Figure 6: Australia**

One of the areas in which research needs to be done is on the healthcare expenses spent on diabetes by the different income groups (high, middle and low- income groups) in various industrialized and non-industrialized countries. The prevalence of Type II diabetes varies with socio- economic status within a population. Low income individuals with diabetes are particularly at high risk for poor health status due to lack of health insurance. Socio-economic status and its constituent elements are accepted as being determinants of health. There is considerable evidence to show that poverty is associated with shorter life expectancies and increased mortality, particularly cardiovascular mortality. Patterns of socio-economic disadvantage are related to patterns of diabetic complications which are, in turn, further related to indicators of access to care. Barriers to quality diabetes care should be identified and removed. The economic burden of diabetes and its complications will only be ameliorated by policies of substantial income redistribution.

Research also needs to be conducted on the expenditure of diabetes care in developing countries. India is a developing economy and it lacks comprehensive and up-to-date information on health care systems. Data on the documentation of medical details, especially the cost of treatment is also limited. Studies done on the cost of diabetes in developed countries is not updated frequently. There is a dearth of information about the direct and indirect costs of diabetes in the South-East Asian Region (China and Japan), Middle-East Asia and South America. These regions would be the hub of diabetic population in the next decade. Therefore, studies need to be conducted on the health care expenditures attributable to diabetes. Exhaustive, in-depth and current economic data on the costs of diabetes is required for pragmatic policy decisions. The resource allocation needs to be optimized for effectively evaluating approaches to disease management. This would help curbing the rise of the diabetes pandemic.

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# COMPLEXITY OF PRIVATIZATION IN KOSOVO-SERBIA

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## ABSTRACT

*Political, economic, social and other aspects of life in Kosovo have been rather complicated. A special challenge for the UNMIK administration – in charge for governing Kosovo's politics and economy – is the act of unilateral declaration of independence by the provisional authorities in Pristina, and a fervent opposition to such an illegal act by Serbia and the majority of members of the United Nations. Apart from diplomatic-political issues, the issues related to economy and the privatization conducted in the previous nine years have been the focal point of interest in Kosovo. This paper briefly presents disputable points in legal aspects of privatization, identifies the scope and structure of the privatized companies, analyses applied models and generally outlines effects of the implemented privatization.*

## INTRODUCTION

The Resolution 1244 (10 June 1999) of the United Nations Security Council (UNSC) put a stop to the NATO's war operations in Serbia and international security presence (KFOR) was deployed in Kosovo and Metohija. At the same time, UNMIK, as an international civil presence, was also deployed under UN auspices, and took over further administration of Kosovo, irrespective of the fact that the province was a territorial part of the sovereign Republic of Serbia. In the meantime, great efforts have been put into resolving the dispute on the final status of Kosovo, but activities conducted in the last couple of years have advanced that process. A special challenge for UNMIK administration – in charge for governing Kosovo's politics and economy – is the act of unilateral declaration of independence by the provisional authorities in Pristina, and fervent opposition by Serbia and the majority of members of the United Nations to such an illegal act in violation of the Resolution 1244.

Parallel to the political process, UNMIK administration and the provisional institutions of self-government (PISG) in Kosovo have organized economy on the part of Serbian territory, thereby excluding the Government of the Republic of Serbia from exercising any economic influence. UNMIK manages privatization of enterprises in Kosovo within the realm of its Fourth Pillar (economy development and reconstruction) which is under auspices of the European Union (EU). The privatization process is undertaken on the grounds of regulations promulgated by the UN Special Representative of the Secretary-General (SRSG). The main supervisor of that process is the Kosovo Trust Agency (KTA). The KTA is an independent body within the scope of UNMIK's competence, with the main goal to manage the property of socially-owned and public enterprises and to take measures which are necessary for preserving or increasing the value of that property.

The above mentioned results in the KTA selling shares of the newly-established subsidiary companies ("new enterprises") which consist only of assets of socially-owned enterprises (SOE). The KTA executes privatization process by methods of spin-off and voluntary liquidation. The revenue of the sold enterprises is kept on a KTA's special account – the KTA is its only administrator. The biggest part (80%) of the earned revenue is assigned for paying off the creditors and owners, while 20% of the is assigned for compensating employees of SOEs, which

possess a verifiable legal interest, pursuant to the lists created by competent body of workers' representatives and subsequently confirmed by the KTA. The main goal of this paper is to analyze and present all aspects of a complex privatization process in Kosovo, with the special emphasis on the following:

- Legal framework analysis of the privatization in Kosovo, implemented by UNMIK administration without any kind of coordination either with the Serbian Government or with the Privatization Agency of the Republic of Serbia;
- Analysis of volume and structure of property of the already privatized enterprises, that is either owned by the Republic of Serbia or falls into the category of socially-owned;
- Analysis of the privatization concept in Kosovo, based on case studies of achieved sale prices for each particular enterprise, in comparison to achieved prices for similar enterprises in Serbia and the region;
- Total privatization-generated income and its distribution, especially from the perspective of relations with foreign creditor clubs (Paris club, EBRD, London club etc), bearing in mind the fact that the Republic of Serbia regularly conducts payments to the foreign creditors for the debts of Kosovo-based enterprises, in spite of the fact that she has no returns from the enterprises privatized in Kosovo;
- Economic effects of UNMIK-operated privatization on economy, employment and standard of living of the people of Kosovo.

## **ANALYSIS OF LEGALITY OF THE PRIVATIZATION**

### **Legality and legitimacy of the UNMIK-managed privatization in Kosovo**

Within its EU-led Pillar IV (economic development and reconstruction), UNMIK conducts privatization of enterprises in Kosovo. The process is legally based on the following regulations of the SRSG: 1) Regulation 2003/13 On the Transformation of the Right of Use to Socially-Owned Immovable Property – amended by the Regulation 2004/45 (introduced a change to the right to use SOEs' assets rented by new subsidiary companies, with the possibility to sell/transfer the property), and 2) Regulation 2002/12 On the Establishment of the Kosovo Trust Agency – amended by the Regulation 2005/18 (KTA manages SOEs and other forms of property which are registered and located in Kosovo, while having the right to create subsidiary companies to the SOEs and sell their stock shares).

The very KTA mandate is based on the following legal documents: 1) the mentioned Regulation 2002/12 on the establishment of the KTA, 2) Regulation 2002/13 On the Establishment of a Special Chamber of the Supreme Court of Kosovo on Kosovo Trust Agency Related Matters. The KTA's internal legal documents further develop certain issues regarding the Regulation 2002/13, primarily: 1) KTA's Rulebook, 2) Rules of Tender for the spin-off privatization (so-called "round closure" comprising only sales of the SOE's assets – it should be noted here that a new enterprise is formed within the existing SOE, which operates only with assets of the SOE, while liabilities remain with the old SOE which is to be liquidated. The sale-generated resources are preserved in a special fund under KTA's control – they are to be used for paying off creditors, owners and employees.) and 3) Rulebook on Board of Directors etc.

The above mentioned legal documents of UNMIK and KTA have, arguably, provided legality to privatization in Kosovo. However, privatization experiences of East-European countries in the last 20 years point to a fairly clear principle that there is no successfully undertaken privatization (as the most important process in transformation of the countries' economies from socialist to market-oriented) if, at the same time, there is no satisfaction of the rights of all stakeholders (former owners, current owners, employees, state etc.). The process of privatization in Kosovo fully infringes the rights of current owners, disputes the rights of employees, while the rights of former owners (whose property was nationalized 50-60 years ago) are made obscure. Furthermore, the rights of the Republic of Serbia (on which territorial part the privatization has been conducted) have been treated as illegitimate.

As a corollary, one may estimate that privatization in Kosovo has a highly problematic legal ground and insufficient legitimacy. Primarily, there is a general issue of competence, i.e. mandate of UNMIK to undertake the privatization. More precisely, the issue rises of whether UNMIK, as a temporally-limited international civil presence in Kosovo (according to the Resolution 1244), has the right and legitimacy to sell the property of existing owners on the territory of the Republic of Serbia. Related to that, it should be noticed that the KTA has

never (not by any formal or factual means) taken into consideration existing laws of the Republic of Serbia in respect of privatization. Moreover, the KTA has not even contacted competent Serbian institutions – most notably, the Privatization Agency of the Republic of Serbia, which undertakes privatization of public and socially-owned property in Serbia pursuant to extant Privatization Act (enacted in 2001 and amended in 2004). Establishing any cooperation between the KTA and the Privatization Agency would provide legitimacy to the privatization process in Kosovo for the very fact that, despite the unilateral declaration of independence and the recognition by more than 30 countries, Kosovo is formally a part of Serbia (pursuant to the mentioned Resolution, as reaffirmed in March 2008 by the UN Secretary-General, Ban Ki-Moon, in his annual report to the UNSC).

The fragile legitimacy of Kosovo's privatization is further shaken by certain concrete problems related to legality which the authors of the text identified either within existing privatization-related legal framework or within the pending privatization practice in Kosovo:

- One may pose a question of UNMIK's competence (legitimacy) for revisions of companies' transformations undertaken in the course of 1990ies in Kosovo by virtue of then existing laws of the Republic of Serbia, applicable to Kosovo;
- The KTA's criteria pursuant to which it determines whether an enterprise falls in the category of socially-owned are vague, inexplicit and, as such, convenient for bringing arbitrary and potentially disputable decisions;
- The future of factories, subsidiaries and other forms of dependent enterprises, whose owners are enterprises from other parts of the Republic of Serbia, is also very ambiguous – the issue has so far been “resolved” by their separation and sale. Existing relations between the enterprises whose founding centers are outside Kosovo (in Serbia or other republics of the former Yugoslavia) and their property in Kosovo thereby cease. Even when indisputably proven, ownership on these parts of enterprises does not mean that the owner will manage to keep the property or in any other way benefit from it – the KTA regulations indeed provided the right to compensation, but without stipulating the criteria for determining the actual amount of compensation;
- There is no reasonable explanation for this *de facto* expropriation of property and its subsequent transfer to buyers who originate from a very defined national/political milieu;
- The rights of creditors and, in general, the issue of liabilities of the privatized companies are imprecisely determined. There is a notion of liquidation procedure, but not the rules of such procedure – only the minutes/records of the KTA's Board of Directors may reveal that liquidation in Kosovo is conducted by PISG. Furthermore, there is no right to appeal (for owners and creditors) related to decisions of a separate court (Special Chamber of the Supreme Court of Kosovo) established to resolve, as the first judicial instance, disputes/actions stemming from this privatization process;
- There is absolutely no notion of possible remedies in relation to rights of owners of the property nationalized from 1945 on the territory of the former Yugoslavia;
- The criteria for realization of employees' rights are equally vaguely determined;
- There are no indications that checks are conducted as to the origin of the future owners' capital.

From the whole corpus of legal remarks in respect of privatization in Kosovo, it can be concluded that the most important problem is discrimination of owners of the enterprises which undergo the privatization process. The most obvious example for this conclusion is the fact that this privatization is based on selling the land owned by the Republic of Serbia – the land that is, by Serbian laws, considered as the property that cannot be sold, but only rented.

## **A short survey of Serbian property privatized in Kosovo and accompanying obligations of the Republic of Serbia toward foreign creditors**

What is the object of privatization in Kosovo– who owns the property? This may be the key question that can, in legal terms, deny legitimacy of the undertaken privatization. In other words: can anyone – under the presumption of inviolability and full protection of ownership (private and/or public), as the basic right extant in the countries of the Western democracy – perform privatization without previous consent of that entity? This particular scenario has been enforced in Kosovo, in respect to property owned by Serbian enterprises and citizens and the very Republic of Serbia.

The fate of Serbian public and private property in Kosovo has been uncertain for almost nine years. Since 1999, Serbia has neither succeeded in returning a single object nor uses any of the resources in that part of its territory. The available data gathered by the authors of this research are mostly unsorted and incomplete, as they are based on the state of the property and capital in the late 1990ies, while there is no adequate estimate of its present state and actual worth – therefore, a reserve is warranted when taking the data into consideration. However, competent Serbian institutions have unofficially provided estimates regarding the worth of the property of the Republic of Serbia privatized or in other ways alienated in Kosovo, revealing the matter of tens of billions of Euros worth.

The biggest research problem in creating this paper was the lack of access to data related to worth, structure and territorial allocation of the property. A certain number of direct sources were used with the purpose of viewing the scope and structure of Serbian property privatized and to-be privatized in Kosovo. The available data were originating mostly from the state sources (direct data from the institutions of centralized property management). The data on the property value of SOEs based in Kosovo with majority of business activities in the province (whose owner-companies were situated in central Serbia) remain unavailable. There are no unified records for the latter category of data, except the accounting values from the year 1998 which, at present, may not be relevant. Furthermore, the records on the property of public enterprises (Serbian Rail, Serbian ElectroPower Company, Serbian Oil Industry etc.) whose property is partly located in Kosovo could only be presented in their obsolete book-value. This is hardly relevant, if taking into consideration that all public enterprises in Serbia have conducted capital re-evaluation (with exception of the property in Kosovo) which enhanced their book value several times.

The Property Directorate of the Republic of Serbia is the principal state institution which maintains records on all property of the Republic of Serbia. This institution has at its disposal the following record on immovable property in Kosovo, categorized by the property's types, quantities and value:

**Table 1: Layout of the scope and structure of property of the Republic of Serbia in Kosovo**

| Type of Realty          | Size                           | Reviewed Book Value in EUR |
|-------------------------|--------------------------------|----------------------------|
| Land – agricultural     | 15,376 ha 84a 83m <sup>2</sup> | 48,456,223                 |
| Land – forest           | 5,707 ha 38a 40m <sup>2</sup>  | 15,796,045                 |
| Land – building         | 3,424 ha 28a 96m <sup>2</sup>  | 188,745,832                |
| Official buildings      | 1,240,992m <sup>2</sup>        | 214,762,260                |
| Business buildings      | 145,202m <sup>2</sup>          | 23,465,114                 |
| Housing buildings       | 24,688m <sup>2</sup>           | 4,899,454                  |
| Residential objects     | /                              | /                          |
| Special purpose objects | 3,973m <sup>2</sup>            | 840,219                    |
| Other civil objects     | 753,915m <sup>2</sup>          | 127,264,175                |
|                         | <b>TOTAL</b>                   | <b>624,229,322 €</b>       |

Source: Property Directorate of the Republic of Serbia, data dated 23.10.2003 (exchange rate: 1 EUR = 66.6119 RSD)

It is presumed that, in order to determine the real/“fair” value of the gross state resources, it is necessary to previously perform evaluation of the property pursuant to the International Accounting Standards. For that reason, the above stated values should be taken into consideration with caution. The following table presents a layout of enterprises dominated by state and/or socially-owned capital seated in Kosovo:

**Table 2: Structure of enterprises in Kosovo under jurisdiction of the Republic of Serbia**

| Size of Enterprise | Number of Enterprises | Number of Employees | Ownership Type |
|--------------------|-----------------------|---------------------|----------------|
| Small              | 345                   | 11,571              | Social         |
| Middle             | 118                   | 18,248              | Mixed          |
| Big                | 46                    | 47,916              | State          |
| <b>Total</b>       | <b>509</b>            | <b>77,735</b>       |                |

Source: Development Fund of the Republic of Serbia, 1998, [www.fondzarazvoj.sr.gov.yu](http://www.fondzarazvoj.sr.gov.yu)

According to official data on submitted final balance sheets, provided by the National Bank of Serbia, there were 837 business enterprises (including parts of those enterprises located in Kosovo with management centers in the Central Serbia) active in Kosovo, whose capital comprised state, social and private capital:

**Table 3: Structure of capital of the Republic of Serbia in Kosovo**

| Type of Capital  | Number of Enterprises   |
|--|---|
| State-owned enterprises  | 39  |
| Privately-owned enterprises<br>(stock companies and limited liability companies) | 309<br>(45 of those are enterprises with ownership already transformed pursuant to Serbian laws till 1999, whereby they had become mixed-ownership enterprises) |
| Socially-owned enterprises   | 489   |
| <b>Total</b>   | <b>837</b>  |

Source: National Bank of Serbia, 1999 balance sheets, www.nbs.yu

According to the ownership structure, all 837 enterprises on the territory of Kosovo had the following structure of capital share (state institutions, public enterprises, social and/or mixed enterprises conducting business outside Kosovo, private subjects etc) in the overall capital:

**Table 4: Shares of various types of capital in enterprises in Kosovo**

| Different shares in capital of enterprises in Kosovo   | %   |
|--|-----|
| State capital of the Republic of Serbia  | 30% |
| Development Fund of the Republic of Serbia   | 15% |
| Enterprises with head offices in Serbia outside Kosovo (social, privatized, public)  | 10% |
| Enterprises with head offices in former republics of former Yugoslavia (social, privatized, public)  | 5%  |
| Socially-owned capital and a smaller portion of private capital of individuals based on ownership right obtained through ownership transformations performed pursuant to extant laws of the Republic of Serbia | 40% |

Source: National Bank of Serbia, www.nbs.yu

The Republic of Serbia has been a warrantor of many contracts concluded between legal entities from the territory of Kosovo and those of foreign origin, on the grounds of which Serbian citizens became debtors (for taken credits or foreign product supplies), and she has also taken over all debts toward foreign creditors in the aftermath of the political changes in the year 2000 (hence, during UNMIK's mandate). In other words, Serbia became the debtor toward foreign creditors, while the final beneficiaries of the credit (or other obligations) became the debtors of the state that had taken over payment of the debt in her name but for the interest of the mentioned legal entities. Allocated foreign debts of the state refer to local, identified debts and they were taken over by the Government of Serbia. On the grounds of the data available to the Ministry of Finance of the Republic of Serbia and the National Bank of Serbia, total amount of Kosovo's debts toward foreign creditors on 30.04.2006 equaled \$1.235 billions:

**Table 5: Total debt of Kosovo toward foreign creditors**

| Foreign Creditor  | Currency   | Kosovo's Debt<br>(after writing off<br>51%+15%) | Paid Due<br>Obligations<br>(principal and<br>interest) from 2002<br>till 30.04.2006 | Total Debt                 |
|---|------------|---|---|----------------------------|
| Paris Club  | USD        | 368,901,788.00                                  | 36,123,949.76   |                            |
| International financial<br>organizations (EBRD, ECB,<br>EC) | USD        | 536,160,189.30                                  | 120,622,329.65  |                            |
| London Club   | USD        | 121,856,079.18                                  | 11,526,546.75   |                            |
| Other governments - Libya                                   | USD        | 2,459,652.20                                    |   |                            |
| Other governments - Kuwait                                  | USD        | 20,930,251.40                                   |   |                            |
| Eurofima  | USD        | 3,995,098.47                                    | 865,737.84  |                            |
| Clearing debt   | USD        | 11,190,978.89                                   |   |                            |
| <b>Total</b>  | <b>USD</b> | <b>1,065,494,037.44</b>                         | <b>169,138,564.00</b>   | <b>\$ 1,234,632,601.44</b> |
| 1 USD = 0.80 EUR  | EUR        | 848,120,914.55                                  | 134,632,338.19  | <b>€ 982,753,252.74</b>    |

Source: Ministry of Finance of the Republic of Serbia and the National Bank of Serbia, dated 30.04.2006, www.nbs.yu, www.mfin.sr.gov.yu



From the total amount of foreign debt of Kosovo, as a part of the Republic of Serbia, 93.8% is allocated to 109 business entities (enterprises took over 87.95% of the allocated debts, while 12.05% are referred to banks). All the debts are regularly paid through determined installments by the Republic of Serbia, i.e. all Serbian citizens, irrespective of the fact that the state practically has had no engagement both in the privatization process and the process of fiscal management in Kosovo (the state does not have any incomes, while it regularly pays expenses).

Apart from the direct take over of the obligations toward foreign creditors and the direct outstanding debts for public incomes, the Republic of Serbia also possesses indirect ownership-related rights and outstanding claims stemming from established business relations of the state financial institutions (funds and agencies) which independently gained such ownership and creditor rights toward legal entities from the territory of Kosovo (Development Fund of the Republic of Serbia, Deposit Insurance Agency of the Republic of Serbia, pension-invalid, social and health funds of the Republic of Serbia). The Development Fund of the Republic of Serbia alone possesses registered owner shares in 155 Kosovo's enterprises and long-term and/or short-term investments amounting to total EUR 140 million.

From this short survey, it can be concluded that Serbia is the direct (public enterprises, banks) or indirect (SOEs) owner of business enterprises in Kosovo, while she is simultaneously the main creditor for paying off Kosovo's debt created by the subject business enterprises. This fact will most certainly be an issue of legal proceedings before international courts, especially under the new circumstances of illegal declaration of Kosovo's independence. Under the presumption of due application of international law, the Republic of Serbia should be entitled to a certain compensation for the uncontested privatization of her property.

## **EVALUATION OF THE PRIVATIZATION MODEL AND THE OBTAINED INCOME AMOUNT**

The Regulation 2003/13 On the Transformation of the Right of Use to Socially-Owned Immovable Property, promulgated by the SRSg, served as a legal ground for commencement of privatization in Kosovo. This Regulation defined a privatization model whereby the newly established subordinate enterprise obtains the right to lease the property transferred from the socially-owned enterprise for the period of 99 years, instead of the standard right to use. The rent/lease comprises the possibility to transfer the property to other persons – therefore, it has all characteristics of the ownership right. The KTA, as a provisional administrative body in Kosovo (in accordance with Article 10 of the Resolution 1244), practically performs permanent transfer of ownership – the 99-year long rent amounts to deprivation of possessions, whereby the real owner (the Republic of Serbia, Serbian public enterprises, private owners on the grounds of previous privatization models applied in Serbia, and all persons with ownership rights pursuant to the Serbian Privatization Act) decides neither on commencement nor on cessation of the rent relation, while the lessee is authorized to alienate the property. It is obvious that this approach violates one of the basic legal rules that no one can give what one does not have (*Nemo dat quod non habet*).

The KTA performs sales of shares of the newly established subsidiaries ("new enterprises") to which it transferred assets of the socially-owned enterprises. The privatization methods used are spin-off and voluntary liquidation. The spin-off method can be regular (the criterion for choosing the buyer is only the highest offered price) and special (the choice of buyer is determined on the basis of the offered price and social and investment programmes). Spin-off method is undertaken in two steps: 1) founding of a subsidiary ("new enterprise" as a stock-company or limited liability company) to which all or part of the assets of the socially-owned enterprise are transferred together with a part of liabilities estimated by the KTA, and 2) sales of all or a part of the shares of the newly established enterprise. In all KTA's privatization-related documents there is no notion of a precise method for determination of the initial sales price, which makes the issue disputable and susceptible to abuses. Voluntary liquidation (by virtue of the UNMIK's Regulation 2001/6 On Business Organizations) enables prompt market exit for the enterprises that apparently do not have chances for survival. The KTA can initiate this procedure when it considers that it is in the interest of preserving the remaining value of the extinct enterprises, or in the interest of their eventual owners or creditors. This method is mostly conducted outside the court, pursuant to the liquidation procedural steps provided in the mentioned Regulation 2001/6. In this case also, the liquidation incomes are placed at disposal of the KTA. The biggest part (80% of the shares sale income) is intended for compensating creditors and owners, while 20% of the resources are intended for compensating

employees who have the right to payoff according to the lists created by the employees' representative body and subsequently confirmed by the KTA.

The privatization process in Kosovo has so far been conducted through 30 tenders. These tenders comprised 356 socially-owned enterprises, out of which 440 new companies came into existence through application of the available privatization methods, with assets transferred to them and liabilities left on the original enterprise. 314 enterprises were privatized by means of the regular spin-off method, while only the special method was used for only 16 enterprises. This implies that there have been 330 contracts on privatization signed so far. According to the KTA data, 7984 potential investors have been registered in the privatization process in Kosovo. The total recorded privatization income amounts to EUR 352,651,978.66. Names and titles of buyers used to be partly published on the KTA's web-site, but the practice was later abandoned – in recent privatization waves, only the actual buyer's code is published.

From the expert point of view, what is the most important question regarding the chosen method and the achieved scope of privatization in Kosovo? Above all, the privatization lacks many phases that naturally precede the very sales. The most important among them is a due evaluation of capital and/or property of an enterprise scheduled for privatization. Had this procedural step been used, it would have been clearly visible which enterprise owned the capital and was capable to be privatized as a whole, and which did not possess capital and needed to undergo the spin-off or some other method of privatization (e.g. bankruptcy-triggered privatization). Lack of previously conducted evaluation of capital and property in the privatization process is a gross procedural omission which has not been reported in any of the privatization processes conducted in Eastern-European countries. In this respect, it should be emphasized that there is a serious lack of methodology relevant for determination of the starting price for any subject enterprise, which is a completely novel case in processes of privatization of socially-owned capital.

Related to the above-mentioned issue, the following question arises: is it possible that each of the privatized enterprises in Kosovo lacked capital (bearing in mind that the spin-off method is, in principle, applicable only in such cases)? In its core, the spin-off method represents some sort of sale of the enterprise on liquidation ground. However, there cannot be placed an equation mark between the two methods, as there had been no prior estimate on liquidation i.e. income-related capital value conducted in the course of this privatization process. Experiences from transition countries (Bennett et al, 2004) and Serbian experiences (see Cerovic, 2006) support the fact that the sale on liquidation grounds is used only for privatization of the enterprises incapable for income generation. It is not hard to assume that certain enterprises in Kosovo could have been privatized by using the method of income-generating power, i.e. by engaging into prior evaluation of future investments in the capital of the enterprise upon its privatization. Consequently, the achieved individual incomes and, especially, the overall privatization incomes in Kosovo cannot be marked as satisfactory.

Reviewing enterprise privatization on individual tenders and the price achieved for any of them cannot serve the purpose of clearly concluding whether the enterprise was sold at a lower or higher value than the real one. It is difficult to make even a crude comparison of the privatization prices reached in Kosovo and those for similar enterprises in Serbia or other countries in the region. The ground for comparison could be the difference between the estimated and the value achieved on the tender, but due to the fact that there were no such estimates in Kosovo, hardly any conclusion can be derived in this respect. The sale of "Pecka pivara" (The Brewery of Pec) can serve as an example of economically inadequate model of privatization in Kosovo and a very low tender price achieved. The brewery was sold for three times lesser price than the real one, bearing in mind the capacity and dominant role of the brewery in the Kosovo's market. According to the data provided by the Solvency Centre of the National Bank of Serbia, "Pecka pivara", the erstwhile very successful enterprise in possession of a good beer brand was sold as a "new enterprise" – "Pecko pivo, stock company", for EUR 11,130,000 to the buyer with highly dubious capital origins. Comparison of this sale with privatization of other breweries in the Western Balkan region raises the issue of the choice of an adequate model and transparency of the tender procedure, especially from the point of obtained incomes. The privatization of breweries in Serbia brought excellent privatization incomes to the state and private shareholders. For example, Belgian "Inbev" paid for the Serbian "Apatinska pivara" (the Brewery of Apatin) EUR 300 million, while "Carlsberg" paid for the "Celarevo" brewery EUR 100 million. Similarly, "Niksicka pivara" (the Brewery of Niksic) in Montenegro was sold for almost 15 times higher amount than "Pecka pivara", despite the fact that it is a brewery of relatively similar

quality of the basic product, that conducts business on a relatively similar market (the size of the Montenegrin and Kosovo's market is territorially similar, but the size of population in Kosovo makes its market four times bigger than that of Montenegro).

On the grounds of the above said regarding inappropriate choice of the privatization model and the omission of certain common phases in the privatization process, a question logically arises in terms of whether the spin-off was useful from the point of, on one hand, legal neglect of relevant facts and/or, on the other hand, a peculiar haste in implementing the privatization methods (before unilateral declaration of Kosovo's independence). This question certainly falls out of the domain of economic analytics, but belongs to the realm of political decisions of UNMIK who has led the controversial process.

## **ARE THERE EFFECTS OF THE PRIVATIZATION IN KOSOVO?**

The amount of the privatization-generated incomes in Kosovo is the lowest in the region – both in its absolute and, especially, relative value (*per capita* privatization income in Kosovo is cca EUR 175). Somebody might assert that the general political situation in Kosovo and around the territory has negatively influenced new investment possibilities, and that this was the sole factor resulting in low privatization incomes, devoid of any external disturbing influences. However, it is a matter of common sense (for both the international administration in Kosovo and the population of Kosovo irrespective of ethnic origin) that the economy of Kosovo collapsed and that a very small number of people gained enormous wealth to the detriment of the majority population (this is a phenomenon of all the countries in the region, but Kosovo has been the most drastic case). The unemployment rate is extremely high, the production level extremely low, the basic economic activity is retail trading (with the overwhelming grey economy), regular (internal) budget incomes are marginal, while (Serbian) public enterprises (erstwhile economic giants, i.e. in production of electric power) either do not work or conduct business with significantly reduced capacity. Despite all this, the public does not have access to trustworthy data on the reality of Kosovo's economy. PISG has so far announced only very disputable surveys which emphasize that “the first effects of the privatization in Kosovo are now available” (see statement of the Privatization Agency of Kosovo, Mr. Ahmet Shala, dated 13.12.2007. available at [www.B92.net](http://www.B92.net)). On the grounds of a single survey conducted in the last six months, one can thereby allegedly “conclude that the real employment, based on the survey of 55 enterprises, grew for 24 percent”.

Positive results of the privatization in Kosovo practically do not exist. If there are any effects, then it can be said that they fall into the category of the worst among all from privatizations conducted in the countries of Eastern-Europe in the last 15-20 years. A simple insight into the situation in Kosovo displays the reality that the people of Kosovo live very bad and practically survive on the budget of UN(MIK), EU or the resources of the Republic of Serbia who is economically engaged in the areas of Kosovo populated by Serbs and other non-Albanian communities (Roma, Gorani, Bosniacs). The resources gained from privatization have not yet been invested into development of Kosovo's economy. Practically, the basic expected privatization result in transition countries should be not only the mere change of the property owner, but also initiation of economic development – primarily through attracting foreign investments. Therefore, apart from immensely controversial legitimacy and legality, the privatization in Kosovo deserves a negative mark in the field of boosting economic development.

It can be concluded with certainty that the main reason for the failure of the KTA-conducted privatization to attract bigger number of foreign investors (only 30% of the income in the current privatization process are foreign investments – majority of them being investments of ethnic Albanians with foreign citizenships) lies in high credit risk of investing into politically and legally unstable environment with, additionally, a small and limited market. Lack of attractiveness of enterprises in Kosovo for foreign investors enables fairly easy purchases by a small number of ethnic Albanians with concentrated capital – it does not, however, benefit all citizens of Kosovo, as the low-price sales imply lower budgetary income and, consequently, lower shares for the future economic development. Economic result of this privatization is double negative – in majority of cases, the privatized enterprises did not initiate production, while the resources generated through sales are blocked on a KTA-managed account. AT this point, it is legitimate to ask what the real motive for the haste to start and

finalize the privatization of enterprises in Kosovo is, if the alleged main arguments for its initiation before the settlement of the Kosovo status were of purely economic nature.

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# **MUSEUM MARKETING -A CASE STUDY FROM TURKEY-**

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## **ABSTRACT**

*As globalization spreads all over the world, there will be more intense competition among different types of service businesses. As a result of this challenge, many organizations have lost their market shares in the local market; therefore these organizations tend to enter into different sectors. Many service businesses that are not considered as an enterprise have started to be seen as a niche market. Museum marketing is one of these areas which become popular in recent years. Turkey, as one of the emerging countries, follows this global trend, with granting more importance on museums and art galleries. In Turkey, there are many private and public museums but most of them do not give importance on marketing activities because they are seen as cultural tools, but not marketable products. In such a profitable sector, the main question is “Which marketing channels are appropriate for Turkish museum marketing and how can institutions use these channels in an effective way?” Therefore, the aim of this study is to reveal how the institutions utilize marketing tools in the management of museums.*

## **INTRODUCTION**

Museums are not-for profit organizations that aim to educate people. But, like many other organizations, they need marketing to set their objectives, implement strategic plans and promote their products and services to the public. To constitute the appropriate marketing plan that fits the organization, every marketing tool in the museum itself should be considered as a whole. Marketing strategy should support the organization’s culture, values, mission, goals and objectives. Before composing marketing strategy, internal and external environment should be analyzed carefully. Through this analysis; core marketing strategy, which is compatible with the target market, and marketing mix is designed for the museum. Marketing mix is the set of tools that organizations need to plan carefully while presenting to their target market. The main tools in the marketing mix are product, price, place and promotion. Museums provide services to public, so they provide intangible products. For museums, price is the entrance fee or price of the services. Place covers the location of museum, transportation to there and promotion covers the tools such as public relations, sponsorships or advertising of products.

## **MUSEUM MARKETING**

Marketing is vital for every business and organization to live and survive. Although, most art organizations are nonprofit institutions, they are not nonmarket institutions (Rentschler, 1998, p.83). During the past decades, most art organizations have gradually become aware of marketing as a management tool.

The museum has been constructed as a symbol in Western society since the Renaissance. This symbol is both complex and multi-layered, acting as a sign for domination and liberation, learning and leisure. As sites for exposition, through their collections, displays and buildings, museums mediate many of society’s basic values (Hooper-Greenhill, 2001, p.2). There are several explanations about the term “museum.” According to Murray

(1904); a museum is a collection of the monuments of antiquity, or of other objects interesting to the scholar and the man of science, arranged and displayed in accordance with scientific method (McLean, 1997, p.9). In a more recent definition, Museum Association defines museum as “an institution which collects, documents, preserves and interprets material evidence and associated information for the public benefit.” Also according to the international museum community, museums are “not-for-profit making and permanent institutions in the service of society” (McLean, 1997, p.10). Traditionally the prime function of museums has been to gather, preserve and study objects. Today managing museums entails also understanding the need to attract visitors (Gilmore and Rentschler, 2002, p.745). Therefore, museums need marketing to increase their roles in people’s lives, and to increase the number of visitors to museums.

As Rentschler (1999) indicates, museum marketing has been conceptualized in three main periods (Rentschler, 2002, p.8). The first period is the foundation period that lies between the years 1975 and 1983. In this period, main issues were educating visitors, raising staff awareness of the benefits of visitor studies and occasionally, the economic impact of the arts on community. Museums became more democratized in the professionalization period (1988-1993). Ames (1989) implies that these changes forced the recognition of the applicability of marketing to non-profit arts organizations and marketing departments were added to museums (Rentschler, 1998, p.85). After 1994, marketing in museums has passed to an entrepreneurial period. In some places, this period (1995- ) is considered as discovery period. According to Radbourne (1997), collaborative marketing models and a new view of visitors are evident, which diversify revenue sources by obtaining new audiences, products, venues and multi-art experiences (Gilmore and Rentschler, 2002, p.746). Since 1980s, there has been increasing pressure on museums to widen their appeal in order to attract more diverse and larger audience. According to Hooper-Greenhill (1996), some reasons can be stated as reduction in museums’ budgets, implementation of performance measures based on customer satisfaction management and consequence of the contract culture (Goulding, 2000, p.261).

Like most services, the museum “service product” is delivered in a physical environment or site, land and building, shape, lighting, means of directing or orientating the visitor, and methods of stimulating interest and involvement (Goulding, 2000, p.261). According to Gilmore and Rentschler (2002, p.749), the important service dimensions for museum marketing are:

- Education: Education of the public on nature and scope of collection is central to museum service product. Core collection and special exhibitions have a great effect upon the choice of visitors and increase the number of visits to the museum.
- Accessibility: People concern easiness of physical facilities, availability of museum services and offerings for different markets. Museum should give different services to different groups according to their interests.
- Communication: Interaction between museum and visitors is an important aspect of marketing strategy. Guidance and interaction between museum’s staff and visitors are important contributors to the visitor. The other item, interpretation, helps visitors to understand and appreciate the tangible aspects of the service. Also the effectiveness of communicating historical information, the essential product, relies on the ability to construct images, convey information and engage the visitor, through either social exchange or more traditional textual and visual methods.

Although there is a physical product (the collection) in museums, what is really being marketed with the display of the collection is an intangible product (McLean, 1997, p.105). As a result, service dimension is taken into consideration carefully. The collection, its conservation, exhibition should be considered as the core product, whereas the other products or services that complement or facilitate consumption of the core product are augmented products (McLean, 1997, p.107). Museums may offer different kinds of product mix. As an example, specific product mix of a museum consists of permanent and temporary exhibitions, special events, educational resources, school visits, and souvenir.

Museums provide services, so it is hard to determine cost of the service produced. Although museums have some fixed costs like staff salaries and monthly payments, the value of the service should also be evaluated carefully. Pricing strategies affect people’s decision making process among the leisure activities. However, for the visitors

monetary price is not the only cost. Also beside this, museum location (place costs) or physical characteristics (sensory cost) can create some other costs for people (McLean, 1997, p.157). Pricing strategies should be related with the overall organization profile. Marketing objectives should be carefully evaluated in deciding price objectives. In addition, product life cycle and portfolio affect the pricing policy. According to the product portfolio, pricing decisions can be made. Differential pricing can be applied for different target groups like students, children, and groups. Variable prices can be implemented such as admission charges or discounts for different groups (McLean, 1997, pp.161-162). In determining pricing strategies, perceived value is a vital point for museums. The value of a museum is established by its visitors and users.

For museums, place is where a play or exhibition is staged and visual art or craft items are offered for sale. Choosing right place is an essential point that should be considered, because this has an impact on target group. There are some factors, related with the place tool that affects audience decision-making process such as distance, accessibility, public transport access, availability of parking or the costs of accessing the 'place' (e.g. parking fees, public transport ticket) Except in such special circumstances, a museum should be readily accessible by private, in some cases public transportation (Goodman, 2003, p.92). Transportation is an important tool and affects audiences. Choosing an appropriate place is important to increase the visits and it is a good advantage for the competition. In addition, museum or galleries should provide parking places or there should be convenience places nearby. To ease transportation, some museums offer shuttle bus services. As an example, National Air and Space Museum in Washington offers some accessibility options for people; there is a map on internet that shows how to reach the museum, metro rail, also bus services from metro rail, shuttle bus services between different two museums, also metro rail and buses can use from the international airports. Availability of the place also includes opening hours, seasonality of the art organizations. Visiting days and open hours of museum should be clearly identified for the target audience group. Distribution channels and the characteristics of the place should be combined with organization's strategies and other marketing mix tools.

Promotion is another vital marketing tool to attract audiences and it is used in building relationships with other critical markets, especially employees, funders, and sponsors (McLean, 1997, p.138). For developing an effective promotional activity, then first step should be identifying target audience, potential buyers, visitors, current users, deciders, or influencers; individual, groups, particular public, or general public. This is a critical tool to decide what to say, where to say it, and to whom to say it (Kotler, 2003, p.566). Organizations use promotional mix as a part of their marketing strategy. To reach the target audience, museums implement these tools. Messages can be originated from outside the museum such as word of mouth and media editorial. Advertisements can be useful for galleries and museums. Especially through brochures, radio, TV, and printed ads, organizations can effectively reach their target. After museums or galleries define their target market, then they can develop advertising strategy. Also many non-profit service organizations are recognizing the importance of using direct marketing in their efforts to reach wider audiences, build revenue and foster long-term relationships (Arnold and Tapp, 2003, p.141). Through mails or catalogs, an interaction can be developed between target audience group and the organization. Today, rather than be constrained by the physical bounds of objects they house, galleries and museums have moved some portions of their efforts to the internet. (Taylor and Ryan, 1995, pp. 80-88) Through internet and web sites, people can learn about museum or gallery, find information and the most important part is that they can see a part of a collection from there.

## **RESEARCH DESIGN**

### **Purpose**

The purpose of our study is to investigate how the institutions utilize marketing tools in the management of museums. The study also aims to determine the expectations of people from a museum. As a result of the research, it is also possible to understand people's satisfaction level, reasons to visit and frequency of visit to develop appropriate marketing plan for museums.

### **Methodology**

The study consists of two parts; qualitative and quantitative. The qualitative research was conducted through depth-interviews with both private and public museums in Istanbul. In the quantitative part, a survey has been conducted for data collection. The developed questionnaire is composed of three parts. The first part contains questions that aim to determine awareness level of museums in Istanbul. The second part of the questionnaire contains questions that aim to understand the expectations of respondents from museums. The third part contains questions that aim to understand the reasons of why people are not willingness to visit to museums.

## **Sampling**

In the qualitative part, the interviews were conducted with the managers and specialist in museums. In the quantitative part, survey conducted with a group of students in Istanbul. Convenience sampling was used in the selection of the respondents.

## **Data Analysis**

Descriptive analysis has been conducted in this research. Frequency, mean, mode, median, t-test and ANOVA test have been used.

As a result of the reliability and validity tests, Alpha values of the questions are determined between 0.850 – 0.930. These values indicate that the developed questionnaire is reliable. The data were processed through SPSS 13.0 for Windows.

## **Limitations of Research**

Both qualitative and quantitative researches were conducted in Istanbul. Therefore, results only reflect the outcomes in Istanbul, not in all of Turkey. Beside, our sample consists of a small group of students; in a further research sample size may be widened.

## **Findings**

The study, in which 8 museum managers and 95 audiences participated, yielded the following results:

Our sample indicates that 30 respondents did not visit any museum within the last 12 months. More than % 60 of respondents visited the museums between 1 and 3 times in the last 12 months. Only % 4 of the respondents visited to museums at least 4 times. More than 50 % of the respondents preferred to visit to museums with his/her friends. % 27 of respondents preferred to visit to there with his/ her family.

The findings of the study support the fact that the most widely used source for taking information about museum is internet. It was also seen that however reference groups and brochures prepared by museums are very significant sources for taking information about museums, media channels are not preferred too much.

Our sample indicates that the most known museum in Istanbul is Topkapı Museum which is a public one. Private museums - Sabancı Museum, Istanbul Modern and Koc Museum- rank after the Topkapı Museum. It is very interesting that however there are new established museums in Istanbul, the awareness level of these private museums are more than all public museums except for Topkapı Museum. The reason behind this situation may be explained through the effective usage of marketing tools by the management of private museums.

The second part of the questionnaire consists of questions that aim to understand the expectations of respondents from museums. The questions in this part were developed based on marketing mix; product/services, place, price and promotion.



Our sample indicates that “the type of collection”, “staff’s behavior and knowledge”, “presentation style of collection”, “degree of given information about collection”, “variety of collection”, “cleanliness of museum”, “collection specialty and newness”, “availability of educational resources”, and “museum interior design” are so important factors for audiences.

**Table 1: The Importance of Museum Services**

|        |         | Collection | Staff knowledge | Staff behavior | Collection variety |
|--------|---------|------------|-----------------|----------------|--------------------|
| N      | Valid   | 95         | 95              | 95             | 95                 |
|        | Missing | 0          | 0               | 0              | 0                  |
| Mean   |         | 3,71       | 3,49            | 3,66           | 4,25               |
| Median |         | 4,00       | 4,00            | 4,00           | 4,00               |
| Mode   |         | 4          | 4               | 4              | 4                  |

|        |         | Awareness of collection | Education programs | Awareness of museum | Cleanliness of museum |
|--------|---------|-------------------------|--------------------|---------------------|-----------------------|
| N      | Valid   | 95                      | 95                 | 95                  | 95                    |
|        | Missing | 0                       | 0                  | 0                   | 0                     |
| Mean   |         | 4,40                    | 3,09               | 3,33                | 3,89                  |
| Median |         | 4,00                    | 3,00               | 3,00                | 4,00                  |
| Mode   |         | 4                       | 3                  | 3                   | 4                     |

Especially, for audiences, the types of collection and collection specialty are seen as the primary indicators to visit to a museum. In interviews, it is seen that almost all public museums have their own fixed collection, and it is also noticed that in the short run, none of public museums have a plan to accept new collection in their own bodies. Because of this reason, it is seen that most of the audiences visit this kind of museums only one time during their lives. However, private museums always open their gates to the new collections.

The other important tool in marketing is price. For profit organization, pricing strategy is one of the most important strategies to survive in the global competition. But for non- profit organizations, pricing strategy is less important than the others, because they are established for developing a nation’s general welfare.

Both all private and public museums in Turkey are nonprofit organizations. In the interviews, it is seen that both private and public museums’ ticket prices are set in a minimum level. All of them provide free entrance for students, soldiers and old people. Some private museums offer free days/hours for everybody. Main private museums in Turkey are established by very reputable businesses and universities. Having a museum provides these institutions to have a chance to add values to their company names and images. So, they never aim to earn money from ticket price. But they try to earn money through souvenir shops or cafeteria for covering some of museum expenses.

**Table 2: The importance of ticket price**

|        |         | M-ticket |
|--------|---------|----------|
| N      | Valid   | 95       |
|        | Missing | 0        |
| Mean   |         | 3,62     |
| Median |         | 4,00     |
| Mode   |         | 4        |

The findings of the study show that ticket price is one of the important indicators to visit to a museum. In the interviews, public museum managers indicated that many people do not visit to museums because of their ticket prices and most of people believe that museum ticket price is so high.

The other important strategy in marketing is placing strategy. This study shows that factors such as “location of a museum”, “ease of transportation”, “security of location of museum” are considered as the important ones that affect people’s visiting decision to a museum.

In the interviews, the private museums’ managers said that to find a proper location for establishing a museum is very hard in Istanbul. Today, it is almost impossible to open a museum in the city center because of the location cost. Consequently, they search for the proper location close to the city center. Some of the private museums solve this problem with using regular shuttles between the city center and museum. In contrast to the private museums, for public museums, the location of the museum or availability of transportation is not considered by the management. Almost all public museums exist in the major historical areas of Istanbul. The power of this situation provides them an opportunity to attract people to the museum.

**Table 3: The importance of museum location**

|        |         | Location | Transportation | Safety of place |
|--------|---------|----------|----------------|-----------------|
| N      | Valid   | 95       | 95             | 95              |
|        | Missing | 0        | 0              | 0               |
| Mean   |         | 3,84     | 3,72           | 3,85            |
| Median |         | 4,00     | 4,00           | 4,00            |
| Mode   |         | 4        | 4              | 4               |

The last marketing strategy is the promotion of products. It is seen that while all private museums have their own promotion department in their bodies, all promotional activities in the public museums are done by the ministry of culture. It is also seen that private museums use almost all elements in the promotion mix. Web pages should be heavily used by museums, because people prefer to take information from internet and web pages. Awareness of the museum is an important factor while deciding to visit a museum and to create awareness, museums should give more importance on promotion tools.

**Table 4: The importance of museum promotion**

|        |         | Advise for visiting | Web page of museum | Awareness of museum |
|--------|---------|---------------------|--------------------|---------------------|
| N      | Valid   | 95                  | 95                 | 95                  |
|        | Missing | 0                   | 0                  | 0                   |
| Mean   |         | 4,51                | 4,09               | 4,33                |
| Median |         | 4,00                | 4,00               | 4,00                |
| Mode   |         | 4                   | 4                  | 4                   |

Our sample indicates that 30 respondents out of 95 did not visit to a museum in the last 12 months. In the third part, it is aimed to understand the reasons of why people are not willingness to visit to museums. As a result of, it is seen that the main reasons of why people do not visit to museums are ordered as “lack of new collection”, “lack of knowledge about museums”, “limited collection variety”, and “high entrance fee”. These results clearly show that marketing tools, especially product, price and promotion are not used effectively by museums in Istanbul. In the interviews, almost all museum managers said that the main reason of people’s unwillingness depends on their personal attitude. They said that most of the people in Turkey are not interested in visiting museums as a consequence of lack of education about museums. So this problem should firstly solved by governmental policy in stead of marketing tools.

**Table 5: The reasons of why people are willingness to visit to a museum**

|        |         | No new collection | No renovate | No staff knowledge | Don’t like visiting | No time to visit |
|--------|---------|-------------------|-------------|--------------------|---------------------|------------------|
| N      | Valid   | 95                | 95          | 95                 | 95                  | 95               |
|        | Missing | 0                 | 0           | 0                  | 0                   | 0                |
| Mean   |         | 3,84              | 3,95        | 3,68               | 2,32                | 2,85             |
| Median |         | 4,00              | 4,00        | 3,00               | 2,00                | 3,00             |

|      |  |   |   |   |   |   |
|------|--|---|---|---|---|---|
| Mode |  | 4 | 4 | 3 | 2 | 2 |
|------|--|---|---|---|---|---|

|        |         | No transportation | No partner to visit | Fee  |
|--------|---------|-------------------|---------------------|------|
| N      | Valid   | 95                | 95                  | 95   |
|        | Missing | 0                 | 0                   | 0    |
| Mean   |         | 2,78              | 2,35                | 2,91 |
| Median |         | 3,00              | 2,00                | 3,00 |
| Mode   |         | 2                 | 2                   | 2    |

## CONCLUSION

In Turkey, there are many private and public museums but most of public museums do not give importance on marketing activities because they are seen as cultural tools, but not marketable products. But like many other organizations, museums also need marketing strategies. In Turkey, it is seen that marketing strategies are only applied by private museums. Therefore, the awareness level of private museums is higher than the almost all public museums. The research results show that collection is the most important factor that affects people participation to the museum. Private museums renovate themselves through new collections or exhibitions. They offer many different services for the visitors. They care about people needs and demands. In most of the private museums, there are souvenir and gift shops and restaurants where people meet with their friends or have a nice time with their parents. Museums should be a part of society's cultural development. This should be promoted through education programs by schools and educational institutions. Meanwhile, visiting museums should be supported through marketing activities. They should especially care about promotion activities. Activities such as advertising or public relations should be heavily used by museums to promote the collections.

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# **SATISFACTION WITH HEALTH CARE SERVICES EXPERIENCE: JAPANESE PATIENTS**

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## **ABSTRACT**

*This study aims to assess patient satisfaction with health care service experience and points the most meaningful service features that form his overall judgment. Through a non linear approach, we relied on the scatter model to detect the effect of service attributes on Japanese patients satisfaction and intentional behavior. The study highlighted the necessity to adopt evolution that enhance technical quality and medical practices in Japanese health care settings.*

## **INTRODUCTION**

Interest toward health care service quality and patient satisfaction has been remarkable. One emergent question on which care services contributors are trying to answer is: how to satisfy patients, provide service quality and maximize profit under limited resources in a competitive environment ?In many countries, health care organizations are under colliding pressures : law emphasizing patients rights to a good care interfere with policies of cutting costs and insurance systems'pressures and Japan is not an exception. Hence, our interest toward the Japanese patients relations with health care providers. In this paper, we adopt a marketing perspective through which we try to assess the determinants of Japanese patient satisfaction. As the Japanese context is scarcely investigated (in contrast with USA and Europe), our work aims to enrich the current knowledge on health care service quality and patient satisfaction and to unveil some characteristics of health care practices in Japan. Further unlike the majority of patient satisfaction studies that presume that satisfaction is a linear compensatory process (O'Connor and Shewshuk, 2003), we will base our work on a non linear approach. In addition, far from presuming that patients are not interested in the pure medical procedures neither able to judge its appropriateness, we will frame our study by a theoretical model that considers both functional and technical quality. By doing so, we aim to go deeper in investigating patients' reactions and behaviors in order to better assess their needs.

## **BACKGROUND**

### **Considering technical and functional quality**

Satisfaction is a valuable consumer's feedback that drives the service improvement. It provides essential information about the care delivery process characterized by technical and functional features (Zineldine, 2006). Technical quality refers to the performance of core services while functional quality refers to the manner in which the core service is provided (Donabedian, 1988, Gronroos, 1984). Experience of service is formed by the joint and interrelated effects of the technical and process quality dimensions (Orava and Tuominen, 2002; Brady et al, 2006). Though some researches in health care literature disregarded the importance of technical quality since it was believed that customers would not be able to discern technical aspects of the service, works by Zifko Baliga and Krampf (1997), Frazer Winsted (2000) and Beattie et al (2002) could prove the positive effect of doctors and nurses perceived skills on patient satisfaction. The patient is able to infer an evaluation of his cure procedure through the skills shown by the doctor and nurses when

dealing with him (Trumble et al, 2006). Further, the patient's ability to understand disease's description and treatment procedures is developed due to scientific knowledge accessibility easiness. To this respect, it seems unfair to neglect the effect of technical quality on the patient satisfaction. Furthermore, more holistic comprehension of the service experience judgment implies consideration of all the features on which patients may key in to evaluate the provided service. Our framework will be then based on the Nordic approach of service features where both technical and functional aspects are equally evoked (Gronroos, 2001) when the service is subject to customer's evaluation.

**H1<sup>a</sup>: patient satisfaction depends on functional and technical quality of health care service**

**H1<sup>b</sup>: patient intentional behavior is influenced by functional and technical attributes.**

## **Compensatory/non compensatory process**

In an attempt to simplify the comprehension of patient reaction to health care service experience, researchers have depicted satisfaction antecedents (service attributes) and consequences (intentional behaviors) in linear models. Many works dealt with "satisfaction with this and with that" (O'Connor and Shewchuk, 2003, p.22) considering that patients mathematically average their reactions to the different health care service attributes to come out with a level of satisfaction with their experience. However, psychological theory comes to weaken and contrast the linearity presumption's validity stipulating that in reality, satisfaction does not follow a linear judgment processing (Cronin, 2003). In the same vein, marketing researches posit that some attitudes have a strong impact on consumer behavior whereas some other attitudes do not influence a person's action at all (Van Doorn et al, 2007). Our facts' interpretation is nor linear neither objective. Human subjectivity and selection shape evaluation (Einhorn, 1971). Persons may be inductive; they just select one element and base the overall evaluation on it (Kardes et al, 2004). Evaluation process is often not additive (Brannick and Brannick, 1989), and then positively evaluated attributes cannot compensate for the negatively perceived ones. As consequence, just one miss performance can lead to an overall dissatisfaction (Cronin, 2003, Brady et al, 2006). The use of non additive models to approximate processes underlying evaluation, can lead to greater accuracy in quantification of cognitive processes of decision making and evaluative judgment (Einhorn, 1971; Cronin, 2003; O'Connor and Shewchuk, 2003). Thus, non linear models are likely to come closer to describe and predict judgment process (Brannick and Brannick, 1989). Among several non linear models, Ganzach and Czapczkes (1995) concluded that the non linear scatter model is the best to fit the data. The scatter model is developed by Brannick and Brannick in 1989. It has the strength to indicate whether the evaluation is following a compensatory/non compensatory process and/or the nature of attributes' addition (conjunctive/disjunctive).

Patient satisfaction is a reaction to health care attributes (Zineldine, 2006; Powers and Dawn Bendall, 2004). Information concerning these attributes can be integrated in two possible ways: compensatory and non compensatory. In compensatory model, the patient adds linearly his experience's appraisals. The low value attributed to one feature can be compensated by a high value accorded to another attribute. In non compensatory model, one or some attributes perception may overcome all the other attributes and hence patient ends with an overall positive or negative evaluation with reference to one or few attributes (Otani and Harris, 2004). Two types of configurable rules govern the non compensatory performance evaluation: disjunctive and conjunctive rules (Ganzach, 1995). In the disjunctive model the rating is fundamentally based on positively evaluated attributes. In the conjunctive model, negatively appraised attributes have more impact on devaluing the overall rating (Brannick and Brannick, 1989). If people are risk averse and they avoid making mistakes, negative attributes are often highly prevailing and then conjunctive model are more likely to depict evaluation process (Otani and Harris, 2004). As medical care service consumption seems to be a risky experience where patient is highly involved and mistakes should be avoided at maximum, **we can hence envision that patients will rely on a conjunctive process when assessing their medical care experience and deciding to reuse and recommend the service.**

**H2<sup>a</sup>: Patient satisfaction is inferred according to a conjunctive process**

**H2<sup>b</sup>: Patient intentional behavior is decided relying on a conjunctive process**

## **Health care services in Japan**

In a macro level, Japan appears to have an excellent health care system as services are mostly available to all people in relatively cheap prices. However, recently, discussion has arisen about poor micro economic efficiency (Ogata, 2001). Likewise, the rare researches conducted in Japan about health care quality and patient satisfaction revealed the existence of many problems that affect the relationship provider/ patient and jeopardize the patient health (Ovretveit, 2001; Kurata et al, 1994, Yutaka, 2002). Furthermore, the researches' scarcity attests for a reluctance to adopt a marketing perspective in Japanese health care organization due to a tendency of cutting cost while maximizing profit. Because of the per fee payment system and the services prices fixed by the government, the majority of Japanese health care settings are offering "standard services" which lack specialization and deprive the medical institution to have competitive advantages. In addition, medical and administrative tasks are overlapped as the physicians are in the same time managers of the setting (Levin et al, 1987). Medical care services are becoming high volume services where the absence of restriction on frequency and duration of consultation appears to be responsible for the high number of visit and the short consultation time. Quality seems to be sacrificed by Japanese doctors as they pursue quantity to maintain their incomes. Doctors try to see the maximum number of patients without caring about "how" they see patients neither about "what" they do to patients. In this sense, Onda et al (2004) remarked that the ability to communicate with patient showing him enough interest to hear his story and complaints is not at yet Japanese doctor's skills. Consequently, and not surprisingly, Japanese out patients evaluate pharmacists as best among physicians and nurses based on the performance of medical consultation and the ability to explain instructions and treatment (Onda et al, 2004). Hence, our interest is focused on the Japanese consumers of medical services and their satisfaction with health care service experience. Through such focus, we try to enrich existing knowledge and to detect potential problems that could affect patient experience of health care services and then illuminate some enhancement ways.

## METHODOLOGY

### Research questionnaire and sample

We carried an empirical investigation among Japanese patients to test the validity of our hypothesis. We took into consideration both of the medical service's facets: the functional and the technical quality (Gronroos, 2001). The functional features are depicted by 21 items extracted from the SERVQUAL instrument (Parasuraman *et al.*, 1988). Explicit aspects of clinical quality include provider's qualification using the proper diagnostic equipment and the selection, timing and sequencing of the medical diagnosis and treatment (Li and Collier, 2000). To depict the technical quality, we used sentences like "the doctor service (explanation, listening, ability and knowledge...) was good", "diagnostic was performed according to the explanation given by the patient" and "treatment was appropriate" so any patient would be able to understand. We asked participants to recall their last visit to the doctor and to answer questions. Overall satisfaction was assessed by a single item asking respondents how they felt after consuming the medical service. Intentional behaviors were captured by two questions asking patients about plans to return to the same provider as well as their intention to recommend it to families and friends. For all propositions, a five-point Likert-type scale was used to capture answers ranging from 1 (totally disagree) to 5 (totally agree). A pilot study was carried out with 12 outpatients experiencing services within the last three months. Respondents suggested the addition of item traducing the existence of recommendation to be examined by the doctor. The question from the type "are you introduced by someone?" exists in the questionnaire to be filled by any Japanese patient when he/she goes to a medical setting. Moreover, some respondents admitted the fact that some "famous" doctors require "gifts" to see the patients. Hence we added the item "you needed a recommendation or offered gifts to be admitted". The self-administrated questionnaire was then distributed to 200 outpatients visiting medical institutions operating in Kansai area, west Japan. All respondents were aged more than 18 years old and were direct consumers of medical services. Offering almost similar medical consultations and treatments, institutions were different in terms of appearance and material innovation. Staff (receptionists, nurses and physicians) working in these clinics were all Japanese. One hundred and fifty nine questionnaires (79 males and 80 females) were available for statistical use – a 79% response rate. Respondents' average age was 43.8 years (sd =12.7). 84% were university-level educated.

## Data analysis

Cronbach alphas for quality and intentional behaviors scales were, respectively, 0.89 and 0.84 (>0.7). The scale's reliability condition, therefore, is satisfied (Nunnally, 1987). To assess the service attributes structure we proceed by EFA using principal component analysis with Varimax rotation. Validity of the found structure was verified through a CFA. CFA confirmed the existence of three main constructs. The relationships quality attributes/ satisfaction and quality attributes/ intentional behavior were estimated using the Scatter model developed by Brannick and Brannick (1989):

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_nX_n + [B_{k+1} \sqrt{\sum_{i=1}^n (X_i - \bar{X})^2}]$$

Where Y is the overall satisfaction or intentional behavior, a is an intercept,  $X_i$  is the  $i$ th attribute evaluation,  $\bar{X}$  is the average of attribute evaluations in one profile,  $b_i$  are coefficients,  $B_{k+1}$  is a coefficient to estimate and that indicates whether consumer are more influenced by negative values or positive values when evaluating the service. The Scatter model includes two parts: the first one is a linear additive model, and the second part is a sum of the negative or positive values that may occur when evaluating each attribute according to the judge expectation. If the estimated relation was linear then the scatter term's coefficient will be insignificant and we rejoin the traditional linear model. However if it was really non linear, the coefficient will be significant and subject to a positive or negative value. The signal is of great utility. Negative one indicates that the consumer evaluation is more influenced by negative alternatives than by positive ones. Positive one means that the consumer evaluation is more influenced by the positive alternatives more than by the negative ones.

## RESULTS AND DISCUSSION

### Health services attributes structure

The EFA revealed three main factors which explain 55.63% of the total variance. The CFA results in good fit indexes (RMR=0.024, GFI=0.961, CFI=0.985 and RMSEA=0.063). The confirmed structure depicts three factors named respectively "staff behavior when delivering the service", "technical quality" and "physical appearance". The first factor groups three items "the service was quickly performed" "The staff are willing to help patients" and "the staff behavior transmit trust and confidence to patient". This factor traduces the functional features of the service. The second factor is formed by three items "the doctor service (explanation, listening, ability and knowledge, etc) was good", "diagnostic was performed according to the explanation given by the patient" and "treatment was appropriate". Those items depict the medical service technical facet. The third factor draws the service tangible dimension. The two items "the setting was visually attractive and beautifully decorated", and "medical staff in the setting have neat appearance" are related to this factor. The features categorization seems to fit the quality structure presented by Gronroos (2001). The functional quality is not enough to draw the patient assessment of medical service experience and it seems necessary to refer to the technical attribute in order to understand better how patients perceive the provided service.

### Overall satisfaction judgment

To be introduced in the scatter model, the composite index (CI) was computed for each attribute (independent variable) as the arithmetic mean of all items measuring that attribute.

The scatter model estimation results show that only the staff behavior and the technical quality are statistically significant and positively related to the overall satisfaction. Japanese patients' satisfaction depends on technical quality and staff behavior.  $H1^a$  was confirmed as patients keyed in on both functional and technical features to evaluate their health care service experiences. The non significance of the scatter term indicates that Japanese patients are following a compensatory judgment process while assessing their satisfaction with medical service experience. Hence  $H2^a$  is infirmed. Technical quality weight seems to be more important



(coefficient 0.67) than staff behavior weight (0.23). Our results diverge with Otani and al (2003) finding that American patients depict a non compensatory satisfaction process where the nurse care benefits from the greatest importance. The contradiction seems to be understandable as American and Japanese have many cultural dissimilarities as well as totally different health care systems. In fact Japanese health care settings present standard procedures of admission and discharge. Yet, the words pronounced by working staff seem to be routine and repeated by everyone everywhere. Such routine does not lay much in satisfaction judgment and patients focus on more human and interactive relationship characterized by the staff willingness to help and serve him quickly while transmitting him confidence and trust. Furthermore, the excessive mechanized diagnostic and treatment prescription has deepened patients' needs to skillful doctors. Interactive service process where physician is able to carefully listen to the patient explanation and "friendly" communicate with him in order to prescribe the appropriate treatment seems to be a necessary ingredient to satisfy Japanese patients. Nonetheless, important majority of Japanese physicians working under the duty to allocate equal time for every patient (Kurata et al, 1994), often rely on the result of mechanical diagnostic and prescribe drugs to the patient without even touching him.

## **Intentional behavior**

Composite index for the two items depicting intentional behavior was computed. The results of analysis predicting intentional behavior indicate that the technical quality attribute ( $p < 0.00$ ) and the setting appearance attribute ( $p < 0.05$ ) are significant and positively related to the intentional behavior.  $H1^b$  is confirmed. However, the insignificance of the scatter term traduces the linearity of the causal relationship between health care service attributes and intentional behavior. These results depict the compensatory process by which the patient forms his experience evaluative judgment and his decision to reuse and recommend the provider.  $H2^b$  is infirmed. While deciding about whether to return to the same provider and recommend it to family and friends, Japanese patients focus on the core of their service experience first (coefficient: 0.61) and the setting and personnel appearance second (coefficient: 0.2). "Was the treatment good enough to cure the disease?" "Was the doctor able to perform good diagnostic and explanation so the patient could understand the situation?" "Was the setting clean and properly organized?" "Did nurses have neat appearance?" seem to be questions on which the answers affect patient decision to reuse and recommend the service.

The weight accorded to technical quality when evaluating the medical service and deciding about future behavior illustrates the evolution of Japanese society generally and the patient/provider relationship especially. Due to the Japanese Confucian culture considering physicians in the top of hierarchy as skillful and qualified people, Japanese patients have been long time classified in the bottom of hierarchy as they are presumed to lack scientific knowledge and power. Japanese health care traditional approach gives short shift to patient rights and emphasizes doctors' authority (Westmore, 2006). However, it seems that such power asymmetry assumption should not be the rule anymore as patients are becoming more aware about their rights (Ogata, 2001). The evolution of Japanese society and the adoption of many liberal and individualist norms (Gjerde and Onishi, 2000) encouraged patients to develop a critical view toward their cure and care services. Lack of communication with doctors, shortage of skillful physicians, inappropriate staff behavior and setting appearance may lead the patient to experience dissatisfaction and infer mistrust of practicing doctors and their medical-care technology especially with the frequent reporting of medical errors (Yutaka, 2002). As still no serious measures are taken to listen to patients' complaints, dissatisfied patients often react by experiencing new providers as the insurance system allows access to any provider at the same price. Further, dissatisfied patients are reluctant to recommend the provider fearing from "losing face" inside their group (Triandis, 2004). It merits noting that such fragile relationship that links patients to their health care service provider is likely leading them to point the setting's closeness to home or work as a first motivation beyond the provider's choice (50.9% of patients in our sample).

## **IMPLICATIONS**

Taking into account both technical and functional facets of the medical service while using the scatter model, this work relied on a reliable framework able to better depict the patient reaction to health care service experience. Researchers in health care service marketing are invited to rely more on such models in order to

have better grasp of patient reaction and predict his future behavior. Equally, the technical facet should figure among the attributes believed to affect patient satisfaction and intentional behavior. Researchers should invest more on defining and measuring this dimension. Results show how Japanese culture characteristics and medical practices specificities could provide better explanation to the Japanese patients' reactions. Researchers in health care service ought to use cultural context as a foothold to understand results and predict phenomena. Our findings indicate that Japanese patients overall satisfaction judgment and decision about intentional behavior are result of linear compensatory process. Managers who are in the same time the physicians in Japanese health care settings should pay more attention to the "how" and the "what" of the service through developing a customer orientation among the different employees. As service technical quality seems by far largely to affect patient satisfaction and intentional behavior, providers should try to adopt medical practices which enhance functional specialization rather than underdeveloped standardization (Yutaka, 2002). Physicians ought to develop communication, diagnostic and treatment skills in order to obtain better service output. Further, it seems that more than pronouncing routine words and adopting mechanic courteous manner, staff should be able to demonstrate their willingness to help patient, transmit him trust and confidence, and perform the service quickly. Patients seem to be exhausted from the long waiting time (88.7% of patients in our study admit waiting long time to see the doctor) and the busyness of staff to accomplish routine tasks. Incentive to the medical providers should be more enhanced to encourage the effective use of appointment system in order to save patient's time and better organize staff's work. Further, a well managed space with beautiful decoration and nurses having neat appearance could be also a key to attract more customers and then to maximize profit. Indeed such evolvement could not be accomplished without a real political willingness to change the current situation and to be more opened on Japanese society needs. Japanese health care system should encourage a medical education which emphasizes clinical training in the different medical treatments and incites knowledge diversification even if many Japanese private doctors may oppose such system to hide their shortcomings. Nonetheless, as a rule, Japanese doctors receive hands-on training only in their specialty and then they are often unable to understand exactly the whole health situation of patients. Such rule should be changed in order to improve medical training, renew medical education and employment systems. Revising the health care practices and lows as well as the excessive cutting cost policy, and finding a solution to increase number of doctors and medical staff are challenges to surmount in order to enhance health care service system.

## **CONCLUSION**

Relying on a non linear approach to assess how patients cognitively process their health care experience, this paper explores a scarcely investigated context in medical services literature which is Japan. Furthermore, the study was designed with respect to the theoretical frame work that considers both functional and technical quality to assess patient judgment of health care experience. Though results could illuminate more the understanding of patient reaction to health care experience generally and within the Japanese context specifically, this study seems to be limited by the relatively small sample. Because Japanese patients and health care settings are reluctant to answer the questionnaire and cooperate with the research due to their unfamiliarity with such kind of studies, future researches should rely on the help of official organization such as health ministry to run larger investigation. Broadly, our study could demonstrate the obligation for Japanese health care services policy and delivery to evolve and take in account the patient effective need. Satisfied loyal patients are an asset for the providers to maintain their viability. The evolution seems to be necessary for all the system (medical education and practices) before an unsolvable "breakdown" of the Japanese medical services.

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# **PASSENGERS' IMPORTANCE AND SATISFACTION LEVEL OF LOW COST AIRLINES: A CASE STUDY PEGASUS AIRLINES**

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## **ABSTRACT**

*The airline industry has been described as "highly dynamic" and "intense competitive". Attaining high level of consumer satisfaction is thus mandatory for company in the airline industry in order to survive, maintain or increase market share. To this end, management needs adequate measure of consumer satisfaction with services rendered by airlines.*

*Today, low cost airlines are very important in airline industry. So many academic papers have recently been published on low cost airlines. However, there is a fat lot search concerning low cost passenger's importance and satisfaction level of low cost airlines. In other words, little is known which factors are important factors and the satisfaction level of them. In this study, the importance and satisfaction levels of the low cost airlines passengers have been tried to be determined. For this purpose, the importance and satisfaction levels for passengers of low cost airline are measured involving on twelve factors. The study is based on responses from 100 passengers who flew on Pegasus Airlines. Empirical data was collected at Sabiha Gökçen International Airport in İstanbul, Turkey. SPSS 10.0 (Statistics Pack for Social Sciences) was used in the analysis.*

## **INTRODUCTION**

Customers are the lifeblood of any organization and customer satisfaction is the key to continued organizational survival (Berry, 1987). Customer satisfaction is becoming an increasingly salient topic in many firms and in academic research. One main rationale behind this interest is that customer satisfaction is believed to be associated with fruitful customer behaviour from the firm's point of view (Söderlund, 1998).

However airline is one of the world's largest service industries. In highly competitive airlines market, customer satisfaction is a key driver of performance, making its measurement and management crucial. Providing high quality service and ensuring customer satisfaction are widely recognized as important factors leading to the success of the airline industries.

## **DEFINITION OF CUSTOMER SATISFACTION**

The word satisfaction first appeared in English during the thirteenth century. The word satisfaction itself is derived from the Latin satis (meaning enough) and the Latin ending -faction (from the Latin facere-to do/ make). Early usage centred on satisfaction being some sort of release from wrong doing. Later citings of the word emphasise satisfaction as a "release from uncertainty" (The Oxford Library of Words and Phrases, 1993). Modern usage of the word has tended to be much broader, and satisfaction is clearly related to other words such as satisfactory (adequate), satisfy (make pleased or contented) and satiation (enough) (Parker- Mathews, 2001).

Customer satisfaction has been considered one of the most important constructs, and one of the main goals in marketing (Erevelles and Leavitt, 1992).

Kotler defines customer satisfaction as follows: *Satisfaction is a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations* (Kotler, 1997).

According to other definition satisfaction is defined as a post consumption evaluation that the chosen alternative is consistent with prior beliefs and expectations (with respect to it). Dissatisfaction, of course, is the outcome when this confirmation does not take place. (Laws, 2005)

Customer satisfaction has become one of the key issues for companies in their efforts to improve quality in the competitive marketplace. It can be seen as either a goal of or a measurement tool in the development of construction quality. Customer satisfaction is considered to affect customer retention and, therefore, profitability and competitiveness (Anderson and Sullivan 1993). According to Jones and Sasser (1995), complete customer satisfaction is the key to securing customer loyalty and generating superior long-term financial performance. It is also apparent that high customer satisfaction leads to the strengthening of the relationship between a customer and a company, and this deep sense of collaboration has been found to be profitable (Kärnä, 2004)

Satisfaction is particularly important in relation to organizations that deliver services, rather than goods. Customer satisfaction with goods frequently focuses on the product itself: does it work, doing what it is supposed to do? In the service field this is not the case. Since the “product” is intangible, satisfaction is a perception about performance, rather than the utilization of an object (Berry, 1987)

In recent years, a growing number of studies have focused on customer satisfaction in the service industry (Cadotte and Turgeon, 1998; Barsky and Labagh, 1992; Almanza *et al.*, 1994; Gundersen *et al.*, 1996; Qu and Li, 1997). Swan and Combs (1976) were among the first to argue that satisfaction is associated with performance that fulfills (equal to or above) expectations, while dissatisfaction occurs when performance falls below expectations. The common reason for studying customer satisfaction is the profitability that is generally believed to be brought by customer satisfaction (Barsky and Labagh, 1992; Gundersen *et al.*, 1996; Lam *et al.*, 1996). The key benefits brought by customer satisfaction are repeat purchases, favorable word-of-mouth publicity, reduced customers' price elasticity, and increased loyalty (Fornell, 1992). Customer satisfaction is a result of comparison of the service performance with expectation (Barsky, 1992; Hill, 1986; Oliver, 1980). This cognitive comparison between pre-use expectations and post-use perception has been shown to be a predictor of satisfaction in some situations (Oliver, 1980). Customer satisfaction is therefore defined as post-purchase evaluative judgment concerning a specific product or service (Fornell, 1992; Gundersen *et al.*, 1996) (Vincent C.S., 2000).

As customer needs and expectations are changing all the time, this will lead to a situation whereby customers keep setting ever higher standards, and therefore to achieve perfection is impossible (Farson, 1997). Knowing the needs of the customer makes it easier to anticipate the ideal set of products and services. A major flaw for all the companies has proved to be their inability to understand other ways that customers can be satisfied (Rothschild, 1984).

Implementing customer satisfaction philosophy means identifying customers, then identifying their needs and expectations and finally, measuring their perceptions (Stenberg, 1997).

Companies must periodically measure customer satisfaction in order to learn how satisfied its customers are. Torbica and Stroh (2001) argue that, in construction, the extent of customer satisfaction is only known late in the project when most of the customer's money has already been spent. When companies know which attributes of a service or product affect customer satisfaction, their challenge is to modify their current offering in a way that would lead to maximum customer satisfaction (Kärnä, 2004). A customer satisfaction study should begin by asking about the factors affecting customer satisfaction, how important those factors are for the whole, and the level of customer satisfaction (Järvelin *et al.*, 1992; Koskela, 2002).

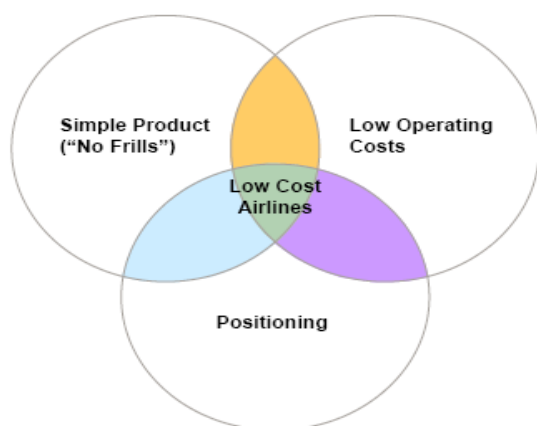
## LOW-COST AIRLINES

According to the Statistics and Forecast (STATFOR) Service of Eurocontrol there is no single best definition of a low-cost carrier (Groote, 2008). It is generally accepted that a low-cost carrier or low cost airline (also known as a no-frills or discount carrier/airline) is an airline that offers low fares in exchange for eliminating many traditional passenger services. (<http://en.wikipedia.org/>, 2008)

Today low-cost carriers pose a serious threat to traditional "full service" airlines, since the high cost structure of full-service carriers prevents them from competing effectively on price - the most important factor among most consumers when selecting a carrier. From 2001 to 2003, when the aviation industry was rocked by terrorism, war and SARS, the large majority of traditional airlines suffered heavy losses while low-cost carriers generally stayed profitable.

What's the secret behind the success of these airline companies?

The "low-cost carrier" business design is defined by three key elements: (Mercer Management Consulting, 2002)



- **Simple product:** catering on demand for extra payment, planes with narrow seating (but bigger capacity) and only a single class; there is no seat assignment, they don't offer frequent-flyer program's, ticketless travel
- **Positioning:** Non-business passengers especially leisure traffic, and budget priced, short-haul point-to-point traffic with high frequencies, making an aggressive marketing; using secondary airports (e.g. regional airports), a strong competition with all transport carriers
- **Low operating costs:** low wages, low air fees, low costs for maintenance, reduced employment (with much lower rates of number of passengers per employer), cockpit training and standby crews due to homogeneous fleet, high resource productivity, short ground waits due to simple boarding processes, no air freight, no hub services, short cleaning times, high percentage of online sales (Internet).

Briefly, the core characteristics common to the majority of low cost airlines are: high aircraft utilization, internet booking, use of secondary airports, minimum cabin crew, lower wage scales, lower rates of unionisation among employees, one class of seating thus allowing more seats per aircraft than traditional airlines (who offer alternative seat pitches for different classes of travel), short 'on the ground' turn around times, no cargo carried to slow down turn around times, a simple fare structure and pricing strategy, e-ticketing, no seat allocation, passengers having to pay for food and drink, simple or no frequent-flyer program, flexible working terms and conditions for employees relative to traditional airlines, point to point services and no connections offered (Doganis, 2001). Combined these factors have enabled airlines to reduce their costs and offer lower fares relative to prices traditionally charged for a route. (Francis, Humphreys, Ison, Aicken, 2006; Oliveira, 2008)

The entry of low-cost carriers providing basic air transport service with no frills and lower fares has considerably transformed competition in the airline industry. Notwithstanding a phenomenon of partially or fully liberalized airline markets dating back to the US deregulation process of the seventies, it was only recently that this low-cost revolution (Doganis, 2001) has resulted in the formation of a well recognized and distinct business strategy and a sustainable market niche. (Oliveira, 2008)

Starting out in 1971 as a small carrier in Texas with only three jets, Southwest Airlines is credited with giving birth to the low-cost-carrier phenomenon. Its founding mission was to fly passengers to short-haul destinations, on time and for the lowest fare possible. Nearly 36 years later, countless carriers have copied the philosophy. (Kerensky, 2007)

Today, it operates 2,800 daily flights to 60 airports in 59 cities across the United States, and registers yearly almost 70 million passengers. According to data gathered in 2003, Southwest Airlines is currently one of the largest domestic airline companies of the USA and it is even world's third biggest just after American Airlines and Delta Air Lines. Around 30 percent of all flights in the USA are realised by low-cost carriers (De Groote, 2008).

Europe's history of low-cost airlines is much younger, but those airline companies are for sure trendsetters of the 1990s. The expansion of low-cost carriers in Europe coincided with the final deregulation of the market during the 1990s. Genuine low-cost operations began in Great Britain in the 1990s with the Irish company Ryanair (founded in 1985), which was patterned on American Southwest Airlines. The European market is without any doubt characterized by the expansion of the existing low-cost airlines (e.g. Ryanair, easyJet), new upstarts (e.g. Wizzair, first flight on 19 May 2004), takeovers (e.g. easyJet) and bankruptcies with market exits (e.g. AB Airlines, Air Polonia) (De Groote, 2008).

Global flight information company OAG released a 2006 report identifying 40 low-cost carriers in Europe alone. It also revealed that Ryanair, a low-cost heavyweight based in Ireland, was carrying more passengers per month than British Airways. And the number of passengers interested in booking with low-cost names is on the rise. According to OAG's Quarterly Airline Traffic Statistics The low-cost sector accounted for 16 per cent, or 416,000, of the 2.6 million flights scheduled for July 2007 (Kerensky, 2007).

## PEGASUS AIRLINES

Pegasus Airlines was established on 1 December 1989 and started operations on 15 April 1990. Pegasus Airlines is one of the biggest companies in Turkey with a passenger capacity of more than 4 million passengers per year. Pegasus Airlines is an airline based in Istanbul, Turkey. It operates holiday charter flights to Turkish resorts from around 100 destinations in 17 countries, scheduled services to 17 domestic destinations and 13 destinations in Europe and on demand charters and ACMI leases. Its main base is Atatürk International Airport, Istanbul, with a hub at Antalya Airport. The Pegasus Airlines fleet consists of the following aircraft (at June 2007): 2 Boeing 737-400, 3 Boeing 737-500 and 12 Boeing 737-800.

The airline has also ordered 12 Boeing 737s (6 firm orders for 737-800, and 6 options for either of 737-700, 800 or 900 ER). Pegasus Airlines average fleet age is 6.9 years (at July 2006). Pegasus Airlines is Turkey's only private airline whose wide networks of domestic flights depart from Istanbul Sabiha Gökçen International Airport. (<http://www.pegasusairlines.com>, 2008)

## RESEARCH METHODOLOGY

**Objective of the Study:** In this study, the importance and satisfaction levels of the low cost airlines passengers have been tried to be determined.

**Limitations of the Research:** The research is limited by the questionnaire answered between the 26- 30 of April, 2007 by 100 passengers. Data were collected from passengers departing from Sabiha Gökçen Airport.

The international terminal of the Sabiha Gökçen Airport was chosen as the main data-collection point which has one of the second largest international terminals and the low cost airport in Turkey. All the same Sabiha Gökçen Airport is located at the crossroads of Europe and Asia. All scheduled domestic flights of Pegasus

Airlines depart from Istanbul Sabiha Gökçen International Airport, which is the newest addition to Turkey's airports. (<http://www.sgairport.com/>, 2008)

**Research Method:** Face-to-face interview is used for the research.

**Research Medium:** The research medium consists of 100 passengers. For sampling purposes, 100 was randomly selected from the passengers between 26- 30 of April and included in the questionnaire analysis.

**Collection of the Research Data:** A pilot work has been done with 16 passengers to learn about how good the questions in the questionnaire form serve for the objective of the research. According to answers to those questions, some modifications have been done in the questions. 100 usable questionnaires were gained in the research and Microsoft Office Excel and SPSS 10.0 (Statistics Pack for Social Sciences) were used in the analysis.

## Findings

**Table 1. The level of importance of low cost airlines by passengers**

| The level of importance of low cost airlines by passengers | Means       |
|--|-------------|
| Convenience of schedules                                   | <b>1.23</b> |
| On time performance  | <b>1.20</b> |
| Safety   | <b>1.14</b> |
| Types of airlines  | 2.35        |
| Price  | <b>1.61</b> |
| Comfort  | 1.82        |
| Food and drinks  | 2.25        |
| Personnel behavior   | 1.48        |
| Airline images   | 1.88        |
| Baggage services   | 1.65        |
| Recommendations of travel agent                            | 2.58        |
| Cabin services   | 1.78        |
| n=   | 100         |

1= Exactly important 2= Important 3= Neutral 4 =Not important 5 =Exactly not important

When the level of importance of low cost airlines by passengers was analyzed; it has seen that a big part of the factors has been determined as “exactly important” for the factors. However the factors such as safety, on time performance, convenience of schedules have come into prominence much more in proportion to the others. It is found that the types of airlines, food and drinks, recommendations of travel agent factors have been considered “not exactly important” factors by the passenger.

**Table 2.The Level of Satisfaction of the Pegasus Airlines perceived by the passengers**

| The level of Satisfaction of the Pegasus Airlines perceived by the passengers | Means       |
|---|-------------|
| Convenience of schedules  | <b>1.76</b> |
| On time performance   | <b>1.89</b> |
| Safety  | <b>1.64</b> |
| Types of airlines   | 2.38        |
| Price   | <b>2.15</b> |
| Comfort   | 2.33        |
| Food and drinks   | 2.67        |
| Personnel behavior  | 2.09        |
| Airline images  | 2.34        |
| Baggage services  | 2.10        |
| Recommendations of travel agent   | 2.61        |
| Cabin services  | 2.06        |



|    |     |
|----|-----|
| n= | 100 |
|----|-----|

1=Exactly satisfying 2=Satisfying 3=Neutral 4=Not satisfying 5 =Exactly not satisfying

When the level of satisfaction of the Pegasus Airlines perceived by passenger convenience of schedules, on time performance and safety has been determined as “exactly satisfying” for the passengers. However the factors such as price, types of airlines, price, comfort, food and drinks, personnel behavior, airline images, baggage services, cabin services recommendations of travel agent have been considered “satisfying” factors by the passenger instead of exactly satisfying.

**Table 3. Comparison of the Importance and Perceived Satisfaction Levels for the passengers on the Pegasus Airlines**

| <b>Comparison of the Importance and Perceived Satisfaction Levels for the passengers on the Pegasus Airlines</b> | <b>Means</b> | <b>Means</b> |
|--|--------------|--------------|
| Convenience of schedules   | <b>1.23</b>  | <b>1.76</b>  |
| On time performance  | <b>1.20</b>  | <b>1.89</b>  |
| Safety   | <b>1.14</b>  | <b>1.64</b>  |
| Types of airlines  | 2.35         | 2.38         |
| Price  | <b>1.61</b>  | <b>2.15</b>  |
| Comfort  | 1.82         | 2.33         |
| Food and drinks  | 2.25         | 2.67         |
| Personnel behavior   | 1.48         | 2.09         |
| Airline images   | 1.88         | 2.30         |
| Baggage services   | 1.65         | 2.10         |
| Recommendations of travel agent  | 2.58         | 2.61         |
| Cabin services   | 1.78         | 2.06         |
| n=   | 100          | 100          |

1=Exactly important 5= Exactly not important

1= Exactly satisfying

5=

Exactly not satisfying

When the comparison of the importance and perceived satisfaction levels for the passengers on the Pegasus airlines are examined, it is seen that there is not very important differences between the importance and satisfaction levels.

As can be seen in the table, convenience of schedules, on time performance and safety “exactly important” and perceived by passengers “exactly satisfying”.

When the factor price, comfort, personnel behavior, airline images, baggage services, cabin services as “exactly important” by passengers and these factors perceived “satisfying” instead of “exactly satisfying”.

It is found that the types of airlines, food and drinks, recommendations of travel agent factors have been considered “important” and these factors perceived by the passenger as “satisfying”.

## CONCLUDING REMARKS

The general aim of the research, the importance and satisfaction levels of the low cost airlines passengers have been tried to be determined and realized as limited with 100 passengers of Pegasus Airlines.

It is possible to summarize the findings as in the following;

- The safety, on time performance, convenience of schedules can be mentioned among the most important factors for the passenger low cost airlines. However the factors such as comfort, airline images, baggage services, cabin services and personnel behaviors’ have come into prominence much more in proportion to the others in terms of the importance attached.

- It is found thought that the types of airlines, food/drinks, recommendations of travel agent factors have been considered “not exactly important” factors by the passenger. This is expected result. Because of passengers only want to fly point to point.
- When the level of importance of low cost airlines by passengers is analyzed, price is not important as much as on time performance, convenience of schedules. It’s very interesting.
- When the comparison of the importance and perceived satisfaction levels for the passengers on the Pegasus Airlines are examined, it is seen that there is not very important differences between the importance and satisfaction levels. According the results, convenience of schedules, on time performance and safety “exactly important” and perceived by passengers “exactly satisfying”. Nonetheless price, comfort, personnel behavior, airline images, baggage services, cabin services as “exactly important” by passengers and these factors perceived “satisfying” instead of “exactly satisfying” and types of airlines, food and drinks, recommendations of travel agent factors have been considered “important” and these factors perceived by the passenger as “satisfying”.

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# **THE ROLE OF AN IDENTIFICATION TECHNOLOGY ON FIRM PERFORMANCE: A CONCEPTUAL MODEL PROPOSAL**

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## **ABSTRACT**

*Customers are more demanding in terms of responsiveness, level of service, quality of products and costs. But many times firms only could reach these goals if they invest in new technologies. The new technology that has received considerable attention from academics and practitioners is the Radio Frequency Identification (RFID) technology. In this context, this paper aims to highlight the potentials associated with the utilization of the RFID technology in logistics field and its contribution to the performance of firms. That is, it wants to emphasize the importance of this technology to firms perform the logistics activities faster, with more quality, cheaper and with more responsiveness.*

## **INTRODUCTION**

The Radio Frequency Identification (RFID) is the generic name attributed to the technologies that use the waves radio (Jones et al., 2005) for the automatic identification of objects, positions or persons through electromagnet answers and at a considerable distances (So and Liu, 2006). It allows that firms produce, warehouse and deliver a high quantity of data quickly (Bange, 2006). RFID is an emerging technology intended to complement or replace traditional barcode technology to identify, track, and trace items automatically. RFID is claimed to add intelligence to and to minimize human intervention in the item identification process by using electronic tags. The tags are significantly different from printed barcodes in their capacity to hold data, the range at which the tags can be read, and the absence of line-of-sight constraints (Meyerson, 2007).

This conceptual paper aims to highlight the potentials associated with the utilization of the RFID technology in logistics field. That is, it wants to emphasize the importance of this technology to firms perform the logistics activities faster, with more quality, cheaper and with more responsiveness. The paper is structured as follows. We start with the characterization of the RFID System in terms of the elements that constitute it (readers, tags, software and security programs). The following section focus on the main advantages and disadvantages associated with the use of the RFID technology. Next, a literature review about the performance measurement systems in logistics is presented with a special highlight on the leading criteria in the selection of performance measures. A conceptual model to evaluate the impact of the RFID on firms' performance is proposed and some conclusions are drawn.

## **THE RFID SYSTEM**

A RFID system is composed by several elements: readers, tags, software and security programs for the readers (Atkinson, 2004). Instead of visible light used in ordinary bar code labels, these tags use radio waves to communicate with the readers. The readers generate signs that are able, by one hand to supply energy to the tag in order to generate data and, on the other hand, to send a sign of interrogation. To produce radio waves tags require some source of energy to power its electronics. Active tags use a tiny battery, a microchip, and a tiny antenna built into them. The operating frequency of radio waves employed also varies. Low-frequency RFID tags

operate at 125 to 134 kHz, for US and international use. High-frequency systems use 13.56 MHz. Frequencies of 866 to 960 MHz are used in UHF (ultra-high-frequency) systems, while microwave systems operate at 2.4 to 5.8 GHz (Dipert, 2004). The key component of an RFID system is the tag itself. Tags come in a large variety of forms and functional characteristics. One useful way of classifying tags is to divide them into active and passive classes. Active tags whose read/write range is longer and passive tags with shorter range. However, passive tags are much cheaper than the active tags and are therefore more widely used. The active tags have more possibilities and bigger flexibility than the passive ones. This is because, they have their own internal power source which is used to power the integrated circuits and broadcast the signal to the reader

To distinguish tag types from each other, Electronic Product Code (EPC) Global has established five tag classes to indicate capabilities a tag can perform (Meyerson, 2007). For instance, Class 0 tags are factory programmable. The EPC number is encoded onto those tags during manufacture and can be read by a reader. Class 1 tags can be programmed by the retailer and supplier. They are manufactured without the EPC number which can be encoded onto the tag later in the field (i.e., by retailer and supplier). The Class 3 tags have the Class 2 capabilities plus a power source to provide increased range or advanced functionality. The Class 4 tags have the Class 3 capabilities plus active communication and the ability to communicate with other active tags. The Class 5 tags have the Class 4 capabilities plus the ability to communicate with passive tags as well.

Antennas also come in a diverse range of form and technical factors. They are used in both the tags and the reader. The size could vary from under a square centimeter to several square meters. Technically speaking, UHF reader antennas can be classified as circular-polarized or linear-polarized antenna. The former emit and receive radio waves from all directions, while the later work best in one particular direction. Therefore circular-polarized antennas are less sensitive to transmit Readers could come in four types: handheld, vehicle-mount, post-mount, and hybrid (Meyerson, 2007). The first three are dedicated to reading of the tags, active or passive. The fourth type has the active/passive mode allowing it to switch from the passive to active mode and vice versa. Both handheld and hybrid readers are more expensive than the vehicle-mount and post-mount. Next generation readers are expected to have less power consumption and fewer voltage requirements. Passive RFID readers create a radio frequency field when they are turned on. When a reader detects passive tags, it activates them. These tags draw their power from the radio frequency field; they do not require battery power. Because they have no battery, the passive tags are smaller and lighter in weight than active tags. Some are as light or even lighter than the bar-coded labels (Meyerson, 2007). When the active tags with power come into the reader's field, the reader switches to the read mode and interrogates the tag. However, the operating range of a linear-polarized antenna is more than that of a circular-polarized antenna (Intermec, 2004). When a tag communicates with an antenna, the radio frequency portion of the circuit between the tag and the antenna is called the air interface. This radio communication takes place under a certain set of rules called air interface protocol. Propriety protocols may cause interoperability problems with equipment from different vendors. Readers read or interrogate the tags. In reading, the signal is sent out continually by the (active) tag whereas in interrogation, the reader sends a signal to the tag and listens. To read passive tags, the reader sends radio waves to them, which energize them and start broadcasting their data. The reader reads all the tags within its read range in a quick succession. This automatic process reduces read times. In a field test, Marks & Spencer, UK, tagged 3.5 million bins with RFID tags. While it used to take 17.4 minutes to read 25 trays with bar codes, on 36 dollies, RFID reduced that to just three minutes. This result was in an 83% reduction in reading time for each tagged dolly (Wilding and Delgado, 2004). Software is the glue that integrates an RFID system

Again it depends upon the industry context, but usually a front end component manages the readers and the antennas and a middleware component routes this information to servers that run the backbone database applications. For example, in a manufacturing context, the enterprise software will need to be made aware of RFID at various levels depending on how far downstream into manufacturing and out into the supply chain RFID is implemented. The middleware technologies could be categorized into three levels: (i) software applications which solve connectivity problems and monitoring in specific vertical industries; (ii) application managers that connect disparate applications within an enterprise; and (iii) device brokers that connect applications to devices like shop-floor machines and RFID readers (RAGMS, 2004).

The enormous advantages associated with this technology, has justified its large application in several functional areas: manufacturing, transportation, distribution, information systems, store operations, and sales (Meyerson, 2007). We can find the RFID technology in different contexts namely in: i) anti-terrorism initiatives (Albright, 2005); ii) electronic keys; iii) warehouses (Meyerson, 2007); iv) centers of distribution (Borck, 2006);

v) points of sales and; v) security applications in the transport (Kevan, 2004), demotic (Kelly and Scott, 2005); vi) e-business; vii) Supply Chain Execution Applications; E-business (Meyerson, 2007).

## **ADVANTAGES AND DISADVANTAGES OF THE RFID TECHNOLOGY**

There is a high investment in the development and improvement of the RFID systems because of the important advantages that firms can reach with it when compared with bar code tags where the reading must be done by a visual contact using optical readers. In this context, one of the advantages pointed out to the utilization of the tags is its power of reading. The tags can be read independently of the environment conditions. They can be read in aggressive environments such as fire, ice, ink, noise and different temperatures (Knill, 2002). This system presents also a high, rigorous and simultaneous capacity of reading (So and Liu, 2006), what could become an important source of competitive advantage in the logistics field. This characteristic, contribute to increase the efficiency of the transport in terms of loads and unloads of cargo once the warehouse operators do not have to use optical reader for collect data about the products that are loaded or discharged in the vehicles. Moreover, this technology allows collecting information of objects in movement (Bange, 2006; Knill, 2002).

The application of the RFID technology can brings also some advantages to the warehousing activity. The collection of the information put in each tag, allows the automatic and rigorous replacement of the stocks' levels (Atkinson, 2004; Kelly and Scott, 2005), a easier identification of the places where products are stored in the warehouses (Kelly and Scott, 2005; Kinsella and Elliot, 2005) and a quicker collect of data (Sullivan, 2004; So and Liu, 2006) without any kind of visual contact with the products (Borck, 2006). Knowing that on average, and in case of bar codes, the warehouse operators read the bar code labels around 25 times, it is comprehensible the high productivity than can be achieved when in its substitution smart labels are used with all the processes' automation that it could involve (Kinsella and Elliot, 2005). In terms of economics, security and marketing, the RFID technology can bring also some advantages. Economically we assist a decrease on stock levels due to a higher control of it and also a better productivity (Witt, 2004; Sullivan, 2004). Thanks to the application of this system, the firms in general and the retailers in particular can reach, by one hand, a decrease on stockouts, a better control of procurement and a development on cross-selling in a more efficient way (Kinsella and Elliot, 2005). The RFID technology makes also possible a better control of the packaging conditions from upstream to downstream of the supply chain (Kevan, 2004; So and Liu, 2006). This last question is related with the rastreability which is imposed by the European regulations to the products agro-food. In the case of retailers, the tags allow them to do a more efficient management of stocks levels (Borck, 2006) since becomes much easier and quicker the identification of the products and also the control of products' life-cycle. The permanent control of the products putted in the shelves of the stores allows the development of specific marketing decisions to each product (Atkinson, 2004; Kelly and Scott, 2005). Under a widened viewpoint, the RFID permits a better visibility of all the supply chain, necessary for a better management of it (Witt, 2004). Among organizations, a supply network characterized by rich information exchange, which can be enabled by RFID, increases the feasibility of implementing alliances of firms that exchange information to coordinate production and distribution, outsource functions and services, and partner with suppliers and intermediaries (Lee *et al.*, 1997; Straub *et al.*, 2004). In cases in which the RFID System adopts a more open and integrated configuration, allowing that the information flows through all partners of the same chain, a lot of bottlenecks of information reading can be avoid.

In the activity of transport, this technology can be used to identify a specific product or to monitor the temperature of the products during the transport. More, the RFID makes possible to verify also if the temperature or humidity of the products was broken during the transport chain (Kevan, 2004). In this way, it is possible to have access to all conditions under which the products were submitted during the transport and also to use security mechanisms (Kinsella and Elliot, 2005). As it can be seen, the new application of the RFID technology in a business and logistics context can bring a lot of advantages for the firms in terms of optimization and of efficiency. However, some problems have also been identified by the firms. Despite of the enormous advantages attributed to the RFID technology, some disadvantages are also pointed out. In this context, the main disadvantage attributed to the use of this technology is its cost. It involves a big investment (Borck, 2006) and the return of this investment is only recuperated in a long time (Kinsella and Elliot, 2005). If a short Return-on-Investment (ROI) was verified it could promote the use of this technology because according to Trunick and Williams (2005) this type of technologies presents a great level of obsolescence and innovation. Furthermore, the

cost of each smart label is higher than the bar code one which lead firms with millions of SKUs to think about it. The level of security provided by the RFID represents another disadvantage. From the point of view of Atkinson (2004) is relatively easy to have access to the information that flows in a RFID systems in a warehouse or in a center of distribution center of a competitor. It is only necessary to use a radio telescope in a relatively near distance. This can explain the fear of the firms to adhere to the RFID technology. The complexity of this technology, the lack of know-how and standardization are some obstacles referred by firms for not use the RFID technology (Albright, 2005). Once analysed the main characteristics, advantages and disadvantages of the RFID technology in a logistics context, we will focus on the impact of this technology to the performance of firms. So, a literature review about the performance measurement system is presented and a set of performance measures is proposed to be used to evaluate the impact of the RFID on a logistics context.

## **PERFORMANCE MEASUREMENT SYSTEM (PMS) IN LOGISTICS**

The reasons which have lead firms to invest in a logistics performance measurement system are the following: (i) obtaining a holistic view of the logistics process; (ii) accompanying the development of logistics activities along time (TRILOG, 1999); (iii) a better understanding of what is happening; (iv) the possibility of influencing behaviours; (v) obtaining competitive results (Fawcett and Cooper, 1998); (vi) understanding firms' unique competences (Clinton, *et al.*, 1996); (vii) a better allocation and control of resources (Bowersox and Closs, 1996); (viii) identification of inefficiencies and sources of costs; (ix) improvement of customer service; (x) development of added-value services for which the customers would be willing to pay a premium price; and (xi) improvement of processes (Keebler, *et al.*, 1999). Two theoretical perspectives of approaching logistics performance measurement systems are referred in the literature: (i) functional perspective (Mentzer and Konrad, 1991; Pohlen and LaLonde, 1994; Davis and Drumm, 1997); and (ii) processual perspective (Carvalho, 1995; Bowersox and Closs, 1996; Keebler, *et al.*, 1999). The main difference between these two perspectives is related to the incidence of PMS. According to the functional perspective, logistics PMS should fall upon a determined function or activity, considering this as an isolated entity. However, this perspective has raised some criticism, mainly from followers of the processual approach, under the argument that efficiency and effectiveness of a determined action does not allow measuring the performance of all the process, obtaining in this case only a biased performance measurement (Keebler, *et al.*, 1999). In contrast, the processual perspective defends that PMS should fall on the whole process. When choosing the performance measures, firms must decide between general performance measures, which are of financial-accounting nature (sales, profit, return on investments), and measures directly related to the logistics process, in other words, operational ones (White, 1996).

Several authors defend that, independently of the function or the business area, measures of operational nature should be used (Kaplan and Norton, 1992; Gerwin, 2005; Cassab and Maclachlan, 2006). This is because, on one hand firms, more than ever, highlight competences and qualifications (not measured by aggregated measures of financial-accounting nature), and on the other hand, because the connection between operational improvements and financial success is, most of the time, tenuous and uncertain. Barker (1995) also argues that financial measures, being short term control mechanisms, become, most of the time, inadequate in the analysis of long term improvements. Apart from these limitations, Ghalayini and Noble (1996) point out some disadvantages associated with financial-accounting measures such as: (i) a lack of flexibility; (ii) high cost; (iii) inadequacy to the new competitive environment; (iv) more probability of quickly becoming out-of-date; and (v) the difficulty of quantifying improvements in monetary terms. Thus, it is reasonable to conclude that measures of operational nature should prevail in a logistics' PMS. In this context, it is important to analyse the criteria to choose the performance measures that should be used to evaluate the impact of the technology RFID used in logistics activities over the performance of the firms.

### **Leading Criteria in the Selection of Performance Measures**

Performance can be considered in a context where one intends to measure the firms' capability in reaching certain targets or objectives, previously defined. Being so, targets and objectives should be previously established and measures and indicators that allow a better performance measurement of the firm should be chosen. In this circumstance, some targets or objectives appear as leading factors in the selection of performance

measures. Kellen (1992) defends the connection between the strategic planning of the firm and the measurement system, in order to guarantee suitability of the logistics processes and specific objectives of the firm.

In the literature it is frequently argued that performance measures should be derived from strategy; that is, they should be used to reinforce the importance of certain strategic variables (Fombrun and Wally, 1989; Zahra, 1993; Chandler and Hanks, 1994). Even though this does not always appear to happen in reality (Neely *et al.*, 1999), the link between performance measurement and strategy has been extensively explored in the business strategy literature (Mintzberg, 1978). Another factor that is pointed out by some authors (NEVEM-workgroup, 1989; Van Amstel and D'Hert, 1996; Bowersox and Closs, 1996) is the logistics objectives.

The NEVEM-workgroup (1989) also points out the role of production organization in determining the selection of performance measures. Other criterion used in the selection process is the one related with the logistics priorities. For Fawcett and Smith (1995) the main logistics priorities in the logistics PMS are the following: (i) order fulfilment; (i) quality of customer service; (iii) flexibility and responsiveness; (iv) service innovation; and (v) cost. Wheelwright (1978) defends that firms can only follow the performance of logistics practices, if they have implemented a PMS which reflects the firms' competitive priorities. These competitive priorities are: cost, service/quality, productivity, and time. Fitzgerald *et al.* (1991) have a different point of view. They suggest that there are two basic types of performance measures in any organization those related with results (competitiveness, financial performance), and those that focus on the determinants of the results (quality, flexibility, resource utilization and innovation). This suggests that it should be possible to build a performance measurement framework around the concepts of results and determinants.

In sum, there is a great variety of proposed solutions in what refers to the factors that should be considered when selecting performance measures. For a faster and easier analysis, we present them in the table 1.

**Table 1: Leading criteria in the selection of performance measures**

| Factors                          | Performance Measures   | Authors   |
|----------------------------------|--|---|
| Key success factors              | Delivery fulfilment; Customer service; Order lead times; Responsiveness level  | Cavaco and Themido (2000)                                   |
| Strategy                         | Availability and reliability of the customer service; Acceptable costs for the level of foreseen service; Investment and financial control; Productivity and                         | Carvalho <i>et al.</i> , (2001)<br>Kellen (1992)            |
| Logistics objectives             | Delivery lead time; Trust deliveries; Flexibility; Stock level   | Van Amstel and D'Hert (1996)<br>Bowersox and Closs (1996)   |
| Organizational way of production | Delivery lead time   | NEVEM-workgroup (1989)                                      |
| Logistics priorities             | Fast and reliable deliveries; Customer service quality; Flexibility; Responsiveness; Service innovation; Cost  | Fawcett and Smith (1995)                                    |
| Competitive priorities of firms  | Cost; Service/quality; Productivity; Time; Leanness  | Carvalho <i>et al.</i> , (2001)<br>Fernie and Sparks (2004) |
| Results/determinants of results  | Measures related with results: competitiveness, financial performance; Measures related with determinants of the results: quality, flexibility, resource utilization and innovation. | Fitzgerald <i>et al.</i> (1991)                             |

**Source:** Elaboration of the authors

As can be seen in table 1, there are many criteria that could be used to choose the best performance measures. It is up to firms choose the ones that best fit its reality and interests.

## A CONCEPTUAL MODEL PROPOSAL

Given the variety of proposed measures, the most important is to respond to the question: which measures to adopt in practice? To assist in responding to this question, Keebler *et al.* (1999) adopt a processual perspective and propose a set of measures considered basic and fundamental, independently of the firm and the logistics



strategy followed (low cost, product innovation, leader in customer service). Those measures are: time, cost, and quality.

Adopting a very similar position, Christopher (1998) considers time, cost and quality as three key performance measures which should form part of any logistics PMS. This is because these measures contribute more than proportionally to the success or failure of a firm. Leong *et al.* (1990) claim that it is widely accepted that the key dimensions of manufacturing's performance, can be defined in terms of quality, delivery speed, delivery reliability, price (cost), and flexibility. They are in fact, the expression of the following philosophy with regarding performance: "Better, Quicker and Cheaper". In other words: superior quality of service, evermore shorter times and lower costs.

Being so, the performance measures proposed in this paper to analyse the impact of the RFID technology on performance of firms are: costs, quality, time and flexibility. These four measures are also the ones proposed by Keebler, *et al.* (1999). Christopher (1998) defends that the time, the cost and the quality, are three key performance measures that should be present in any logistics' performance measurement system. By using these four measures which reflects the new competitive priority of firms (responsiveness) it can be evaluated the contribution of the technology RFID to enhance the firms' responsiveness to a lot of environment changes. After a literature review about, not only the operational and technical aspects related with the RFID technology but also the performance measurement system in a logistics context, a conceptual model is proposed which try to reflect the main relationships that exist between the use of this technology and the performance of firms. That is, the conceptual model tries to illustrate how the use of the RFID technology may influence the logistics performance of the firms. As previously seen, and according to some authors (Atkinson, 2004; Kelly e Scott, 2005), the utilization of the RFID technology in warehousing allows an automatic reposition and rigorosness of the stocks management (Kelly and Scott, 2005; Atkinson, 2004), a easier location of products inside the warehouses (Kelly and Scott, 2005; Kinsella and Elliot, 2005) and, a better efficiency in the collect of data (Sullivan, 2004; So and Liu, 2006). That is, using this technology in warehousing the performance of firms could be improved in terms of time, customer service and costs. Being so, the following propositions are drawn:

P01: The use of RFID in warehousing activity (WH) has a positive impact on Time (TM)

P02: The use of RFID in warehousing activity (WH) has a positive impact on quality (QL)

P03: The use of RFID in warehousing activity (WH) has a positive impact on cost (CT)

As regards the picking activity, and according to Trunick and Williams (2005), the use of the RFID technology leads to a better pick-and-pack sequence while provides a full list of the content of each order while this moves for delivery. Being so, it can be considered that the RFID contributes, by one hand, to improve the quality of the performance of this activity and by other hand, to minimize its time of execution, what can be translated by the following propositions:

P11: The use of RFID in picking activity (PK) has a positive impact on Quality (QL)

P12: The use of RFID in picking activity (PK) has a positive impact on Time (TM)

In what concerns the use of the RFID technology in the transport and according to Kevan (2004) this contributes for increase the quantity and quality of the information that flows along the transport' chain allowing to reach a better rastreability of the products. So, it can be said that the RFID contributes to increase de firms' performance in terms of quality. This relationship can be drawn by the following proposition:

P21: The use of RFID in transport activity (TP) has a positive impact on Quality (QL)

In this context, and having in mind the relationships found in the literature, a conceptual model is proposed (Figure 1). This model aims to highlight the influence of the RFID technology on logistics in terms of costs, time and quality of firms, that is, it intends to explain how the RFID contributes to enhance the responsiveness of firms.

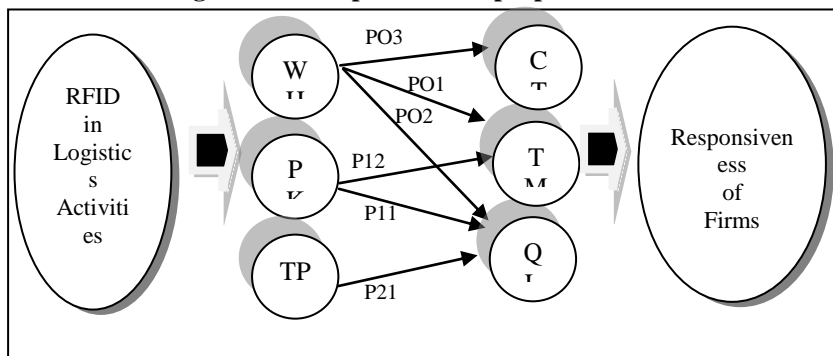
## CONCLUSIONS

In the business context the smart labels have reached many adepts by the huge potentials that it presents for firms considered individually or integrated in a supply chain. The drive toward adopting RFID is being further enhanced by mandates from large retailers such as Wal-Mart and Target, and the Department of Defense of many countries, who require all suppliers to implement this technology within the next few years.

The RFID technology has received considerable attention from academics and practitioners because of its potentialities and diverse fields of utilization in organizations such as: manufacturing, transportation, distribution, information systems, store operations, sales. The increase use of the RFID has been justified by the advantages

associated with its use. Through the RFID we may assist a decrease on the stock levels, a better productivity, a decrease on stockouts, a more efficient cross-selling, a better visibility and rastreability along the supply chains, more efficient logistics activities. The adoption of this kind technology allows a quicker flow of information, an improvement in the quality of the information that crosses the different types of logistics activities and a better synchronization of the information among the supply chain' members. However some disadvantages are also pointed out. The one that is most referred is its cost. Apart from this, questions of security, the complexity of it and a lack of know how are also identify.

**Figure 1: Conceptual model proposed**



To evaluate the true advantages associated with the RFID technology is important to measure its impact on performance. Adopting a processual perspective a set of measures must be considered, independently of the firm and the logistics strategy followed. A set of measures proposed are: time, cost, quality and flexibility. In the literature some relationships are identified between the use of the RFID in some logistics activities and the performance of firms. Being so, the use of the RFID to support the development of the warehousing activity seems to have an impact on time, quality and time. The use of it in the picking activity has an impact on quality and time and an impact on quality when it is used as an identification technology in the transport activity.

Business leaders are facing several critical considerations with regard to RFID. They have already identified its advantages but also a set of disadvantages are pointed out. It is up to managers evaluate the use of the RFID technology inside the logistics through the implementation of a performance measurement system that allows them to measure its impact on the responsiveness of firms. The RFID opportunities outlined here are a starting point. Supply chain leaders must seek out creative ways to use RFID to improve efficiency of the logistics activities while distancing their firms from the competition.

This paper is a first attend to alert managers and academics to the RFID technology. Future studies should therefore be developed taking into consideration the conceptual model proposed and build up a survey to test its validity in a cross-functional and national reality.

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# PROSPECTS OF INSURANCE MARKET DEVELOPMENT IN SERBIA

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## ABSTRACT

*The subject of this work are insurance companies, as the important institutional investor, with a special retrospective view of their place and a role at the financial market in Serbia. A successful development of insurance companies depends on the degree of development of the financial market, as well as on the ability to make a decision regarding the structure of its investment portfolio, in the best way. Besides the usual risk of property and personal insurance, the insurance companies in Serbia faced also the risk of investing free pecuniary funds, in the previous period. A new Law on Insurance has introduced new rules for the functioning of insurance companies in Serbia, but also confused instructions, which are bad for investment decisions of insurance companies, as well as for the development of the financial market in Serbia.*

## INTRODUCTION

From the macroeconomic point of view, a degree of insurance development is defined as the degree of participation of insurance premium in the gross domestic product. It represents one of the most important indicators for monitoring the achieved level of insurance development. That indicator is exactly proportional to the achieved levels of economic development. We shall demonstrate by comparable data, that the insurance sector in Serbia is undeveloped, and that regarding a degree of development, it is considerably below the average of the countries-members of the European Union. The indicators of insurance market development speak in support of that, i.e. the ratio between total premium and gross domestic product, as well as the total premium per capita.

One of the most important indicators of a degree of insurance development in the regional countries, is the insurance structure, i.e. the participation of life and non-life insurance in the total insurance portfolio. If, based on those indicators, we compare Serbia and EU, we can see where is the place of Serbia. The participation of the premium in the gross domestic product in Serbia, in 2005 was 2,0% (1,6% in 2004 year), and therefore Serbia was at the 58<sup>th</sup> place in the world (according to the Swiss Re data). In Slovenia, in the same year, that indicator was 5,7%, in Croatia 3,2%, and in 25 countries-members of the EU it was even 8,4%. The greatest percentage of the premium participation in the gross domestic product, in the year 2005, had Taiwan, and there follow the South African Republic and the Great Britain.

**Table 1 – Insurance premium as a % share of GDP**

| Insurance premium as a % share of GDP, for EU countries |                |      |          |       |       |          |       |
|---|----------------|------|----------|-------|-------|----------|-------|
|   |                | 2005 |          |       | 2006  |          |       |
|   |                | Live | Non-life | Total | Live  | Non-life | Total |
| 1   | United Kingdom | 8.9% | 3.5%     | 12.4% | 13.1% | 3.4%     | 16.5% |
| 2   | Switzerland    | 6.2% | 5.0%     | 11.2% | 6.2%  | 4.9%     | 11.0% |
| 4   | Slovenia       | 1.7% | 4.0%     | 5.7%  | 1.8%  | 4.0%     | 5.8%  |
| 5   | Check Republic | 1.5% | 2.5%     | 4.0%  | 1.5%  | 2.3%     | 3.8%  |
| 6   | Croatia        | 0.8% | 2.4%     | 3.2%  | 0.9%  | 2.5%     | 3.3%  |
| 7   | Poland         | 1.3% | 1.8%     | 3.1%  | 1.7%  | 1.8%     | 3.5%  |
| 8   | Hungary        | 1.4% | 1.7%     | 3.1%  | 1.7%  | 1.7%     | 3.4%  |
| 9   | Serbia         | 0.2% | 1.8%     | 2.0%  | 0.2%  | 1.6%     | 1.8%  |
| 10  | Greece         | 1.0% | 1.1%     | 2.1%  | 0.9%  | 0.8%     | 1.8%  |
| 11  | Turkey         | 0.2% | 1.3%     | 1.5%  | 0.2%  | 1.4%     | 1.6%  |
|   |                |      |          |       |       |          |       |

Source: www.swissre.com, Sigma No 5/2006

Serbia was ranked at 63<sup>rd</sup> place in the world, regarding the premium per capita in 2005 year, of 65 dollars or 55 euros (in 2004, 52 dollars, more exactly 38 euros). Switzerland with 5.558 dollars per capita, was ranked at the 1<sup>st</sup> place. According to the total premium of 480 millions of dollars, realized in insurance, Serbia was ranked at the 67<sup>th</sup> place in the world, in 2005.

The following data which show that participation of Slovenia in the total portfolio of the regional insurance market amounts to 49,44%, of Croatia 30,70%, B&H 5,12%, Macedonia 2,46%, and Serbia 12,28%, demonstrate the degree of insurance market development in Serbia.

The insurance market development, measured by the insurance premium growth, indicates the ascending tendency. Based on the data from the Federal Bureau of Statistics, the total insurance premium, (although a part of the premium for the pension insurance was transferred into pension funds) in 2006 year, in relation to the premium in 2005 year, increased by 10,5%, and that with the rise of retail prices of 6,6%, denotes a real growth of the total insurance premium.

**Table 2 – Financial institutions in Serbian financial market**

| Percent share of different financial institutions in Serbian financial market <sup>1)</sup>       |       |       |       |                   |      |      |                     |       |       |
|---|-------|-------|-------|-------------------|------|------|---------------------|-------|-------|
|   | Banks |       |       | Leasing companies |      |      | Insurance companies |       |       |
|   | 2004  | 2005  | 2006  | 2004              | 2005 | 2006 | 2004 <sup>2)</sup>  | 2005  | 2006  |
| Total Assets  | 90.5% | 88.8% | 90.4% | 4.1%              | 5.9% | 5.3% | 5.5%                | 5.3%  | 4.3%  |
| Equity  | 85.8% | 85.8% | 89.8% | 0.7%              | 1.5% | 1.6% | 13.5%               | 12.7% | 8.6%  |
| Number of employees   | 80.9% | 77.1% | 77.3% | 0.5%              | 1.0% | 1.1% | 18.6%               | 21.9% | 21.7% |
| 1) 1 voluntary pension fund included  |       |       |       |                   |      |      |                     |       |       |
| 2) Without insurance companies which licences were taken at the end of 2004 and beginning of 2005 |       |       |       |                   |      |      |                     |       |       |

Source: www.nbs.yu/Department for Insurance Company/ Department for Bank/  
Financial reports for 2004, 2005,2006

In the total financial sector, according to the size of the balance sum, the insurance companies participated with only 5,5%, in 2004 year, i.e. with 4.3% in 2006 year, while the participation of the banks was dominant with 90,5%, in 2004 year, i.e. 90,4%, in 2006 year.

According to the amount of invested capital, the banks also dominated with 85% in 2004, i.e. with 89.8% in 2006, while the insurance sector participated with only 13,5% in 2004 year i.e. 8.6% in 2006 year. It can be observed that the banks dominate at our financial market, while the insurance companies, as financial institutions, occupy a very small part of the market.

## **PORTFOLIO STRUCTURE OF INSURANCE COMPANIES IN THE REPUBLIC OF SERBIA**

The portfolio structure of insurance companies in Serbia was not adequate in the previous period, taking into consideration that only 3% of the total insurance premium pertained to life insurance, and 97% to other insurances. When the Law on Insurance was passed in 2004 year, it had a considerable effect on the change of the portfolio of insurance companies, and the following data demonstrate that.

According to the data of the Insurance Companies Association in Serbia for 2006, the insurance companies realized total insurance premium in the amount of 38,3 billion dinars (485 million euros, more exactly 639 million dollars), that represent 10,5% of increase in relation to the previous year, when it amounted to 34,7 billion dinars (406 million euros, more exactly 480 million dollars). The participation of non-life insurance amounted to 89,4% in the premium structure, in 2006, while the participation of life insurance increased from 7,4% in 2004 year to 10,6% in 2006 year, owing to the realized high increase of the life insurance premium of almost 23% in relation to the previous year, with the increase of non-life insurance premium of 9,2%. The reasons for such structure lie in passing the Law on Insurance, which succeeded to «regulate» the insurance market, to improve life standard, and to arrange the financial market.

In the structure of the total portfolio of non-life insurance, over 80% was realized in only five types of insurance and they are: accident insurance, motor vehicle insurance, insurance of property from fire and other dangers, other property insurances, as well as the liability insurance for using motor vehicles. The property insurances, which had the greatest share previously, due to the fall of 1% in 2006 year, in comparison to the previous year, reduced their share to 29,5% and gave up the leading share to the motor third party liability insurance, which made 32,3%. After the property insurances, there followed, motor vehicle insurances – Casco of 12,8%, which together with the increase of a share in the premium, recorded the increase of the premium itself of 14%, in relation to 2005 year.

Although it is little represented, there is a considerable annual increase of the premium in the group of non-life insurances in 2006, of the voluntary health insurance (55%), where one can identify the increase of share from 2,3% in 2005 year to 3,3% in 2006 year. Bearing in mind, that in the economically developed countries, there is marked tendency of transferring the gravity of health insurance to the insurance companies, and the fact that the existing system of mandatory health insurance is characterized by substantial weaknesses, it is realistic to expect a faster development of that type of insurance at our market. The premium of voluntary pension insurance marked reduced participation in 2006, due to the withdrawal of the premium into the sector of voluntary pension funds.

According to the data of the Insurance Companies Association in Serbia, the scope of insurance business operations, measured by the balance sum of the insurance companies, that performed insurance and reinsurance business, increased by 21%, more exactly from 46,4 billion dinars to 56,1 billion dinars, in 2006, in comparison to 2005 year.



## PARTICIPATION OF INSURANCE COMPANIES AT THE FINANCIAL MARKET IN THE REPUBLIC OF SERBIA

Insurance companies represent one of the biggest institutional investors at the financial markets, which substantially determine and provide current liquidity and diversification of the financial risks at the market. The indicators of the insurance market development speak in support of that, i.e. the ration between total premium and the gross domestic product, as well as the total premium per capita.

The insurance companies in the USA are significant actors at the financial market, and it is the same case in the countries of the European Union. Since the bankassurance is developed at the enviable level, the banks and insurance companies establish consortiums and take over the mentioned loans together. The long-term securities dominate in the structure of the portfolio of insurance companies in the USA and the EU.

**Table 3 – Investment structure of insurance company in development country**

| Investment structure of insurance companies in developed countries |     |                |         |        |
|--|-----|----------------|---------|--------|
|  | SAD | United Kingdom | Germany | France |
| Real Estate  | 10% | 8%             | 7%      | 7%     |
| Equity Stocks  | 5%  | 38%            | 32%     | 27%    |
| Bonds  | 75% | 42%            | 58%     | 53%    |
| Other Investments  | 10% | 12%            | 3%      | 3%     |

Source: [www.financialservicesfacts.org](http://www.financialservicesfacts.org)

The insurance companies in the USA invest most often in the municipal and state bonds, while the situation in the EU countries, where the long-term securities also dominate, is somewhat different. In the EU countries, there are mostly investments in the shares i.e. mostly in the portfolio shares of the big corporations. One of the important types of investments is the security of transnational's companies. The leasing operations of the insurers are also widespread, whereby they successfully compete with the specialized companies. One of the prerequisites for the approval of mortgage credits is the conclusion of the insurance contract. However, the fall of profitability from such operations, the increase of risk of mortgage credits, the low liquidity, and the long-term character of those assets, have reduced their share in the investment structure. Based on that comparative analysis, the first hypothesis has been confirmed. The countries, where there is a high degree of development of the financial market and the insurance market, have a diversified investment portfolio which brings revenues, but also the assets necessary to cover the losses in insurance business, and as such they have a considerable influence by creating their portfolio.

The insurance sector in Serbia is undeveloped, and regarding a degree of development, it is considerably below the average of the countries-members of the European Union and the USA. The insurance companies are not a significant participant at the financial market with their share of 1,2% in 2006 year, while the banks dominate with 94%. Totally observed, for all insurance companies in Serbia, the technical reserves of non-life insurances in 2006 year, were mostly covered by depositing with the banks – 28%, by the job shares –17% and by the state securities – 14%. In the covering structure of technical reserves for life insurances, there are mostly investments in the securities - 57%, and then follows depositing with the banks - 16%. **The presence of the insurance companies at the financial market, in Serbia is not sufficiently significant.**

**Table 4- Development of Serbian insurance company in financial market**

| Investment structure of Serbian insurance companies for years 2005 and 2006 |       |      |               |      |                |      |                  |      |                            |      |
|---|-------|------|---------------|------|----------------|------|------------------|------|----------------------------|------|
|   | Dunav |      | DDOR Novi Sad |      | Delta Generali |      | Wiener Stadische |      | Insurance industry average |      |
| Type of Investment  | 2005  | 2006 | 2005          | 2006 | 2005           | 2006 | 2005             | 2006 | 2005                       | 2006 |
| Real Estate   | 72%   | 15%  | 7%            | 9%   | 0%             | 0%   | 0%               | 0%   | 32%                        | 10%  |
| Equity Stocks   | 7%    | 30%  | 38%           | 53%  | 0%             | 10%  | 0%               | 0%   | 12%                        | 25%  |
| Bonds (long term)   | 1%    | 1%   | 9%            | 1%   | 0%             | 0%   | 61%              | 56%  | 14%                        | 12%  |
| Notes (short term)  | 20%   | 55%  | 46%           | 37%  | 100%           | 90%  | 39%              | 44%  | 42%                        | 54%  |
| Total   | 100%  | 100% | 100%          | 100% | 100%           | 100% | 100%             | 100% | 100%                       | 100% |

Source: [www.belex.co.yu](http://www.belex.co.yu)

The biggest part of the insurance companies investments in Serbia, was directed at the short-term securities - 42% in 2004 year, and in 2005 year - 54%. One of the worse investment structures was the investment structure of the insurance company "Dunav", because 72% of investments referred to real estates, and only 1% was invested in the long-term securities. The reason for such investment was that the insurance co. "Dunav" had mostly the premiums for motor vehicles in its premium structure. In contrast to "Dunav" insurance company, Wiener Stadtische had the best investment structure, because life insurance was the most represented in the insurance structure, and therefore the investments at the financial market were directed at the long-term securities - 61% in 2004 year, i.e. 56% in 2005 year. The situation is somewhat better in the investment structure of DDOR Novi Sad, which improved its investment structure by 38% in 2005, investment in shares by 53% in 2006 year. Observing portfolios of the biggest insurance companies in Serbia, one can conclude that such investment structure is not adequate, since by keeping free funds in bank deposits, smaller revenue is achieved than it would have been realized if it had been invested at the financial market, especially in the long-term securities. Investment decisions of managers in the insurance companies were based on hedging, and one part of investment was directed at the financial market, but only in order to maintain liquidity, while the second part of investments referred to real estates and keeping of deposits with the banks. Investment in real estates in the previous period, were only a burden with regard to the maintenance costs and none revenue for the insurance companies.

It can be concluded that the national insurance companies invest at the money market, in the most expensive and the least transparent segment. The reason for that is that the capacities of the insurance companies are still at the low level in relation to the highly developed countries. The life insurance makes only 5% of the total insurance portfolio, and that is one of the reasons why the participation of the insurance companies at the financial market is modest. In comparison to the insurance companies at the highly developed markets, which realize their profit by investing at the capital market, the insurance companies in Serbia realize their profit exclusively from business operations. Undevelopment and instability of the financial market cause that a share of insurance sector in the general scope of investment in the country is insignificant.

The adoption of the Law on insurance in 2004, according to which the supervision over insurance was entrusted to the National Bank of Serbia, was the basis to initiate big changes at the Serbian insurance market. Defining the criteria for the investment of insurance funds, first of all the technical reserves, and the criteria for the evaluation of balance sheet items, as well as the permanent control of business operations of the companies, has caused important changes in relation to the previous condition. Measured by the participation of types of assets, which may be characterized by complicated chargeability and overrated presentation in the financial reports, it can be concluded that the quality of assets of the companies in 2005 year and especially in 2006 was improved. Namely, the values of those indicators in 2005 and 2006 years at the level of all companies which dealt predominantly with non-life insurances, amounted to 61,53% and 42,96%, respectively. Increase of total assets of the companies and reduction of value of a part of assets that may be characterized by complicated chargeability, influenced the change of values of those indicators.

The first controls carried out by the National Bank of Serbia, when the supervision over the companies was undertaken in 2004, demonstrated that the previous situation was characterized by the absence of the security of

investments incomplete business books, as well as, unsettled obligations towards policyholders by some companies. A share of non-material investments, real estates, investments in securities which are not for market trading and claims (as a form of assets that may be characterized by complicated chargeability, as well as overrated presentation in financial reports) in total assets of the companies which dealt predominantly with non-life insurances, amounted to even 75,68% in 2004 year. Relatively high participation of those types of assets in the total assets of the companies, indicated problems in clearing up obligations of those companies.

The growth of living standard and the growth of the GDP are certainly a good sign that the insurance sector will start to develop in the forthcoming period, at a faster rate. In addition, the current participation of the insurance premium in GDP in Serbia, which is estimated at less than 2%, is the indicator of the potential of this market in its intention to nearly achieve the level of the European Union countries.

In the forthcoming period, we expect the entrance of the world leaders to the insurance market in Serbia. Assicurazioni Generali, Uniq, Wiener Städtische or Grawe have already appeared at our market, whether by taking over the Serbian companies, as it has been the case with Generali, which has taken over Delta or Uniq, which has taken over Zepter, or by opening their own affiliates, as it has been done by Wiener and Grawe. Besides them, big insurance companies, which used to have a prominent role at the market in Serbia at the time of former Yugoslavia, like Zavarovalnica Triglav and Croatia insurance, have returned to our market by taking over the companies Kopaonik and Millennium insurance. Besides the insurance company Allianz, other companies like VHV Group, Eureka, KBC, AXA, have shown great interest to start business activities in Serbia. In future, we can expect that the insurance premium structure will get better in favor of the life insurance and that the arrival of those insurance companies will improve the quality of services and competitiveness at the insurance market in Serbia.

After the arrival of foreign insurance companies and docapitalization carried out according to the legal regulations, the value of capital has increased by 5%. That should have positive influence on the financial market in terms of investment in the long-term securities i.e. shares. The portfolio of Wiener Stadische that consists of 56% of long-term securities (tables T26 page 177) demonstrates that. After the arrival of new foreign insurance companies, the increase of the total insurance premium by 25% is expected, that would raise the financial assets by 10%, and thereby improve the investment portfolio of the insurance companies at the financial market in Serbia. We believe that the process of internalization of the insurance market in Serbia, will lead to a greater involvement of the insurance companies in diversification of risks at the financial market.

Based on that, we expect rapid development of that sector from 2008 year, and bearing in mind what effects the insurance development carries with itself, the economic development of Serbia is before us.

## CONCLUSION

That what has been positive in the insurance sector in the last year, is as follows: the increase of the total insurance premium, the increase of the number of employed in insurance business; the improvement of the premium structure in favor of life insurance; increase of technical reserves; sale network quality improvement.

In order to provide normal investment environment, consolidation of the capital market is necessary, since otherwise every investment in that type of securities, exposes investor to a risk. The functions of an institutional investor, and thereby of insurance companies, at the securities market are directed towards the resolution of the problem of budget deficit, which is negative. The insurance companies, through the development of life insurances, should mobilize available savings and direct it in productive investments, that will increase the level of economic activity, i.e. in shares and bonds of companies. Investments in state bonds are useful, but they should not be the only investment of the insurance companies. The insurance companies should invest assets in real estates also, because there is a noticeable price rise of real estates nowadays. Besides that, it is necessary to provide an adequate flow and validity of information from the financial market in order to make proper decisions. The status of an institutional investor requires not only qualified personnel, but also operative procedures for making decisions about investment, the ability to make reports about its business, as well as the efficient internal supervision.

I believe that the insurance market in Serbia is developing and that it has enormous potential, first of all for the life insurance development. Further reforms of the insurance sector in Serbia, should facilitate the financially reliable and stable insurance market, where the interests of the insured and insurance beneficiaries would be protected, and the quality of insurance business activity would be raised at a higher level and adjusted to the European Union standards. Attention should be paid especially to certain parts of the Law on Insurance, which restrict investment activity of the insurance companies. It is necessary to correct the existing Law on Insurance, as soon as possible, and to stimulate the development of insurance, in order to enable the development and the growth of the insurance market. The author ends this paper by pointing out that the participation of the insurance companies at the financial market in Serbia is not sufficiently significant, but also raises a new question about the influence, of the process of globalization of the insurance market, at the increased presence of foreign insurance companies at the market of the Republic of Serbia.

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# **WORLDWIDE WINE SYSTEMS: COMPARING YARRA VALLEY AND DOC CONEGLIANO VALDOBBIADENE COMPANIES ORGANIZATIONAL AND SUPPLY STRUCTURE**

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## **ABSTRACT**

*This paper compares two global wine models, though their organizational and supply structures. These are the wine systems of companies in the Yarra Valley of Australia (southern hemisphere) and in Conegliano Valdobbiadene Denomination of checked origins (D.O.C.) area of Italy (northern hemisphere). These are related to the evolution of the market in recent years (2006-2007). This paper, which represents a first investigation on a research project with future development, applies a comparative analysis of region, organizational structure and supplies in the wine sectors of both 'New World' and 'Old World'. An international study is utilized that will highlight major differences and analogies in the organizational structure and market strategy among the two worldwide wine systems of companies.*

## **INTRODUCTION**

In Italy, the grapevine and wine-making culture was mainly performed by the Latin and Etruscan populations and new impulse and prestige then resulted from the Greek colonies contributing to vine-growing (Pini, 1988).

In the north-eastern region of Italy, viticulture and oenology began with the *Paleoveneti* (Venetian people) around the 10<sup>th</sup> century BC. The tradition continued with the Romans, and grew prosperous around the time of the Edict of Rotary (643 AD) and the St. Benedict's Monachism which maintained the viticulture of the time (Calò et al., 1996). Centuries later, it spread to the Enlightenment with the establishment of the Agriculture Academies (XVII Century). In this period, the Republic of Venice established numerous Agricultural Academies. The Academy of Agricultural Aspirants was founded in Conegliano (near Treviso) in 1769. This was the embryonic nucleus for the future expansion of the schools of specialization in Viticulture and Oenology in the area. The newly founded Viticulture School of Conegliano would be named 'Little Venice, a forerunner in its kind (1876). The Oenology School of Conegliano established under the patronage of Antonio Carpenè and Giovanni Battista Cerletti had among its lecturers international high-level personalities who contributed to putting modern science into viticulture and oenology. In the 1990s, the University of Padua entered in partnership with the Conegliano Oenology School and widened the academic curriculum.

In this experimental, formative and research context, the value of one of the more appreciated Italian sparkling wines, the *Prosecco*, started to acquire prestige, in particular after the second half of the XIX Century. During this period, the first cultural characterization of Prosecco occurred thanks to Conte Marco Giulio Balbi Valier. In fact, Conte Balbi Valier writes: "Approximately one quarter, 380, of the above mentioned areas that had undergone census could not be quantified with precision and were thus considered as all vineyard onto which I planted Prosecco Vines that were safer and more fruitful than any other quality and that produced an extremely

selected white wine, full of grace and strength” (Balbi Valier, 1868). Then, the *Prosecco* wine began to be produced by adopting the French *Charmat* method, and soon became a true enology pearl in the so-called area of ‘Little Venice’. The creation of the *Prosecco* sparkling wine would not become a reality without the intuition and genius of the Professor Antonio Carpené (1838-1902). Antonio Carpené learned how to ‘improve’ the local *Prosecco* wine believing in the possibility of producing a sparkling wine (with re-fermentation in big tanks). In 1924, the first Bottled Prosecco wine ‘Colli Trevigiani’ was made by sparkling house Carpenè & Malvolti. The new *Prosecco* wine eventually was embraced with pride and enthusiasm by the local community. The way in which the *Prosecco* wine was improved was by creating progressive stratification of the vineyards and the variety of wine (XIX Century), and by the incorporation of the so-called Denomination of Checked Origin (D.O.C.) of the Conegliano Valdobbiadene (1969) area. This was further improved through the special marketing of the *Prosecco* brand in more meaningful ways starting from the 1980s.

The sparkling Prosecco D.O.C. wine is so renowned that it is included amongst the most rated and celebrated successful wines produced in Italy.

In Australia, the history of the Australian wine making industry began in 1788 when Capitan Arthur Philip conducted the First Fleet into Sydney Cove to establish a penal colony (Spawton, 2006).

In Australia, the state of Victoria has 3000 growers across 21 wine regions. There are more than 850 Wineries and 650 Cellar Doors. In Victoria State, the Yarra Valley area was the first wine growing district with a long history. In 1838 the Ryrie Brothers introduced the first vineyard at Yering Station and in 1843 the first product of the Yarra Valley was created, fruit of the passion and creativity of James Dardel. The courage and initiative of these workers gave the wine-growing industry a strong boost in that area towards the end of the XIX century. The local wine industry was flourishing and tourism was experiencing the first signs of success. The growth of the wine-growing industry registered a slowdown during the 20’s but reimplantation of the vineyards began again in the late 1960’s and by the early 1990’s.

In this environmental, social and economic context which characterises peculiarities which are difficult to encounter in other wine-growing areas around the world, important wineries originated in the Yarra Valley in the seventies, amongst which the French Champagne house Moët & Chandon established their brand Domaine Chandon, at Coldstream (1986).

The Yarra Valley area is now recognised as one of Australia’s foremost premium, and internationally renowned wine region, so much that the most important Australian brands, which are also internationally acclaimed, have production plant and an agency in that region (for examples: Fosters, BRL Hardy, De Bortoli Wines, Casella Wines, etc).

## GLOBAL WINE MODELS

On a worldwide scale, change within the wine market could be interpreted through a dualistic model that could be seen in two opposite ways – ‘Old World’ countries versus ‘New World’ countries. However, this interpretative differentiation between ‘Old’ and ‘New’ perspectives of worldwide competitiveness appears to be out-of-focus, due in large to complex economic processes occurring within the wine sector which has seen wine producers distancing themselves from the logic of cut theory – which focuses on broad geographical scale modeling. Rather, it appears that worldwide wine areas should be understood at the firm level group, allowing research to measure with a greater accuracy the worldwide market as well as local markets.

This paper aims to compare two global wine areas in two countries, Italy and Australia, both countries with a significant specialization in both organizational structure and wine supplies. Italy, together with France, is traditionally the country which is the world leader in wine making (example, ‘Old World’ countries). Australia had demonstrated the most growth in competitive performance between the Countries of the New World, right or wrong, the paradigm of new models of competition in the wine market (Pomarici, 2005). The similarities (as well as the differences) between these two wine systems countries have been detailed elsewhere (Pomarici, 2005).

Using statistics regarding wine organizational structure and organizational supply conducted in Italy and Australia, the paper demonstrates how it is possible to identify different approaches to market. In this initial assessment, differences and analogy in size structure and performance organization are examined from aggregate results in companies located in the Yarra Valley in comparison with D.O.C. Conegliano Valdobbiadene companies.

Understanding differences in approach to organization and strategy structure, inside two different territorial systems, is important for evaluating as differentiate vision of companies on worldwide wine markets. This can be organized with a different strategic vision to respond in a diversified way, and in the best possible way to varying target demands that originate from worldwide consumers.

This paper will pursue this comparison between the two wine global models by examining two related themes:

1. A comparative analysis of organizational structure (area of grapes, ampelographic platform, vineyards yield, total tonnes crushed, value of winegrapes, number of wineries, legal structure, etc.).
2. A comparative analysis of wine supply and export structures (wine production, domestic market, export market by continent, estimated wine value to the local economy, etc.).

## **COMPARATIVE ANALYSIS OF THE ORGANIZATIONAL STRUCTURE**

The Australian vine-growing systems does not foresee mechanisms for checking production potential (example: planting rights, etc) and geographic origin that characterise the European Denomination of Origin. Nonetheless, the Geographical Indications (GI's) have been introduced into the Australian vine-growing industry since 1933 thanks to the Australian Wine & Brandy Corporation. In essence, in the Australian GI's, the regulations allow greater freedom for entrepreneurial initiative: the delimitation of the vineyard region or sub-region is substantially topographic, that is, it represents an indication of the origin; there is no reference to a specific vineyard or cultivation techniques; there is no reference to specific oenological practices; the checks are performed on the final product that is destined for exportation; in some cases, the marking of the geographic references is registered.

From an initial evaluation of the profile of the organizational structure of the Yarra Valley region (Table 1), a few considerations can be drawn. Today, the Yarra Valley region is composed of vineyards that extend over a surface area of 3,800 hectares (with altitudes ranging from 50m to 400m above sea level), approximately equal to 2% of the total surface area of the vineyards in Australia.

The composition of the ampelography platform is multi variety, attributable to 64% to the red bead variety and 36% to the white bead variety. Amongst the red variety, which are the most commonly cultivated in the Yarra Valley, the Pinot Noir and the Cabernet Sauvignon are amongst the varieties that ensure a prime product of excellence for those wines that are particularly appreciated by the market. Amongst the whites, the area destined for the cultivation of the Chardonnay and Sauvignon Blanc stands out the most, from which wines of particular prestige as well as emerging wines are obtained, for both sparkling wines as well as a variety of still wines.

The quantity of the prime material produced and that is destined for the production of wine is 19,000 tonnes. The yield per hectare, equal to approximately 5 tonnes /hectare, if compared to the Australian average, is considerably lower (-50%). Normally, in fact, the bunches of grapes are thinned in order to ensure a final product that is of high quality and to obtain wines that are complex and intense to the sense.

The average price of the grapes is of 1.060 € /tonne, so as to markedly affect the provisioning cost of the raw material.

**Table 1: The Yarra Valley Region (Australia) - organizational structure**

|                             | General situation  | Year - 2007   |
|-----------------------------|--------------------|---|
| Area of grapes              | (hectares)         | 3.800   |
| Ampelographic platform      | (composition)      | Multi-variety<br>(red & white grapes)   |
| Total tonnes crushed        | (tonnes )          | 19.000  |
| Vineyards yield             | (tonnes/hectares ) | 5,0   |
| Average value of winegrapes | (€ /tonne)         | 1.060   |
| Wine-growers                | (number )          | 186   |
| Wineries                    | (number )          | 85  |
| Legal structure             | (Typologies)       | Sole trader, Partnership,<br>Proprietary Limited, Public<br>Limited Company, Publicly<br>Listed Company |

Source: Yarra Valley Wine-Growers Association, 2007.

The 186 operators that compose the wine producing industry report heavy investment in human capital within the region. The 85 wineries present have considerably contributed, by the added value gained by bottling the product, to the affirmations in terms of quality and quantity of the Australia brand in the national markets but above all, in the international markets. The legal structure of the companies involved are those of small companies (77% of the companies crush less than 10 tonnes). The Yarra Valley region, which is also flourishing tourism venue, includes various Public Listed Companies of both national and international importance (example, Foster's, Moët & Chandon, De Bortoli Wines, Casella Wines, etc).

The Italian wine-growing systems currently considers the control mechanisms of product potential (example, plant rights, etc), the market (example, distillation, etc) and of the geographic origin that characterises the European Denomination of Origin. The Denomination of Origin (DO) were introduced into the Italian wine-growing industry with the D.P.R. 12<sup>th</sup> July 1963 no. 930. With the successive Law no. 164 in 1992, the principles of the geographical origin of the wine are recalled and that are founded on the criteria determined by the production discipline, that is: delimit the production area; variety and cultivation norms of the vineyards; norms related to the oenological practices; natural minimum alcoholic value of the grape; yield per hectare; organoleptic checks.

Since then, the D.O.C. Conegliano Valdobbiadene 'wine district system' has evolved considerably. Today it comprises 4.830 hectares of vineyard (Table 2), with altitudes ranging from 50m to 500m above sea level, approximately equal to 0,6% of the total surface area of the vineyards in Italy, almost exclusively cultivated for Prosecco (the other minor vineyards cultivated are for the Bianchetta, Perera and Verdiso variety).

The quantity of the prime material produced and that is destined for the production of Prosecco D.O.C. wine is approximately 61,000 tonnes, with an average hectare yield of around 13 tonnes per hectare.

The average market value of Prosecco D.O.C. grapes has reached 1.400 € /tonne. Approximately 2,800 wine-growers are responsible for the quality of the prime material.

Within this context, 460 wineries, 153 of which are sparkling wine manufacturers that have entered gradually introducing their creative experience and cooperating in the construction of the national enological identity and diffusion of the made in Italy around the world. In the Conegliano Valdobbiadene D.O.C. region, with reference to the legal structure, there are apparent analogies: on one hand amongst the single proprietorship companies and the Australian companies, similar to the sole trader; on the other, amongst the Società per Azioni (S.p.A.) and the Australian companies, similar to the Publicly Listed Company. In addition, there are several enterprises supplying the industry sector with wine-making and wine-processing equipment and technology.

**Table 2: D.O.C. Conegliano Valdobbiadene (Italy) - organizational structure**

|  | General situation | Year 2007 |
|--|-------------------|-----------|
|--|-------------------|-----------|



|                             |                    |   |
|-----------------------------|--------------------|---|
| Area of grapes              | (hectares)         | 4.830   |
| Ampelographic platform      | (composition)      | Unique white variety<br>(Prosecco plus of 85% in<br>production disciplinary)  |
| Total tonnes crushed        | (tonnes )          | 61.000  |
| Vineyards yield             | (tonnes/hectares ) | 13  |
| Average value of winegrapes | (€ /tonne)         | 1.400   |
| Wine-growers                | (number )          | 2.800   |
| Wineries                    | (number )          | 460   |
| Legal structure             | (Typologies)       | (ditta individuale =Sole<br>Proprietorship, S.R.L.=<br>Limited Liability<br>Company;<br>S.A.C.=Farmers'<br>Cooperative Company;<br>S.N.C. = General<br>Partnership; S.A.S =<br>Limited Partnership;<br>S.p.A.= Publicly Listed<br>Company |

Source: Consortium of Guardianship of the D.O.C. Conegliano Valdobbiadene, 2007.

## COMPARATIVE ANALYSIS OF WINE SUPPLY AND EXPORT STRUCTURES

In terms of an examination of the commercial flows conducted on the aggregate of the companies of the Yarra Valley, a production of 13,3 million litres is registered and 15% of the total yield produced in 2006 was exported (Table 3).

**Table 3: The Yarra Valley Region (Australia) - wine supply and export structures**

|                      | General situation | Year - 2006   |
|----------------------|-------------------|---|
| Australian market    | (million litres)  | 11,3  |
| Australian channels  | (typologies)      | Cellar Door; Hotel & Restaurant & Catering;<br>Retail & Warehouse; Agents/<br>Distributors; Independents; E-commerce/<br>Mail Order |
| Exported wine        | (million litres)  | 2,0   |
| Exported wine:       | (%)               | 15,0  |
| - Oceania            | (%)               | 3,6   |
| - Europe             | (%)               | 38,4  |
| - Asia & Africa      | (%)               | 15,9  |
| - Americas           | (%)               | 42,1  |
| Estimated wine value | (million €)       | 160   |

Source: Yarra Valley Wine-Growers Association, 2007.

Comparing the commercial channels present in Australia with the Italian ones, a particular segmentation is apparent: direct selling occurs through Cellar Doors, the Ho.Re.Ca channel is composed of Hotels & Restaurants & Catering; large distribution includes Retail & Warehouse; the wholesale channel includes Agents and Distributors, amongst the other channels there are the independents and an ever more important part of the production is sold through E-Commerce and Mail Order channels.

As far as exporting is concerned, the leading role is held by America (United States and Canada) and European (driven by the United Kingdom), which count for 42.1% and 38.4% respectively of the sales abroad, whilst the Asian, African (15.9%) and Oceania (3.6%) markets cover a significant role in terms of exportation.

An estimate as to the value in terms of locale economy for the entire wine production of the Yarra Valley results to 160 million Euro.

An overview of the 2006 production of Prosecco can be obtained by analysing the data supplied by the D.O.C. Conegliano Valdobbiadene Consortium (Table 4). The prospectus highlights production of 25,3 million litres of *Prosecco* of which 30,1 million are of sparkling wine (translating into 81.5% of the total production). In this sphere, it is significant that the production of the *Superiore di Cartizze* sparkling wine, alone amounts to 0.9 million litres.

The production of fizzy (*frizzante*) wines counts for 6,4 millions litres, while 0,4 are the litres of so-called *tranquillo* (non-sparkling) wine. From the database of the Consortium, the litres exported in 2006 were 11,6 million, of which 8,6 million were of sparkling wine. In so far as the export data is concerned, the leading export market is Europe (78,4%) in which Germany receives (34.4%) of the wine litres, followed by Americas (16,5%) and the Asia & Africa (4,0%). In the Southern Hemisphere market, sales to Oceania amount to 1.1% of the total sales abroad.

It is estimated that the total consumption of Prosecco wine in relation to the entire production is of 330 million Euro.

**Table 4: D.O.C. Conegliano Valdobbiadene (Italy) - wine supply and export structures**

|                      | General situation | Year - 2006   |
|----------------------|-------------------|---|
| Italian market       | (million litres)  | 25,3  |
| Italian channels     | (typologies)      | Direct Selling; Ho. Re.Ca.; Large Distribution; Wholesale channel; Other channels |
| Exported wine        | (million litres)  | 11,6  |
| Exported wine:       | (%)               | 31,4  |
| - Oceania            | (%)               | 1,1   |
| - Europe             | (%)               | 78,4  |
| - Asia & Africa      | (%)               | 4,0   |
| - Americas           | (%)               | 16,5  |
| Estimated wine value | (million €)       | 330   |

Source: Consortium of Guardianship of the D.O.C. Conegliano Valdobbiadene, 2007.

Some of the elements that outline the success achieved by the Wine District of Conegliano Valdobbiadene can be explained by analysing the available data, for the evolution in the production of D.O.C. wine commercialized in bottle (Table 5) over the last decade. Along with a meaningful increase of the total production in the typologies fizzy (*frizzante*) and sparkling wines (+68.0%) and its export capacity (+87.6%), we notice the positive trends of the production of the D.O.C. sparkling wine (+87.5%) and of the exports of the main product of the local territory (+182.3%).

**Table 5: D.O.C. Conegliano Valdobbiadene: elements of evolution of the market of the Prosecco wine (1997-2006)**

|   | Year 2006 | Growth % 1997/2006 | Growth % 2005/2006 |
|---|-----------|--------------------|--------------------|
| Sparkling wine manufactures (million bottles) | 153       | +11,1              | =                  |
| Total production (million bottles)            | 49,2      | +68,0              | +11,3              |
| Total sparkling production (million bottles)  | 40,2      | +87,5              | +12,3              |

|  |      |        |       |
|--|------|--------|-------|
| Total 'frizzante' production (million bottles)       | 8,5  | n.a.   | +9,0  |
| Sparkling production (% on total bottled production) | 82,0 | +8,5   | +0,9  |
| Total export (million bottles)                       | 15,5 | +87,6  | +10,7 |
| Sparkling export (million bottles)                   | 11,5 | +182,3 | +10,6 |

Source: Studies Centre of the District D.O.C. Conegliano Valdobbiadene, C.I.R.V.E., 2007.

## CONCLUSION

This paper is the first assessment of a research project started by the University of Padova (Italy) in cooperation with the Swinburne University of Technology in Melbourne (Australia).

These two countries are amongst the main wine producers and exporters in the world and represent a leading model worldwide for the role they have as far as production structure and wine offers as well as demands.

The two national wine producing systems are characterized by some specific features and analogies that are to be found on an areal scale. Both the D.O.C. Conegliano Valdobbiadene and the Yarra Valley Region are characterized by historical peculiarities, uniqueness and beauty of the environment (tourist areas), cultural heritage and by details and analogies that extend up to the aspects of the production and market system.

From a historical point of view one can detect some analogies regarding the development and evolution of the tools used in vine growing (i.e. role of the Ryrie Brothers and of the Count Balbi Valier), oenology (for instance the role of Antonio Carpenè and of James Dardel) marketing (i.e. the role of the brands), starting from the XVII century and going further on today; some differences (i.e. role played by the Consorzio di Tutela Conegliano Valdobbiadene in the European Area and of the Yarra Valley Wine-Growers Association in Australia).

By examining the organisation one can see on the one side, the Australian territory, characterized by a multiple varieties ampelographic platform, based in particular on a berried variety (ex. Pinot noir, Cabernet Sauvignon, etc), with some white varieties which are appreciated and currently emerging such as Chardonnay and Sauvignon blanc; the drastic limit of the yield per hectare (5 tons per hectare), to obtain varied wines above all of particular value and complex as far as sensory; on the other side the Italian territory which focus on the Prosecco variety and on the production of sparkling wines, spumanti D.O.C., a higher overall yield, supported by a high value of the raw material. The two areas have something in common as far as a production in the large production manufacture based on small and medium size companies and something in common regarding the company's governance (for ex. between the Sole Traders, the Publicly Listed Companies and the Limited Liability Companies).

From a close examination of the supply structure and of the exports we can see: from one side the group of the Yarra Valley producers who avail themselves in the marketing of their wine range, first of all of the domestic market, where the distribution is mainly the property of two main distribution networks (Woolwhorts, Coles), in the export they privilege the Americas (ex. United States, others) and Europe (ex. U.K., others), and they reserve a considerable quantity of their production towards the Asian countries (China, Japan, Hong Kong, others), while the producers of the D.O.C. Conegliano Valdobbiadene are keen towards the European market mainly (ex. Germany, Switzerland and Austria), and after that North America (United States and Canada).

These two wine systems are characterized by quite different oenological features, expressions and interpretations which on the other hand enable them to satisfy 360° to the requirements of the wine consumer.

The wines of the Yarra Valley express in their organoleptic profiles, a sensory complexity (i.e. from barrels, variety or blends, ferments, aged, etc) instilled by both the Oenologists and by the climate and the Australian environment. The wines of the D.O.C. Conegliano Valdobbiadene, in their organoleptic profiles, on

the other hand show a sensory simplicity (i.e. the taste is unoaked, elegant, young and fresh, etc), the expression of the traditions and of the local wine culture.

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# **THE STATE FUNCTION AS INDUCER AND FORMULATOR OF A PUBLIC POLICY OF CREDIT ACCESS AS A TOOL OF COMBAT AGAINST POVERTY AND SOCIAL INCLUSION**

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## **ABSTRACT**

*The combat against poverty and social inclusion are appellants themes when analyze the public policies implemented in latin america in the last decade. In brazil, the “real plan”, implemented in 1994, achieved stability to the economy, eliminating the inflationary inertia of salaries and prices. The elimination of the inflationary rate was a relief to the social and business brazilian pyramid basis, however wasn't enough to contain the population impoverishment process. This article present the main public policies of credit access, implemented in the last 10 years in brazil, as a way of social inclusion and combat against poverty, with the federal government as inducer and more important actor.*

## **INTRODUCTION**

The combat against poverty and social inclusion are appellants themes when analyze the public policies implemented in Latin America in the last decade. In Brazil, the “Real Plan”, implemented in the government of the President Itamar Franco, in 1994, achieved stability to the economy, eliminating the inflationary inertia of salaries and prices.

The elimination of the inflationary rate was a relief to the social and business Brazilian pyramid basis, however wasn't enough to contain the population impoverishment process, as direct consequence of the productive and distributive reestructuration caused by globalization, through the unemployment and informality increase of the small business.

From 1995 and during the eight years of the president Fernando Henrique Cardoso government (1995-2002), in function of this scenery, the federal government took over the paper of inductor and formulator of a train of public policies turned to the minimization of this situation. Among them, the credit access, not as an isolated politician, but inside a context of integrated and sustainable local development occupied a complete important function.

The policy makers of this period understood that the productive credit was the best way of maintenance of the work places and income generation to the familiar unit and then, in a second moment, through the income multiplicator effect their benefits expanded for all the collectivity.

As a result of this action line, we have from 1996 the creation of the Popular Productive Credit Program (PCPP) and the Institutional Development Program (PDI) from the National Bank of Economic and Social Development (BNDES) with the purpose of foment and create solid basis to the microfinance industry expansion inside the country; the arrangement of a legal mark to the sector and the creation, in the Solidary Community Council scope, of a discussion group about the microcredit expansion in Brazil.

From 2003, with the political break caused by the election of Luiz Inácio Lula da Silva to president (2003-2006), the new team of policy makers decided for the maintenance of the economical policy of the previous government, but, the concept of credit access was modified with the bankarization of the lower classes of the population.

As a result of this new vision were reserved 2% of the compulsory over the deposits in cash to the microcredit and the creation of simplified accounts by Brazil Bank and Federal Savings Bank.

This article presents the main public policies of credit access, implemented in the last 10 years in Brazil, as a way of social inclusion and combat against poverty, with the federal government as inducer and more important actor.

## **THE MONETARY STABILIZATION AND THE BASIS TO THE INCREASE OF THE CREDIT OFFER IN BRAZIL**

For more than a decade, the Brazilian economy cohabited with high inflation rates that, coordinated with the low economic raise, verified from 1981, carried a strong contraction in the investment rate. From 1980 to 1994, the average inflation rate, measured for the IGPM (General Index of Market Prices) of Getulio Vargas Foundation was 725,47 %. In the same period, the average rate of economic and investment raising, measured in percentage terms of the Growth Domestic Product (GDP), were respectively 2,29% and 20,50%.

Obtaining this scenery as a bottom cloth, besides the utilization of the inflation as a tool of economic policies, supporting the government to regulate ex-post of the public accounts (index incomes), the productive sector was suffocated. A vicious circle was formed, making that the Brazilian economic period of the history, in special in the 80's, was known as the lost decade, characterized for: low economic raising, high inflation, power deterioration of population purchasing and credit scarcity, where the financial system stood back more and more of his basic function of credit provider to investment and consume and concentrate in the maintenance of the public debt.

Between 1986 and 1991, five heterodoxies tried of inflation combat failed – Cruzado Plan (1986), Bresser Plan (1987), Summer Plan (1989), Collor Plan I (1990) and Collor Plan II (1991). These plans, had as a common characteristic, the prices freezing, which carried to an immediate inflation fall, with the posterior acceleration of the prices rates growing, leading to a hyperinflationary route (Giambiagi and Moreira, 1999, p.22).

The increasing retake was linked to the success of a new stabilization program, but turbulences in the policy scenery postponed his implementation. The impeachment process of the president Fernando Collor de Mello, started in 1992, 29 September, finished with his renounce, in 29 December and the take over of the command by the vice president, Itamar Franco.

Bypassed the policy crisis and, with a new policy makers team, the path was free to the elaboration of a new stabilization program. The Real Plan, was pre announced in 1993 December and implemented in three stages: fiscal regulate of emergence (federal budget approbation characterized by the *ex ante* equilibrium, creation of the Emergence Social Fund, that unlinked 20% of the Union expenses between 1994 and 1995 and increased the flexibility of the budget execution); the elimination of the inflation inertia, through the salaries and prices conversion, in an account unity, named Real Unity of Value (URV), which value in cruzeiros reais (currency) was daily adjusted with basis in the average variation of three inflation indexes and, the monetary reform, through the transformation of the URV in a new currency, in 1994 July. The inflation monthly rate, in June, was of 45,21% and, in the next month fall down to 4,33%, keeping the falling tendency in the next months.

The Real Plan implementation ended eliminating the retroactive indexation, without need to freeze prices and salaries to contain the inflation. Besides, the exchange appreciation coordinating with the commercial opening allowed that tradable prices were rigidly contained, giving effectivity to a currency anchor in the inflation control. As a result of this process, succeeded a drastic inflation falling, without happen a serious recession (Giambiagi and Moreira, 1999, p.23).

The resulting of this process was the beginning of a new virtuous circle of the Brazilian economy, with low inflation rates, relative increase of the investment rate and a moderated economic increase (see table 1). The maintenance of this policy, in the following years, was possible with the election of the Minister of Finance to Republic President, Fernando Henrique Cardoso, in 1994 October.

In his two orders, 1995-1998 and 1999-2002, his policy makers team looked for the construction of a institutional and legal structure to support one of the main positives points of the Real Plan, the inclusion of millions of Brazilian people in the consume market.

## EXERTS ABOUT MICROFINANCES, MICROCREDIT AND THE SOCIAL AND BUSINESS “PYRAMIDS”

Fulfilling the paper of formulator and inductor of determined public politician, the agent (State), must define correctly the components variable of the analytic model to be implemented.

This idea of access to credit as a public policy overpass all the National Finance System (SFN), where “consider as financial institution, to the effects of the legislation in force, the private and public juridical people, who has as main or accessory activity the collection, the intermediation or the application of the own or others resources, in national or foreign currency, and the custody of value of the others propriety” (Article 17 of the Law 4.695/64, in Fortuna, 2001, p. 17). From this ample spectrum of entities, this analyze will unroll over those whose action is conducted to the social and business pyramid basis.

The social pyramid definition (economic), uses the concept of consume classes, with basis in the familiar person/unit annual income per capita, extrapolated from the power acquisitive equity in the United States of America (Prahalad and Stuart, 2002, p.18). In the pyramid top, we find the class 1, where are between 75 and 100 millions of consumers, with the annual income per capita over US\$ 20.000,00, the richest of the world (high and middle class of the developed countries and the high class of the development countries). In the classes 2 and 3, with income per capita between US\$ 20.000,00 and US\$ 1.500,00, we find the poor consumers of the developed countries and the middle class of the developing countries, in an universe of 1 billion and 750 millions of people. In the pyramid basis, the class 4, with 4 billion of people, and annual per capita income under US\$ 1.500,00; from these, about 1 billion live under the poverty line, (per capita income under US\$ 1,00 by day). In Brazil, about 50 million of people fits in this class, according to the National Research for Sample in Home (PNAD), of 1999.

To characterize the business pyramid, we will use Brazilian parameters. From the universal categorization by charge- micro, small, medium and big enterprise, added to the standard of the new Statute of the Micro and Small Enterprise (Law 9.841/99) and his actualization by the Edict 5.028/04, that classifies the enterprises according to the annual gross income, beyond the concept of occupied people, used by the Brazilian Institute of Geography and Statistics (IBGE) in the raises of the social economic researches and censuses, annuals and monthlies. According to Sebrae (2004), this concept encloses not only the employees, but encloses, also, the owners of the companies, as a way of arrange information about the expressive number of micro business unities that don't employ workers, but work as an important factor of income generation to their owners. So we have:

- Micro Enterprises: annual gross income under US\$ 144.585,00 (utilizing a conversion value of US\$ 1,00 = R\$ 3,00) and/or industrials establishments with until 19 occupied people and, in the trade and in the services loan with until 9 occupied people.

- Small Enterprises: annual gross income over US\$ 144.585,00 and equal or under US\$ 711.044,00 and/or industrials establishments with 20 to 99 occupied people and, in the trade and the service loan among 10 to 49 occupied people.

The small business (micro and small enterprises – MPE) represent, according to IBGE, more than 3,8 millions of establishments, consuming 44% of the employed workers and generating about 20 % of the Growth Domestic Product (GDP).

After define the variables determinates of our model, the credit, determinate variable, must be defined. According to Aurélio Buarque de Holanda Ferreira (1999, p.575) the word credit comes from the latin *creditum* and, means in *lato* sense, security that something is true; trust; good reputation; consideration and in the economic sense the merchandise allow, service or money amount, to future payment or the opportunities of raise loans.

Focusing the social and business pyramid basis, the credit access may be used as a toll of social inclusion in two ways: guided to the consume and/or destined to the production.

Microfinances are, according to Parente (2002, p.11), a new field and in accelerated development, that combine mechanisms of market, strategic support of the State and communitarians initiatives with the objective of structure the sustainable financial services to the clientele of low income, to people, families or enterprises (formals or informals). In Brazil, the most visible and developed part of this complex group of tools in income generation and combat against poverty is the microcredit; besides this we can detach other products, as: popular saving; domicile credit; safes; emergence credit and the popular credit card.

Is important to stand out that the products created by the microfinance sector aren't just a reproduction of those offered by the traditional finance system (commercial banks and financiers); they belong to a philosophy where the credit is seen as a right, because the access to credit lead the person and the productive unit to development.

This reality - microfinance - is present and consolidated in a good part of the Latin America countries in operation, of legislation more comprehensive and flexible. In Brazil, besides it's more recent, the legislation in force just allows one modality of microfinance: the microcredit.

Microcredit is a low value loan, to the informal, micro and small enterprises, without access to the traditional financial system, main because they can't offer real guarantees. Is a productive credit (finances rotation capital and fix investment) and is allowed by an assisted methodology, where the credit agent (institution employee) interacts with the taker before, during and after the credit award (Adapted from Barone, Dantas, Lima and Rezende, 2002, p.14).

## **POVERTY AND LOCAL DEVELOPMENT**

After this melting pot of variables, becomes necessary to evidence the scenery, which they figure. A public police of credit access, whose tools provides from micro finance, and in special from microcredit, focused in the social and business pyramid basis has as basilar poles the combat against poverty and social inclusion inside of a local development strategy.

With the monetary stabilization success in 1994, the combat against the poverty became the main question to the different segments of the brazilian society. The importance that the theme is taking over reveals the understanding that the poverty persistence reflect and synthesize the more critical face of several national problems, between the crescent informalization of the work market, the difference between people and the regional unbalances (adapted from Rocha, 2003, p.174).

One country with continentals dimensions, Brazil posses 5.656 city councils, those are the mater cells of the federation, from these, according to IBGE, only 6% has more than 50 thousand habitants and, just 95 cities, between them, the state capitals, has more than 150 thousand habitants. With social, police and economic differences, any public police of inclusion that reach to be efficient, permanent and effective must, at the same time, has an universal comprehension and be focused in the small federative unit, the city council, following the old maxim of *"think globally and act locally"*.

From the economy study, more particularly the macroeconomy, part of the person income available is spenden in the goods consume and necessary services to the subsistence and a part is saved to the future consume ( $Y = C + S$ ). In the class 4 of consume (social pyramid) or in the business pyramid basis (informal enterprise, micro enterprise and the small enterprise), where the productive activities are to subsistence or simple accumulate, the microcredit, that is a productive credit, works as a lever, increasing the available income of the person/ familiar unit that is spenden in the consume. The multiplier income effect, generated by this process, when amplified, in a small city council district, in the own city council and then successively, generate in aggregated macroeconomic terms, national income increasing and by consequence the economic increase with inclusion, portion wished by all policy makers. By the other side, the credit to the consume can generate either similar effects to the collectivity because, stimulated, by the demand side, determinate part of the population consume and/or increase their consume of goods and services basket and, this offer must to fit, producing more, generating more jobs and, consequently, in aggregated terms, more income will be available in the economy.

For that reason, the importance of the concept comprehension that poverty and social exclusion can't be faced only with economic and compensatory polices raising, but, with innovative investment programs in human and social capital (Franco, 2002, p. 37).

## **THE SOLIDARY COMMUNITY, HIS ROUND AND THE PUBLIC POLICE OF CREDIT ACCESS**

One of the thoughts that were marked during the campaign and the beginning of the first ordering of the President Fernando Henrique Cardoso (1995-98) was "Brazil isn't a poor country, but an unfair country". Over



this tonic and, through a presidential decree, the Solidary Community was created in 1995 January and, in parallel, the “famous” Brazilian Legion of Assistance (LBA) was extinguished.

An agenda of social development was constructed to the country, according to Cardoso, Franco, Oliveira and Lobo (2002, p.05), new concepts placing old structures, singular proposals of singular action replacing old and surpassed assistances models. In this process, also was chopped beside the idea that the social development is unique task of the State. Partnerships with the civil society and privet initiative were used to potential the State action in several fronts.

In the breast of these transformations, in 1996 June, arise the Police Interlocution Rounds of the Community Solidary Council, incentived, according to Cardoso, Franco, Oliveira and Lobo (2002, p.13), by the conviction that was essential the construction of new dialogue channels between society and government.

Were, a long of six years, realized fifteen rounds about key-themes of a social development agenda to Brazil, but, from these, three (Alternatives of Occupation and Income, Legal Mark in The Third Sector and Microcredit Expansion in Brazil) contributed to the induction, formulation and implementation, directly or indirectly, of public politician of access to credit as a way to combat poverty and social inclusion.

The microcredit in Brazil is not recent, its origins reassemble in the end of the 50's, when Dom Helder Câmara, in Rio de Janeiro, created a “ loan wallet” that objective was assist the social excluded to start a productive activity. This wallet was the embryo of the Providence Bank, an answer of the Catholic Church against the miserable reality of a fraction of the carioca population, searching collaborate and participate actively in the effort of help and human promotion of the social excluded.

In the 70's, more specifically in 1973, in the municipal district of Recife and Salvador, by initiative and with technical assistance of the Accion Internacional, in the age called AITEC, and with the participation of business entities and local banks, was created the Northeast Union of Assistance to Small Organizations, knew as UNO Program, a NGO specialized in microcredit and capability to workers of low income in the informal sector (Barone, Dantas, Lima and Rezende, 2002, p.21).

In the 80's, two experiences, of regional importance, appeared in the country: the Woman Bank (Association to the Woman Development), founded in 1984 by the initiative of the Executive Woman Council of the Commercial Association of Rio de Janeiro and, the Rede CEAPE, from the Supporting Center to the Small Enterprises Ana Terra, at Rio Grande do Sul, in 1987.

Belonged to the civil society initiatives to the introduction of the microcredit in Brazil, however, the high inflation growth in the 80 's and in the beginning of the 90's practically made impractical the appearing and the development of a meaningful quantity of experiences. In the middle of the 90's, happened a fundamental change in the macroeconomic environment of the country – the prices stability – reached from the Real Plan implementation.

The elimination of the inflationary inertia and the monetary reform created a favorable environment to the few institution that operated microcredit. Crossing an annual inflation rate over 1.000% to 15%, and with a low sloping that confirmed in the follow years (see Table 1), these institutions could adapt their expectatives so far refers to the interests rate, that is, with a favorable economic conjuncture, started to operate with pre fixed rates, contributing of a meaningful way to the expansion of the credit wallets.

This “incentive”, additioned to the other structuring actions promoted by the federal, state and local governments, made that the number of operators entities surpassed 200, in 2004 (according to the research in process realized by the authors).

Between the structuring actions promoted in the federal government, is proper to detach the creation, in 1996, of the Social Development Area of the National Bank of Social and Economic Development – BNDES that, in syntonization with the Community Solidary Council, published the Popular Productive Credit Program (PCPP), with the objective of divulge, in a consistent and consequent way, the concept of microcredit and promote the formation of a wide institutional network able to take credit to the microentrepreneurs, formal and informal (Kwitko, Burtet and Weihert, 1999, p.11). Through this and the Institutional Development Program (PDI), fruit of an accord of technical cooperation not reimbursable with the Interamerican Bank of Development (BID), the bank passed to arrange of a special credit line to lever the wallets of the institutions in operation (funding) and, invested in the market infra-structure and in the strength of the institutional capability, through the development of qualifying manuals in analysis methodologies, award and accompany of microcredit, to credit agents; manuals to managers (techniques of microfinance management, marketing, microfinances regulation and information systems); a manual to the companies of auditors; institutional classifying systems (rating); support to the development of manager information systems, systems of credit punctuation (credit-scoring), as the strength

institutional actions: governability, regionalization, institutional transformation, development of new products, among other things.

In parallel to these actions, in the breast of the Solidary Community, through of his council, were promoted Police Interlocution Rounds that would influence over way the public policies of credit access. In the fifty round, that treated of the theme Alternatives of Income and Occupation, realized in 1997 august, the microcredit was indicated as an important strategy of the income and work policies and, was created a work group, with representatives of the Central Bank of Brazil (BCB), BNDES, Finance Ministry, among others, to present proposals to their incentive and regulation.

With two meetings, in 1997 august and 1998 may, the Interlocution Police Round about the Legal Mark in the Third Sector, incorporated, according to Ferrarezi and Rezende (2000, p.13), the necessity of construction a new legal structure, that recognize the public character in a complex, vast and still informal, the organizations of the civil society and, at the same time make easy the cooperation between these organizations and the State. From these two rounds, start to be projected a legal structure that makes easy the operations of microcredit institutions of the civil society.

With the monetary stabilization and incentivized by one of the main themes of the national and global agenda of the beginning of the 90's – social development, the microcredit institutions multiplied in the country, through the organized social society (NGO) and the local and state public initiatives (municipals and state funds), knew as people bank. This expansion appeared with a legal problem. The credit concession, with rates over 12% per year, according to the Brazilian legislation in vigor (legal norms about *usura*, usually knew as "Usura Low": articles 13, 14 and 15 from Decree nº 22.626/33; article 4º of the law nº 1.521/51; article 7º, V, of the Law nº 8.137/90), could only be done by entities that belonged to the National Finance System (SFN).

Besides of not making part of the National Finance System, the biggest part of these institutions charged and charge interests rates that guarantee their sustainability in a long time (between 3 and 4% per month), covering their costs and operational expenses and still generate superávit to be reinvested in their operations.

This legal problem was solved only, in 1999, with the promulgation of the Low nº 9.790 and by the Provisory Measure nº 1.965-11, from February 2000 (reedited successively), both fruits of the two Police Interlocution Rounds already named.

The Low 9.790/99, knew like "The Third Sector Low", created a new qualification to the juridical people of privet right without profits intention: organizations of the civil society of public interest (OSCIP), represented, according to Ferrarezi and Rezende (2000, p.13), one step on the direction to the legal mark reformation that regulates the relationship between State and civil society in Brazil. According to this Low, the entities that has by purpose the microcredit concession will not be liable to the "Usura Low", if they qualify their selves as OSCIP; after regulated by the Provisory Measure nº 1.965-11/00.

In 1997 November, the Northeast Bank (development bank federal public, that has his area of actuation in all the northeast region of the country and at the Minas Gerais and Espírito Santo north), marked by the social development agenda of the federal government, created a microcredit program, the CrediAmigo that, working with a methodology of solidary groups and, offering concomitantly the credit concession, the manager capability to the takers, became the biggest microcredit program of the country and one of the biggest, in terms of number of clients and total amount of the operations, of Latin America.

In the second part of the 90's, the Brazilian microcredit sector was composed by, in principle, only by the NGO, after, incorporated to the locals and state government experiences, and the CrediAmigo from the Northeast Bank. The participation of the privet initiative in the sector was through donations to the formation of own capital (equity) or loan capital (funding) to the civil society organizations that's performed in this sector.

The sustainability of a public intervention, in any area, depends on the capability articulation of strategic partnerships and, in the case of a public policy of access to credit, its not different. The dynamic equilibrium could only be ensured with the entrance of a new player, the privet initiative. Once more, proper to the Solidary Community Council create basis, through the Fifth Policy Interlocution Round – Alternatives of Income and Occupation, to this fact happens. As a result of the work group initiated in 1997, the National Monetary Council (CMN) edited, in 1999 August, the Resolution 2.627, considered the legal mark of the privet initiative in the microcredit sector (after improved by the Resolution 2.874/01). This Resolution arrange about the constitution and the operation of the Microentrepreneurs Credit Society (SCM), juridical people of privet right, with lucrative purpose, that exclusive social objective is the concession of providing capital to physic people, with sight to make practical professional business of professional commercial or industrial nature of small size, as like juridical people classified as microenterprises.

The expectation around this new actor was too big, in the measure that ensured the contributions to the equilibrium in all the proportions of the sector practicability (economic, financial, institutional and social). This, less the number of institutions (the legal structure still not attracted the quantity of investors purposed), and more by the business character, join marketing expertise and aggressivity to the microcredit operations. This knowledge of finances come from the fact that the Microentrepreneurs Credit Society (SCM) are being constituted by people originated of the financial system, in special for owners of the business of mercantile foment (factorings).

With the objective of carry financial services to the city councils population not attended by the National Finance System (1.627), the federal government, through the Communication Ministry, in October 2000, edited the decree nº 588, instituting the financial postal special service, denominated Postal Bank, to be landed by the Brazilian Company of Mail and Telegraphs (ECT). According to the 2º article of this decree, the services relatives to the Postal Bank characterize by the utilization of the network attending of ECT to the lend basics bankarian services, in all the national territory, as bankary institution attending. BRADESCO, the biggest privet bank of the country wined, in August 2001, competition to operationalyze it. The first agency was inaugurated in March 2002 and, their results impressed. In the end of 2003, counted with 3.365 agencies and, the hoped quantity to 2004 is of 5.482 agencies, covering 1.006 city councils and benefiting 9 millions and 900 thousand people.

Still with the development of the fifty Round of Police Interlocution of the Solidary Community Council and, under two basic things about microcredit approved at the Round about Alternatives of Occupation and Income, that “microcredit or popular credit can accomplish a strategic paper in the field of the public police of work and income, seen not as a compensatory police, but as element of a perspective more ample to the integration of popular enterprises or small port in the process of development, inside a not excluding optic and, that the popular credit will just obtain expansion to accomplish the strategic paper if be treated of a distinguished way of the traditional credit” (A Expansão do Microcrédito no Brasil, Documento Final, 2001, p.10), The Microcredit expansion in Brazil was theme of two meetings, in March and October 2001. The objective was construct proposals and consensual measures capable to contribute to over coming the obstacles that obstruct the microcredit raising inside the country, between them the expansion and consolidation of microfinances as a new economic sector; reach the countryside regions with low Development Human Index (IDH) and attract the credit offer in the country. Theirs instruments and results were primaries to the sector as the creation of four technical commissions to purpose actions paths to the sector problems: legal mark, divulgation and institutional strength, capacitation and evaluation. Between their results, detach: the edition of the Resolution nº 2.874, July 2001, that improve the legal mark of the participation of the privet initiative in the sector, through the SCM, flexibility some rules and becoming more attractive to the investors; the creation of the microcredit portal ([www.portaldomicrocredito.org.br](http://www.portaldomicrocredito.org.br)); the elaboration of a little book to the microcredit divulgation in the country; elaboration of the minimum requirements to the programs of capacitation in microcredit and the formulation of a group of financial indicators and the impact evaluation in their concepts.

In the end of the second order of the President Fernando Henrique Cardoso (1999-2002), the last important actor, in the policy social scenery, to adopt a specific police, guided to the microcredit foment in the country was the National Service of Supporting to the Micro and Small Enterprises – SEBRAE.

SEBRAE is an autonomous social service, created in 1990, from the mechanisms Constitution of 1998, that purpose, according to the strategic guiding of 2001/2002, is work in a strategic way, innovator and pragmatic to make with the micro and small enterprises in Brazil have better condition to a sustainable evolution, contributing to the development of the country as a hole. In October 2001 was launched the SEBRAE Program of Supporting to the Microcredit Segment, example that the partnership between public-privet-civil society can be conducted in benefit of a specific sector. According to Barone, Dantas, Lima and Resende (2002, p.26), by acting as second line institution, purpose support to the creation and the strengthening of the microcredit organization, since that these adopted independence principle and self sustainability. Between the supporting models, besides the resources to funding, the program expected the supporting to the institution reestructuration; capability of the human resources; allow of computerize management systems use, among others.

## **THE LUIS INÁCIO LULA DA SILVA GOVERNMENT AND THE NEW VISION OF CREDIT ACCESS**

The election of the metallurgic Luiz Inácio Lula da Silva to Republic President (2003-2005), in the end of 2002, represented a rupture with the policy model in vigor in the country in last 20 years. From 2003, a new policy makers team choose by the maintenance of the economic policy of the previous government, but, the concept of access to credit became to be understood as the bankarization of the lower classes of the population (pyramid social basis).

To the middle and the high class, use a “surpassed” piece of paper (check) to pay a bill is a common routine, but, as affirm Rubin (2004), to a big part of the country population, this trivial act is sophisticated, until original. There is no precise statistics about the number of actives economical Brazilian people without access to the bank services, but calculate something about in the band of 25 millions and 45 million of people.

Include this big mass of people in the National Financial System became the main tonic of the public politics of access to credit of the new government. In the eight years of the previous government, microcredit was understood as a productive credit, capable of gear income. In this government, the concept of microcredit was supported to credit of low value, productive or not, either, as already exposed before, capable of generate income (see item 4). Between the taken measures, detaching the edition, in June 2003, of the “Microcredit Package”, a group of measures that purpose to amplify the offer of financial services to the low-income population. Three were their pillars: the creation of simplified accounts (bankarization); the incentive to the credit offer through the destination of part of the resources of the compulsory collecting about the deposits in cash and the credit cooperatives of free association formation.

The edition of the Resolution nº 3.104, of June 2003, by the CMN, as part of the package tried to became instrumental, through the amplifying of accessible mechanisms of access to low income population to the National Finance System and, consequently, incline the improvement of the condition to the credit obtaining, the achievement of savings and the purchasing of financial products, besides of the bigger convenience to pay bills by the people with low income (Darcy e Soares, 2004, p.22).

In parallel, the Federal Savings Bank and the Brazil Bank (federal public banks), created mechanisms to operate this public policy through the creation of simplified current accounts, moved by a magnet card and, needing to the opening, only, the presentation of the identity card and CPF. The Savings created a simplified account denominated “Caixa Aqui” and, the Brazil Bank, one total assisted, called Popular Bank of Brazil to attend this segment. Over another aspect, this Resolution, allowed too, the creation of the cooperatives of free admission associated that, according to Darcy and Soares (2004, p.22), allow the organization of the population today, with few financial services access, localized far from the big downtowns, to move and apply the resources in their own benefits, stimulating the small rurals and urbans enterprises that generate jobs. Another Resolution of CMN, the nº 3.140, of November of the same year, allowed the credit cooperatives creation to the entrepreneurs entailed to classes entities.

Complementing the package and, implemented through the Provisory Measure 122, of 25 June 2003 (arrangement, after, by the Low 10.735, of 11 September 2003), was comparing to the Monetary National Council “competence to regulate the commercial banks applications, of the multiple banks with commercial wallet, of Federal Savings Bank, as with the credit cooperatives to small entrepreneurs, microentrepreneurs and free admission associated, in microfinances operations destined to the low income population and microentrepreneurs, based in resources originated of the deposits in cash” (Darcy e Soares, 2004, p.40). With basis in this Provisory Measure, the CMN edited the resolution (nº 3.109, June 2003) establishing the application of 2% of the deposits in cash, collected by these institutions to the credit operation the social and business pyramid basis. With this measure, hoped that the disposition and by consequence inject in the market of more than US\$ 350 million in credits of low value, productive or not, through the channels already subsisted, mainly the big retail banks, nationals or foreign.

## CONCLUSION

Although the “incentive” given by the economic stabilization, and of a complex of public polices turned to the credit access, such in the two orders of the Fernando Henrique Cardoso government (1995-1998 and 1999-2002) as in the firsts years of the Luiz Inácio Lula da Silva government (from 2003), so much still must be done in terms of productive credit (microcredit), credit to the consume and bakarization in Brazil.

Its frightening the number of people that live under the poverty line in the country (more than ¼ of the population) and the increasing of the informality in the big urban centers. The small business, urban and rural, formal and informal, suffer an acute scarceness of capital, that generates low productivity and low capital

income, that obstruct the income multiplier effect and, consequently, in macroeconomic terms, the including economic development.

This thesis is corroborated by a research realized by the Labour International Organization (OIT), where the potential demand for credit in Brazil, is estimated in almost 14 millions of entrepreneurs. This number was obtained by crossing information of the National Research by Domicile Samples, of 1999 with the Research about Urban Informal Economy, of 1997, both realized by IBGE (Darcy and Soares, 2004, p.07).

When verified the microcredit offer, the result is discourage, same with the expressive raising of operators entities after -Real, that attends only 1% of the estimated demand by OIT, according to Darcy and Soares (2002, p.07) and, half of this number is responsibility of the Program CrediAmigo from Northeast Bank. In part, this situation explains the option for the bankarization and the increasing of the credit offer through the traditional finance institution (2% of the compulsory over the deposits in cash), as a public policy of the Work Political Organization (PT) government.

Independent of the strategy adopted by the federal government: incentive to productive credit (microcredit) through the organized civil society, privet initiative and government programs (of first and second level, municipal, state and federal); bancarization, through the offer increase of specific products destined to the low income population and the spatial cover increase, specially in the city councils not attended by the Finance System, through Postal Bank and, the stimulus to the credit offer expansion, productive or not (2% of the compulsory over the deposits in cash), the policy makers and the society comprehended, in particular, in the last then years, that the war against poverty won't be wined with paternalist actions, clientele and assistance actions, traditional in the Brazilian society of the XX century but with, universal strategies, relative to the purpose, and focused, in the intervention sense of a specific agent complex, carrying local development and inclusion, through the sustainable increasing of the benefited income.

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# COUNTRY TOURIST APPEAL AND COUNTRY IMAGE – THE CASE OF ITALY

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## ABSTRACT

*Starting from the belief that Italy has a great tourist potentiality, this study intends to measure the appeal of European market, and of Italy in particular, for US residents. Moreover Italy's image is investigated using an unstructured method that considers the nouns/adjectives associated to the country from the respondents. 119 personal interviews were conducted in different US States from July to August 2007. The analysis of the questionnaire confirms the strong position of Italy comparing to the others EU and world States and make it possible to identify interesting differences between people who already visited Italy and nonvisitors.*

## INTRODUCTION

The increase of areas of the world developed for tourism and of the quality of leisure time, a major knowledge of the world thanks to the media and to the increase of educational level and a more efficient transportation networks push the competition among countries. Today's consumers have the means to choose from this much larger variety of destinations. But the destination is made, essentially, of immaterial components. Consequently, destinations mainly compete on their perceived images relative to competitors in the marketplace.

Hence, in order to compete successfully, a destination should create and manage a distinctive and appealing perception, or "image" (Calantone, Di Benetto, Hakam and Bojanic, 1989). As pointed out by Guthrie and Gale (1991), with reference to tourism research, "Images are more important than tangible resources" because "perceptions, rather than reality, are what motivate consumers to act or not act". This is absolutely true, but just with reference to first time visitors. For repeaters visitors, it is truly important the confirm (or the improvement) of their perception otherwise, after the first visit, they never will come back (Lovelock, Wirtz, 2006).

In the tourism research field, a clear definition of image does not exist: "image" is a term difficult to define, it is a tricky concept. There are several definitions (Hunt, 1971; Crompton, 1979; Dichter, 1985; Kotler et al, 1994; etc.) but it is difficult to establish the boundaries of the concept.

In the literature about tourism destinations the importance of this topic is strongly recognized by the growing body of research. In particular, it is deeply examined the meaning and the measurement of the image. There are many possible approaches to studying destination image, because this argument has many implications for human behavior. Briefly, a destination (or a product) is perceived both in terms of individual attributes (coming from a "discursive processing" which is characterized by pieces of information on individual features or attributes of the stimuli) and holistic impression (coming from an "imagery processing" which is a sort of mental picturing, although sight is not the only sensory dimension that can be incorporated; imagery can include any or all of the senses).

In table 1 it is proposed a regrouping of 75 works, between 1971 and 2008, focused on this subject. This table is based upon a study of Gallarza, Gil and Calderon (2002) to which we have added the works wrote after the 1999.

**Table 1: Literature review on Tourism Destination Image**

| Topics covered  | Authors *  |
|---|--|
| a. Conceptualization and dimensions                                     | 1,2,4,9,13,15,16,18,19,20,21,22,27,30,31,32,33,34,41,43,45, 46,47,48,49,51,53,55,58,62,63,66,67,70,71,74             |
| b. Destination image formation process (static and dynamic)             | 1,2,6,9,11,13,16,17,20,22,23,27,31,32,33,34,46,48,51,63,68, 70,71,74,75  |
| c. Assessment and measurement of destination image                      | 1,2,3,4,5,7,8,9,10,12,13,14,18,19,22,23,34,25,26,27,28,33,37, 34,40,41,43,47,49,51,54,55,56,62,63,64,67,70, 72,73,75 |
| d. Influence of distance on destination image                           | 1,4,16,19,23,43,46,56  |
| e. Destination image change over time                                   | 1,4,16,19,23,43,46,56,71,72  |
| f. Active and passive role of residents in image study                  | 5,35,36,39,40,42,45,49,52,57,60,61   |
| g. Destination image management policies (positioning, promotion, etc.) | 3,7,9,10,13,14,15,16,19,20,24,25,28,29,30,32,33,34,35,36,37, 39,40,42,46,47,49,50,51,52,53,54,59,61,64,65,69,70,75   |

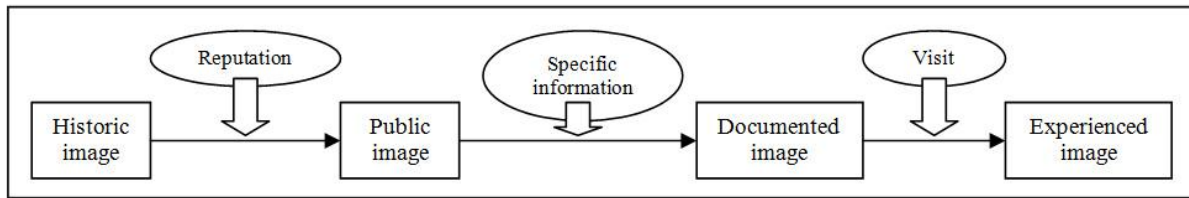
Source: our elaboration starting from an analysis of Gallarza, Gil and Calderon (2002).

\* 1. Hunt (1971), (1975); 2. Gunn (1972); 3. Goodrich (1978); 4. Crompton (1979); 5. Sternquist Witter (1985); 6. Gartner (1986); 7. Haahti (1986); 8. Gartner and Hunt (1987); 9. Stabler (1988); 10. Calantone et al (1989); 11. Chon (1989); 12. Embacher and Buttle (1989); 13. Gartner (1989); 14. Min Han (1989); 15. Telisman-Kosuta (1989); 16. Ashworth and Voogd (1990); 17. Chon (1990); 18. Reilly (1990); 19. Ahmed (1991); 20. Ashworth (1991); 21. Chon (1991); 22. Echtner and Ritchie (1991); 23. Fakeye and Crompton (1991); 24. Guthrie and Gale (1991); 25. Williams and Clarke (1991); 26. Carmichael (1992); 27. Chon (1992); 28. Crompton et al (1992); 29. Heath and Wall (1992); 30. Kotler et al (1994); 31. Valls (1992); 32. Borda's and Rubio (1993); 33. Echtner and Ritchie (1993); 34. Gartner (1993), (1996); 35. Prentice and Hudson (1993); 36. Ritchie (1993); 37. Amor, Calabuig, Abella'n and Monfort (1994); 38. Driscoll et al (1994); 39. Getz (1994); 40. King (1994); 41. Mazanec (1994); 42. Ryan and Montgomery (1994); 43. Dadgostar and Isotalo (1995); 44. Muller (1995); 45. Parenteau (1995); 46. Ahmed (1996); 47. Bramwell and Rawding (1996); 48. Dann (1996); 49. Eizaguirre and Laka (1996); 50. Fesenmaier and MacKay (1996); 51. Oppermann (1996a), (1996b); 52. Schroeder (1996); 53. Selby and Morgan (1996); 54. Baloglu (1997); 55. Baloglu and Brinberg (1997); 56. Borchgrvink and Knutson (1997); 57. Lindberg and Johnson (1997); 58. Lumsdon (1997); 59. Alford (1998); 60. Lawson et al (1998); 61. Smith and Krannich (1998); 62. Walmsley and Young (1998); 63. Baloglu and McCleary (1999); 64. Lohmann and Kaom (1999); 65. Ruiz, Olarte and Iglesias (1999); 66. Kleppe and Mossberg (2001); 67. Gallarza, Saura and Garcia (2002); 68. Beerli and Martin (2003); 69. Mansfield, Romaniuk and Sharp (2003); 70. Echtner and Ritchie (2003); 71. Beerli and Martin (2004); 72. Castro, Armario and Ruiz (2007); 73. Govers, Go and Kumar (2007); 74. Tasci and Gartner (2007); 75. San Martin and Rodriguez del Bosque (2008).

According to Gunn (1988) everyone has some kind of information stored in memory concerning a destination, even though it may be incomplete. Fakeye and Crompton (1991) speak about a destination image evolving from an organic image, through an induced image, to a complex image. Also in our opinion it is possible to individualize different level of image. The first one is something "given", information stored in memory: it depends on the magnitude and importance of that destination in the history and what the history has left in the country. An image a little bit more complex is made also by the "reputation" of the destination, coming from: the "product country image" (related to famous national products); the exposure to newspapers reports, magazine articles, TV reports, and other nontourism specific information; organization of mega sport or cultural events or the presence of famous sport men/women or teams, singers, etc. The third level implies, first of all, the active information search, but also any type of destination's specific information (documentary film, word-of-mouth, etc.). Finally, upon visiting a destination, a tourist will develop a more complex image resulting from actual contact with the area.



### Different kind of images



## AIMS OF THE STUDY AND METHODOLOGY

### Study's objectives

The empirical part of the study had mainly three objectives. First of all, the study moved from the belief that Italy has a great tourist appeal on US residents. The second objective of the study was to assess the image of Italy given by US residents (and verify if this is different for visitors and nonvisitors). The last objective referred to the importance given, in the related literature, to the benefits coming from organizing mega sport events (Preuss, 2004; Van Den Berg et al, 2002; Watt, 1998). In particular, we wanted to verify the awareness level concerning the country and the city in which the last Winter Olympic Games were hosted. How many knows where the last Winter Olympic Games were held? And, is there a statistically significant difference among who knows and who doesn't know it with reference to the desire to visit Italy?

### Methodology

The techniques commonly used in more general image measurement researches are based on two basic approaches: structured and unstructured. The first requires the use of a standardized instrument, usually a set of semantic differential or Likert scales that incorporates various common image attributes. A product (or, in our case, a destination) is rated by respondent on each of the attributes included in the measure and an "image profile" is derived from these ratings (Ferber, 1974). This method allows the researcher to compare several products (or destinations) across each of the attributes included as scale items. On the other hand, scale items are not designed to measure the unique characteristics of the product. Rather, they force the respondent to rate the product on more general, common traits.

The second approach is based on unstructured methodologies. These methods use free form descriptions to measure image (Boivin, 1986). In this way, respondent is allowed to more freely describe his / her impressions of a product (destination). Therefore, unstructured methodologies are more conducive to measuring the holistic components of product image and also to capturing unique features.

In the major destination image studies researchers have used structured methodologies (Echtner, Brent Richie, 2003), preferring instruments like semantic differential or Likert scales. Therefore, the majority of destination image measurement studies have focused on the common, attribute-based component of destination image and have not addressed the more holistic and unique components.

In our study we decided to use both the approaches. In particular, we used an open question in order to collect the impression about Italy (nouns and adjectives associated to it) and a Likert scale for evaluating the opinions of respondents (only who has already visited Italy) on several attributes.

### The questionnaire

For the data collection we used a questionnaire structured in six main parts; the questionnaire begins with a short introduction that wants to briefly introduce the topic of the survey and the objectives of the study (the developing of the structure of the questionnaire and of the items was made according with principles contained mainly in: Schuman and Presser, 1981; Wright and Anderson, 1983; Bayley, 1995; Corbetta, 2003).

The goal of the first part of the questionnaire, placed after the introduction, is to collect data to gain an exhaustive description (through the major significant variables) of the sample involved in the survey.

With the second part of the questionnaire we wanted to collect information about the process of planning and the vacation preferences of the respondent. The questions in this part are mainly closed items.

In the third part the questionnaire wants to capture the potential relevance of an event (in particular a sport event) to characterize and make stronger the image of a State and to attract the preferences of a potential visitor; the questions are particularly focused on the 2006 Winter Olympic Games (Italy, Turin).

The fourth part of the questionnaire, developed principally with open questions, asks the respondent to specify which States in the world (first) and in Europe (secondly) she/he wants to visit. This part wants to evaluate and compare the potential of attraction of the different States and in our opinion this could be considered a measure of the strength of their images. Moreover, the respondents can do a list of 1 to 5 States he/she wants to visit, giving the first place to the favorite countries, the second one to a State less important, and so on.

The fifth part of the questionnaire wants to collect data about the previous experiences of the respondent, as a tourist in the European countries. This part was developed to obtain a measure of the actual strength of the European States as tourist attraction because (differently from the questions seen above) we consider experiences effectively made by the respondents, and not only an attraction on a "potential" level. The respondents can indicate from 1 to 9 of European countries that he/she has already visited.

The last part of the questionnaire wants to study, in particular, the case of Italy and its image. To all the respondents is asked to indicate from 1 to 5 things or adjectives that he/she associates to Italy. This part is finalized to get a profile of Italy and the holistic components of Italy's image using the unstructured methodology (mentioned before) proposed by Boivin (1996). Considering the different kind of potential respondents, the last part of the questionnaire is divided in two different sections. The first is finalized to collect information from respondents that never visited Italy. The second section, reserved to respondents who visited Italy in the past, collects information about the tourist experience's satisfaction. The section asks to respondents if he/she likes Italy (actual image) and wants to study which aspect is more relevant to grow on his/her satisfaction using an evaluation scale (Delvecchio, 1995; De Vellis, 1991; Giampaglia, 1990; Marbach, 1997; Stevens, 1991; Thurston & Chave, 1974).

The questionnaire was developed in a way that the respondent can follow a logical itinerary through the different questions and to be as short as possible, even if collecting all the relevant information about the topic is the main goal; due to this reason were provided a series of jumps and textual links that allow the respondent to skip the part of the questionnaire in which he/she is not interested or involved.

## **The data collection and the sample**

To carry out this research 119 residents in the U.S.A. were interviewed by means of the questionnaire described above. The sample selection was systematic and not based on a sampling list. The selection of respondents was, mainly, at Manchester Airport (New Hampshire) and at Boston South Station. These two places were chosen to try to intercept, using only two main locations, people coming from as much wide as possible range of US States. The data were collected between July to August 2007.

Considering the way of selection of the sample, the description of its characteristics is very important due to the way of selection.

The sample is composed by 51,7% male and 48,3% female. The majority of respondents comes from New Hampshire (23,5%), Massachusset (16,8%) and Maine (9,2%) and from city with less than 10,000 habitants (27,7%) or with a number of habitants between 10,000 to 50,000 (26,9%) or with more than 500,000 (20,2%). The sample age has the following distribution: the principal part of the people interviewed were young (13,4% under 20, 37% between 21 to 35 years old) while 23,5% are people from 36 to 50 years old, 18,5% between 51 to 65 and 7,6% over 65 years old. The 22,7% of the respondents lives alone, while the 59,7% lives with parents or has an own family. The principal job of respondents involved in the survey is "student" or "working student" (28,6%) and employee (9,2%).

## **RESULTS**

### **The countries appeal**

The analysis of the fourth part of the questionnaire can make it possible a comparison of the potential appeal of all the countries in the world. The question # 7 of questionnaire asked: “*Write the name of the first five countries that you would like to visit (1 = the favorite one)*”. As a result of this item were elaborated two different rankings. In the first one (that we called “counter”) the countries are ordered by the number of the citations: this could be considered a measure of the relevance of the country in relation with the tourists knowledge and background. In the second one (called “score”) the number of citations is weighted with the place assigned (from 1 to 5, in decreasing order of importance) given to each country by every respondents. This second list, based on the score, gives an idea not only about how much frequently a State was pointed out, but takes in account also the relevance that respondents give to each country, that is the strength of the desire to visit the country considered. In the table 2 is possible to find the percentage associated both to the counter and to the score, to get an immediate idea of the difference between the two kinds of evaluation of the country’s relevance.

**Table 2: World’s countries appeal**  
(ordered by score’s ranking)

| # by score | # by count |           | % of tot. count | % of tot. score |
|------------|------------|-----------|-----------------|-----------------|
| 1          | 1          | Italy     | 9,0%            | 11,1%           |
| 2          | 2          | Australia | 6,8%            | 8,4%            |
| 3          | 4          | England   | 6,0%            | 6,2%            |
| 4          | 5          | Spain     | 5,6%            | 6,2%            |
| 5          | 3          | France    | 6,2%            | 6,0%            |
| 6          | 7          | Ireland   | 4,8%            | 4,7%            |
| 7          | 6          | Germany   | 5,2%            | 4,3%            |
| 8          | 8          | Japan     | 3,8%            | 3,6%            |
| 9          | 9          | Brazil    | 3,6%            | 3,5%            |
| 10         | 11         | China     | 2,8%            | 2,9%            |

**Table 3: European Union’s countries appeal**  
(ordered by score’s ranking)

| # by score | # by count |             | % of tot. count | % of tot. score |
|------------|------------|-------------|-----------------|-----------------|
| 1          | 1          | Italy       | 14,8%           | 17,2%           |
| 2          | 2          | France      | 12,6%           | 13,6%           |
| 3          | 3          | England     | 11,5%           | 11,4%           |
| 4          | 4          | Spain       | 10,4%           | 10,3%           |
| 5          | 5          | Germany     | 9,5%            | 8,6%            |
| 6          | 6          | Ireland     | 5,3%            | 5,0%            |
| 7          | 8          | Switzerland | 5,0%            | 4,9%            |
| 8          | 7          | Greece      | 5,0%            | 4,4%            |
| 9          | 11         | Scotland    | 2,5%            | 3,3%            |
| 10         | 9          | Holland     | 3,4%            | 3,1%            |

*Counter* = number of citations; *score* = number of citations weighted with country’s relevance.

In the top-ten list considering all the countries of the world there are 6 States of the European Union (Italy, England, Spain, France, Ireland, Germany) and 4 extra-EU States (Australia, Japan, Brasil, China). Italy results the major cited country with a percentage of 9% of all the citations. It is also the country that the sample wants to visit more, that is the most “desired” and attractive one (11,1% of the global score). This means that the importance that the sample gives to Italy is higher than the Italy’s weight in term of number of citations (there is a difference of +2,2 percentage points). An analogue consideration can be made about Australia but on a lower level (+1,6 percentage points) while the opposite happens, for example, to Germany (-0,9 p.p.). We have to underline also the strong difference between the percentage obtained by Italy if we make a comparison with the second country in the lists, Australia (+2,2 p.p. for the counter and + 2,7 p.p considering the score), and with the second EU country, England (respectively +3 p.p. and + 4,9 p.p.). Also considering England and Scotland together (count’s total percentage: 8,2%; score’s total percentage: 8,8%), Italy remains the world’s country that our US residents sample wish to visit most.

If we consider only the EU context, we can see analogue results in the table 3. The exact formulation of the open question in the questionnaire was: “*Which European States would you like to visit? (1 to 5 names; the first is the favorite one)*”. In table 3 are presented two different rankings similar to the ones seen in table 2: the percentage of country’s total number of citations and the percentages of counter weighted with the importance given to each country by respondent (% of total score).

As a confirmation of the data showed in the previous table 2, Italy is considered the country where the majority of the respondents wants to spend their vacancies (14,8% of the total citations); and, if we consider the place in the list attributed by respondents, Italy is even more important (17,2% of total score, +2,4 percentage points). The distance between Italy and the second country in the ranking list is of +2,2 p.p. (considering the counter) and of +3,6 p.p. considering the score. And, if we consider together England and Scotland (counter percentage: 14%; score percentage: 14,7%) Italy registers again more citations (respectively + 0,8 p.p. and +2,5 p.p.).

If the data showed before are useful to understand which is the impact of European States (and Italy in particular) in the word context, there is another question we proposed to the sample ( “*Which European states did you already visited?*”) to evaluate effectively where in Europe the U.S. respondents spend their vacancies more. The results are in table 4, where one can see the total number of citations (and the percentage on the total number of citations) of the first 10 European countries visited from the sample.

**Table 4: European countries visited**  
(ordered by counter’s ranking)

| #  |             | Counter | % of tot. counter |
|----|-------------|---------|-------------------|
| 1  | France      | 29      | 14,9%             |
| 2  | Italy       | 25      | 12,8%             |
| 3  | Germany     | 24      | 12,3%             |
| 4  | England     | 22      | 11,3%             |
| 5  | Spain       | 10      | 5,1%              |
| 6  | Switzerland | 9       | 4,6%              |
| 7  | Ireland     | 8       | 4,1%              |
| 8  | Holland     | 7       | 3,6%              |
| 9  | Poland      | 7       | 3,6%              |
| 10 | Austria     | 5       | 2,6%              |

*Counter* = number of citations. (multiple responses allowed).

The results showed in table 4 are quite different from the idea given from table 2 and table 3. France is the European country visited most (14,9% of all the citations registered by all the UE countries) and it has a percentage of +2,1 percentage points higher than the second States, Italy (12,8%). Moreover there are two new States that are frequently visited (Poland and Austria), even more than Greece and Scotland (who were in table 3). This results, particularly considering the Italian evaluation, seems to underline that Italy has the highest potential of attraction on the U.S. tourists, but when one U.S. tourist go to Europe, he/she chooses France more frequently as the final destination for his/her vacations.

## The image of Italy

The totality of qualitative responses concerning the nouns and adjectives associated to Italy was content analysed in order to find most frequently used meaningful words describing perceived image elements. We did the analysis dividing the US residents who already visited Italy and the nonvisitors. In order to summarize the great number of nouns/adjectives (each respondent could write 5 words maximum) we grouped them in thematic areas. The results are listed in table 5. In the first column (“visitors”) the underlined words are the ones which, in the category, have been cited more often (the frequencies are in the second column). In the column “nonvisitors” the first number refers to the frequency associated to the same words used by “visitors” (reported in the first column), while the second number refers to words not mentioned by visitors.

The main results underlined by the analysis (see table 5) are the following.

- The food, is really appreciated, both by visitors and by nonvisitors. The respondents praise the quality of the food in general, omitting, usually, to name which one in particular. In addition to food, also the wine received is great appreciated.
- The main attractions of Italy seem to be the landscape (judged beautiful and scenic by about the 40% of the visitors against the 20% of nonvisitors) and the artistic and cultural heritage.

**Table 5: Nouns/adjectives attributed to Italy**

|  | Visitors | Nonvisitors |
|--|----------|-------------|
| <b>Culinary aspects</b><br>( <u>great food</u> , pizza, pasta, <u>wine</u> ) | 25       | 55 + 5      |

|   |    |  |
|---|----|--|
| <b>Artistic and cultural richness</b><br>(music, art, culture, literature, ...)                 | 16 | 21 + 2 (museums)                                 |
| <b>Quality of landscape</b><br>(beautiful, scenic, ...)   | 14 | 14 + 1 (wonderful cities)                        |
| <b>Italian Life Style</b><br>(peaceful, friendly, crazy, cool, exciting)                        | 12 | 3 + 5 (picturesque, fun)                         |
| <b>Typical aspects of Italy</b><br>(architecture, small villages, lakes, Mediterranean lush...) | 11 | 7 + 15 (gondola, soccer, scooters, ...)          |
| <b>History – historic heritage</b><br>(historic site, colosseum, ...)                           | 10 | 13 + 3 (roman ruins, ancestor)                   |
| <b>Religion</b><br>(holy, religious)  | 2  | 3 + 10 (Pope, Vatican)                           |
| <b>Shopping [Italian products]</b><br>(leather good, clothing, boats)                           | 3  | 0 + 4 (jewelry, shoes, shopping, farm machinery) |
| <b>Negative aspects</b><br>(crime, dirty, unpleasant Rome, Smog, expensive)                     | 5  | 0 + 4 (mafia, fascists, Corleone)                |
| <b>Weather</b><br>(weather, warm, hot)  | 3  | 3 + 1 (sun)                                      |
| <b>Cities</b><br>(Rome, Florence)   | 2  | 17 (Rome, Venice, Sicily, Torino, Pompei)        |
| <b>Sentimental matter</b>   | 0  | 7 (pretty women, romantic)                       |

Total visitors: 33 units; total non-visitors: 76 units

- Who visited Italy recognises as typical elements of the country something different from the nonvisitors. For example, the latter ones named different times the word “gondola”, while no one of the visitors named it. We could call this an unfilled expectation, or we can just say that who visited Italy remember aspects of the territory more widespread (gondola is a typical vessel in Venice only).
- The visitors went home with the feeling to have been in a country with a life style particularly extrovert (they use terms like “crazy”, “cool”, “exciting”) other than friendly (more than it is considered to be by the nonvisitors).
- Little importance is given to the shopping goods (clothes, shoes, ...) contrary to our expectations (Italian fashion products are particularly appreciated abroad).
- Religious aspects tend to be forget after visit Italy (or they are considered less important than other attributes), while the nonvisitors strongly associate Italy with them (with the Pope and the Vatican in particular).
- The few negative aspects mentioned by the two categories differ from each other. The ones mentioned by nonvisitors are the ones associated, in a stereotype way or historically, to Italy: mafia and fascism.
- Nonvisitors have mentioned much more cities (Rome in particular) comparing to visitors.

## The impact of mega sport event

The questionnaire wants to evaluate the impact of mega sport events on the image of a country. We focused on Italy and, in particular, on the Winter Olympic Games that took place in Turin in 2006. Only 35,3% of the sample answer to the question about the country, 28,6% to the question about the city. We presume that the other respondents didn't know where Winter Olympic Games were held.

If we consider only the people who answered to the question, the 61,9% (21,9% of all the sample) gave the right answer about the State (Italy) and 52,9% (15,1% of all the sample) gave the right answer about the city that hosted the game (Turin).

To understand if the knowledge about the Winter Olympic Games is a strength point for the image of Italy, we used the chi-squared statistic test to verify the null hypothesis of the independence between the Winter Olympic Games State variable and the questions that asked which country the respondent wish to visit. At the usual levels of statistical significance ( $\alpha = 0.001, 0.01, 0.05$ ) the null hypothesis of independence cannot be

refused. This means that, in the case of Italy, the Winter Olympic Games are not statistically relevant in determining or less orienting the potential tourist's point of view and desires.

## CONCLUSIONS

The version used for this survey is the first release of the questionnaire; and this was the occasion to definitely test the questionnaire itself. In our plans it will be strongly developed in the future not only to get more data from respondents from the US and to make more deepening, but also to implement the survey in different contexts: in fact we're planning to extend the survey to Canada and to other European States, in a close future.

Another objective we proposed ourselves in developing this research is to collect data not only about the Italian image in a world and in an Europe context, but also to collect detailed information about others States that would allow to make a comparison of the evaluation of the States' image from the tourist point of view. This could be very useful for local or National government to plan interventions and improve the tourist appeal of their countries.

Despite this all, interesting considerations can be obtained by the analysis of these firsts 119 questionnaires.

First of all, we have to confirm that Italy still has a great tourist appeal, at least for US residents (for them, it is the most desirable country in the world and the "top of mind" country). Nonetheless, there is a good part of Americans that have already visited Italy (30% of respondents) and they have been satisfied about the tourist experience. The "profile" of country emerging from the judges given by the visitors is really positive (beautiful landscape with great food, extrovert life style and a lot to visit). Moreover, on a more general level, analysis shows clearly the high attraction of the European Union countries: the only extra-EU country that seems to be really competitive with the most cited EU countries is Australia (# 2 after Italy in rankings shown above: see table 2).

Of course, to have a good image is not enough in order to be chosen or chosen again as tourist destination. The tourists, in fact, will compare the image of one destination with all the others' ones. So, if a country picks up the greatest number of preferences, concerning the desire to be visited by the tourists, we can conclude that the country has big appeal. But we cannot conclude that the specific country will be the one with the greatest number of visitors because this depends upon different other aspects (such as the distance, the price, the cost of life, the availability of international connection, the weather conditions, the presence of relatives, etc.). We want to deepen these aspects in further researches.

Other interesting findings of our research concern the little recall of aspects related to Italian fashion business, style and design, and just the few references to negative aspects such as crime, mafia and fascism.

With reference to the role of mega sport events, we can only conclude that to have hosted the last Winter Olympic Games didn't give to Italy too much more notoriety (only 21,9% of the sample knew where the Games were organized and there is not statistically significant difference in the desire to visit Italy comparing with the ones that didn't know where the Games were hosted).

Several additional directions for further researches can be suggested. Firstly, creating a competitive position in the marketplace implies examining not only the strengths and weaknesses of the tourist destination under analysis, but also those relative to the competitors. By applying the same study to a wider group of tourist destinations it will be possible to identify the images of destination that tourists have compared with the main competitors. The results of this comparison are extremely useful in order to develop a successful strategy concerning the tourist destination's positioning in the target markets.

Another direction for further researches, that we're still planning (as told above), is to extend the study not only to analyze the image of other States, but also to study the Italy's image of the residents in countries different from the US.

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# **RISK MANAGEMENT IN AIRLINES: FINANCIAL RISKS AT TURKISH AIRLINES**

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## **ABSTRACT**

*Air transportation industry has a significant place for developed and/or developing economies. Changes in rules of economic activities as well as progresses in international economic relations, rapid change in competitive conditions, and technological innovations affect airlines' performance. Operational risk that naturally exists in aviation has also being discussed as means by institutional, financial, and strategic. This study contains 4 sections. Risk management in airlines is explained at the first section. Current situation of Turkish Airlines in Airline Industry is exposed at the second section. At the third section results from interview are evaluated and explored financial risks at Turkish Airlines. At the final section, current situation is examined and some propositions are constitute for Turkish Airlines financial risk management practices.*

## **RISK MANAGEMENT IN AIRLINES**

### **Introduction**

Airlines in today's environment of economic uncertainty are doing everything possible to reduce costs and conserve cash. While this is understandable, a broader view may be necessary to reduce the risk of failure in both the short and long term. Some of the risk faced by airlines stems from a flawed and complex industry structure, which becomes more obvious when times are difficult. For example, ownership restrictions have prevented airlines from consolidating, which could mitigate local and regional economic risk. Also, the airline business model is capital, labor, and technology intensive, increasing the complexity of the risk management challenge. Much of this risk, however, could be identified and managed. There are effective strategies, adopted by other sectors, which can help identify and managed risk. The alternative is volatility of earnings, and therefore, of share prices. In general, the financial markets do not trust airlines' earnings consistency and, therefore, heavily discount the sector's stock. Airline price-to-earnings ratios are generally half or a third of the market average, a fact often lamented by airline CEO's. (Zea, 1998)

### **Risk Management**

Aviation encompasses a full spectrum of risk factors. International airline is exposed both to general entrepreneurial risks and to industry-specific risks. Key areas of exposure are capacity and utilization risks, strategy-related risks, political risks, operational risks, procurement risks, labor agreement risks, It risks plus financial and treasury management risks. Steering with circumspection between opportunities and business risks is integral to corporate management. (<http://konzern.lufthansa.com/>)

The primary risks facing the industry fall into four categories hazard, strategic, financial, and operational (Exhibit 1). Airlines have tended to see risk management in terms of hazards, such as the need to protect physical assets. Significant and growing attention has also been given to safety and security issues. Elsewhere there has been some experimentation with hedging financial risks, such as foreign currency exchange rates, interest rates, and fuel prices. These approaches have been successful to an extent, but Entrepreneurial and Industry –Specific Risk Prioritization to Airline 316 more aggressive techniques and a wider perspective would



greatly increase the benefits. One new concept that can address this opportunity is ERM, a process of systematically identifying all critical risks, quantifying their impacts, and developing and implementing integrated risk management solutions. Those solutions need to be total aligning people, processes and technology to maximize enterprise value. Some tenets of this approach include the concepts that (O'Toole 2002): Not all risks are material - it depends on their potential impact on the value of the enterprise. Individual risks and their impacts should be evaluated on a portfolio basis to understand and appreciate correlations among risks. Risk management is an ongoing process, not a one-time event.

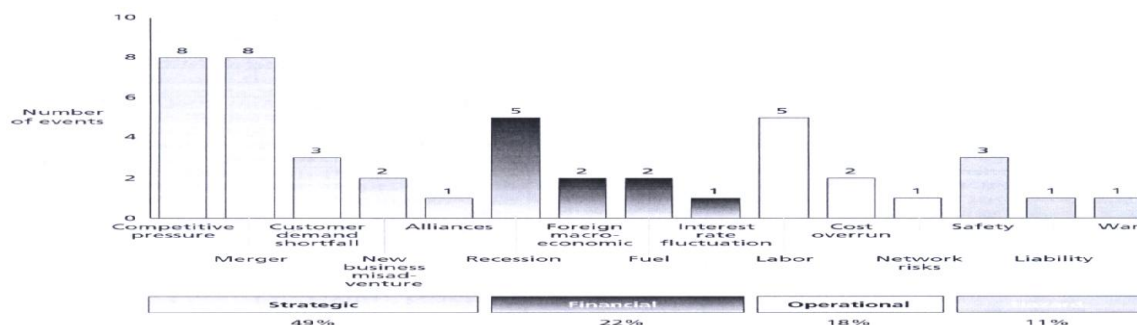
Exhibit 1 Airline Risk Factors



Source: Airline Business April 2002

The Airline Risk Management Survey 2005 was launched last autumn with the aim of gaining a better understanding of the issues and trends within airline risk management and to establish some industry benchmarks against which airlines can measure and monitor their own performance. For research breaking new ground among the airlines, the response rate was positive [degrees] 51 airlines took part, accounting for 41% of the world's top 200 airlines by total revenue. The study shows that risk management has a high profile within airline businesses: not only do two thirds of airlines have a company-wide risk management strategy, which, on average looks just over three years into the future, overall responsibility for risk is taken at boardroom level in 75% of airlines, with the chief executive's office making the decision whether to avoid, retain or transfer risk in 45% of airlines. (Airline Business, 2006) Mercer Management Consulting recently analyzed aviation industry risks for the 10-year period from April 1991 to April 2001. The primary risk facing the industry fall into four categories: hazard, strategic, financial and operational. Overall, failure to manage the entire spectrum of risks resulted in the evaporation of \$46 billion in shareholder value during this time period. Interestingly, hazard events, including safety, liability, and war, were the least likely to result in value loss. Strategic and financial risks were much more prevalent, accounting for nearly %75 of value loss events during the period (Exhibit 2).

Exhibit 2 Risk Events Precipitating Stock Drops, 1991-2001



Source: Mercer analysis

## Key Risks for Airlines

Strategic risks are defined by business design choices and how these interact with various external factors. A challenge from a new form of competition shifts in customer preference and industry consolidation are all strategic risks. Many of these challenges may be mitigated through traditional responses, such as creating a culture focused on the customer, developing a rigorous strategic planning process, or maintaining an independent board of directors. But many risks can be lessened in the first place through the selection of the business design itself. For example, Southwest has designed a business that attracts customers in good times and in bad because it is simple operationally and, therefore, cost effective. It is also not subject to the tremendous reliability problems that bedevil network airlines. Other Southwest business design choices further lower risk exposure. For example, use of secondary airports insulates Southwest from direct competitive pressure while improving turnaround speed. Low debt levels make the company less vulnerable to interest rate fluctuations. And profit sharing and a fun culture reduce the chance of labor difficulties. (Zea, 2002)

Financial risks involve the management of capital and cash, including exogenous factors that affect the variability and predictability of revenue and cash flow (e.g., general economic conditions or foreign exchange rates). Beyond of hazard risks, techniques to mitigate financial risks are the most advanced, primarily because there is a large third-party market dedicated to the effort, including banks, credit specialists, derivative markets and others. Financial solutions may include the design and placement of financial transactions, including, for example, structured finance, derivatives, insurance, contingent financing and debt equity offerings. Other, new approaches could push thinking even further in this area. (Zea, 2002)

Operational risks arise from the more tactical aspects of running the business day-to-day, such as crew scheduling, accounting and information systems, and e-commerce activities. Many airlines have processes in place to mitigate the most obvious operational risks such as business interruption, but fail to address more subtle risks. For example, little effort has been put into working with the government to shape industry regulation or solve capacity issues, yet airlines have spent tens of millions of dollars fighting inquiries and lawsuits, all the while incurring system delays. Operational risks can be mitigated through organizational solutions, for example, process redesign, organization structural changes, improved communication, contingency planning, performance measurement and reward systems, and capital allocation and pricing. Most managers would think of mitigating risks such as these as just part of “doing their job.” The challenge is great, however, and involves looking at risks holistically, as well as evaluating each potential response through the lens of impact on shareholder value. Then strategies can be defined to mitigate risk wherever it resides. (Zea, 2002)

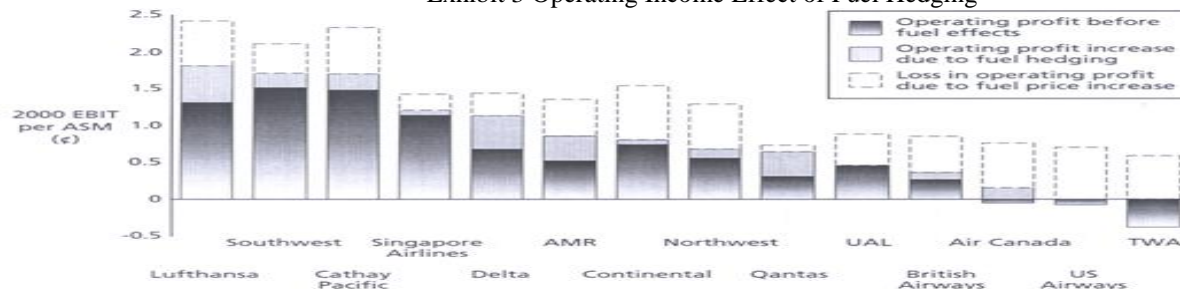
## Risk Mitigation

Lufthansa’s diversification into non-flying businesses was designed to reduce strategic risk and the volatility of their earnings base originating from the passenger airline business. The program began in 1994 after three years of losses, with four companies being created: Lufthansa Technik, Lufthansa Cargo, Lufthansa Service, and Lufthansa Systems. Revenue growth has been highest in the service-related divisions, and passenger airline revenues now account for only 56 percent of the total, down from 70 percent in 1995. While Lufthansa is still reliant on the air transport sector, it is in a better position to reduce earnings volatility than its competitors,

despite the fact that not all of the divisions have been successful. Swissair pursued a similar strategy but, unfortunately, also attempted to diversify geographically within Europe by investing in weak, second-tier airlines. Not surprisingly, the only value left in the company after the recent liquidity crisis was in the services businesses. (Zea, 1998) Some airlines have contained strategic risk through aggressive cash management. Most airlines accelerate spending during periods of high growth to acquire new aircraft, upgrade products and services, and maintain labor peace. Airlines with the highest multiples, however, conserve cash during the boom times and invest in the trough. For example, during the Asian financial crisis, Singapore Airlines initiated hundreds of millions of dollars worth of upgrades to their onboard product, further entrenching their leadership position during the later economic upturn. Low-cost airline Ryanair recently placed an order for 100 Boeing 737s with 50 options, during a time when most airlines are deferring orders and mothballing aircraft. They were able to negotiate a low unit price, and are poised to further exploit the current weakness of Europe's network airlines.

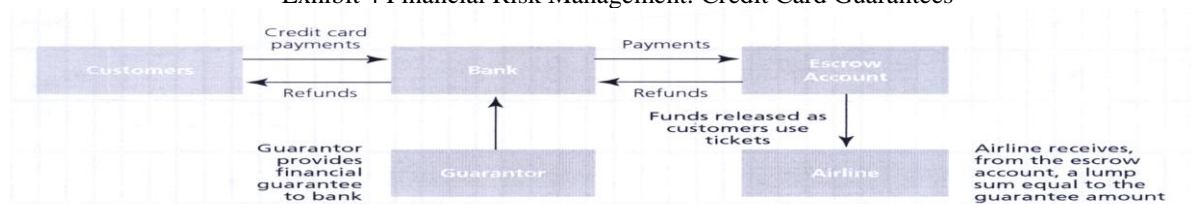
Hedging is a common way to manage the financial risk of input price changes, and no airline input is more volatile than fuel. Airline executives often comment that hedging is not a core competency, and that as long as competitors are not hedged, it will be a level playing field. Unfortunately, when fuel prices rise dramatically, airlines cannot pass all of the cost on to their customers. As shown in Exhibit 3, Mercer analyzed the effect of year 2000 hedging strategies among major airlines. While many airlines were able to maintain profits in the face of price increases, more aggressive strategies could have been used to further improve results. If such tools are not further leveraged, earnings will continue to be vulnerable, and shareholders will suffer value loss during volatile periods of supply.

Exhibit 3 Operating Income Effect of Fuel Hedging



An example of a new technique for financial risk management involves guarantees for credit card transactions. This product, developed by MMC Enterprise Risk, allows an airline to access otherwise unavailable cash (e.g., credit card escrow funds). Normally, the bank processing a weakened airline's credit card transactions will put all of the funds into an escrow account, to be released as customers use their tickets. This protects the bank against refund requirements should the airline cease operations. In the new arrangement, shown in Exhibit 4, a guarantor "insures" the refunds to the bank, which then releases the cash in the escrow account. The risk analysis carried out by the guarantor focuses on the likelihood that the airline will fail to discharge its obligations rather than simply its risk of default. Insurance capacity can typically provide a flexible risk mitigation avenue, without exposing the insurer to undue risk of losses. This arrangement offers the airline access to additional funds at a lower than average cost of borrowing, at a time when traditional funding lines are strained due to the industry's weakened financial state.

Exhibit 4 Financial Risk Management: Credit Card Guarantees



Of the 45 risk events analyzed by Mercer, nearly two-thirds could have been avoided using the types of approaches discussed above. Ten could have been mitigated through traditional means such as insurance or financial derivatives. Fourteen events could have been mitigated by more consistent and in-depth customer analysis, combined with scenario planning and game theory exercises. Finally, eight events could have been

mitigated through improved merger integration planning and improved execution. Given the many new tools available, it is time for airlines to move to the next level of sophistication in Enterprise Risk Management. The impact of one-time value-destroying events and related earnings volatility would be reduced, and shareholder value dramatically improved. As James Lam, former Chief Risk Officer of Fidelity Investments and CE has said, “leaders recognize that over the long-term, the only alternative to risk management is crisis management.”

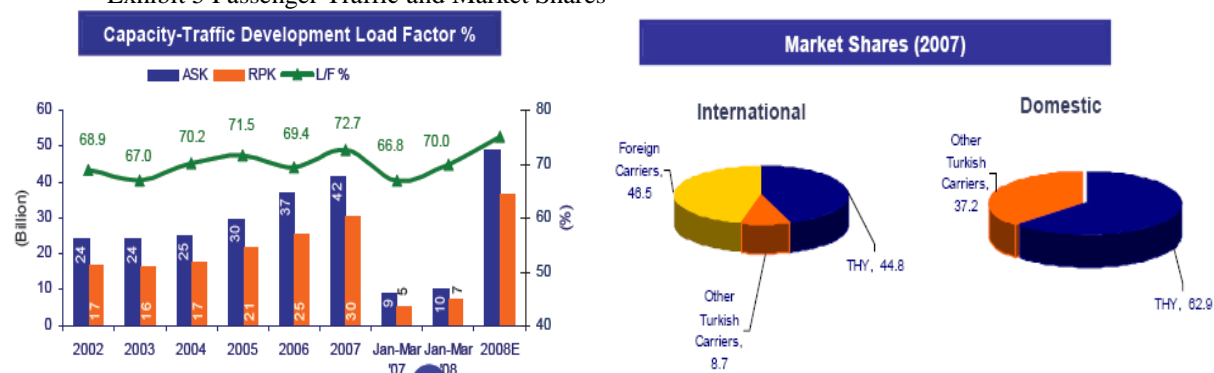
## FINANCIAL RISKS AT TURKISH AIRLINES

### Current Status of Turkish Airlines

Air transportation is a fast growing sector of the Turkey economy. For these reasons airlines and their good governances are vital important for Turkey as a part of air transportation system. The future of Turkey air transportation is crucial to the Turkey’s economic develop and growth. According to IATA report, Turkey will be one of the fastest growing civil aviation markets in the world between 2005 and 2009. Poland, China, Czech Republic, Qatar and Turkey will be fastest growing civil aviation markets in passenger and cargo areas. An approximate of 8.9% growth in passenger numbers is estimated for Turkey for the next 5 years. Turkish Airlines (THY), founded in the year 1933, was the only airlines company operating in Turkey for a very long time. It may have considered itself the sovereign of Turkish skies as it did not have any domestic competition. Today air travel has improved both in the aircraft used and their safety, in addition to the ground services provided. THY was reorganized in 1956 as a mixed corporation and in 1990 the airline’s shares were transferred to the Prime Ministry Public Participation administration in the form of a privatization venture. THY, remains the national flag carrier. THY was the only national airline providing air transport for a very long time. The performance of its administration had much to do with the revenues of the company. Sometimes it showed great profits but sometimes its revenues did not meet spending. However with competition in the market, a Turkish airline has improved its standards and since the deregulation of Turkey’s airline industry in 1982, the private sector has steadily increased its share in the international market. (<http://downloads.uktradeinvest.gov.uk>)

In Jan-Mar 2008, THY capacity on domestic routes increased by 9,4%, traffic increased by 9,7%, load factor decreased by 0.2pt to 71,4%. On international routes; capacity increased by 10%, traffic increased by 16,5%, while load factor increased by 3.4pt to 70,2%. Total capacity increased by 9,9% while traffic increased by 15,1%. Load factor was 70% (+3.2pt). ([http://www.thy.com/en-INT/corporate/investor\\_relations/](http://www.thy.com/en-INT/corporate/investor_relations/))

Exhibit 5 Passenger Traffic and Market Shares



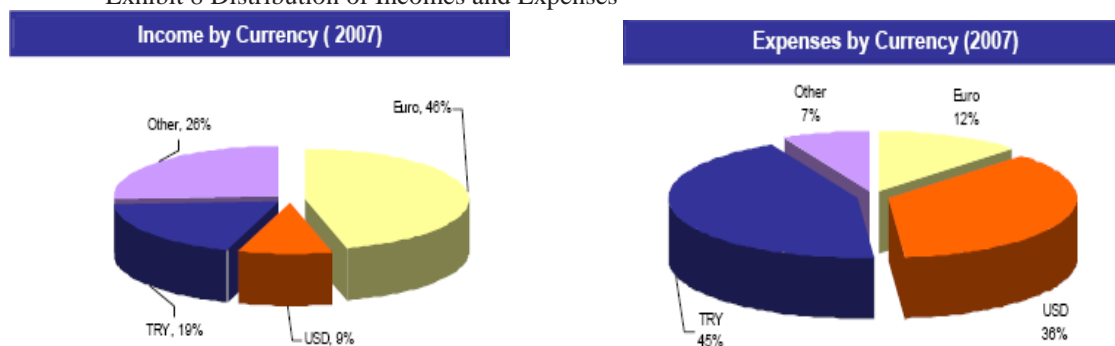
During the year 2007, THY carried 19,6 million passengers, flies to 69 countries, 138 cities and 140points, fleet of 102 aircraft and seat capacity of 17,594. THY generated 90% of revenues from passenger traffic and 10% from scheduled cargo traffic. They have regular services to 107 international destinations and serve 31domestic airports. They are members of Star Alliance on April 1st. 2008. Out of 59 aircraft, 43 of them joined the fleet as of 2008. As of 2008 average age of the fleet will be around 6 yrs. Total of 2.7 billion dollars financing were completed for the aircraft delivered in 2005,2006, 2007 as well as 19 aircraft in 2008, at Libor and Euribor without Treasury’s Guarantee. At the end of 2008, annual lease expenses will be approximately around \$545 million; of which 77% Financial leases and 23% Operational Leases. ([http://www.thy.com/en-INT/corporate/investor\\_relations/](http://www.thy.com/en-INT/corporate/investor_relations/))

Revenue breakdown has been relatively constant over the years, passengers accounting for around 80%. Turkish Airlines benefits from the large Turkish population living in Europe, creating a steady revenue stream. Revenue has positive correlation with growth in GNP in Turkey.

## Financial Risks at Turkish Airlines

**(a) Financial risk management objectives:** A formally specified risk management model and its active application are not available within the THY. Currency risk, interest rate risk and liquidity risk are some important risks of the THY. THY management manages the risks through its decisions and applications. Even a formally specified risk management model is not available, corporate risk management model has been aimed and the related activities are being performed. THY is subject to the financial risks related to the changes in the exchange rate and interest rate due to its operations. Distribution of expenses and incomes based the types of exchange rates and distribution of debts based on the types of exchange rates and fixed and variable interest rates are managed by the company management. THY's income is diversified among the major currencies. Due to its currency basket THY is very flexible on fx position. Although USD income is lower then USD expenses, THY is able to cover its USD expenses from Euro income due to strong Euro against USD. Same concept on USD/Euro is applicable to cover Turkish Lira expenses Diversified revenue & expense base and agility in pricing currency. (Turkish Airlines Inc.)

Exhibit 8 Distribution of Incomes and Expenses



**b) Foreign currency risk management:** There is a natural balance in the foreign currency risk between the THY's incomes and expenses. This balance is tried to be kept through taking into consideration the future forecasts and market conditions. Foreign currency sensitivity: THY is primarily subject to US Dollar and EUR foreign currency risk. The table below demonstrates that the sensitivity of the THY against the 10 % change in US Dollar and Euro exchange rates. Negative amount demonstrates the decrease effect of the 10 % increase in the value of US Dollar and EUR against YTL in the net profit for the year. If US Dollar and Euro is devaluated against YTL by 10 %, the amounts are the same as the figures in the table below and its effect in the income statement will be reverse. In the impairment calculation of aircrafts, motors, and simulators, US Dollar prices are used. Accordingly, the impairment provided by the THY for the tangible assets decreases when the US Dollar is evaluated against YTL, and increases when the US Dollar is devaluated against YTL. In this context, when the US Dollar is evaluated by 10 % against YTL, due to the decrease in the impairment provided for aircrafts, motors, and simulators, there would be an increase in the net profit for the year amounted 185.532.444 YTL other than the effects in the table above. If US Dollar is devaluated by 10 % against YTL, these amounts remain constant but the effect in the income statement will be reverse.

Exhibit 9 Foreign Currency Sensitivity

|                         | US Dollar effect (i)        |                             | Euro effect (ii)            |                             |
|-------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
|                         | 1 January-30 September 2007 | 1 January-30 September 2006 | 1 January-30 September 2007 | 1 January-30 September 2006 |
| Income statement effect | (66.399.990)                | (98.045.510)                | (24.877.859)                | (14.210.043)                |



Source: Turkish Airlines Inc.

**(c) Interest rate risk management:** THY's liabilities are on fixed and variable interest rates. When the interest situations of the existing debts are being considered it is seen that the variable interests compose the majority. In recent years, a partial balance between the debts with fixed interest and the debts with variable interest is tried to be provided through increasing the weight of the debts with fixed interest provided that the financing of the aircraft is favorable. Because the THY's debts with variable interest rate are dependent to Libor and Euribor, dependency to local risks is low. THY's financial liabilities are showed below. (Turkish Airlines)

**Short-term portion of long-term financial borrowing at 31.12.2007 is as follows:**

| Maturity   | Interest Rate | Original Amount      | Interest Accruals  | YTL       |
|------------|---------------|----------------------|--------------------|-----------|
| 15.08.2009 | Libor + 1,25% | 2.959.707 US Dollars | 247.266 US Dollars | 3.735.162 |

**Long-term bank borrowing at 31.12.2007 is as follows:**

| Maturity   | Interest Rate | Original Amount       | Interest Accruals | YTL        |
|------------|---------------|-----------------------|-------------------|------------|
| 15.08.2009 | Libor + 1,25% | 22.937.732 US Dollars | -                 | 26.715.577 |

**Finance lease obligations at 31.12. 2007 are as follows: (YTL)**

|                                   |                      |                           |                      |
|-----------------------------------|----------------------|---------------------------|----------------------|
| Less than 1 year                  | 298.808.141          | Represented by:           |                      |
| Between 1-4 years                 | 797.170.667          | Short-term liabilities    | 225.183.209          |
| Over 4 years                      | <u>1.137.792.480</u> | Long-term liabilities     | <u>1.569.126.885</u> |
|                                   | 2.233.771.288        |                           | 1.794.310.094        |
| Less: Future interest expense     | <u>(439.461.194)</u> | Interest Range:           |                      |
| Principal value of future rentals |                      | Floating rate obligations | 1.123.591.167        |
| shown in the balance sheets       | 1.794.310.094        | Fixed rate obligations    | 670.718.927          |

**The future lease rental payments under operating leases at 31 December 2007 are as follows: (YTL)**

|                          |                    |
|--------------------------|--------------------|
| Not later than one year: | 130.984.676        |
| Between 1 - 4 years:     | 374.178.949        |
| Over 4 years:            | <u>522.289.995</u> |
|                          | 1.027.453.620      |

THY Management calculates the effects that are arisen from the fluctuation in the Libor and Euribor rates by 0,5 % that are the interest rates of the THY's variable interest rates and reports them to the top management. When there is an increase by 0,5 % in Libor and Euribor interest rates and the other variables remain to be constant: The amount of the THY's interest expense for the twelve months period increases by 4.616.168 YTL. When the Libor and Euribor interest rates decrease by 0,5 %, twelve months interest expense decrease as the same amount. THY signed interest swap contracts in order to change its financial leasing debts from fixed interest rate to floating interest rate. Also THY signed exchange contracts in order to change financial leasing debts from Euro to US dollar.

**(d) Credit risk management:** THY's credit risk is basically related to its receivables. Because there are so many customers, the THY's credit risk is dispersed and there is not important credit risk concentration. Additionally, THY manages the risk through obtaining guarantees for its receivables.

**(e) Liquidity management:** THY manages liquidity risk by maintaining adequate reserves, banking facilities and reserve borrowing facilities by continuously monitoring forecast and actual cash flows and matching the maturity profiles of financial assets and liabilities.

**(f) Capital risk management:** THY manages its capital to ensure that entities in the Group will be able to continue as a going concern while maximizing its profit and market value through the optimization of the debt and equity balance. The capital structure of the THY consists of debt, which includes the borrowings and equity comprising issued capital, reserves and retained earnings. The top management of the THY assesses the cost of capital and the risks associated with each class of capital. At the time of these analyses, top management assesses the risks associatible with each class of capital and gives the ones that are dependent to Board of Directors to the assessment of Board of Directors. As the results of the assessments of top management and Board of Directors,

the Group provides the optimization of the capital diversification through obtaining new debts, repayment of the existing debts and/or capital increase. This is overall strategy of the Group.

## CONCLUSION

THY, that carries the Turkish flag, by making the decision to expand its fleet, bought 61 new airplanes, in this way THY made an attack on carrying its identity upper levels in the Civil Aviation Sector, that is developing seriously in least years. 41 airplanes financing has completed and the airplanes has delivered to THY. 18 airplanes financing has been decided. For that reason, approximately 2,7 billion dollars financing has provided. While provide the airplanes financing, guaranty of treasure isn't taken and the lowest interest rate credit accepted on libor(-). On finance of the airplanes, THY makes decisions by researching all alternatives as ECA, American Eximbank Guaranteed Financial leasing, Operational leasing, Japanese Operating Lease(JOL) and Securitization. This decision depend on evaluation criterions such as lowest cost offer come from the financial establishment, keep in aircraft at the end of leasing, tax advantages of offer and scrap value risk of the airplanes. The risks and the advantages of ownership concern the lessee in financial leasing but in operational leasing it concerns lessor.

Today, the risk of interest of companies has two sources: the sensitiveness of assets to the interests and the sensitiveness of debts to the interests. If the companies want to protect themselves on natural ways from the risk of interests, the firms which would has the positive correlation with the changes of interest should prefer the floating interest debt and negative correlation with the changes of interests should prefer the fixed interest debt. On the other hand, distribution of foreign money on the revenues and the expenses are care about. If the cost is low, a part of financing can be done on Euro beside dominant money US Dollar in aircraft market. Thus, THY provide positive contribution with the matching distribution of revenues and expenses in their future cash flows,

On financial leases, to guaranty these leases there are some comprehensive works with the US Eximbank and ECA's that is in Europe. In this way, the guarantied credits, that is gotten from these works, let THY can use low cost financing methods. Beside these financing methods, especially in 2007 also JOL that is a financial leasing method has first time used on aircraft financing. This method supplied the possibility of low interest to THY like in US Eximbank and ECA financing. The reason of this low interest is implement to finance policy with zero interest of Japanese Central Bank for encouraging consumption.

In additional, French Tax Shielded Financial Leasing system which one of first in international market and taking advantage of tax agreement between Turkey and France. This method was used financing Airbus aircraft in 2006 which guarantied by ECA. THY's this aircraft financing got reward of the year by "Janes Transport Magazine". Also its aircraft financing US Eximbank guarantied Boeing aircrafts which will be delivered in 2008 by the mentioned French Taxing Shielded Financial Leasing method. These leasing companies share taxing advantage which French laws provides with THY. So Turkish Airlines gets lower cost financing from libor and Euribor like the ECA/US Eximbank guarantied financial leasing and JOL.

The processes about formation Enterprise Risk Management strategy also comprise financial, strategic, risks which will give many advantage to THY in transition process to Basel II criterions, is going to complete very soon. With formation of ERM it's planning to identify risk appetite, risk strategy and create risk transparency to create a strong risk organization, to inculcate sharing risk culture and effective risk processes. It is clear that any kind of changing in this sector is effecting and will effect air transportation directly. If we say economy is a chain and every sector is its ring, so every sector has to keep its ring strong.

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# **MEMORIES OF THE PAST, CONSUMPTION AND CONSUMER BEHAVIOR: EXPLORING THE ORIGINS AND LIMITS OF THE NOSTALGIC TREND THROUGH LIFE STORIES IN BRAZIL.**

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## **ABSTRACT**

*The main objective of this exploratory study was to deepen the understanding of some aspects of the nostalgic appeal and its influences in the attitudes, behaviors and consuming intentions of consumers. To achieve that purpose a field study was conducted, investigating the different reactions, feelings, memories, reasons and other conditioning factors in the life histories of two men when questioned on the influence of nostalgia in their consumer behaviors. Data were collected through in depth interviews and were analyzed with an interpretative approach. The ambivalent results point out the relevance of past recollections and the effect of nostalgia in consumers' attitudes, in situations where nostalgic effect can play as either positive or negative stimulus and that consumer decisions such as buying, rejecting, discarding or collecting products can be strongly influenced by the nostalgic appeal.*

## **INTRODUCTION**

The nostalgic appeal of products has already been the object of research interest of many researchers (HOLBROOK, 1993; HOLBROOK e SCHINDLER, 1994; among others). Specifically in the Brazilian context Bonn and Motta (1999), Benazzi (2000), Benazzi and Motta (2001), Benazzi, Assayag and Gomes (2004), among others, have already focused research efforts on the theme. Brown, Kozinets and Sherry (2003), for instance, argue that it is an important factor in the revival of once famous trademarks and for the success of the retro style. Nostalgia has also been object of recent studies related to the industries of tourism, entertainment and sports (HASHAMOVA, 2004; FAIRLEY and GAMMON, 2005; PELEGGI, 2005) and in marketing studies centered in food preferences (BREWIS and JACK, 2005).

This work aims to deepen the understanding of nostalgic appeal influences in attitudes and preferences of Brazilian consumers. To meet that objective, this study investigated the mode of operation of the nostalgic appeal through in depth and exhaustive analysis of life-story narratives of two consumers who live in the city of Rio de Janeiro (Brazil). One of the interviewed was self-identified as non-nostalgic and the other was self-identified as nostalgic. The results are consolidated in this article, composed of this introduction and other five sections. The second and third sections discuss the concept of nostalgia and its limits, its contextualization for marketing and consumption studies and presents studies already made on nostalgia worldwide and in the Brazilian market context. The fourth section focuses on the methodological choice made and informs on the process of the field search. The following section presents, discusses and interprets the results and in the last section conclusions are presented.

## **NOSTALGIA – THE CONCEPT**

According to Holbrook (1993) nostalgia has been studied in subjects such as history, psychology, sociology, anthropology, environmental psychology and other social sciences approaches. Usually, nostalgia

refers to longing for the past, for yesterday or a desire to revive activities that took place a long time ago (HOLBROOK 1993). Davis (1979, p18), for instance, interprets nostalgia simply as “a positive evocation of a past experience”, involving a negative feeling towards the present or the future, seen in the idea that “things used to be better ... than they are today”. Holbrook e Schindler (2003, p 107) define nostalgia as “preferences (positive attitude or affection) for objects (people, places or things) that were more common (popular, in fashion or of more intense circulation) when one was younger (in the early adulthood, teenager period, childhood or even before birth)”.

Nostalgia can be seen as an intense emotion and can also be considered a kind of feeling that alters and modifies individual experiences. Nostalgia, thus, involves past memories, but can also be connected to fantasies of a remote time or space during which the individual did not go through any direct living experience (SCHINDLER and HOLBROOK, 2003). Anyway, the memories of what one lived in the past, directly or mediated through someone else's report, may not reflect the reality of that past, but even be distorted, producing a more positive image than reality. Therefore, the nostalgic appeal may ignore negative aspects of past and keep only good memories. Though it is not always plausible to assume that the object of nostalgic appeal was more common in the past, the association with the past creates a net of connections with the individual that does not occur with other objects. These connections or associations produce the nostalgic appeal. Nostalgia does not necessarily imply in preference for a determined object, but essentially in a feeling that may result in preferences (HAVLENA and HOLAK, 1991). Thus, nostalgia appears more frequently linking positive feelings – such as joy, happiness and pleasure – with others, such as affection, love and sentimentalism.

According to Havlena and Holak (1991) the concept of nostalgia, in the field of consumer behavior, means “a bitter-sweet longing for Home”. Nostalgia is seen as an emotional state in which the person longs for an idealized view of a past period. This longing for yesterday (Davis, 1979) is expressed by the individual attempt of recreating some aspects of that specific past in the present, either through the reproduction of past activities or through the collection of symbolic representations in memory.

## CONSUMPTION AND NOSTALGIA

Firat and Venkatesh (1995) point out that consumption –the everyday choices that one makes when engaged in shopping processes – gained new meanings when confronted with the new organization of contemporary social life. What we consume explains who we are. Belk (1988) highlights that the self perceptions that consumers actively build and modify are strongly affected by the objects they buy and keep. This perspective will guide the specific approach and development of this study as it will focus on the relationships built between consumers, and acquired products and services and specific interactions in their consuming processes.

According to Giddens (2002) our life styles are revealed through our daily consuming choices. Nowadays, the role of tradition as behavior modeling has been far diminished. Its conventional function – to determine values and, thus, behaviors – is more and more performed by different figures of authority that contemporary social life produces. Such figures work as basis for behaviors of wider layers affluent populations , more and more submitted to market a great variety of market information stimuli. Those figures of authority can be either movie stars, sport idols, intellectuals and celebrities, each one in his/her field of action and influence. It is important to notice that those figures of authority do not need to be in present focus in order to exert influence: they can also be from the past. Giddens' (2002) authority models – present or past – may be a clarifying element in the web of relations between identity perceptions and consuming choice influences, as those figures can be catalysers of behavior, role that, previously, was sociologically played by tradition.

Nostalgia has already been defined as preference or positive attitude towards people places or objects that were frequent, popular or fashionable until the early adult life of an individual (HOLBROOK, 1993). In fact, the period to which Holbrook refers, covers the beginning of adulthood, adolescence, childhood and even the pre-birth period, discarding the need of personal experience in the nostalgic tendency. This appeal to nostalgia would be especially relevant in adults over 30 years old, especially because of the association of positive past events and presently offered goods. Products also evoke memories and trademarks that are successful in linking their images to reminiscences and memories of past may have their sales dramatically affected, especially in items related to the consumer's childhood or adolescence. When buying an item, the consumer would be bringing his memories back to life, re-living, through memories, the times to which the product would be associated (SOLOMON, 1996). For Holbrook (1993) the approaches about the role of nostalgia influence in the consumers' behavior intend to study the importance of two distinct phenomena. The first one relates the degrees of nostalgia to changes that

happened in a lifetime, associated, thus, to the consumer's age: the older ones would be more inclined to be influenced by nostalgic appeals. The second one intended to test the degrees of nostalgic proneness in people of same age rank, trying to prove the influence of psychographic and general characteristics of life style in nostalgic proneness.

The same author has made two studies in the USA about consumers taste in films that show that women were more nostalgic than men, but with non-significant results. Such results also failed to find any relationship between age and nostalgic tendency or even between nostalgia and other demographic variables studied (HOLBROOK and SCHINDLER, 1989; HOLBROOK and SCHINDLER, 1994). In a research about consumer's favorite movie actors or actresses of different time periods, Holbrook e Schindler (1994) assessed the question of nostalgic tendency based on the concept of *attitude toward the past* - ATP. As in the study of Holbrook (1993), a scale of 20 assertions that measured their nostalgia proneness was used.

A study performed in Brazil, whose aim was connected to the detection and measurement of cohort effect in the movies, also verified the nostalgic tendency of the respondents and used 10 of those assertions to measure the nostalgic tendency. The results indicated a probable greater nostalgic tendency in women than in men, but with a non-significant difference in the confidence interval of 95%. The same study also failed to find a relationship between nostalgic tendency and age (BONN and MOTTA 1999).

Based on the studies of Holbrook (1993), Holbrook and Schindler (1994) and Bonn and Motta (1999), Benazzi and Motta (2001), using a sample of over 400 respondents, formulated and tested four propositions on relations between nostalgic tendency and other factors that could help in characterizing and segmenting market targets: the relation between variations in nostalgic tendency and variables such as gender, age, cohort effect and income levels of respondents. The results confirmed a greater nostalgic tendency among women rather than men with a meaningful difference in the confidence interval of 95%. The research found no direct or inverse relationship between nostalgic tendency and age, though nostalgic proneness was higher among respondents of less than 25-year old and among respondents older than 70. But results indicated relation between nostalgic tendency and economic income – lower income levels were associated to greater nostalgic tendency. Finally, no relation between nostalgia and cohort age groups was found.

Reisenwitz, Iver and Cutler (2006) studied the differential receptivity of magazine ads with and without nostalgic appeal. They focused on gender, age and trademark image variables and discovered that the ads with nostalgic appeals exerted influence on the respondents for all the studied variables. Benazzi, Assayag and Gomes (2004) have studied, in the Brazilian context, the influences of nostalgic appeal in the attitudes and consuming intentions of men and women. The field study checked the different male and female reactions when confronted with ads published in national magazines from 1930 to 2004. The results suggest that for most of the respondents, the ad with nostalgic appeal was seen as non attractive. Nevertheless, though women have higher degrees of positive attitude for nostalgic-appealed ads than men, this was more important for men than for women, as women would tend to have more neutral opinions about the subject.

An alternative tendency has been the increasing of interest in a more distant past, as reflected in the success of books and magazines that deal with themes or tell stories that happened in the 19<sup>th</sup> century and in the beginning of the 20<sup>th</sup>. The contrast between the evocation of nostalgia of recent past and the extraction of feelings for a more distant past is also present. Whereas the interest in 1800 and the beginning of 1900 may reflect the longing for a golden age, this is not true for the real nostalgia found in memories of individual experiences. Despite that, the feelings of calm, security and happiness that can be evoked by those messages are similar to those evoked by truly nostalgic messages to assure the classification of those magazines and books as a stimulus on nostalgic basis. This approach, that uses a wider definition of nostalgia, seems more appropriate in the context of the consumer behavior (Havlena e Holak, 1991). Csikszentmihalyi and Rochberg-Halton (1981), studying "special" or "sacred" objects, showed that women are more prone than men or children to collect objects as a source of memories. While men tend to mention action objects (such as sports equipments, TV and vehicles), women mention contemplation objects (such as pictures, art objects, plates and textile articles). Though not examined by the authors, we can expect similar differences between the genders in the kind of stimuli that evoke nostalgic feelings.

However, the perspective of most of those studies prioritizes the quantification of nostalgic tendency (HOLBROOK, 1993; HOLBROOK E SCHINDLER, 1994; BONN E MOTTA, 1999; BENAZZI E MOTTA; 2001) instead of deepening the understanding of its mechanism of action and its influence factors. Such perspective, though partially carried out by Holbrook and Schindler (2003) lacks more attention in the Brazilian academic context. This study sought to address this gap.

## RESEARCH METHOD

The field study investigated the factors related to consumption that were influenced by the nostalgic appeal. Factors that influenced the process were identified, specifically those related to the life stories of the respondents that could bring light on the reasons and causes of different effects of nostalgic tendency in behaviors and attitudes. In order to collect those data, semi-structured in depth interviews - characterized by the high control over content and low control over structure - were performed. This research design intended to uncover regularity in various discourses and infer meaning from the presented text, justifying thus this kind of data collection (TESCH, 1990). Semi-structured interviews are flexible instruments because they make possible redirecting the interview whenever its focus is lost or even to solve ambiguities. The interviews stimulated the development of narratives about aspects related to feelings and perceptions associated to appeals and influences that past memories may have exerted or still exert on the consuming behavior of those interviewed. They explored exhaustively, in the life stories of the respondents, the causes for the various impacts and valorization of nostalgic appeal in consumption. The questions were asked, however, in a very careful way, generally trying to make them indirect or in the 3<sup>rd</sup> person.

The information obtained was submitted to content analysis. The central aim, clearly of qualitative and interpretive perspective, intended to capture perceptions, opinions and evaluations of respondents regarding the possible reasons for the positive or negative preferences towards consumption decision processes, products and other factors of influence. One of the main aspects focused was the reason offered by the respondents for their behaviors and attitudes. The research concerned about classification is, fundamentally, based on interviews and employ, as analysis tool, the verbal expressions contained in the participant narratives. The illustrative expressions of each interview were selected as quotes and are preliminarily classified, based in their similarity. The groups of quotes are organized and re-organized, each group's attributes are explicated and the meaning of each group is consolidated in a definitive category. The result is a list or map of qualitatively different ways in which people undertake, define, distinguish and understand the aspects of reality that are the object of the research. It is a process of analysis that involves a sequence of actions, comprising the decontextualization, the classification (or codification) and the contextualization of data (TESCH, 1990).

During the phases of interview and analysis of document originated by the data transcription, it is necessary to have in mind that we are dealing with what the interviewers revealed about their self-images, the people they are related to and aspects of their daily consumption. In many contexts one can expect that such images do not correspond to the respondents real opinion (ALVESSON, 2003). Such opinions may be selected or even deformed due to a variety of influences, from the expectations regarding the interviewer's reaction, a positive public image to be built or even the defense of public faces, images and roles played by the interviewed. It proved vital to interpret the interviews from a critical perspective in order to identify those possible counterfeits and point them out among the data collected. In addition, Goffman (1976) argues that, among the various processes of social interaction in everyday communication, the individual play social roles and defend faces dynamically. Such perspective contributes to deepen and to limit the analysis made as the consumption processes will be understood as social processes that only make sense when interpreted inside their specific cultural context. The selected perspective, thus, will deal with consumption as an essentially symbolic process that can be object of interpretative analysis.

## RESULTS AND ANALYSIS

The selection of subjects was based on accessibility and judgment. The two respondents of the interview processes had opposite characteristics when it comes to nostalgic tendency: one is very much influenced by the nostalgic appeal of products and services and the other, very little influenced by them. Both were selected after an introductory and informal interview when the aim of the study was explained, and the issue of nostalgic appeal extensively debated. The objective of such debate was twofold: at first the respondents could understand, at first, the very concept of nostalgia and, subsequently, identify the level of influence of such appeals in his own consumption attitudes and behaviors. It was only after this very first contact (whose aim was just to select the respondents) that the first interview for collecting data was effectively scheduled. The sample was composed by two respondents, what makes of this study a case study in which specific cases of consumers are deeply explored

and, whenever relevant, the attitudes in each case are compared (YIN, 2005). The first subject, self-identified as very little nostalgic (S1), is 41 years in 2008, does not have any children, was born in the city of Niterói in the state of Rio de Janeiro, Brazil and has moved to the city of Rio de Janeiro (RJ) when he was 18 years old. He receives approximately US\$1.900,00 per month (typically middle-class income) and has a homo-affective relationship for over 6 years; has concluded high school and works in a small retail organization. The second subject, self-identified as very much nostalgic (S2), is 45 years old in 2008, no children, was born and lives in Rio de Janeiro. He has a graduation degree, a formal and relatively stable job in a large Brazilian organization and eventual insertion as free lancer professional. His monthly income reaches nearly US\$ 4.500,00 and has been divorced for eight years maintaining at present a homo-affective relationship for the last seven years.

The fact that both respondents maintain homo-affective relationships was not a pre-determined criterion of sample selection but proved useful as it helped to reduce the variability of answers. Such aspect certainly marks the life style of both respondents in a similar way and, thus, help in highlighting the different positions each manifested towards their reactions and opinions concerning nostalgic proneness. Similarly the respondents have around the same age. Four interviews were performed with each respondent performing the total length of eight hours of conversation with each respondent. In the interviews, they were stimulated to tell events about the past, memories and short stories about consuming situations and, more specifically, about the meaning of objects, services and reasons evoked in such situations. The analysis of the narratives focused on the identification of their discourse content and the reasons – especially those of affective and symbolic content – for the actions and feelings evoked.

The childhood, adolescence and early adulthood of the non-nostalgic subject (S1) were marked by unpleasant memories. Such negative aspects concerned three specific factors: being the only child, the income level of his parents was much lower than his present income level and questions related to his sexuality. The fact of being the only child brings back memories of loneliness, playing alone and having few friends in childhood. Though he has friends in the neighborhood, he claimed to feel few opportunities to share uneasiness, fears and opinions with friends of same age. His parents' income level made consumption quite limited and created feelings of insecurity. It also forced the respondent's parents to spend long time periods at work – more remarkably his mother, strengthening the feeling and memories of solitude in this phase of life. Because he grew up in a conservative environment, the expression of his sexuality was conflictive and produced unpleasant memories concerning his social acceptance. He claims that this situation had only ceased to be a source of suffering when, at the beginning of his adult life, he started to work and left his parents' house. The memories of freedom and self-esteem, thus, have their origin in a relatively recent phase of life. The respondent says that such circumstances – that nowadays dominate the symbolic images he build and keeps about his past – are the dominant facts about his past. Those features are possibly the reason of his low affection for nostalgic appeals: the past is a source of unpleasant memories.

S1 says that his life is much better now, that he is much happier in the present than in the past. His income level is increasing, the satisfaction with his life and with himself is in constant progress. Those statements make him conclude that his past is not a source of good memories. Therefore, he tends to characterize the nostalgic appeal as something highly negative. For instance, he despises the retro style and he does not like clothes inspired in the decades of 60, 70 and 80. He does not have collection of objects, except for one: watches of famous brands. He started this collection six years ago when he got the first one from his present companion. The symbolic content of this collection is strongly marked by affective behavior – as the collection is stimulated by his companion – and a sign of status and increased income – as they are expensive watches, available only to those that can buy luxury superfluous consumption objects.

When asked about affective attitudes towards objects of his past, S1 pointed out two kinds of objects that remind him of his parents, both deceased. From the father, he keeps two handkerchiefs that he takes with him daily – for nine years, since his father died – in the bag that he takes to work. They are just like some old bills of old money that the father kept and that the interviewed keeps at home. From the mother – dead two years ago – he keeps a ribbon from his baptism, of great affective meaning. The interviewed brings, in his arm, the name of his mother tattooed, as homage paid to her memory and devoted love. He also kept some tickets of shows and parties he took part and that were, in a way or another, important. But those are all events of his adult life – and not adolescence – a period of time and life when he was already independent from his parents and lived at his own. But such objects, kept either as gifts or as symbols or memories of the beloved ones, are a manifestation of his ambivalent attitude towards nostalgia. It is contradictory that someone self-designated as

little nostalgic keeps objects specifically because they are highly symbolic and emotion-intensive on memories of his past.

S1 also declares not keeping clothes for long. He says that gets quickly tired of his garments and usually gives away clothes still well-preserved when notices that he does not want to wear them anymore. He appreciates fashion news and informs that does not buy more things due to exclusively to financial limitations. He manifests strong desire to return to Europe, experience he had, for the first time, in 2007. In general, foreign countries seduce him due to the news and unexpected habits, sceneries and cultures. He is open to the new, to the future and willing to consume products with such symbolism. The stimulus to consume is positive when associated to such imaginary.

On the other hand the nostalgic subject's (S2) childhood is marked by pleasant memories whereas in the adolescence predominate feelings linked to suffering. The beginning of his adult life is not characterized by any remarkable kind of memories, alternating moments of happiness and sadness. The positive aspects of his childhood are marked by family memories. This subject has two sisters and mentioned occasions in which past events influenced present choices. It was impressive the emphasis given to food habits and lifestyle preferences associated to that period of life. For instance, he mentioned many typical dishes from the countryside of São Paulo state, in Brazil where he used to spend long vacation times with the sisters and cousins in his childhood. The dishes mentioned varied from fruit (jaboticabas - a local fruit - and mango) to manioc-powder biscuits and coconut caramels to other candies and a stew chicken made by an old beloved aunt. The subject affirms that he has a strong preference for those dishes and always associates them to his childhood memories, feelings that, when eating them, recover pleasant feelings evoked by that period of his life.

His favorite hobbies and activities for leisure time are also influence from that same period of life. Going to the beach, alone or with friends, is a habit he keeps and mentions as a result of his happy childhood memories. Riding bikes or horses are other leisure activities that, though not present in everyday life, also have positive associations to happy moments of childhood. Some tourist destinations in south of the state of Minas Gerais, in Brazil and at the seashore of Rio de Janeiro are linked to that period of life with pleasant memories. From the same time come the reminders of objects collected that still have symbolic value. He says that used to collect key rings and still keeps the collection, though does not dedicate himself to the activity anymore. Likewise, he claimed that keeps many childhood toys as souvenirs of that stage of life: toy cars, a miniature motordrome and a miniature apache fortress, his favorite toys. In addition, he informs that has already bought those kind of toys for his nephews, connecting such behavior to those sepecific past memories.

From early youth also came associations with vacation trips to places in Brazil and abroad. He specifically mentioned trips to Florida (USA), Brasília and Goiás ( both in Brazil) and to the seashore of Espírito Santo state (also in Brazil). But also among those trips, taken with sisters and parents, came negative memories: such destinations are strongly associated to unpleasant moments. He also said that has no intention to travel to those places again, partially due to such memories. From that stage of life also come associations similar to those of the non-nostalgic subject: feelings of loneliness, associated to his first memories about his sexuality. He also mentioned, as well as the other subject, few opportunities to share uneasiness, fears and opinions with others of his age, though he had a wide circle of friends and relatives. For the nostalgic subject, the parents' income level seems to play an indirect role in his nostalgic tendency: their financial situation – both successful professionals – was from average to high income level and this condition provided the chance to have various pleasant and eventually expensive activities during his childhood and adolescence. Differently from the non-nostalgic subject, he mentioned having neither relevant negative memories concerning his family's consumption level during childhood nor insecurity memories associated to the family's income during his childhood and youth.

As the non-nostalgic subject, he also mentioned the conservative social environment in which he grew up as source of unpleasant memories regarding the expression of his sexuality, conflicts and insecurities about his social acceptance in a wider sense. For the nostalgic subject, the memories about freedom and self-esteem are linked to moments of childhood vacation, to trips at the early adult life without the family during graduation. They are, thus, also recent in his life, but not as meaningful as for the non-nostalgic subject. The nostalgic subject claims that the circumstances narrated about his childhood seem very important to explain the symbolic images that he has built and keeps about his past. Such features are possibly the cause of his affection for nostalgic appeals. Differently from the non-nostalgic subject, the past tends to be a source of pleasant and unpleasant memories. Specifically in this case, there were fewer unpleasant souvenirs, possibly corroborating Schindler and Hoolbrook (2003) when they argue that the filter of time tends to mitigate bad memories, selectively keeping the good ones.

The nostalgic subject, as the non-nostalgic one, also informs that his life seems much better nowadays, that he feels happier in the present than in the past. But he does not see his trajectory of life as a constantly improving process. On the contrary, sees highs and lows. Therefore, understands that, in his past, there is room for memories to be re-lived in the present and that consuming products with nostalgic appeal is a way to reach that intention. The nostalgic subject also pointed out a wide variety of objects with affective meaning associated. Furniture, photos of events and situations, souvenirs from trips, scents, clothes and food are in that category. He remarkably mentioned occasions when traveled and bought objects just because they were associated to the other past trips, which supports the assumption that the nostalgic appeal can be relevant in tourism (FAIRLEY and GAMMON, 2005). That specific connotation was the origin of buying behaviour of perfumes, photographs and even the LCD monitor of his computer. Those objects were linked to stories of pleasant moments even if quite recent. All of them had a specific short story that provided them with symbolic meaning, beyond their specific utilitarian features (CSIKSZENTMIHALYI e ROCHBERG-HALTON, 1981). When asked if any item connected him to his parents, he informed that both were still alive and that he has a pocket clock that belonged to one of his grandfathers' and that he has pictures of five generations of relatives in his living room. But such pictures and the clock do not seem to evoke nostalgic feelings: their meanings were linked to a feeling of belonging to the family and had no other associated memories.

Regarding everyday consumption habits influenced by past memories, the nostalgic subject informed he had great emotional difficulty in discharging even ordinary objects linked to memories of the past. He claims to dress in traditional style and admits being a little resistant to fashion changes, though he may eventually appreciate novelties. Such ambiguity may be, simultaneously, effect and result of his memories whereas the ambivalence may be a consequence of the development of nostalgic tendency and appeal (HOLBROOK E SCHINDLER, 2003).

Just like the non-nostalgic subject, the nostalgic respondent also claims to be open to novelties, to the future and willing to consume products with such symbolism. Again, the stimulus to consumption is positive when associated to such imaginary. But, for the nostalgic subject, past can be a supplementary source of associations, subjectivity and symbolic value for marketing processes.

## CONCLUSIONS

The understanding of the changeable motives of consumer behavior can help offer products and services that better fit demands and expectations of consumers. The purpose of this study was to understand more deeply aspects of this complex behavior, emphasizing the effect of nostalgia on the attitudes and preferences of clients. The nostalgic tendency, defined as an appreciation, preference or positive attitude towards people, places or objects that were frequent, popular or fashion in the past has become a relevant variable in market segmentation, able to characterize and differentiate Brazilian populational groups. More specifically this study deepened the debate on the way the nostalgic appeal operates through an exhaustive investigation of two consumers' life story narratives, being one self-identified as non-nostalgic and the other self-identified as nostalgic.

The results confirm that nostalgic appeals have an important role for service and product consuming in tourism, food and toys in Brazil and indicate that the positive or negative attitude towards events and memories of childhood may play a central role in the width and intensity of nostalgic tendency. For nostalgic consumers, the appeal to memories of other phases of life and the association of brands and products with the past may be an important differential in the processes of purchasing as well as an important stimulus to build positive image associations. Nevertheless, for non-nostalgic consumers, such effect can be an obstacle for selling and a negative image association. The results suggest, though ambiguously, that even nostalgic consumers respond positively to image association with the future, progress and updating.

Finally, we emphasize that symbolic aspects of products – and not just its usefulness – are a relevant part in sense making and in intensifying market value. More specifically, old objects, not associated to past memories, have no nostalgic stimulus. Such results reinforce the necessity of deepening the understanding of subjective aspects of consumer's complex behavior as a way to produce relevant and rigorous knowledge in marketing in Brazil.

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# COMPARATIVE ANALYSIS OF EUROPEAN BOARD OF DIRECTORS

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## ABSTRACT

*We conduct a comparative analysis of corporate governance laws with respect to boards of directors and directors' duties in six European countries (Spain, Italy, France, Germany, Austria and Portugal). The analysis focuses on corporate governance and directors' duties for companies limited by shares. The article focuses on three major objectives: 1) to compare different laws that could improve the board's strategic role and protect the shareholders' rights, 2) to measure with an index the extent to which legislation intervenes in the composition of boards of directors for each country, 3) to point out some divergences and convergences among the European countries analyzed.*

## INTRODUCTION

Corporate governance law has an impact on corporate behavior, in particular on the protection of shareholders' rights and on the strategic decision-making process. Variability in the political and social environment can profoundly affect which firm structures and which governance provisions survive and flourish. Using this as a starting point, we conduct a comparative analysis of corporate governance laws with respect to boards of directors and directors' duties in six European countries (Spain, Italy, France, Germany, Austria and Portugal). The analysis focuses on corporate governance and directors' duties for companies limited by shares. The methodology is based on the conventional approach to evaluating a law which consists of examining its contents from a qualitative point of view. We have three major objectives: to compare different laws that could improve the board's strategic role and protect all the shareholders' rights, to measure with an index the extent to which legislation intervenes in the composition of boards of directors for each country, and lastly, to point out some divergences and convergences among the European countries analyzed.

## LITERATURE REVIEW

According to the literature, corporate governance "becomes a key consideration (and often a binding constraint) in countries with sound economic policies and with regulations which provide adequate protection of property rights" (Rueda-Sabater, 2000). Moreover, in these times of globalization, many continental European countries have transformed their corporate laws and financial market regulations. The literature suggests that, even if national corporate laws are different, there are different forces that can contribute to corporate governance convergence (Jeffers, 2005). Two of these are very important in the European Union: the free circulation of capital and the introduction of the Euro as a common currency as well as the constitution of a unique European market that leads to a bigger competitive environment. Through this restructuring process, firms have developed a new culture that transcends specific national characteristics. As a consequence of the integration, Jeffers explains that different elements that directly affect corporate governance can be cited. He mentions the establishment of common prudential rules (that is, rules designed to limit risk taking by investors), the usage of international norms of accounting, and, in Europe, the aim to harmonize fiscal policy and corporate laws. Inside Europe, as mentioned above, a process of convergence in the various systems has started. Nonetheless there are

different opinions about the future of European Corporate Governance Law. Cernat (2004), for example, remarks that in Europe the diversity of national corporate governance models and the presence of different EU decision-making procedures do not guarantee a successful future convergence into a unique corporate governance model for the EU. On the other hand, it must be noted that, in the last few years, a number of rules by the European Court of Justice (ECJ) have made cross-border mobility in incorporation in the European Union easier. Becht *et al* (2006) have analyzed how deregulation and the costs of regulation have affected the location decisions of firms. They found that incorporation costs, especially those due to minimum capital requirements and delays in incorporation, have significant influences on firms' location decisions. Their results confirm that when a firm has to choose between different legal systems, the price is relevant and that cross-border incorporation has encouraged regulatory competition between EU member states to offer low-cost corporate law. Moreover, Khanna *et al* (2006) have analysed cross-sectional data and tested the hypothesis that similarity in corporate governance between two countries is correlated with economic integration between those countries. The authors conclude that globalization may have encouraged the adoption of some common corporate governance standards but that there is little evidence that these standards have been implemented. Furthermore, Black (2001) found that a firm's corporate governance behavior can have a vast effect on its market value in a country. These results are confirmed by recent literature which shows empirical evidence of a positive relation between the quality of corporate governance and the firm-specific valuation (Beiner et.al. (2006). What we wanted to explore is the convergence of the corporate governance law in European countries and we decided to do so by a comparative law analysis. In the literature, some authors focus on comparative law and corporate governance (Barca & Becht, 2001; Kraakman *et al*, 2004). For example, Albert-Roulhac & Breen (2005) examined the key aspects of the structure and composition of boards in Europe by considering a sample of companies from different European countries. They interviewed these companies and defined the corporate governance ratings by country) according to the response obtained. We believe that although the Roulhac and Breen study is one of the most important works on this topic, it seems that the influence that the law has on the corporate governance characteristics of the companies in the sample has been neglected. For this reason, we decided to analyze the corporate governance laws in six different countries; the results of the analysis will help understand some aspects of corporate governance behavior in Europe.

## THE SAMPLE

This paper focuses on law provisions for Spain, Germany, France, Italy, Austria and Portugal. We decided to consider these countries because of their geographic location (all are in continental Europe, each bordering at least one of the others) and the similarity in their GDP per capita in 2006. Moreover, the countries selected all belong to the Romanistic-German legal system (Visegrádi, 2001) which formed the first legal family in the world. More specifically, France, Italy, Spain and Portugal belong to the *Romanistic* legal system (the first subgroup of the Romanistic-German group). In the past, Italy, Spain and Portugal have been also greatly influenced by the German and the Swiss codes, which makes them representatives of an intermediary type. Germany and Austria belong to the *Germanic legal family*, which is the second legal grouping of the Romanistic-German system. This article will consider the law requirements for boards of directors and some indicators of shareholders' rights in companies limited by shares. By companies limited by shares, we mean those in which each shareholder pays debts up to the amount of the shares they have bought if it fails; legally speaking, such companies have a legal personality, limited liability and transferable shares. We considered the legal provisions of these types of companies for each country. Table 1 shows the acronyms and names used for in each of the analyzed countries. It shows also which corporate governance model can be applied. The countries in which only one model it is applicable are Spain, Germany and Austria.

**Table1: Board Structures**

|         |                          |                                      |
|---------|--------------------------|--------------------------------------|
| SPAIN   | SA (Sociedad anónima)    | Unitary                              |
| GERMANY | AG (Aktiengesellschaft)  | Two-tiered                           |
| FRANCE  | SA (Société Anonyme)     | Unitary or Two-tiered                |
| ITALY   | SPA (Società per Azioni) | Traditional or Unitary or Two-tiered |
| AUSTRIA | AG (Aktiengesellschaft)  | Two-tiered                           |

## METHODOLOGY

Each country has been analyzed from a legal point of view. In particular, we have considered some aspects that we believe to be of primary importance in describing the typical features of the boards of directors. Firstly, we measured with an index (*legal rules index*) the extent to which legislation intervenes in the composition of boards of directors for each country, secondly, we compared all the different laws and finally we pointed out some divergences and convergences among the European countries analyzed. In order to build the legal rules index, we explored nine different aspects of the composition of the boards and two aspects of the shareholders' rights that are regulated by the law. We verified whether the country's laws refer to employees' representation in the board, the number of directors, directors' age restrictions, non-executives or independent figures, the prohibition of appointment of the chairman as CEO of the same company, directors' terms of appointment and directors' ownership. With respect to shareholders, we considered as a good indicator the possibility of shareholders calling a meeting or proposing a specific resolution for a meeting and the percentage of shares required in order to do so. Moreover, we explored the shareholders' inspection rights. In other words, we examined the extent to which shareholders had access to directors' service contracts. With the aim of building the legal rules index, we gave a value to each of the ten aspects analyzed: one point when the topic considered as regulated by the law and zero points when it was not regulated; in specific cases, the points given were 1.5 (i.e. high law intervention) and 0.5 (i.e. low law intervention).

## RESULTS AND COMMENTS

### The law requirements country by country.

*Employees' representation* is mandatory -when certain conditions regarding the number of employees are met- on the supervisory boards of Germany, Austria and France (for France, if the unitary system is implemented, the employees' representation is required on the board). In Italy, Spain and Portugal this type of representation is not required. According to Fauver & Fuerst (2006), such representation on boards offers precious first-hand operational knowledge for board decision-making. The authors found that labor representation helps monitor and reduces agency costs; the governance effectiveness obtained through the requirement of employee representation is high and there is good co-ordination between all the company's parties in the firm. On this topic, we espouse Roe's (2003) point of view according to whom both the strengths and weaknesses of employee representation are important for facilitating corporate governance arrangements. For this reason the cases in which the law requires the presence of employees on the board of directors could be considered as rules that improve corporate governance.

Regarding *the minimum or maximum number of members on the board*, each country's laws refer to this but different rules are applied. From a theoretical point of view, the experts affirm that, in general, boards with a small number of members are more desirable because in large groups individual responsibility tends to dissolve (Neubauer and Lank, 1998). The board members' liability is indeed connected with the size of the board. Additionally, many authors claim that excessively large boards can be ineffective in terms of teamwork and communication. Larger boards can lead to difficulties in the co-ordination of board meetings and may inhibit the full participation of each member. On the other hand, boards should be big enough to offer adequate resources to govern. Indeed, the board of directors has to be seen as a team in which persons with different skills, experiences and backgrounds meet together to deal with complex problems (Corbetta & Minichilli, 2006). Moreover, board size is affected by the number of committees (if the company needs to have different committees the board size can be bigger), the workload for the board and the ownership structure. For the abovementioned reasons concerning board size, we suggest that the optimal size is impossible to identify as it depends on a company's characteristics and goals. There is no consensus in the literature on the relationship between board size and performance in the case of general samples. The lack of consensus about the relationship between board size and performance can be attributed to the fact that too many variables interact in determining the performance of a company and it is necessary to consider the complexity of each of them.

On the subject of *age restrictions*, Lorsch *et al* (1992) contend that board effectiveness could be improved if each board established a mandatory retirement age for independent directors. We believe that *all* members of the board should retire at a certain age, which is up to each board to determine. Unfortunately, few boards set retirement ages and, amid the analysed countries, only the French law prescribes retirement ages (unless otherwise specified in the company articles, no more than 1/3 of the board of directors and of the supervisory board can consist of directors of over seventy years of age while the chairman of the board of directors, the general manager and the members of the management board must not be over sixty-five years of age). Having a director's age limitation is one of the criteria generally used by corporate governance and board rating systems (Van den Berghe & Levrau, 2004). Indeed, the presence of an age limit improves the corporate governance effectiveness because it helps guarantee a proper turnover on the board.

With regard to *independent directors*, we considered board composition (obligation to include non-executive or independent members), the recognition of non-executive or independent figures within the board, and the definition of independence. Relating to the last two points, for the most part in the countries analyzed, both the recognition of non-executive or independent members and the definition of independence is provided (either by the law or by the codes). Nonetheless, in France and in Portugal, this definition does not exist or there is no consensus on it. In the literature the effect of outsider-dominated boards on performance is controversial. Greater representation of outside directors on the board results in a negative impact on firm performance (Agrawal & Knoeber, 1996; Coles *et al.*, 2001). Some authors found a negative relationship between a higher proportion of independent directors and performance or firm value (Rosenstein & Wyatt 1990; Baysinger & Butler, 1985; Wagner *et al.* 1998). Other scholars affirm that there is virtually no relationship between board composition and firm performance (Dalton *et al.*, 1998; Hermalin and Weisbach, 2003). We believe that inconclusiveness of these results' is due to the fact that finding the right mix of independent and non-independent directors is a very complex issue. On the one hand, the inclusion of insiders in the board may be useful because they have access to information relevant in assessing both strategic and managerial performance. On the other hand, independent directors can bring external skills and competencies to the company and have an important role to play, chiefly in those fields where conflicts of interest may arise (i.e. financial control, nomination and remuneration). As Van den Berghe and Levrau (2004) assert, almost all rating systems pay attention to *board independence*. To conclude, the proper balance inside the board may depend on the company's characteristics (company structure, size, age etc.) and needs: the board of directors should pursue a balance between executive directors, shareholders' representatives and outside independent directors.

The *prohibition of appointment of the chairman as CEO* of the same company is another issue that we have taken into account. Other than Austria, France and Germany, the law does not forbid appointing the chairman as CEO. Austrian and German laws instead explicitly require the strict separation of the roles of the management board and supervisory board in these two countries the only model that can be implemented is the two-tiered one. In France the position of chairman is separated from the position of general manager in principle but the board can decide to give the two functions to the same person. The separation of the roles of CEO and chairman reduces the power of the CEO and the potential for management to dominate the board. It has to be recognized, however, that when the CEO also serves as the chairman, his or her role-duality provides unified firm leadership, builds trust and stimulates the motivation to perform (Muth and Donaldson, 1998).

With regard to law requirements for *terms of appointment*, all the countries other than Portugal (where no limits are defined) fix some terms of appointment. We consider this as an element that improves the quality of corporate governance. The importance of establishing the length of a term is stressed by many authors. The precise length of a director's term depends on a number of unique factors that are not only connected with the company's characteristics but also with the individual business' characteristics. In one sense, fixed terms of service have to be long enough to allow the sharing of knowledge among all members and to provide a long-term perspective on the running of the company. In another sense, they have to be short enough to permit the board to be effective and ready to adapt to new scenarios. The fact that the law prescribes some terms of appointment is enfeebled by the possibility, allowed for by the same law, of re-electing the same director.

*The role of directors as owners* is another point that we analyzed. We wanted to investigate whether the law allows for directors to be owners or not. We found that in every country directors are allowed but not required to own shares in the company. The only case in which directors and members of the supervisory board have to own at least one share in the company is France. This information shows that ownership by directors is not considered as a danger for the company. In fact, in the literature it is recognized that having owners as

directors can positively affect performance. For example, Bhagat *et al* found that the greater the value of an outside director equity ownership, the better the company's overall performance.

## The legal rules index.

The legal rules index is a numerical construct that we created to measure law intervention on the features of boards of directors. The higher the value of this index, the deeper the law intervention is. As shown in tables 1 and 2, we gave one or zero points to each analyzed aspect of boards of directors (employees' representation, number of directors, and so forth) country by country. The attribution of points depended on the depth of the law intervention. When particular situations required a different consideration, we gave 0.5 or 1.5 points. This happened when we had to assess the number of directors' regulation, we gave 0.5 points when the law has a low intervention and 1.5 when the intervention is high. We added up all the figures and we found, for each country, the value of the legal rules index. Spain's index is 5.5, Italy 4.5, France 6.5, Germany 7.5, Austria 7.5, and Portugal 0.5. These results demonstrate that, in spite of the European Union, the impact of law intervention on board's aspects is still different in each of these European countries. Moreover, Germany and Austria, from the Germanic legal family, have laws that more minutely prescribe what the characteristics of the board have to be. While Italy and Spain have indices that are more similar, this concurs with the fact that they belong to the Romanistic legal region. France is in an intermediate position. The peculiar result is Portugal's index. It is the lowest and very different from all the other countries. Company law in Portugal does not contain many definite rules about the characteristics of boards of directors and this is reflected in a low legal rules index.

## The rights of shareholders.

The protection of shareholders' rights is a huge and complex issue. It is not the aim of this article to define and measure the level of shareholders' rights in Europe. Our aim is to focus on some precise topics and try to understand whether there is a convergence among some European countries. What we would like to emphasize in this paper are two aspects that we consider to be, in a broad sense, indicative of shareholders' rights recognized by the law. These aspects are the capacity to call a meeting or propose a specific resolution for a meeting and the shareholders' right of inspection. If shareholders want to call a meeting or propose a specific resolution for the meeting, they generally have to hold a minimum percentage of the company's share capital, which is equal to 5% in Spain, France, Germany, Austria and Portugal, while it is 10% in Italy (unless otherwise stipulated in the company's articles). The rules from this point of view are largely similar. With regard to shareholders' inspection rights, they are not entitled to access documents about service contracts between the company and directors in Spain, Italy, Germany and Austria, while they are entitled in France and Portugal where it seems that more attention is given to these rights. Country by country, the similarity in the law is higher on the topic of shareholders' rights.

## Conclusions.

We have defined some features of boards of directors and we have considered how they are regulated. Moreover, this paper has revealed some divergences and convergences among six European countries. It has been shown that boards' characteristics vary and that these differences are probably connected to the legal families to which every country belongs to. There are more similarities on the two indicators of shareholders' rights. On these aspects and on what makes a good board of directors, there is not always homogeneous theoretical support. This aspect and the fact that some cultural and historical differences remain strong can explain the law divergences that we found. More research has to be done on this topic, and it would be interesting to extend the analysis to all the members of the European Union.

**Table 2: Countries Comparison**

|  | SPAIN | S | ITALY | I | FRANCE   | F | GERMANY  | G | AUSTRIA   | A | PORTUGAL | P |
|--|-------|---|-------|---|--|---|--|---|---|---|----------|---|
| Employees' representation on the board (mandatory) | NO    |   | NO    |   | YES on the board (unitary syst.) or on the supervisory board (two tiered) of companies with more than 50 | 1 | YES on the supervisory board of companies with more than 500 employees | 1 | YES on the supervisory board of companies with a works council (which is mandatory with at least 5 employees) | 1 | NO       |   |

|   |  |     |  |     |   |     |   |     |   |     |   |     |
|---|--|-----|--|-----|---|-----|---|-----|---|-----|---|-----|
|   |  |     |  |     | employees or when employees hold more than 3% of the share capital.   |     |   |     |   |     |   |     |
| <b>Number of directors or members</b>   |  |     | Traditional model minimum: NO maximum: NO  |     |   |     |   |     |   |     |   |     |
|   |  |     | Two-tiered: on the management board minimum 2 maximum: NO, on the supervisory board minimum 3 maximum: NO. |     | Two-tiered: on the management board minimum 1 maximum 5, on the supervisory board minimum 3 maximum 18.   |     | Two-tiered: on the management board minimum 2 (when share capital >Eur3million or when the representation of employees is mandatory) maximum NO, on the supervisory board minimum 3 maximum: depends on the AG's capital, but it must be a number divisible by 3. |     | Two-tiered: on the management board minimum 1 maximum NO, on the supervisory board minimum 3 (exclusive of employees' representatives) maximum: depends on the AG's capital, (for listed minimum 10 excluding the employee's representatives)   |     | Two-tiered: on the management board minimum NO maximum NO, on the supervisory board minimum 3 maximum: NO |     |
|   | Unitary: minimum: 3 maximum: NO (for listed companies the Report on Good Governance suggests a minimum of 5 and a maximum of 15)   |     | Unitary: minimum: NO (for listed min 3) maximum: NO  |     | Unitary: minimum: 3 maximum: 18   |     |   |     |   |     | Unitary: minimum: NO maximum: NO  |     |
|   |  | 1   |  | 0.5 |   | 1.5 |   | 1.5 |   | 1.5 |   | 0.5 |
| <b>Age restrictions (superior limit)</b>                                      | NO   |     | NO   |     | YES   | 1   | NO (but recommended by the Code)  |     | NO (but recommended by the Code)  |     | NO  |     |
| <b>Recognition of non-executive or independent figures</b>                    | YES (in the Report on good governance)   | 1   | YES (by the Code and the Law)  | 1   | NO  |     | YES (by the Code)   | 1   | YES   | 1   | NO  |     |
| <b>Board composition (obligation to include non-executive or independent)</b> | suggested by the Report on Good Governance   | 1   | only for listed companies and for companies with unitary board   | 1   | NO  |     | suggested by the Code   | 1   | YES the supervisory board (composed only of non executive directors) must define the criteria that defines independence.  | 1   | NO  |     |
| <b>Independence definition</b>  | YES  | 1   | YES  | 1   | NO consensus on it  |     | YES   | 1   | YES   | 1   | NO  |     |
| <b>Prohibition of appointment of the chairman as CEO of the same company</b>  | NO (not mandatory but suggested by the code)   |     | NO   |     | YES   | 1   | YES (roles of the management board and supervisory board are strictly separate)   | 1   | YES (roles of the management board and supervisory board are strictly separate)   | 1   | NO  |     |
| <b>Terms of appointment</b>   | YES (maximum term is 6 years but re-election is possible) For listed companies (Report on good governance) independent directors should not serve for a continuous period of more than 12 years) |     | YES (maximum term is 3 years but re-election is possible)  |     | Unitary structure: maximum term 6 years- Re-election is possible.   |     |   |     |   |     |   |     |
|   |  |     |  |     | Two tiered structure: for supervisory directors maximum term 6 years, for management directors: term of 2 to 6 years. Re-election possible.   |     | Two tiered structure: for supervisory directors and for management directors: maximum term of 5 years. Re-election possible.  |     | Two tiered: for managing directors :maximum terms 5 years. For supervisor directors :between 4 years and 4 months, and 5 years and 8 months for supervisory directors, depending on when the annual shareholders' meeting for the election and the re-election of sup.directors takes place |     | NO  |     |
|   |  | 1   |  | 1   |   | 1   |   | 1   |   | 1   |   |     |
| <b>Directors as ownership</b>   | Directors are allowed but not required to own shares in the company.   |     | Directors are allowed but not required to own shares in the company.                                       |     | Directors (in a unitary structure) and members of the sup.board. (in a 2 tiered str) must own at least one share in the company. Members of the management board are allowed but not required to own any shares in the company. | 1   | Managing directors and supervisory directors are allowed but not required, to own shares in the company.  |     | Directors are allowed but not required to own shares in the company.  |     | Directors are allowed but not required to own shares in the company.                                      |     |
| <b>The legal rules index</b>  |  | 5.5 |  | 4.5 |   | 6.5 |   | 7.5 |   | 7.5 |   | 0.5 |

**Table 3:Shareholders power**

|  | SPAIN   | ITALY  | FRANCE  | GERMANY  | AUSTRIA   | PORTUGAL  |
|--|---|--|---|--|---|---|
| <b>Can shareholders call a meeting or propose a specific resolution for a meeting?</b> | Yes if they hold more than 5% of the company's share capital  | Yes if they hold at least 10% of the company's share capital   | Yes if they hold at least 5% of the company's share capital; if it is in the case of emergency, no minimum shareholding is required. In listed companies particular rules are applied).             | Yes if they hold either A) at least 5% of the company's share capital or B) shares worth at least EUR500,000.  | Yes if they hold more than 5% of the company's share capital                    | Yes if they hold more than 5% of the company's share capital    |
| <b>Shareholders' inspection</b>  | Shareholders are not entitled to access documents about service contracts between the company and related parties (such as controlling shareholders and directors). | No right to inspection is provided for shareholders; however, shareholders can file a complaint before the internal auditors | Shareholders are not entitled to access documents about service contracts between the company and related parties (except for directors' service contracts that must be shown to the shareholders.) | Shareholders have no right to view directors' service contracts. However, the chairman of the supervisory board should disclose certain details of directors' remuneration to the general meeting (Code) and the law requires disclosure of details of the remunerations under certain conditions. | Shareholders are not entitled to examine managing directors' service contracts. | Shareholders are entitled to view directors' service contracts. |

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\*Even if this paper is the result of the shared research of the authors, the Introduction paragraph can be attributed to Lal Chugh –Project Coordinator – the literature review, the description of the sample, the methodology and results paragraphs can be attributed to Cristina Bettinelli.

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# CHANGING ORGANIZATIONAL MODELS OF CORPORATE GOVERNANCE : AN EMPIRICAL CASE-STUDY OF ITALIAN CORPORATIONS

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## ABSTRACT

*The existent literature ascribes a company's dynamism to some specific company characteristics. In 2003, a deep company law reform in Italy introduced the possibility to modify radically their corporate governance organization. Starting from this event we have collected a dataset composed of more than 35,000 joint-stock corporations incorporated in Italy. We defined an innovative company as one that decided to change the traditional corporate governance model in favour of a new one. Our aim was to investigate the relationship between these innovative companies and some of their specific characteristics. Surprisingly, no statistically significant relationships emerged.*

## INTRODUCTION

The existent literature tends to ascribe a company's dynamism to some specific company characteristics (see for example: Zajac et.al. 1991 and Sørensen & Stuart 2000). In 2003, a deep company law reform in Italy gave to Italian companies the opportunity to modify radically their corporate governance organization. To the traditional corporate governance model, two further models have been added, so a company can choose from three different frameworks (the traditional, the one-tier and the two-tier models). Using this event as a point of departure, we have collected a dataset composed of 35,000 joint-stock corporations incorporated in Italy. The dataset is provided by the Italian Chamber of Commerce. Which is a public entity that has access to the Enterprises Register. It was drawn out on April 2007 and it considers a sample composed of all the existing and operatives Italian Joint-Stock Corporations which are, accordingly to the Enterprises Register, 35,590. Of these enterprises we analyzed the adopted Corporate Governance Model (Traditional, Monistic and Dualistic), the Age, the Activity, the Value of Production and the geographic position (location). We have defined an innovative company as one that has decided to abandon the traditional corporate governance model in favor of a new one. We have then investigated the relationship between these innovative companies and some of their specific characteristics (age, sector, total sales, and location). In particular we were interested in understanding if empirically exists a relationship between structural inertia and some organization's characteristics such as age, size and sector. This general question derived from the literature review and in particular from the consideration of a seminal paper of Hannan & Freeman (1984). The authors deeply studied the concept of structural inertia and developed some assumptions and theorems. We wanted to apply these theoretic assumptions to the corporate governance field. In particular we were interested in understanding whether exists or not an empirical relationship between corporate governance structural inertia and some organization's characteristics such as age, size, location and sector. From the descriptive statistics emerged that a very small percentage of the companies analyzed could be defined as "innovative" (0,65% of 35,590). We then had to resort to a peculiar methodology that is the Re-Logit function which has been created in order to solve Rare Events Logistic Regressions (King & Zeng, 2000). We made use of the R software. By considering this dataset we can assert that for size and sector there isn't any statistically significant relationship with structural inertia while for age the weakness of the results makes it impossible to draw any conclusions.

## LITERATURE REVIEW

Organizational behaviour studies consider organizational models and structures as the core element. An interesting aspect in this field regards organizational changes and structural inertia. As Freeman & Boeker (1984:79) affirm, an organizational form is “a set of stable routines for accomplishing organizational action”, this definition is based on the assumption that structural features of organizations change slowly and so, organizations have typically the characteristic of being structurally inert.

Organizational change has been explained by different theories, two main streams can be considered: the theories that define it as the adaptive response of existing individual to prior changes and theories which assume that when organizational change occurs a *selective* replacement of the old failed forms by the new forms takes place. In the first group can be included contingency theory (Woodward 1965, Lawrence & Lorsh 1967), resource dependence theory (Pfeffer & Salancik 1978) Burt (1983), institutional theory (Meyer & Rowan 1977, DiMaggio & Powell (1991, 1993), and transaction cost economies theories (Williamson 1975, 1985). The second group embraces organizational ecology theorists such as (Hannan & Freeman (1984, 1997, 1989) and also evolutionary economics theorists such as (Nelson & Winter 1983). In particular, Hannan & Freeman assert that structural inertia is the outcome of an ecological evolutionary process. Conceptual ideas and new theories have been shaped during the last decade (see for example, Schwarz & Shulman 2007, Wischnevsky 2004, , Hannan; Pólos and Carroll 2004). Nevertheless, the aim of this article is to focus on the concept of structural inertia and to verify whether it is related to the existence of particular company characteristics. For this reason, we consider the Hannan & Freeman (1984) work and empirically verify their assumptions. In particular our aim is to answer this question: *Does exist empirically a relationship between structural inertia (and conversely, structural dynamism) and some organization's characteristics such as age, size and sector?*

Hannan & Freeman (1984) theoretically assert that inertial forces vary over the life cycle, with organizational size and with complexity. Amid the mentioned authors' assumptions, we found 2 interesting theoretic answers to our question. The first one states that “*Reproducibility of structures increases monotonically with age*”, the second one affirms that “*the level of structural inertia increases with size for each class of organization*” (Hannan & Freeman 1984:157,158). These assumptions have been confirmed in different empirical studies. For example, the relationship between organizational aging and innovation processes has been investigated by Sørensen & Stuart (2000). The authors found that in dynamic environments aging leads to a bigger divergence between organizational competence and contemporary environmental demands. Moreover, Ruef (1997) tested the structural inertia hypothesis on a sample composed of hospitals, interestingly he found that organizational size, age, and service scope affected a hospital's capacity to surmount relative structural inertia. As far as the relationship between structural inertia and organizational size and age, the most adaptable elements of the sample were the ones with a bigger size and an higher organizational age.

Scholars assert that organization's attributes such as size and age are supposed to affect also the organization's legitimacy (i.e. the recognition of an organization by its external environment). The older the organization is, the easier will be to build up strong exchange relationships, enter in a power hierarchy and be legitimate by powerful social actors (Singh et al. 1986).

Furthermore Baker & Cullen (1993) analyzed the effects some organization's characteristics on the administrative reorganization of top-level managers in 200 colleges and universities. They found that age, size and change in size have important influences on administrative reorganization. Large, old, and growing organizations experienced high levels of administrative reorganization not the moderate levels hypothesized. Small, old, and growing organizations, had low levels of reorganization. The authors asserted that the organizations, put in order of decreasing levels of reorganization, follow this order : (1) large, young, and declining, (2) large, young, and growing. (3) large, old, and declining, (4) small, young, and growing, (5) small, old, and declining, and (6) small, young, and declining (Baker & Cullen p1268).

In corporate governance by organizational models we mean the governance structures adopted in order to govern and steer the company. These models are generally defined by the law in a mandatory way. The application of the structural inertia concept to the corporate governance field implies that if the lawmaker changes the corporate governance models range, for example, by adding some new models, then we expect the company to be relatively slow in experimenting these new models. We couldn't find in the literature the application of the concept of structural inertia to corporate governance, for this reason we decided to explore this new field and to do the empirical analysis on the adoption of new corporate governance models by Italian Companies. In particular we specified our general question (Does exist empirically a relationship between structural inertia and some organization's characteristics such as age, size and sector?) with the following: *Does exist empirically a relationship between corporate governance structural inertia and some organization's characteristics such as age, size and sector?*

In the next paragraphs we present the sample, then we explain the methodology and finally the results.

## THE SAMPLE

In 2003, a deep company law reform in Italy gave to Italian companies the opportunity to modify radically their corporate governance organization. To the traditional corporate governance model, two further models have been added, so a company can choose from three different frameworks (the traditional, the one-tier and the two-tier models). Using this event as a point of departure, we have collected a dataset and we have defined an innovative company as one that has decided to abandon the traditional corporate governance model in favour of a new one. The dataset considers the Italian Joint-Stock Corporations (JSCs) and is provided by *Infoimprese*, the Italian Chamber of Commerce office. This office is a public entity which has access to the Enterprises Register. Every time an enterprise decides to change something of its Corporate Governance System, it must communicate this to the Enterprises Register. The dataset was drawn out on April 2007 and it considers a sample composed of all the existing and operative Italian Joint-Stock Corporations which are, accordingly to the Enterprises Register, 35,590. Of these enterprises we have considered the adopted Corporate Governance Model (Traditional, Monistic and Dualistic), the Age, the Activity, the Value of Production and the geographic position (location). With respect to the corporate governance models the legal options are the following.

- The traditional model of governance (inspired by the French tradition) prescribes the implementations of a board of directors and a board of auditors both selected by the shareholders' meeting.
- The two-tiers model (inspired by the German experience) requires the shareholders' meeting to select a board of independent supervisors, and this board of supervisors has to select and remove the members of the board of managers. In addition of the controlling function performed by the board of auditors in the traditional system, the board of supervisors also approves the balance sheet of the corporation and other issues that, in the traditional system, compete to the shareholders' meeting.
- The one-tier model (inspired by the Anglo-Saxon experience) requires the Shareholders meeting to select a board of directors, the board itself must appoint an auditing committee, as well as in the US and English approaches. At least a third of its members must have the same independence requirements of the auditors.

The two-tiers and the one-tier models have been introduced in 2003 with a law reform, before it, companies could apply only the traditional model. So, from this point of view, we define structurally *inert* the companies that did not explore the new models and *dynamic* the companies that implemented one of the new models. The Age is calculated by estimating the difference between the date of inscription on the Enterprises Register (and, if not applicable, the date in which the corporation has started its activity), and the date of extraction of all the data. The activity refers to the ATECO codification, it is the official codification provided by the ISTAT (the Italian Institute of Statistics), this codification is organized in sections, under-sections, divisions, groups and categories. We have re-elaborated the codification to simplify it, in particular we have created some macro-groups that contain all the most important activities codes (see Table 1). The elements that compose the Value of Production are specified in the Appendices.

## METHODOLOGY

The dataset shows that after 4 years from the corporate governance reform in Italy, the 99,35% of all the Italian Joint Stock Corporations (JSCs) are still governed according to the traditional system. At almost the middle of year 2007 (April), Only 154 companies have adopted the one-tier model and only 79 the two-tier. So a very low quantity of JSCs has decided to modify its traditional corporate governance system. The aim of this article is to verify whether there is a relationship between the structural inertia of these companies and their characteristics. By using the R software we built a logistic regression that could help us understand this relationship. In particular we specified that:

$$syst=f(company\ characteristics).$$

Where *syst* is the dependent variable and is a dummy, it equals to 1 when the company is *dynamic* (i.e. adopts one of the new governance models), it equals to 0 when the company is *inert*. Company characteristics is a group of variables that measure the Age, the Sector and the Value of Production (which measure the size of the company). We created different classes for each of these variables, that is we transformed them into polychotomous variables

which equal to one when each of them belongs to a particular class and to zero otherwise.

Since we have a dependent variable with only two levels multiple regression techniques are not suitable, to handle this problem we applied a logistic regression which uses a transformation called *logit* that forces the prediction equation to predict values between 0 and 1. A logistic regression equation calculates the natural log of the odds for a subject being in one category or another. In addition, the regression coefficients in a logistic regression equation can be used to estimate odds ratios for each of the independent variables. Our aim is to see if age, size and sector can be used to predict if the company is dynamic or inert. The peculiarity of this database consists in having an huge quantity number of traditional companies but a very small amount of innovative companies. In other words, the adoption of a new corporate governance model is a “rare event”, indeed we have binary dependent variables with hundreds of times fewer ones than zeros. The problem is that popular statistical procedures, such as logistic regression, can sharply underestimate the probability of rare events. Moreover commonly used data collection strategies are grossly inefficient for rare events data. The solution of this problem has been provided by King & Zeng (2000), the authors provided mathematics proofs to solve with appropriate corrections the rare events question. King & Zeng provided also a software that implements the corrections developed. Technically we have chosen the software called R, and the statistical program “Zelig” the corrections for the “rare events bias” have been applied by writing in the logistic regression the value of *tau*, a vector to specify the ratio between the 233 dynamic companies and the 35,357 inert companies. We also added the statement “bias.correct” which is a logical value of TRUE (default) or FALSE indicating whether the intercept should be corrected for finite sample (rare events) bias. The statement utilized is the following:

*Zelig (formula = SYST ~ company characteristics, model = "relogit", data = finch, tau = 233/35357, bias.correct = TRUE).*

We made different attempts by changing the combinations of variables comprised in the company characteristics.

## RESULTS AND COMMENTS

In table 1 we show how Italian companies are grouped in different sectors, in the grouping process we focused our attention on the macro-groups that we believe could be more significant for the topic of this research. The sector n.1 contains, with the classical primary sector, also the groups that weren't essential for this research (i.e. non industrial activities). This sample is characterized by a high presence of Manufacturing companies, Trade Companies and Real Estate and Services companies.

Table 2 contains the sample's company size. There is a high quantity of companies with a value of production comprised between 1 million Euros and 15 millions Euros. This means that the sample is composed of a large amount of small and medium size companies, the number of enterprises that could be defined as very big (i.e. value of production higher then €100.000.000,00) is low and this is true also for the big companies. These characteristics can be explained by looking at the Table 3, which represents the companies' age. Each of the age class has a width of 20 years in most cases the companies are younger than 40 years, almost half of the sample is composed of companies younger than 20 years.

**Table 1: Distribution of Companies by Sectors**

| Sector |   | n         |
|--------|---|-----------|
| 1      | Agriculture, hunting, forestry, fishing plus other non industrial activities            | 1,715.00  |
| 2      | Manufacturing industry  | 12,571.00 |
| 3      | Production and distribution of energy, gas and water                                    | 485.00    |
| 4      | Buildings industry  | 2,538.00  |
| 5      | Retail trade and wholesale trade, repairing of personal goods                           | 5,463.00  |
| 6      | Hotels and restaurants  | 534.00    |
| 7      | Transportations, logistics and communications   | 1,333.00  |
| 8      | Financial activities  | 2,238.00  |
| 9      | Real Estate, rental activities, computer science, research and services for enterprises | 8,162.00  |
|        |   | 35,039.00 |

**Table 2: Distribution of Companies by Size**  
(in Euros)

| size classes |               |               | n         |
|--------------|---------------|---------------|-----------|
| 1            | €-            | 99,999.00     | 1,560.00  |
| 2            | 100,000.00    | 499,999.00    | 2,803.00  |
| 3            | 500,000.00    | 999,999.00    | 1,852.00  |
| 4            | 1,000,000.00  | 4,999,999.00  | 6,815.00  |
| 5            | 5,000,000.00  | 9,999,999.00  | 5,456.00  |
| 6            | 10,000,000.00 | 14,999,999.00 | 3,190.00  |
| 7            | 15,000,000.00 | 19,999,999.00 | 1,939.00  |
| 8            | 20,000,000.00 | 29,999,999.00 | 2,173.00  |
| 9            | 30,000,000.00 | 49,999,999.00 | 1,756.00  |
| 10           | 50,000,000.00 | more          | 2,260.00  |
|              |               |               | 29,804.00 |

**Table 3 :Distribution of Companies by Age**

| age classes |    |      | n         |
|-------------|----|------|-----------|
| 1           | 0  | 19   | 16,515.00 |
| 2           | 20 | 39   | 14,118.00 |
| 3           | 40 | 59   | 3,717.00  |
| 4           | 60 | More | 1,240.00  |
|             |    |      | 35,590.00 |

Table 4 represents a summary of the most important independent variables (age, size, sector) the mean Italian joint stock corporation is 23,6 years old and has a value of production comprised between 5 and 10 millions Euros. The amount of missing values is low for *sector* while is unfortunately pretty high for *size* (16,00%). We have no missing values for age. In the regression the statistical software eliminated all the observations with a missing data. The results of the logistic regression are shown in the Appendices. In order to avoid technical problems due to perfect collinearity we included the first element of each variable group (i.e. AGE1, VP1, Att<sub>a</sub>) in the intercept estimation. We have chosen to do this with the first element because it facilitates the output interpretation. The number of statistical significant variables that could help explain the adoption of a new organizational model is too low. Only one variable (AGE2) seems to be significant. We made different attempts by considering diverse combinations of variables (age, size, sector and location) and the results did not change. The statistical significance of AGE2 could mean that companies younger than 40 years are more dynamic. Nonetheless we believe that having only one variable with a significant p-value is not sufficient to draw conclusions on the presence of any relationships between structural inertia and company characteristics. The interpretation is complicated by the fact that the majority of the companies belong to the same class that results to be significant (AGE2). As a conclusion we wanted to understand whether an empirical relationship between structural inertia (and conversely, structural dynamism) and some organization's characteristics such as age, size and sector exists or not. By considering this dataset we can answer that for size and sector there isn't any statistically significant relationship while for age the weakness of the results makes it impossible to draw any conclusions. A possible explanation of these results is that typically there is a period of time during which existing rules and structures are being taken apart and new ones are being implemented to replace them. Three complementary points have to be acknowledged, first, structural inertia depends on both external and internal forces, second, to argue that inertial forces characterize organizations doesn't mean that organizations never change, it means instead that organizations tend to be relatively slow in responding to external changes. Lastly, the duration of the response-period is not known. Since the Law reform took place in 2003, the Joint Stock Corporations have had 4 years to change their systems, it is possible that these systems are still too new for the Italian companies. An open question is whether that period of time was enough for the operators to assess the new models and understand if they could improve the corporate governance effectiveness and fit the real needs of the Italian environment. It would be interesting to monitor the adoption of these new models in the future and to see how do Italian companies behave.

**Table 4:Descriptive statistics**

| Descriptive Statistics |                   |                |                     |
|------------------------|-------------------|----------------|---------------------|
| Age                    | Size (in classes) |                | Sector (in classes) |
| Mean ( $\mu$ )         | 23.6              | Mean ( $\mu$ ) | 5.3                 |
|                        |                   | Mean ( $\mu$ ) | 4.8                 |

|  |         |  |         |  |     |
|--|---------|--|---------|--|-----|
| Standard Deviation ( $\sigma$ )              | 16.8    | Standard Deviation ( $\sigma$ )              | 2.5     | Standard Deviation ( $\sigma$ )              | 2.9 |
| Sample Variance ( $\sigma^2$ )               | 281.8   | Sample Variance ( $\sigma^2$ )               | 6.3     | Sample Variance ( $\sigma^2$ )               | 8.6 |
| Coefficient of variation<br>( $\sigma/\mu$ ) | 0.7     | Coefficient of variation<br>( $\sigma/\mu$ ) | 0.5     | Coefficient of variation<br>( $\sigma/\mu$ ) | 0.6 |
| Minimum                                      | 0.7     | Minimum                                      | 1.0     | Minimum                                      | 1.0 |
| Maximum                                      | 107.9   | Maximum                                      | 11.0    | Maximum                                      | 9.0 |
| missing values                               | 0.0     | missing values                               | 5786.0  | missing values                               | 1.0 |
|  | 35,590. |  | 29,804. |  | 35, |
| tot. Obs. Available                          | 0       | tot. Obs. Available                          | 0       | tot. Obs. Available                          | 03  |
|  |         |  |         |  | 9.0 |

## APPENDICES

Value of Production is composed as follows : *Value of Production = Total sales+ Variation of Inventory level (Finished Product and Unfinished Product) + Variation of Value of Existing Job Orders + Increase of Value of Internal Assets due to Internal Works + Other Revenues.*

**Table 5:Logistic Regression**

Call:

zelig(formula = SYST ~ AGE2 + AGE3 + AGE4 + VP2 + VP3 + VP4 + VP5 + VP6 + VP7 + VP8 + VP9 + VP10 + ATTB + ATTc + ATTD + ATTe + ATTf + ATTg + ATTh + ATTi, model = "relogit", data = finch, tau = 233/35357, bias.correct = TRUE)

Coefficients:

|             | Estimate | Std. Error | z value | Pr(> z ) |     |
|-------------|----------|------------|---------|----------|-----|
| (Intercept) | -4.51    | 0.41       | -11.03  | <2e-16   | *** |
| AGE2        | -0.50    | 0.17       | -3.03   | 0.0024   | **  |
| AGE3        | -0.14    | 0.24       | -0.57   | 0.5684   |     |
| AGE4        | 0.01     | 0.46       | 0.01    | 0.9906   |     |
| VP2         | -0.34    | 0.34       | -1.00   | 0.3168   |     |
| VP3         | -0.33    | 0.38       | -0.89   | 0.3754   |     |
| VP4         | -0.29    | 0.30       | -0.97   | 0.3335   |     |
| VP5         | -0.53    | 0.33       | -1.58   | 0.1135   |     |
| VP6         | -0.32    | 0.36       | -0.89   | 0.3740   |     |
| VP7         | -0.38    | 0.41       | -0.92   | 0.3558   |     |
| VP8         | -0.21    | 0.38       | -0.56   | 0.5763   |     |
| VP9         | -0.30    | 0.41       | -0.73   | 0.4660   |     |
| VP10        | 0.22     | 0.39       | 0.58    | 0.5632   |     |
| ATTb        | -0.02    | 0.35       | -0.06   | 0.9528   |     |
| ATTc        | 0.54     | 0.55       | 0.98    | 0.3290   |     |
| ATTD        | -0.21    | 0.44       | -0.47   | 0.6400   |     |
| ATTe        | -0.10    | 0.38       | -0.28   | 0.7802   |     |
| ATTf        | 0.12     | 0.66       | 0.19    | 0.8505   |     |
| ATTg        | 0.19     | 0.46       | 0.40    | 0.6858   |     |
| ATTh        | 0.39     | 0.48       | 0.80    | 0.4264   |     |
| ATTi        | 0.14     | 0.35       | 0.40    | 0.6887   |     |

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 2342.7 on 28507 degrees of freedom

Residual deviance: 2319.7 on 28487 degrees of freedom  
AIC: 2362  
Number of Fisher Scoring iterations: 8  
Prior correction performed with tau = 0.00659  
Rare events bias correction performed

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\*Even if this paper is the result of the shared research of the authors, the Introduction paragraph can be attributed to Lal Chugh –Project Coordinator – the literature review, the description of the sample, the methodology and results paragraphs can be attributed to Cristina Bettinelli.

# **LITTLEPAW® SKATEBOARDS CASE STUDY**

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## **ABSTRACT**

*This is a case study appropriate for introductory business courses. It describes the entrepreneurial efforts of a recent business school graduate, Geno Chou, to establish and grow his lifestyle venture involving the popular sport of skateboarding. Issues of start-up strategy, management, marketing, operations, and international expansion are included in the case.*

## **INTRODUCTION**

Founded in 2002, LittlePaw® Skateboards is the fulfillment of Geno Chou's ambition to participate in the skateboarding sport he loves. "After realizing that my chances to become a professional skateboarder were slim to none, I decided to get into the business end of the sport, designing and selling skateboards as well as sponsoring young riders who are looking to make their mark on the sport. Through this venture I am aiming to make a living and do something I enjoy each and every single day."

While holding down a 50-hour-a-week full-time job, Geno, 27, puts an extra 30-plus hours into his sole proprietorship. Currently, Geno has 7 young riders on his team and, through a U.S.-based distribution network that reaches 9 countries, he has grown his fledgling business to the 500 unit sales mark in 2006. However, he wonders how far he can grow this venture, whether he should attempt to concentrate on the agent side of the business - and if he will ever be able to make LittlePaw® his full-time endeavor.

## **THE FOUNDER**

Geno Chou is a 2003 graduate of St. John's University's Peter J. Tobin College of Business, where he majored in management with a concentration in integrated marketing. In 1988 Geno and his family emigrated from Taiwan to Queens, New York, where, as a child, he easily adapted to the city's fast-paced, hard-driving culture. This is where he first encountered skateboarding. However, he did not truly develop his love for the sport until his high school years. Geno caught the skateboarding "bug" after many years of participating in mainstream sports such as basketball and handball. Rather than the controlled environment of team sports with coaches, he was attracted by the individualized freedom and action of skateboarding.

Throughout much of his adolescence Geno involved himself in community events related to skateboarding and spent a considerable portion of his discretionary income on new decks and equipment. One particular incident exemplifies Geno's passion for the sport. In early 2000, Geno got the news that New York City was considering the construction of a new skate park. He drafted a petition in favor of selecting a site in Flushing, easily accessible to him and many other skaters, and collected 800 signatures from local residents. In addition to presenting the petition, he lobbied the board members as hard as he could. Though the outcome was not favorable, Geno knew that he had identified a cause that energized him. It was just a small indicator of what was to come.

## THE INDUSTRY AND MARKET

The skateboarding industry has demonstrated tremendous growth over the past decade. Since the mid-1990's, exposure on TV's sports networks has helped commercialize the sport by bringing it into millions of households. Emergence of several professional skateboarding personalities helped to swell the ranks of U.S. skateboarders to more than 11 million. The board sports industry (consisting of skateboarding, snowboarding, and surfing) is estimated to generate \$11 billion in annual sales.

Among skateboarders there are two major segments – core and non-core. Non-core markets include buyers who are attracted primarily by the designs on the decks. Core markets also care about designs, but their interest extends to the particular size of decks that best suits their skating performance.

## BUSINESS MODEL AND OPERATIONS

Geno envisions LittlePaw® Skateboards becoming a well-recognized brand in the skateboarding industry. Primarily, his satisfaction is derived from working with young, developing skaters, helping them improve their techniques and engendering in them a love for the sport. His general approach has been to identify talented young skaters at local and regional competitions as well as amateur skaters who have not yet reached the competitive level. Geno talks to the skater's parents, seeking their permission to add the skater to his team. He provides each skater with his branded skateboards, apparel, and such. In addition to providing equipment, LittlePaw® covers some of the skaters' travel expenses and entrance fees at various competitions.

Geno runs all aspects of the day-to-day business - from developing deck designs to marketing to team management. Throughout the year, he travels numerous times with his team riders while co-paying their expenses with their parents. In return, Geno and LittlePaw® Skateboards gain exposure through his riders' involvement in competitions. LittlePaw®'s brand image is strengthened and sales of his skateboards are promoted.

The firm generates revenue through sale of its decks. Currently, there are 7 different size decks (see Exhibit A) with 3 different series of designs (see Exhibit B). The 3 different design series are intended to target the core and non-core markets. Geno works hand-in-hand with a designer to develop different series. As shown, there are three different series of designs: "Year of Monkey Series"; "The M Series"; and the "Team Logo." Geno was born in the Year of the Monkey; the "M Series" is similar to the "Year of Monkey Series," but less edgy; and the "Team Logo" contains different LittlePaw® font designs on the decks.

Each series takes between three to six months to produce. During the design process, Geno and his designer create many drafts before it is ready for production. Geno's experience with his market influences the designs. He knows what will appeal to customer groups. He designed "Team Logo Series" specifically to target the core markets, while the "Year of Monkey Series" and "The M Series" target both the core and non-core markets.

LittlePaw® Skateboards will customize designs to satisfy specific market needs. The firm will also produce different sizes if there is sufficient demand. Retailers are enamored with LittlePaw®'s flexibility. Geno is able to customize different designs on different size decks, helping to meet the needs of various customer groups.

Industry-wide, retail prices for a typical deck range from \$45-55 based on brand value. Of course, endorsements by pro athletes add significantly to perceived value. Brands, such as LittlePaw®, generally mark up the cost of their decks 30-35% when selling to distributors, and distributors mark up another 35% or so.

Geno's business objectives are to provide the best-value products for his customers and to support the development of the next generation of talented skateboarders. Therefore, he seeks to provide high quality products to every skateboarder who purchases one of his decks. Geno says, "I want all customers to be purchasing the same high quality of LittlePaw® decks each and every time they are in a skate shop." To achieve

this, Geno is committed to work with the best manufacturers to produce his decks. Products are made to Geno's specifications, and materials used for production are also of the highest quality. He is unwilling to lower his cost of production by outsourcing to countries like China, because so far Geno has found their quality to be inferior to the products he can produce in the U.S. Geno accepts a lower profit margin on each deck rather than compromise his standards. According to Geno, "Skateboarding is a lifestyle business, you have to believe in what you are doing. You have to be passionate and committed, or no skaters will believe in you or support you."

Geno's manufacturer is located in North Carolina, where quality raw material is plentiful. "You can't make a great deck without great wood," Geno says. After his products are made, they are tested by Geno and his team riders. Then they are transferred to the distributor a few miles away in the same city. Geno's distributor, Eastern Skateboard Supply, is the largest on the East Coast, and sells products to retailers nationwide. They are "America's Only True One-Stop Wholesale Shop" as they cater to more than two thousands retailers across the U.S., mostly on the East Coast. The close association between manufacturer and distributor supports a cost-effective operation, minimizing transportation costs and preserving more profit margin for LittlePaw®.

Currently, LittlePaw® Skateboards are marketed to both distributors and retailers. Unlike many larger competitors, Geno is willing to take custom orders from smaller retailers. Further, to simplify the retailer's ordering and billing tasks, Geno will introduce his buyers to Eastern Skateboard Supply.

## **ADVERTISING AND BRAND BUILDING**

In his attempts to build brand recognition Geno employs multiple advertising strategies. However, the cost effective use of very limited funds is always a key consideration. Over the last five years, Geno has carefully planned his advertising and marketing strategies. He has used some print ads (see Exhibit C). However, in this market there are many magazines for potential advertisements, each targeting very specific types of skateboarders.

LittlePaw® Skateboards also gains exposure at competitions. At these events each skater's sponsor is mentioned as a promoter courtesy. Thus, by sponsoring his team riders at competitions, Geno earns numerous plugs for the LittlePaw® brand. Moreover, Geno judges at competitions where his team riders do not participate, and he is announced along with the company name when he is introduced. For more information about the team riders, events and contests, *LittlePawSkateboards.com* can be consulted.

Geno attends various domestic and international tradeshows. He distributes business cards and brochures to retailers who may have interest in carrying his products. Typically, tradeshows charge \$15-30 per square foot for booths, which start at 10 X 10. Through his experience, Geno has found that any booth smaller than 10 X 20 at a major show is fairly ineffective. Large brands occupy 40 X 40 booths and may have 10+ salespersons on the floor to meet potential customers. Major trade show dates tend to be January and September, serving summer season and "back-to-school" retail orders. Regional shows pop up throughout the year. With his budget restricting him to 10 X 10 booths, Geno has found regional shows to be of relatively equal value to the major shows.

## **INTERNATIONAL MARKET EXPANSION**

International markets represent 20% of LittlePaw® Skateboards' current sales and play an integral part in their future expansion plans. LittlePaw® decks are now sold in Taiwan, France, Germany, Canada, England, Sweden, Italy, and Australia (see Exhibit D). Also, Geno has an international rider, Kyle Ke, on his team. Kyle is from Taiwan. They met in a skate park where Geno clearly remembers Kyle jumping over his head from a ramp. After securing permission from Kyle's parents, Geno added this young Taiwanese "aspiring actor" to his team of talented riders. (See Exhibit E for some more information about a few of the current team riders.)

LittlePaw® Skateboards are distributed internationally in two ways - the same ways Geno distributes to his U.S. retailers. He personally contacts retailers at international tradeshows. Plus, Geno sells his decks to an international distributor who sells to retailers in many nations and helps to build brand recognition for LittlePaw® in those countries.

LittlePaw® Skateboards' exposure to the international market is still relatively new, and Geno has been working diligently to improve his presence worldwide. Moreover, Geno understands that there are different purchasing patterns between the international markets and the U.S. market. By keeping his hand in both, LittlePaw® will be protecting itself from economic downturns in any single area.

## **STARTUP HURDLES TO OVERCOME**

Success never comes easily, and in the last five years Geno has encountered his share of challenges while guiding LittlePaw® Skateboards' operations. Like many entrepreneurs, Geno bootstrapped his way through early growth stages. All financing came from his personal savings. There were no corporate sponsorships to rely on. Fortunately, due to well-chosen advertising strategies and the exposure his team riders received at competitions, sales of skateboards increased sufficiently to allow LittlePaw® to reach its breakeven point recently.

Since LittlePaw® Skateboards' inception, it is common for Geno to work 80-hour weeks. While having to fulfill his responsibilities at his day job, Geno has struggled at times to keep his firm on track. Typical of his dedication to his riders, Geno saves all of his vacation and sick days so he can travel with his team to events, contests, and demos.

Financing for LittlePaw® Skateboards has been challenging, but the operational side of the business has been equally daunting. Geno had to change his early product lines after he realized there was a flaw in his early product conception. His initial strategy involved targeting both the "kids" market (with smaller-sized, "mini" skateboards) and the standard market (with standard-sized skateboards). However, the "mini" skateboards didn't sell well, due mainly to the fact that the target market was very small. When scaling up his products, Geno not only had to redesign his decks, he also had to redesign the graphics for the decks.

In early production stages Geno drew his graphics by hand and had the scanned image printed on the final product. The resolution was good, but not excellent. Therefore, he decided to hire a graphics designer to illustrate the graphics on a computer. Computer-generated designs produced the quality he was seeking and permitted the dimensional flexibility to fit designs to decks perfectly. This operational adjustment coincided with development of the "Year of Monkey Series," which took shape as the first major line of LittlePaw® Skateboards.

Lack of commercialization and professional endorsements initially posed a problem for establishing LittlePaw® Skateboards' brand image. Demand was low, yet Geno wanted to offer different designs and different deck sizes. Consequently, production runs were quite small – much to the displeasure of manufacturers who did not want to reconfigure their equipment so frequently. This greatly hampered Geno's buying power. He couldn't obtain his early stock at favorable prices. However, five years of hard work have eliminated the small order quantity dilemma.

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Eastern Skateboard Supply, Concrete Wave, Line Up Magazine, Focus Skateboard Magazine, and Woodward Camp are registered trademarks of their respective owner(s). All names and logos are used under agreement terms and may not be used without consent from the owner(s) of the companies mentioned.

**Exhibit A: Deck Sizes**

| Length | Width   |
|--------|---------|
| 7.5"   | 31.5"   |
| 7.625" | 31.375" |
| 7.625" | 31.5"   |
| 7.75"  | 31.75"  |
| 8"     | 32"     |
| 8.25"  | 32.75"  |
| 8.5"   | 32.75"  |

**Exhibit B: Deck Designs  
Year of Monkey Series**



**The M Series**



**The Team Logo Series**



**Exhibit C: Print Ads**

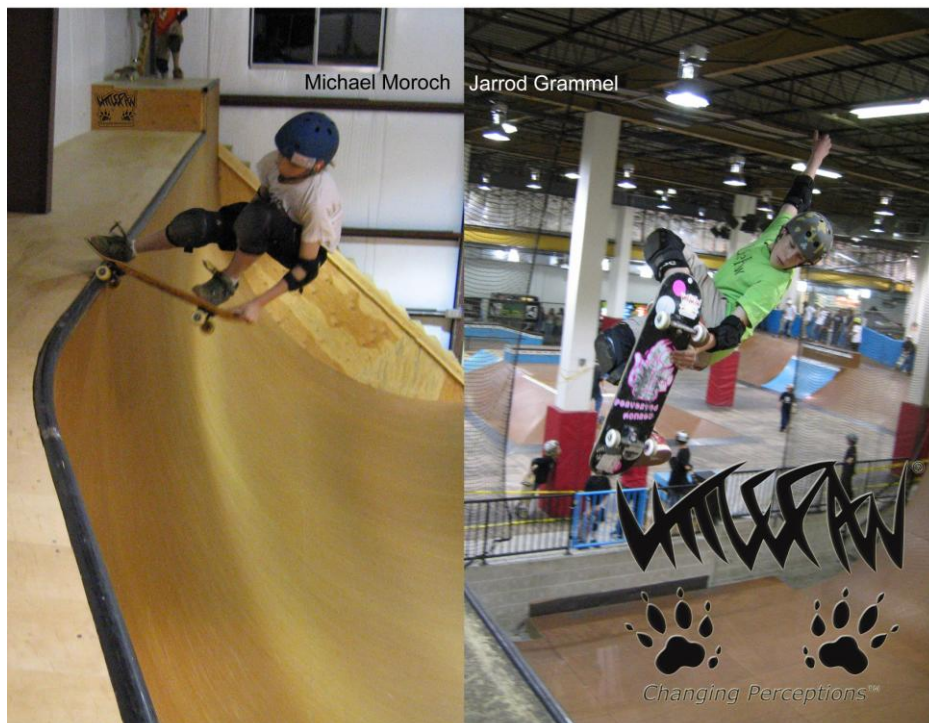




Focus Skate Magazine featuring team rider.



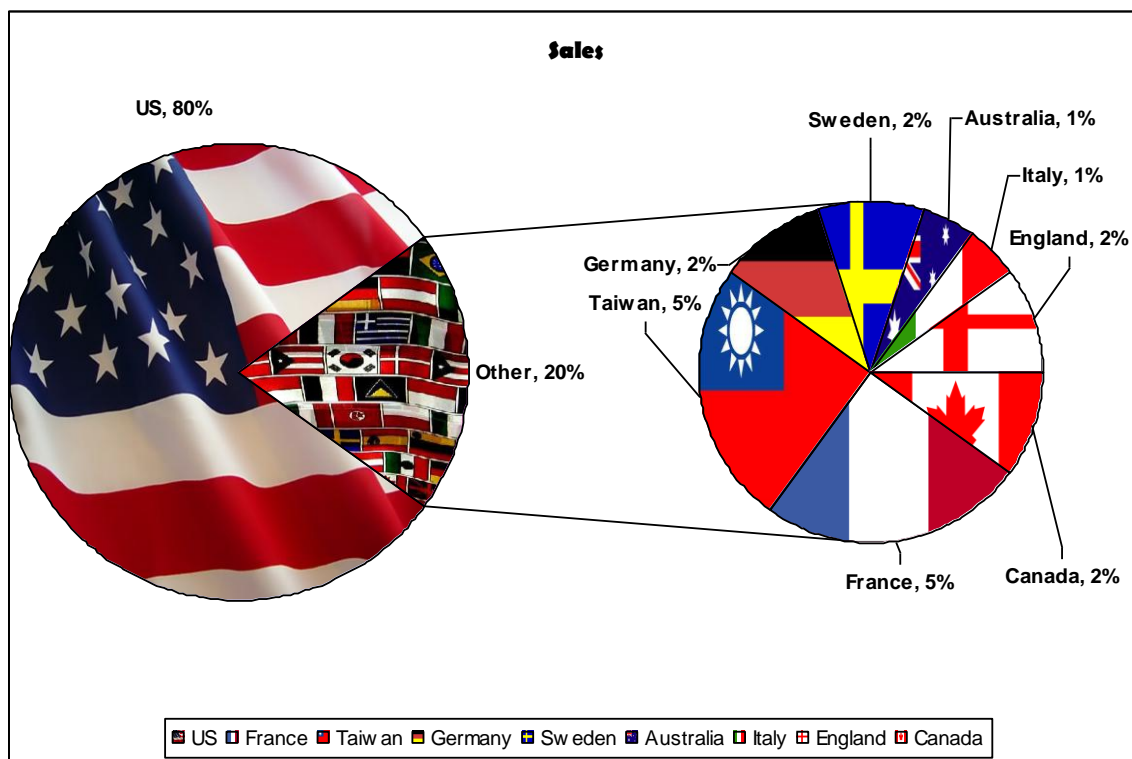
Line Up Magazine featuring team rider at Maryland & Virginia demos on the beach.



Concrete Wave 2007 Calendar photo ops with team riders

## Exhibit D: International Sales Distribution





### Exhibit E: Sponsored Athletes

#### MICHAEL MOROCH

Michael always knew how to pump up the vert ramp without stressing out and looking graceful at the same time. He was a natural on the transition, working each wall smoothly, effortlessly and going higher on airs each time that he skated. By summer 2003, he “rolled in” on the 13+’ “Titanic” ramp at Woodward Camp, PA catching at least a 5 foot backside air 1<sup>st</sup> try. He was just 9 years old then.

#### JARROD GRAMMEL

Jarrold Grammel was seen skating and spinning a “540 McTwist” (a 540 body rotation and using the front arm by grabbing the board in between the front and back foot position) at a Wilmington, Delaware skate park in late 2003. His ability to try difficult tricks at a young age was unmatched; as well as his fluid style. In spring 2004, he was asked to be on LittlePaw® Skateboards. At the young age of 10 years old, Jarrod showed quite of bit of determination but was very humble in his abilities.

# **CROSS SECTOR AND CROSS ORGANIZATIONAL COORDINATION FOR LOCAL SUSTAINABLE DEVELOPMENT: A STUDY IN ARAÇUAÍ, MINAS GERAIS, BRAZIL**

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## **ABSTRACT**

*This paper aims to discuss local development under the prospect of coordinated intervention of multiple organizations, considering different thematic areas of action, sectors and origin regions; different methodologies of work and different social technologies. Search to identify determinants, facilitators, and restrictive factors of cross sector and cross organizational coordination processes for a common purpose structuring results on a conceptual map. The field research was conducted at a region of State of Minas Gerais, Brazil, where a group of 13 organizations fitting the above profile, joined up to work facilitating the environment for local development. 54 citizens were interviewed using the semi structured inquiry methodology.*

## **INTRODUCTION**

There are several challenges and obstacles that permeate the actions of local development initiative in which civil society carried out involving multiple social institutions, who argue different themes, accumulate different paths of development and various activities, and are distinct from sectors of society. The historical background, social vision, fields of interest, understanding of the priority, the construction of thought, methodology of work and action of each of the organizations and each of the different sectors are different and often divergent.

What are the factors that determine, facilitate and then restrict the construction of alliances and partnerships aimed cross organizational coordinated actions for local development? To what extent a number of organizations from different regions of Brazil, from more different backgrounds and areas of expertise, can join in for a same question in a single territory, working towards the development of a municipality and its rural communities?

The object of this work is to examine the extent to which the action of 13 organizations from regions and different areas of expertise, are helping to change and strengthen the local scene, in the municipality of Araçuaí, Minas Gerais, Brazil. The result of the work is the structure and dynamics of the factors that determine,

restrict, or facilitate the coordinated action of different organizations that propose to the implementation of joint activities, flagged in a conceptual map, and the perception of respondents about the impact of actions implemented Program for Sustainable Araçuaí, are the main references practice guidelines of this study. In the next section we will present the methodology used for the lifting of information and concepts that made possible such work.

## **METHODOLOGY**

The survey was conducted in two stages: the first documentary and literature and, second, field interviews. The systematization of the data collected was made with the construction of conceptual map held in four stages: i) the definition of the question of search, ii) identification of sources of reference for research and its implementation, iii) the processing of data with the identification and selection of key concepts for structuring the map and definition of groups of affinity of concepts and data iv) structuring of the relationship as between the concepts.

The methodology used is limited in data collection, with regard to search the field. The interview by itself is limited, because the respondents may feel inhibited, which undertakes, in some aspect, the collection of information. On the treatment of data, there is a risk of confusion when trying to extract trends, intentions capture, acknowledging the important aspects and essential to the objective of the proposed work here. With regard to construction of a conceptual map limiting factor is the many possibilities of cross between the words selected for the final work.

## **REFERENTIAL THEORETICAL**

### **Development and local development**

The lines of study involved in development can be divided into two parts: those that consider only economic factors that process, and those who defend the existence of multiple dimensions to this theme: cultural, social, environmental, scientific, political and economic. Bresser Pereira said that the development is a process of transforming economic, political and social, through which the standard of living of the population tends to become automatic and autonomous, is a process in which the overall structures economic, political and social, suffer continuous and profound changes, with no sense to talk about economic development only or just political, social or just (2003, p.31). Ramos (1996) in his essay on sociological reduction already believes that the development is the ability of a place, be it a country, a state or a municipality, to develop a project for the existence of its territory and its population.

In Latin America, the evolution of the approach - theoretical and practical - given to the development passes by two historic moments before reaching the local development: country development and regional development. The first, comprehensive territorial in nature, focused on the nation, includes the period marked by centralizing policies and practices aimed at bringing the country to modernity. The second is that which deals with regional development, reduction movement of the concept of development, when applied to the territorial dimension, since their practices are directed to regions rather than the nation and that, in Brazil, includes the period of 60 years to beginning of the 90, in the twentieth century of operations.

The concept of local development enters the staff of theoretical and practical discussions in the 90, a period marked by structural changes in the economic policies of developing countries, characterized in general by opening up markets and the consolidation of democratic public management. Search to develop models and initiatives intended to undertake the development and characteristics from the vocation of the area or the territory. Abromovay (1999) considers the territory as the environment in which it runs a political project of territorial development. In concept, is rapidly incorporating the concept of citizen participation, imbued with aspects such as construction of alliances and partnerships and work in networks. While Albagli (1999) points out that the place is the complementarity of three dimensions: location, culture and social interaction, a lot of space where people live, have their daily practice, where the changes occur and reproduction of social relations, the

physical construction and material life in society, Schommer and Fischer (2001) include the diversity of the merits of the actors involved and advocate the importance of relations between ordinary agents of the State, market or civil society, under local and potential virtues of action a network in interdependence. They believe that these relationships occur within a movement of recovery of the site as an area of confluence of global powers and local area and how to (re) configuration of organizations and (re) building institutions for integrated development. To Brose (2000), the ability of developing a town becomes increasingly dependent on the set of local, natural, economic, social, cultural, political, complementary or systemic, built or rebuilt during the process of interaction between the actors which includes trust and morality. Tenório (2007) highlights the gap that process, compared to the other, is clear in encouraging the participation of local people in the structuring of the proposed development, not more centralized, not more bodies imposed by political-administrative superiors. He stresses the six main characteristics of this new model of planning: i) the leading role assumed by localities in economic development, ii) the relationship interdisciplinary aspects are considered in the analysis of development, iii) external aspects to the site again to matter, are reference for planning and design of projects, iv) sets up technological innovation and learning; v) show is not commercial relations existing in the locality; vi) the formation and accumulation of social capital are considered essential for success in this new model.

## **Alliances, partnerships and network**

The concepts of alliances, partnerships, and the performance of networks represent different stages in terms of relationships between institutions. While Spink (2001) point the convergence of concepts, noting that both the alliances and coalitions as they relate to the process to regroup, come in the same enterprise to achieve a common goal, Lins (2001) the difference in the following terms: the partnership is a specific action that involves planning and development of ideas among organizations that have similarity of objectives and ability to share ideas, setting up a relationship of reciprocity and complementary, and the optimization of resources and expertise, the basis justifying the relationship; already the alliances assume that even before establishing any link to a joint action, there is the sharing of beliefs and values between the institutions, and alliances especially useful for the confrontation of complex social issues, which require continuous and sustained action. Marinho (2007) says that an alliance is in the process of collaboration between a larger number, but stable of partners aimed at developing a project or specific program of action, around goals and objectives agreed and requires a strong link between the actors Depending on which cooperation can become lasting or permanent. Already the partnership, to the author, it is a bilateral pact to cooperate on the development of a specific project. It occurs when a pair of actors provides a practical working around common goals and objectives. The duration of the partnership can vary depending on the nature of the project developed, but it generally has specified period. Meirelles, a survey conducted in 2005, adds that the alliances and partnerships, especially those of cross sector nature, can be seen in three dimensions: as instruments contributing to the effectiveness of corporate social responsibility and to the sustainability of the organizations civil society; as cross sector strategies for social development, symbolizing the reduction of accountability in the public sector, given the enormous social challenges, and as a emblem of the renegotiation of a new social pact.

The processes of alliances and partnerships then indicate the existence of common interests, ideas, shared goals and projects, the search for a new logic of action presumes that understanding, consensus, communication, articulation of interests, the quality of relationships built; addition to learning mutual, democratic and continuous. For Giannecchini (2003), the implementation of integrated and coordinated actions, with different purposes, but complementary, is a basic condition for development. For authors such as Ekuni (2002), perceives itself to convergent trend of a society that works together. Partnerships, strategic alliances, cross sector and networks called the collective identity of the activities of different sectors, regardless of how we are organized, there are emerging social structures around the collective good. It is important to emphasize that the actions implemented under the sign of the logic of alliances and partnerships are marked by complexity. It is not difficult to understand why: places in the same table organizations that even share similar values and beliefs and converging, have administrative structures, management styles and different ripening of managerial processes. The meeting is a balance of power between different organizations is a challenge that requires the parties' flexibility and openness to try new processes and adapt to new. If the administration of relations between organizations in the same industry already calls to a scenario of such peculiarities, that between organizations from different sectors tends to heighten them.

The work involves a network that identified a different dynamic in relations guided by the logic of alliances and partnerships. This rationale is based on different principles: the horizontal and decentralization reflected in the lack of hierarchy; density, qualified by the number of connections that can be identified in the network, its plasticity, denoted the possibility to grow from any of the connections that integrate ; Transitivity expressed in the potential for access to another node of the network that each represents, the free flow of information, the ongoing reorganization of its own elements of the system, the self-organization. Another feature of the network, which distinguishes it from concepts of alliances and partnerships, is its temporality: the network appears when it is driven, with specific goals to meet. Frijof Capra (2002) in their studies on the living systems reference to the theory of systems and identifies the pattern of network as being common to all forms of life. For him, where there is life, there is network. Social networks are, first of all, communications networks involving the symbolic language, the cultural limits and also the relations of power. Communication and power are the subject of studies of Habermas (1987) with respect to the structure of social relations that argues that the social structures are defined by a set of rules and the resources available. He explains that there are two types of rules and two types of resources: there are rules as to the interpretative schemes, or semantic rules, standards, rules or moral, and in the resources exists both materials such as authority. Also discussing how the social system by the manner in which restrict the actions of individuals, or is linked to relations of power and those related to issues of communication and significance, given that individuals give a specific meaning to their environment and act in according to the meaning given. The author relates the process of the three dimensions proposed by Capra in his analysis: the subject (caused by instrumental action in the world), shape (resulting from the strategic action related to human relationships), and meaning (resulting from the communicative action whose purpose is the understanding of things).

## **Coordination and Inter role of the parties**

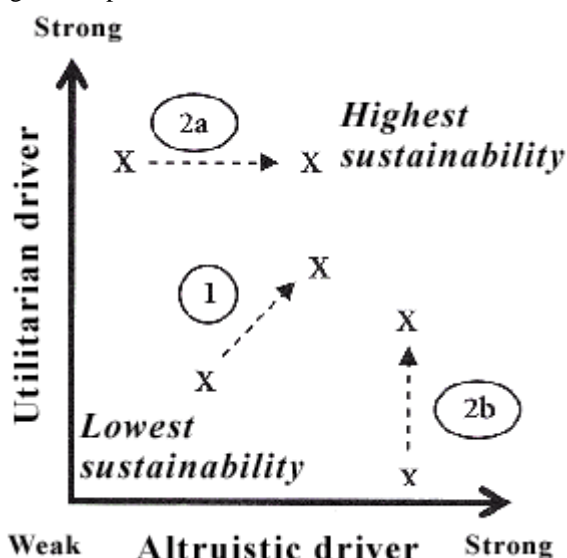
According Alarcon et al. (2006), inter-institutional coordination is an ideal way to add targeted efforts to achieve strategic objectives and common. For them, multidimensional social problems require the participation of multiple actors and complex issues such as welfare, can not be addressed only with public policies, require the coordination of wills, resources and actions cross, vertical and longitudinal. In the same vein, Van de Ven (1980) discusses the relations between institutions as a result of the emergence of social and economic problems that go beyond the capacity of action of a single organization. To the author networks between institutions can be defined as a model of interrelation between a group of organizations that are organized as a social system to achieve both goals of personal interest and collective goals or solve common problems specific to a particular population. It requires the existence of administrative arrangements established to define the role of the relationship between the members of the system; by case, the flow of activities and is related to decisions and the frequency of both resources and the information that flows between its members.

Bose, Dutra and Schoenmaker (2003) note that the links established between the institutions are strongly guided the values and beliefs of each partner and without the explicit definition and understanding of what it is up to each actor perform the simple agreement between the parties is not sufficient to ensure the success of joint performance and efficiency of inter-institutional coordination. Schommer (2000) highlights characteristics identified in cross sector partnerships between institutions and well-delivered: clear and common goals based on mutual benefit, a group or organization that plays a leading role of intermediary between the partners; clear understanding of different functions and capabilities of partners, technical knowledge of procedures and decision-making, conflict resolution and evaluation; open and transparent communication. He also emphasized the importance of a strategy to organize the common ideal and the involvement and genuine and clear responsibilities distributed among the partners. Valley record the chart prepared by Austin (2005) which depicts the spectrum of motivational cross sector collaboration. From the analysis of vectors and variables, the author concludes that, regardless of motivational point of departure, where the cross sector collaboration continue to meet the interests of all partners, their motivations for joint collaborative action probably will evolve over time.

## **Conceptual Maps**

Conceptual Maps are tools that allow graphic represent and organize knowledge, as of terms and expressions, enabling establish relations between these terms and conditions contributing to the systematization of knowledge in a given field. Novak (2006) indicates the main characteristics of a conceptual map: the concepts are organized from diagrams, in a hierarchical structure from the wider concept than the more specific, and between these concepts are established relationships, illustrated by lines that connect a concept the other, explaining the limitations of the relationship between them. The author identifies the link between the concepts as the area of creativity in the production of knowledge and highlights the applicability of the model in search of answers to questions investigative and considers that "Conceptual maps are displayed not only powerful tools for capturing, archiving and represent the knowledge of individuals but also to create new knowledge." (P. 13)

Figure 1: Spectrum of motivational cross sector collaboration



Successful collaborations influence motivations: (1) Even if mix of original motivations remains constant (50%-50% in example), intensity may increase.(2) Even if intensity of original motivation remains constant, it may become more blended: **2a** Generating a value-oriented and emotional connection in the ultra-pragmatic actor **2b** Generating a utilitarian connection in the purely-altruistic and idealist actor

Source: Austin, 2005.

Cañas, in his work of 2005, presents the tools of conceptual map as a basis for knowledge management to integrate the visualization of information with graphical representation of knowledge that allows you to express your knowledge of how easily understandable to any other and adds further that the conceptual maps have proved to be an efficient and effective tool to organize, represent and communicate knowledge.

## REFERENTIAL PRACTICAL

### The Program Sustainable Araçuaí

Araçuaí Sustainable is a local development program, initiated in 2005, implemented in the city of Araçuaí, semi-arid mining, aims to turn this municipality of Vale do Jequitinhonha in a place viable and sustainable, with cultural resources, social, education, housing and income, which reduce the rate of migration to other urban centers.

You can say that the Program Araçuaí Sustainable arose from maturity and the relations of trust, built in the course of four years, by a group of social leaders supported by a foreign foundation that promotes sustainable development in Latin America and operates in Brazil since 1999. The initiative is founded on three basic premises: the logic space (the space where they express the results), the relevance of social technologies (applied with systemic) and work together (the groups, the teams, alliances).

The dynamics in Araçuaí has been thus built on the integration of social technologies in seven outbreaks of work as priorities for the sustainability of the municipality, in view of the group: food security and water, housing, energy, labor, education and culture. The conceptual logic of the Program is based on a mandala who moved and guides the work of the group. On the core, the common goal of the group that is the social transformation. That goal has been translated into four main lines of action independent and complementary: economic satisfaction, community empowerment, human values and cultural and environmental commitment, that the fundamental objective of long-term project, which is creating opportunities and quality of life that reduce the need the migration of the population in search of work and financial resources, and ideas materialized in "My Place is Here" and "Taking Care of Next Generations." From that perspective outcome the seven outbreaks priority of work defined by the group and cited above. In the external dimension, are the organizations participants of the program.

The area of focus and expertise that each of the 13 members of the program brings to the group include popular education, permaculture, generating income, redemption cultural, management and planning of projects, promoting the construction of alliances and partnerships cross organizational, agriculture, bio-fuels and recycling.

It is considered that, overall, the construction of the Program Araçuaí Sustainable follows the following milestones: a) formation of the group of leaders of the Representation AVINA northern Brazil in 2001, b) institutional strengthening of each of the organizations, from projects and initiatives funded by the foundation, c) contacts between organizations, recorded in the annual meetings held in events and training aimed at improving the institutional organization of each in the period 2001-2005, d) the group's annual meeting, held in Araçuaí in December 2005, saddle the desire of collaboration between organizations and) meeting of conceptual construction and planning held in July 2006, in the Serra do Cipó, in Minas Gerais. f) first joint activities in Araçuaí g) selection of the path of the water project, designed by the group and presented the program of financing environmental damage, in January 2007, strengthens the financial base of the initiative, accelerating the implementation of various initiatives.

## **Perception of interviewees**

Two issues are highlighted among those raised in the search. The factors that facilitate, reserve and support a coordinated initiative between multiple organizations, in view of these, and the contribution of local development program, the vision of both organizations as a group of local citizens who act as agents of mobilization.

For the organizations, the success of the initiative is based on the existence of a structured organization and with initiatives recognized in the host city to act as facilitator, planning, methodology, tools, equipment capable of mobilizing local people, besides a good articulator political, as factors that can not misses a speech based on the characteristics of Araçuaí Sustainable.

In the analysis of interviews conducted notes that the impact of the program for local development is perceived by respondents from organizations of participants in environmental dimensions, social and cultural. They were cited: i) the actions of education, by nature cross-dimensional, that is inherent in them, ii) incorporating environmental aspects to the staff of educators: iii) the echo of the program in the region, which already affects neighboring counties to Araçuaí iv) to promote initiatives to generate income, the ownership and use of information technologies, dissemination of agricultural production techniques; v) Araçuaí placing at the forefront of a new model of action and intervention for social transformation, to meet economic, cultural values and human than the environmental approach; vi) the natural dissemination of knowledge among the population, through the publication of social technologies in the program and, vii) the definition of planning with clear targets which together aim to sustainable local development.

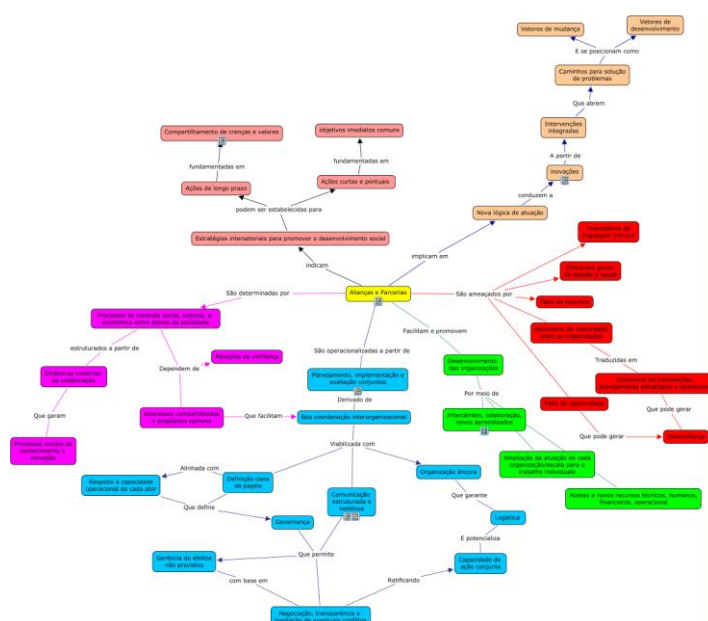
Citizens who contribute on condition of local agents interviewed shared the vision above and specifically emphasize aspects linked to new knowledge about the use of water, care for the rivers and the

environment, plus the new techniques of food production based on the concept of permaculture. One aspect that is new in the speech that group is the construction of the capital, or the qualification and development of relations of trust between the residents.

## The key terms and structure of the conceptual map

From the theoretical and practical environment were selected key expressions for the construction of the proposed conceptual map. After selection, trying to combine the words and expressions listed in groups of affinity that could define or describe the construction of alliances and partnerships on the way to answer to guide the work. There were seven groups of affinity indicate that: i) what determines alliances and partnerships, ii) what they indicate or imply, iii) in what they depend on: iv) from which they can be operational; v) which facilitates its construction; vi) that the threat or restricts its construction; vii) the leading. These seven groups are the seven core structuring of the conceptual map prepared as exemplified in the figure below:

Figure 2: conceptual map of alliances and partnerships for social development.



Source: Structured by author, 2008.

## FINAL CONSIDERATIONS

The work reported here is proposed to discuss the development site from the intervention of coordinated initiatives of many organizations, considering that these are originated from different regions of Brazil and engage in different areas of expertise. The conceptual map structured as a result of this work sought to answer the question "What are the factors that determine, facilitate and restrict the construction of alliances and partnerships aimed at cross organizational coordinated actions for local development?"

The mission of social transformation that permeates the initiative Araçuaí Sustainable is one of the most relevant to the development of sustainability of small municipalities. Create conditions to increase the opportunities for citizens to build a dignified life and reduce the levels of poverty and deprivation identified in the environment is a key factor for promoting equity and, from a long-term, the structuring of a sustainable city, which does not oblige its citizens to seek, in other cities, minimum conditions for survival.



The logic proposed by Araçuaí sustainable impact in breaking with current models of management and coordination of initiatives aimed at social welfare, postures and organizational approach of the problems common to territorial spaces, whereas the inter-relationship of initiatives have greater potential to point solutions that implementation of initiatives isolated from each other.

It is important to emphasize that Araçuaí Sustainable is an experimental initiative and that the procedures and results to be established, due to the nature of the changes it proposes to launch the council, have their measurements in the largest possible space of time. Learning from a project like this is an exercise which requires openness to new concepts: the identification and understanding of new social values, new institutional pipelines, new tools and mechanisms that arise and to consolidate as the proposed model is built. The systemic view of the challenges faced by the municipality of Araçuaí, and the conceptual basis that moved the program, are differential of this initiative.

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# ON SAFARI IN BOTSWANA: DESCRIBING THE PRODUCT

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## ABSTRACT

*The purpose of this paper is to elicit the motivations or push factors of self-drive visitors to game parks in northern Botswana, in order to describe the product. A survey was conducted and visitors' experiences observed. The most important motivations were escape, nature, adventure and mega-fauna. It is suggested that promotion material should not only emphasize specific species (the Big 5) but also include camp-life, creating an image of relaxation away from daily routine, as well as overland safaris. The unique attributes of the destination should be used to differentiate it and provide the benefits visitors are seeking, thereby ensuring repeat visits.*

## INTRODUCTION

Wildlife-viewing tourism contributes to the Gross Domestic Product of many southern African countries. Fringe areas of the Okavango Delta in northern Botswana offer great wildlife-viewing opportunities, and is one of the most visited tourist destinations in Botswana. (Mladenov, Gardner, Flores, Mbaiwa, Mmopelwa & Strzepek, 2007:409). Tourists are generally transported to safari camps by small plane or four-wheel drive vehicles from Maun International Airport to Moremi Wildlife Reserve and from Kasane to the Chobe National Park. Often visitors are self-driven to public campsites or part of an overland tour. The number of visitors to the Okavango Delta is estimated at 80 700 for 2001-2002 and their average annual tourist spending on safaris in the Delta calculated at US\$90.5 million (Mladenov, et. al., 2007:414).

Reynolds and Braithwaite (2001:258, 260) define wildlife tourism as “the experience of wildlife by tourist, and an area of overlap between nature-based tourism, ecotourism, consumptive use of wildlife, rural tourism, and human relations with animals”. Since there is a wide range of possible experiences and wildlife human interactions it is suggested that these be examined in order to ascertain their attraction to tourists and their effect on wildlife (Cf. Björk, 2000; Bulbeck, 2005; Newsome, Dowling & Moore, 2005). This overlap or coalescence in markets and concepts is confirmed by Buckley (2000:438) who uses the term Neat tourism; that is nature, eco- and adventure tourism, to describe the sector where nature and adventure are the product's primary attraction. Buckley (2000:439,442) argues that a combination of social factors has led to sudden and rapid growth to a sector, at least the size of a quarter of the total tourism industry in developed countries such as the United States of America (USA) and Australia, and more in developing countries, with most occurring in and around national parks. Bulbeck (2005; xix-xxii) elucidates a number of such social factors to list but a few; our emotional response to animals bend us towards respectful stewardship; we are neither completely separate from nor completely merged with the world around us; we escape our ordinary existence and work demands to a space where time is our own; our search for meaning operates through a search for the authentic and the primitive in the construction of the *other* where *self* stands for civilization, rationality, individualism while the *other* stands for naturalness, emotion and connection, the quest is to fill the emptiness of the self with the other.

Consumer behaviour of tourists has shifted away from mass tourism towards experiences perceived to be more individualistic and enhancing and Diamantis (1998: 516) ascertained that ecotourists in the United Kingdom (UK) tend to be a highly involved group who see their holidays more as pleasure and important to them. They magnified the values of excitement and sense of accomplishment and selected this type of holiday to experience different lifestyles, explore an undisturbed area with the purpose of being educated, and seek to attain

value for money for their holidays. To understand visitors to nature-based destinations, enhance their experiences and facilitate promotion, it is necessary to ascertain their state of mind in terms of Moscardo's (1996: 383) "mindful/mindless model of visitor behaviour" (Ladkin, 2000:212-213). In the case of mindful visitation, the tourist learns more, satisfaction is high and the consequence is greater understanding. Wildlife tourism seems to generally lack important information on the user in terms of expectation, motivation and satisfaction, especially for African destinations to market and manage the quality of the experience. However, Beh and Bruyere (2007:1468-1469) identified eight motivational factors and three distinct segments of visitors to three Kenyan national reserves. The motivations in order of importance are; general viewing, nature, culture, mega-fauna, adventure, escape, learning and personal growth. The three segments are escapists, learners and spiritualists. Bresler (2007:175) also asserts that wildlife-viewing at South African (SA) game lodges offer visitors memorable and differentiated experiences with authenticity, intensity, uniqueness, and popular species which have publicity status.

Two frameworks can be used to categorise the experience of wildlife-viewing on safari. The one; "Experience and trade-off" suggested by Reynolds and Braithwaite (2001:273) and the other; "Nature of animal encounter and conservation orientation" used by Bulbeck (2005:11). Reynolds and Braithwaite constructed a matrix with two dimensions; richness/intensity of experience and effect on wildlife, then plotted a range of possible experiences and wildlife/human interactions on the matrix, and drew three diagonal lines across the framework to delineate four broad categories that attempt to capture the trade-offs between the impact and the quality of experience. Wildlife-viewing on safari does not appear on the matrix, and even though this paper focuses on one dimension only, namely the human side of the wildlife encounter, a suggestion will be made for categorising it. Bulbeck ranked animal encounter sites firstly in terms of the nature of the animal encounter (from authentic to staged) and secondly the conservation orientation plus major activities of the animal encounter site (from ecotouristic orientation to education of visitors).

Tourism marketing is image marketing and must be looked upon from the demand side, especially in the case of wildlife-viewing that is expensive and the risk of unsatisfied visitors is substantial owing to the diverse range of experiences (Björk, 2002:199). It is thus essential that the product is marketed correctly in terms of motives (Bergery & Eckersley, 2007:2-3). When promises are made they create mental pictures and expectations partly on what marketers tell them and these need to be kept. It is therefore necessary to elicit the motivations of visitors to nature parks that are rich in wildlife and require specialised vehicles for access, in order to describe the product for differentiation purposes

## **THE PURPOSE OF THE STUDY**

The purpose of this paper is to elicit the motivations or push factors of self-drive visitors to two game parks in northern Botswana, in order to describe the core product in terms of motives or the benefits tourists seek. To contextualise expectations, it is necessary to observe visitor's experiences and to profile them; in other words, to find out more about the consumer behaviour of the wildlife tourists. The findings may assist destination managers in positioning wildlife safaris, and promote an appropriate image (Ibrahim & Gill, 2005:183).

## **RESEARCH METHOD AND PROFILE OF VISITORS**

It is an exploratory, descriptive and multi-method study, which is predominantly qualitative in nature. In addition to secondary sources, namely a literature study and content analysis of various documents, primary data was collected. The methods used were participant observation, and interviews with groups and individuals at campsites. A structured questionnaire with closed and open-ended questions was used for the survey.

The universe was all self-drive safari visitors camping in the Moremi Wildlife Reserve and the Chobe National Park in northern Botswana during the first two weeks in April 2006. The researcher interviewed them whilst at their camps; mostly Savuti and Ihaha. It was a convenience, judgemental sample. Those who were willing to be interviewed formed 17 informal discussion groups consisting mostly of two to four persons; two groups consisted of six persons. Four interviews were also held with individuals. Respondents represented the group with whom they camped and travelled; the sample therefore consisted of 93 persons, and the composition is reflected in table 1. Collectively these travellers spent 843 nights over a period of fourteen days in this area.

**Table 1: Composition of the sample of tourists on safari in northern Botswana**

| Country of origin | No. | %   | Province in S Africa | No. | %   | Language  | No. | %   | Age group | Gender Male/fem | Total | %   |
|-------------------|-----|-----|----------------------|-----|-----|-----------|-----|-----|-----------|-----------------|-------|-----|
| S Africa          | 70  | 75  | Gauteng              | 65  | 95  | Afrikaans | 68  | 73  | Children  | 5 8             | 13    | 14  |
| Germany           | 12  | 13  | WCape                | 3   | 3   | English   | 13  | 14  | Students  | 1 2             | 3     | 3   |
| USA               | 11  | 12  | Limpopo              | 2   | 2   | German    | 12  | 13  | 25 to 40  | 11 12           | 23    | 25  |
|                   |     |     |                      |     |     |           |     |     | 41 to 54  | 19. 12          | 31    | 33  |
|                   |     |     |                      |     |     |           |     |     | 55+ older | 12. 11          | 23    | 25  |
| Total             | 93  | 100 |                      | 70  | 100 |           | 93  | 100 |           | 48 45           | 93    | 100 |

Three quarters (75%) of the tourists came from the neighbouring state SA, and almost all (95%) from the most densely populated province of Gauteng. All the tourists from SA were Afrikaans with the exception of two who preferred English. The interviews were thus conducted mostly (73%) in Afrikaans. A group of eleven tourists were Americans (teaching at the international school in Johannesburg) and two groups consisted of Germans. Three had been working in SA for four years and brought along three visitors. The only tourists who came from overseas specifically for this safari were three couples from Germany accompanied by a tour operator. All tourists were from the white population group. None could be found from other groups. Respondents travelled in groups with family and friends. The sample thus included all age groups with more mature adults (33% was between 41 and 54 years of age) and an almost equal split between males (48 or 51.6%) and females (45 or 48.4%). There were few children all of school going age, the exception was one baby that was not included in any analysis. Three students accompanied their parents.

To ascertain if the sample selection was not biased, it was compared with the register of visitors through the Sedudu entrance gate, from 1-13 April. The origin of these visitors (230) was; SA (145 or 63%), Europe (23 or 10%), North America (22 or 9%), UK (7 or 3%), New Zealand and Australia (2 or 1%), Botswana (permanent residents 14 plus others living there 17 = 13%). Although dominated by South Africans (63%) it comprised of more international visitors. This can be attributed to its proximity to Kasane, a major town in the area with an airport, a number of game lodges on the Chobe River, and the availability of safari tour operators and overland vehicles for hire.

## FINDINGS

### Safari Groups in Northern Botswana

The safari groups ranged in size from three to 23 persons and were family and friends, or friends of friends. There were two very small groups of three, considering the survival skills required and vulnerability in case of emergency, and two very large ones of 22 and 23 tourists, considering the logistics, and only one overland tour operator group of seven persons including the guide. One very small and one very large group's profile will be elaborated upon. The one group of three consisted of a self employed financial adviser of 58 years of age from Centurion, Gauteng, who had been in Botswana 15 times before he got married, his wife of 38 and their son of eight. Formerly he had been a conservationist. Since their marriage they have been camping in Botswana 12 times. The father explained they had food supplies for two weeks, and 200 liters of fuel in addition to a tank of 80 liters, in case they got stuck. They had a mishap in the past, and for three days had no contact with anybody.

The largest group consisted of a family with two school going daughters and grandparents. The males were self employed manufacturers of mechanical equipment, and the daughter in law was a science teacher. They brought a young couple along who came to test their newly acquired Land Rover and tried to get away one weekend a month. This acquaintance was a self employed estate agent and his partner a project manager. The rest of this team was an electrical engineer lecturer cum dairy farmer, his pharmacist wife and their student son who had an affair with one of the two student girls from another family with whom they regularly went camping. There was also a specialist (otorhinolaryngologist), his wife and colleague, an audiologist, her husband who was

a mechanical engineer and their two school going sons, as well as a cousin who was a retired language lecturer with his marketing lecturer wife. The specialist was invited by his colleague.

In addition to the demographics reported above the sampled population held a variety of professional positions, ranging from an IT software developer, land surveyor, zoologist, horticulturist, registered big game hunter, forester, public relations officer, automobile and clothing marketer, bank marketing manager, bookkeeper, administrative assistant/accountant, builder, dairy and game farmer, social worker, policeman and housewife. Their qualifications thus ranged from a school leaver certificate (the majority of these were from SA and self employed), to a diploma and higher diploma for teachers, technicians and some engineers. Others had a professional four year degree, masters or doctoral qualification. An above average proportion was self-employed and educationally qualified, and were all financially secure; earning above average incomes to be able to afford the required vehicles and equipment. The findings confirm what is reported by Herbig and O'Hara (1997:232) that ecotourists are wealthier, better educated, more mature; between the ages of 35 and 54, more environmentally focused in comparison to other types of tourists, and are likely to pay more for this privilege.

## **The Attraction of Going on Safari to a National Park in Northern Botswana**

On the questions why respondents decided to come to Botswana, why nowhere else, and what was the greatest attraction, they said what made it unique was the abundance of wildlife in a genuine unspoilt wilderness/jungle, yet accessible. Some of the comments were: "it is part of Africa, here is no fences, no camp gates, very few campsites, it is not commercialized, no management intervention, more freedom, you can drive off the roads, not regulated like in the Kruger National Park (KNP), it is less travelled, here is less people, it is not overcrowded, it is very quiet, the isolation, and this is not available in SA".

The dire need for solitude, to experience magic moments, was other important push factors. This was strongly associated with being privileged to be there. In addition, a feeling of spirituality was evident. One group said this was the last "genuine churches". Many used the words adventure and unknown. One American stated; "I wanted to drive with this nice vehicle through the mud before I leave SA". This was their ideal holiday. Respondents enjoyed overlanding, and driving through the sand and mud with a 4x4. The vehicles were status symbols and a motivator to go on safari. A sense of self esteem, of superiority, was also evident with comments like: "ordinary guys go to the KNP, because I can afford to, not everyone can, I have the right vehicle, I am sufficiently confident and secure to cope with damaging this vehicle" (Ek is mans genoeg om die motor op te neuk). The fact that it was safer than Mozambique and Zimbabwe was also mentioned as decision criteria.

## **Decision Making and Planning a Safari to Northern Botswana**

The decision to go on safari was generally suggested by a male family member who had a safari experience and wanted to share the nostalgia of a previous trip to the area with his family. It was subsequently supported by the children and agreed to by the wife who wanted to see what she heard. In not one case was the initiator a female. The husband and wife alternatively selected the eventual destination. The seed to go away on holiday may be planted during a social gathering where work related stress was discussed or, whilst viewing photos or a video of a previous trip. On average, serious planning commenced about three to four months before the actual trip. As one respondent explained; "the sequence is: friends socialize, they agree that they need to get away, they agree it should be somewhere in the bush as this is their kind of holiday, and then they decide where it will be". Peer pressure definitely played a role. A person or family may have wanted to go to Namibia or Mozambique, but were persuaded by friends to rather join them on a trip to Botswana.

The planning process evolved over a period of eight months to a year. Respondents all read relevant travel magazines and specific destinations evoked their interest. Once the bug had bitten them they got excited or itchy and consulted catalogues or the internet. One member testified that he kept a file of clippings from *Getaway*, *Weg* and other outdoor magazines of places he wanted to see, for planning purposes. A leader started making arrangements and organized regular meetings as the itinerary planning progressed. Medical insurance and preventative measures with respect to contracting malaria, was part of it. Subsequently other friends may be invited or convinced to join, to replace those who had withdrawn. For the late comers it was a spur of the moment decision. There were subgroups within larger groups that planned their own menu, food acquisitions

and sharing of camp equipment; who takes what. Not everyone would take a two-way radio, a spade or saw, a kinetic rope or set of mats to use under the wheels of a stuck vehicle. This was also a time to enthusiast newcomers, to build camaraderie and initiate them to what lies ahead, and ensure that they would be sufficiently prepared not to be a burden or contribute to the risk. Visitors going on safari did not go uninformed into a territory. They knew what they were doing and were not such daredevils that they would try to conquer a complete unknown territory. They read about the destination, asked people who had been there and made a list of what was required, especially in terms of an emergency medical kit. One said the only thing he did not know was that the fridge at home was switched off!

## **Other Holiday Destinations Frequented**

All the SA respondents had criss-crossed their own country, from around the corner of their homes to far away places like the KNP, Sabi-Sabi, Zululand, the Drakensberg, Graaff-Reinet, Klein Karoo, Knysna, Cape Town, Durban and the Kalahari. A few responses are quoted on the question; where have you been on holiday before?; “where haven’t we been?, everywhere, anywhere, from fishing in the Vaaldam to Thabazimbi, every inch between Johannesburg and Botswana, from east to west, from south to north in SA, and overseas”. Most respondents have been to the neighbouring states of SA namely Namibia, Botswana, Mozambique, Zambia and Angola, in this order of frequency. They have also been overseas to the most popular and less travelled destinations; places like London, Rome, Venice, Austria and Australia, to Vietnam, Maldives, Mauritius and Iceland. On average respondents went overseas once in five years. Visiting family and friends, in whatever country or continent they resided, were high up on the priority list. Respondents generally enjoyed the full depth and breadth of the available tourist products and alternated self-reliant wilderness and hiking holidays with self-service resort experiences, five star luxury resorts and hotel based city tours.

## **General Holiday Behaviour**

All the respondents went on holiday for about ten to 14 days at least once a year, and took a few short breaks in between. Some of the pensioners even went away for as long as three months a year; especially in winter. They were thus well travelled. The duration of this safari was ten to 14 days, with one group who stayed for nine days and one for 16. To take a shorter trip was not worth their while, considering that the travel time to SA and back would take at least four days. All, but 15 of the 93 visitors had been to Botswana before. Four previous visits seemed to be the average. Visitors reported to have been in Botswana anything from two to 10 years ago. Three had been in Botswana over 15 times. One worked in Botswana, one was a travel operator and another purchased souvenirs for a curio shop in SA. Persons from SA on safari are thus most likely recurring visitors.

Not a single respondent travelled only to the camp or park they were interviewed at. The majority also stayed at other camps, and included a brief visit to the Victoria Falls in Zambia. Many overnight in a lodge to be pampered for a day or two. Some of the international visitors planned to go to either Namibia, Mozambique, or to Zululand and the Cape in SA afterwards. A safari is thus a touring expedition and not a short break away.

## **Push and Pull Factors to Holiday Destinations**

The reasons most frequently given for going away on holiday were; to get away from everyday routine, to relax, for a balance, to broaden experiences and learn more, and to be with family and friends, in this order. Examples of responses are: “we need to get away from the rat race, at home we only work, I work seven days a week for long hours, we cannot always look after others, we are tired and want to switch off, we need to relax, to cope with the stress of living in town, in SA we feel oppressed, to see different places, to have different experiences, we like scouting, we want to be in nature, it is important for a balance, we want to get away from push button conveniences, we want a change from home so that we can appreciate it when we get back, we want to see everything fresh again; from a new perspective, we want to be alone with our children and parents, we like to spend time with family and friends”. Respondents described themselves as venturesome, the wondering type, responsible and caring, not reckless.

On the question; what is your ideal holiday? it would seem as if places far away from everyday life and other people, (not Margate) where you have time to look after yourself and not your keys, time to think and meditate, with neither telephone nor television, were most attracting. Outdoor life was the dream world for respondents, especially if they could see animals in their own environment and hear the sounds they made at night. One said; "I wish I can put the stars here in a bottle and sell it". Even though, water, the sea, beautiful beaches and white sands as well as mountains were mentioned as ideal holiday destinations, nature escapes in the bush had more pulling power in terms of frequency of visits, because it was not perceived to be as busy as at the sea. They liked places that were different, or held the promise of a different experience, such as surprising behaviour of wild animals. One retired couple said they desired to see as much as possible before they die and another group that they wanted to see the world. The pulling power of overseas visits was to feel part of the European first world, to make mistakes and to conclude transactions in foreign currency. When overseas, respondents wanted to learn more about different cultures. The ideal was a balance between luxuries and roughing it. Respondents desired comforts and were willing to take these along if necessary. Females also liked to be totally pampered in five star luxury, and made sure they were occasionally getting it. In their hearts respondents were explorers who did not like to stay at one place, they preferred touring. Value for money and the time spent to get to a destination were important decision factors too.

Taylor and Prieaux (2008:78, 80, 84) found similar psychological motivations or push factors for the experiences of four wheel drive (4WD) trips namely; socializing with like minded people, personal discovery, getting away from it all and from the city, facing challenges and developing and maintaining friendships. 4WD tourists clustered in the same age group, 45-65, the median length of long trips taken were also 12 days and multiple-vehicle trips was a motivation in its own right. Both represent the same contradiction whereby the wilderness is desired for its solitude but at the same time a catalyst for enjoying the company of friends.

## **Knowledge about Nature**

Visitors were asked to describe and rate their knowledge about nature. This varied from as little as three out of ten for international tourists to ten out of ten for some tourists from SA, meaning that they knew almost all the animals, birds and trees of the area, but not all the other plants. This is not surprising given that the respondents included a former conservationist, a zoologist, a horticulturist, a registered big game hunter, a forester, a couple that was dairy farmers and four couples owning game farms in SA; and their friends had often been guests there. These people could identify grass types, knew the nutritional value of plants and could diagnose the veldt conditions. Tourists were very knowledgeable; their average rating was seven. The most frequently given rating were eight, which can also be ascribed to the fact that all the SA respondents had a variety of reference books on fauna and flora, especially on wild animals, birds and trees. The three outdoor educational magazines read mostly were *Weg*, *Getaway*, and the *National Geographic* in that order. Respondents also watched the National Geographic television (TV) channel and 50/50, an educational nature TV programme in SA.

## **What Tourists do Whilst on Safari in Northern Botswana**

Tourists remain busy whilst on safari. When touring to a destination they pack up and travel daily, but remain stationed at one campsite for two to three days once they arrived. To set up a camp, pitch a tent, inflate a mattress, make a bed and find your bearings takes time and coordination if you are part of a group. A leader needs to plan the logistics in a democratic non intrusive manner, and individuals must be mindful to take cognisance of the needs of others. Whilst stationed at a camp tourists split into smaller groups for more independent camp life and freedom to view the wild animals around the camp when and for how long they wanted to. Normally this was done twice a day for two hours or longer at a time. Whilst on such drives visitors may have a picnic at what they believed to be a safe spot, and once they knew the area, they ventured out on their own. When at the campsite tourists made coffee or tea, drank cold beer or wine with ice cubes, prepared meals, had a barbeque (braai), took a shower, washed their clothes, dishes or vehicles. They shared their latest experiences and photos with friends. Males filled water tanks, refilled petrol tanks or adjusted the pressure of tires. They attended to these camp chores as if it was a pleasure. Sometimes they shared knowledge, gave advice, assisted a friend with a problem, demonstrated a unique gadget or boasted about the performance or capacity of their vehicle's engine. They also told stories, played games and asked riddles. Although groups



socialized for hours on end till late at night around a fire, individuals occasionally desired some privacy and relaxed with a nature book or took a nap. It was not uncommon to retract with no questions asked by anybody.

The food people prepared on this safari was exquisite; as if they were entertaining. They ate prawns, T-bones steaks, hamburgers and chicken, had sausage rolls and meat balls (frikadelle). There was no shortage of fried sausages (boerewors), kebabs (sosaties) or lamb chops. They baked pot-bread, made stews (afval and potjiekos), served with a variety of vegetables and even salads. Snacks such as biltong and dried wors, Easter eggs, chocolates, biscuits, rusks and fruit were in abundance. Delicatessens were often shared. When close to a town, such as Maun or Kasane, tourists stocked up with fuel, ice and other luxuries and necessities. They then had a cold beer or meal. Many participated in a guided cruise down the Chobe River from the Chobe Safari Lodge to view the abundance of wildlife on its banks. The lodge accommodation and boats were filled to capacity. Respondents spotted animals such as crocodiles, hippopotamuses, buffalos, lots of elephants, giraffes, and kudus, snakebirds, fish eagles and jacanas, from the boat. When three elephants swam through the river as many as 12 boats of different sizes descended upon this spectacle, as operators and tried to come as close as possible to the elephants swimming, for tourists to take close-up photos.

## **What Will Tourists on Safari in Northern Botswana Tell Their Friends?**

On the question what will you tell your friends upon return? respondents were in unison that they will show their videos, photos and CDs to their friends, share the experience, make them jealous and try and invite them to come along next time. Words such as: “amazing, fantastic, a feast, very peaceful, really different, a truly African experience, and it stimulates your imagination”, were used to describe their emotions. One said “you cannot tell somebody, this must be experienced firsthand” and another; “there are really no fences, the animals walk on both sides of the park entrance, even in the streets of Kasane!”, “you hear the animals breaking the leaves around your tent at night”. The fact that it stirred deeper emotions needs to be mentioned. One respondent said he would share the feeling of vulnerability; he felt completely powerless. That so many people were Afrikaans will also be told. The young boys would share the experience of baboons that urinated on their tent which was pitched under the baboon’s tree, and making a lot of noise from above whilst shaking the branches to scare the intruders. The young girls would tell friends about the tiny mouse they found in front of their tent and the frog underneath the canvass in front of it.

Some advice will also be shared, such as “make sure you take a trip in a mokoro (dugout canoe), you cannot do this without a guide, go with a group of people who know, planning is very important, you must be self-reliant, your equipment needs to be reliable, you must be cautious, you cannot do this without knowing what to expect, take your own port-a-potty along, if you need help or something it will take you a full day trip to get it, do not expect to find any *MacDonalds* or *Steers* and there is no place for a laptop”. Respondents were asked to categorize the type of experience as either special interest tourism, nature based tourism, adventure tourism or wildlife tourism, but they could not come to a conclusive decision. Nature based plus adventure tourism was suggested by most. One respondent suggested a category “back to the basics”.

## **Discussion and Management Implications**

Tourists on safari are mindful visitors. The product can be categorised as authentic and ecotouristic. The effect on wildlife is minimal and the experience is one of high enthrallment. Visitors are escapists since general viewing, nature, escape, adventure and mega-fauna were more important motivators than personal growth, learning and interacting with a unique culture. Their profile is also similar; escapists are mainly European (85%). It is suggested that promotion material not only emphasize specific species (the Big 5) but also include camp-life at a novel place, expansive scenery, vista points creating an image of relaxation away from daily routine, 4WD safaris with some challenging driving excitement. Designated vehicle stops could be established at scenic points under special trees, blending into the landscape, offering a more varied experience. The unique attributes of the destination that attract tourists to the area would then be used to differentiate it in their minds and provide the benefits they are seeking, thereby ensuring sustainable use of the resource.

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# STRATEGIC ALIGNMENT AND MANAGEMENT OF FACULTY PROGRAMME OFFERING TO STATE HIGHER EDUCATION REGULATION: A FACULTY CASE STUDY AT THE UNIVERSITY OF JOHANNESBURG

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## ABSTRACT

*Higher education state governance fulfils an important function in providing policies and procedures, which in turn provides guidance and strategic vision to higher education in South Africa. The reformed South African higher education policies have to guide, rebuild the nation and drive transformation that is necessary in a post-apartheid society. However reformation and transformation of regulations require change and restructuring in order to ensure alignment within the entire system. At the University of Johannesburg, the Faculty of Art, Design and Architecture (FADA) is positioned in a newly restructured educational landscape and merged institution. This paper aims to determine the challenges and expectations presented in reformed state regulation that should be considered in the strategic management of faculty programme offerings in order to ensure strategic alignment to state regulation. The study employed a qualitative research approach in order to observe and document the perspective of the academics in FADA. Using documentary and policy analysis and interviews with academics within FADA, the study revealed that an increasing move towards a management paradigm is evident in the restructured higher education environment, which necessitates the introduction of strategic management in higher education.*

## INTRODUCTION TO THE STUDY

Higher Education regulation in South Africa (SA) has been under the spotlight of reconstruction, transformation and re-curriculation since 1994. The post-apartheid political ideologies were required to restructure and reform the education environment in SA. Past Minister of Education, Kader Asmal identified in the foreword of the National Plan for Higher Education (NPHE) that: “*The victory over the apartheid state in 1994 set policy makers in all spheres of public life the mammoth task of overhauling the social, economic and cultural institutions of South Africa to bring them in line with the imperatives of a new democratic order.*” (SA, 2001: Foreword).

The time period from 1994 to 2007 gave rise to a number of education acts, policies and discussion documents, which aimed to reform and transform a diverse and fragmented pre-1994 higher education environment. This study focuses on reformed state regulation, in order to determine strategic direction and guidance for strategic management of programme offering as well as the challenges and the expectations that are presented through alignment with the regulations. It is compulsory for public higher education to be aligned to state regulation. However in order to be aligned to state requirements the faculty must understand the focus of state regulation, which begs the following, central research question:

**How does the change in the institutional environment and change in Higher Education Qualification Framework affect the academic staff and the programme offering of the Faculty of Art, Design and Architecture?**

Against this backdrop, the aim of the study can be purported as follows:

**To determine the challenges and expectations presented by reformed higher education state regulations that should be considered in the strategic management of faculty programme offering in order to ensure strategic alignment to state regulation.**

## **REGULATION AND REFORM IN SOUTH AFRICAN HIGHER EDUCATION**

### **Post-apartheid regulation for a New South Africa**

The first five years of the New SA, was land marked by the emphasis placed on the introduction of new policies and legislation. The vision for the transformation of the higher education system was communicated in 1997 with the publication of the Education White Paper 3: A Programme for the Transformation of Higher Education (SA, 1997a). Asmal (SA, 2001: Foreword) describes the focus of the vision as follows: “*Central to this vision was the establishment of a single, national co-ordinated system, which would meet the learning needs of our citizens and the reconstruction and development of our society and economy.*”

The Education White Paper (SA, 1997a) identifies that the separate and parallel qualification structures for universities, technikons and colleges have prevented student transfer between these institutional types. Technikon qualifications did not articulate with university programmes and did not provide a coherent pathway and mobility between qualifications for students. The Education White Paper (SA, 1997a) therefore proposed a single qualification framework for higher education. The White Paper (SA, 1997a) further motivates that it is the role of higher education to provide education and training to develop skill and innovation that are necessary for national economical development and successful participation in a competitive world economy.

The Education White Paper (SA, 1997a) provided a policy framework with goals, values and principles for the higher education system. The White Paper was immediately followed by the Higher Education Act 101 of 1997 (SA, 1997b) which established a legal basis for a single national system. The White Paper and Higher Education Act were followed by the NPHE (SA, 2001) which provided a strategic framework for the re-engineering of a higher education system. The NPHE included the strategic objectives that were developed according to the higher education goals as identified in the Education White Paper.

In July 2004 the Ministry of Education presented the first draft Higher Education Qualification Framework (HEQF), the long awaited Framework was finally published by the Education Minister Naledi Pandor on 5 October 2007 and the implementation date is 1 January 2009. (SA, 2007) The HEQF addresses the need for a single qualification framework for higher education as identified in the Higher Education White Paper (SA, 1997a). It is identified that the impact of this policy on the Higher Education sector is widely expected to be significant and opinions about its ‘fitness for purpose’ range from skeptical to cautiously optimistic. (Education Web, 2007). However, the Department of Education (DoE) and Council of Higher Education (CHE) indicated that new programmes and qualifications to be offered in 2009 should be aligned as closely as possible with the HEQF. (DOE *et al*, 2008)

### **Academic freedom and institutional autonomy**

A concern that is noted by various authors’ is that the increase in the number of state education policies indicated an increase in state authority in South Africa. (Waghid *et al*, 2005; Hall, 2006). Hall (2006:374) notes that: “*The defining trend in university governance in South Africa, expressed through legislation and amendments to the Higher Education Act, has been increasing state control.*”

The concern around the increase in state control is also evident in a response document submitted by the previous Mangosuthu Technikon (S.a.). This Technikon expressed the opinion that political interference in higher education is often a symptom of a much larger fear. The Technikon argues that the Ministry of Education and related constituencies are reacting fearfully to change, and seek to impose more rigid controls on institutions and processes.

The concerns regarding academic freedom and institutional autonomy received much attention in 2007 in SA. In a paper presented by Jackson (1997:121) he reflects on the academic regulation environment in the United Kingdom. He states that regulation is an emotive, threatening and potentially divisive concept when used

in academic communities. He explains that the academic communities hold high values for the concept of academic freedom and institutional autonomy, and the academic community is often reluctant to engage with the concept in order to avoid the notion that autonomous institutions lose control over the way in which they conduct their internal affairs.

The national debate around institutional autonomy and state governance is not new. *“What is new; however, are the effects of international reform ideologies that fundamentally challenge the notion of institutional self-steering in higher education.”* (Cloete *et al*, 2002:8). They refer to the work of a Norwegian political scientist, Johan Olsen, who made interesting contributions to the policy debate on the modernisation of higher education. Olsen (as cited in Cloete *et al*, 2002) claims that the traditional pact between society and higher education has become problematic. A number of examples are provided to explain this problematic situation such as; the accusations of insufficient quality, effectiveness and efficiency, and the complaints about the lack of intellectual capacity. The result of the deterioration of the relationship is the re-interpretation of the relationship between society and higher education. The traditional emphasis on academic freedom and self-steering of academics is replaced with an interpretation that higher education is a service-company with society as its marketplace. (Cloete *et al*, 2002).

## **Increased focus on strategic management**

The challenge for higher education leadership challenge is to reconfigure institutions to become more competitive and market orientated. Cloete *et al*, (2002:162) indicates that *“This requires the vigorous adaptation of corporate management principles and techniques to the higher education setting.”* The focus on managerial leadership in SA Higher Education institutions includes the need for strategic vision and planning within a new changing and competitive environment.

The leadership challenges for strategic managers are to position the institution in such a way as actions become more strategic. (Cloete *et al*, 2002). The strategic manager will also have to indicate to the academics that managing the institution on sound management principles will not threaten the traditional values of academic freedom and that such management is necessary.

## **THE INSTITUTIONAL CONTEXT OF THE CASE STUDY**

The University of Johannesburg (UJ) is a comprehensive institution, and is the result of a merger between the former Technikon Witwatersrand (TWR) and the Rand Afrikaans University (RAU) that took place in January 2005. The Faculty of Art, Design and Architecture (FADA) formed part of the former TWR and offer programmes that are referred to as technikon type programmes. FADA is the smallest faculty in the university. UJ's statistics indicates that FADA enrolment headcount contributes 2% of the total UJ headcount. From 2005 to 2007 the average student enrolment was 854. In 2008 FADA has indicated a growth of 15%. The faculty nearest in student size to FADA is that of Law Faculty with a headcount enrolment of 1431 in 2008.

FADA consist of eight Departments which all currently offer three year National Diplomas (N Dip) and fourth year Bachelor of Technology (B Tech) qualifications. The Master Technologiae (M Tech) is offered by six departments. FADA is currently only offering previous technikon-type qualifications. However the faculty has indicated in 2007 that the introduction and conversion to identified degrees programmes will take place from January 2009. The programmes that are offered by the faculty have to compete within a small and highly competitive regional and national higher education environment. Regional competitors, who are mostly private providers, offer similar design programmes to those presented by FADA. In 2003 private providers started to convert their qualification types from diploma to degree programmes.

## **RESEARCH DESIGN AND METHODOLOGY**

The nature of the research question suggests an exploratory study, which, as Mouton (1996) argues, attempts to gather new data and “facts” and to establish whether there are interesting or novel patterns in the data. For the fact that qualitative methods are generally used for exploratory research – in particular when the research activities attempt to identify, describe and generate explanations for phenomena (Crabtree & Miller, 1992) as is the case in this study, a qualitative design was chosen. Moreover, the choice of a qualitative design is

generally considered appropriate when little previous research has been conducted in the subject domain (Mouton, 1996). The qualitative design was effected through a *case study* approach, which allows investigation of phenomena as “bounded systems” (Henning, Van Rensburg & Smit, 2004). Any social entity can be demarcated by parameters that enable exposure of its distinctive dynamics. Data is solicited from within the parameters of the bounded system or case. In this study the focus is on the changing institutional environment and proposed changes in programme offering within FADA, which can be viewed as a bounded system with clear parameters and a specific and unique dynamic.

The ontological platform for the study is indicated by the study’s point of departure namely the impact of a changing educational environment on people. The study investigates the experience of employees and thus works at the level of individual feelings, beliefs, views, and understandings of this changing environment. The latter are of course personally and socially constructed and fit an *interpretive* research paradigm. In this regard Neuman (2003) argues that researchers operating from within an interpretative paradigm strive to systematically analyse socially meaningful actions. This they do through direct observation, in order to understand how people create and maintain their social worlds. From an epistemological perspective it follows that first hand accounts (e.g. verbatim narratives) of how the change in state regulation was experienced, and obtained directly from those who experienced it, will be most suited as a vehicle of knowledge.

Methodologically this poses significant demands in terms of the nature and quality of information required, which are not easily met with traditional (positivist) survey-approaches and which are criticised for generating impoverished data. As a consequence data-gathering methodologies employed in qualitative research rely on predominantly unstructured or semi-structured, open-ended techniques which will extract data of the required levels of richness and redundancy. The degree to which observations or measures are consistent or stable i.e. are reliable (Rosenthal & Rosnow, 1991, p. 628), is a function of scientific rigour which commences substantially before actual data-gathering but includes inter alia the conceptualisation of the research, preparation of the research context (e.g. managers) and cultivating receptivity for the research, maintaining the anonymity of respondents, establishing rapport with respondents, and ensuring consistent interviewing through the use of a single interviewer and a consistent format and procedure of interviewing across respondents and organisations (cf. Mouton, 1996). This was indeed the case in this study where the researchers secured faculty support some time before commencing with the research.

The *research population* for the study comprised all full time academic personnel in the employ of FADA at UJ, which includes academics and faculty managers. As with most qualitative studies, non-probability sampling was employed in this study – in particular as representativity in terms of the population, is not a consideration. However, as strategic management is firstly, a function that is associated with management, it was therefore important to include faculty managers within the research population.

In all then, nine academics and nine faculty managers were selected on a judgemental basis for the collection of primary data through the usage of semi-structured interviews. The nine managers are; the eight Heads of Departments as well as the Dean. In addition nine senior academics were identified, which must have occupied a senior academic position for at least five years. Preference was given to academic staff that were previously in FADA management positions. This research group represented 41% of the full time academic staff within FADA.

Coding and identification of patterns and themes as presented by Miles and Huberman (1994:55-69) were used as guide to formulate a content reduction process for this study. The coding process searched for relationships in the content and find any emphases or gaps in the gathered information. The scope of this paper, as directed by the research question, focuses on the primary themes (or categories) that emerged from open coding.

## **PRESENTATION OF THE RESEARCH FINDINGS**

Richardson (as cited in Taylor and Bogdan, 1989:168) identifies that researchers do not merely report research findings, but they transform their field notes, documents, interview transcripts, and other data into a form of narrative text. Taylor and Bogdan (1989: 168) encourage researchers that engage with qualitative research to experiment with new forms of writing qualitative research researchers, and to increase their sensitivity when conducting and producing the narrative product. This research study will however attempt to maintain an objective reflection of the research findings.

The narrative production of the research findings aim to present a thick or rich description as suggested by Miles and Huberman (1994) and, Taylor and Bogdan (1989). This rich description should aim to reveal the

complexities within the context in which it is nested. Taylor and Bogdan (1989: 174) further suggest that illustrative quotations and descriptions should be included to convey a deep understanding of what the context and the people involved are like, and to provide support for the researcher's interpretations. These authors state that quotes and descriptions help readers to understand how the researcher has reached conclusions and interpretations.

In contrast to quantitative research, qualitative research focuses on findings, not results and on rich descriptions rather than graphs, tables and frequencies of events. The research findings as presented in this study have been grouped under headings that represent the main themes and patterns identified in the text of the transcribed interviews.

## **THE RESEARCH FINDINGS**

### **The reformed higher education system as experienced by the subjects**

The reformed higher education system is described as being extremely rigid with an increase in constraints. The majority of subjects mentioned that there is an increase in bureaucracy, which relates to the increase in the number of higher education policies and procedures. A subject stated that: *"The expectations are far more bureaucratic. It seems to be tied up with many more rules and regulations and restrictions and this is very inhibiting for art education. It actually gets in the way and they do not enhance the performance of the educator."* Another subject observed that: *"It has become much more bureaucratic and is much more driven by policy and procedure."*

The changes within the reformed higher education system require of academics to approach, present and deliver education in a new, different and transformed manner. This observation is presented by a subject who stated that: *"The fairly massive sets of paperwork also reflect the paradigm shift in the minds of staff and the workshops and programmes that they have to attend in order to familiarize themselves with the concept and the processes that are associated with the paperwork."*

### **Reflections on change in Higher Education state regulation**

Four main occurrences that resulted in major changes in higher education governance since 1994 are recalled by a number of the respondents. These aspects are:

- The merger of the higher education landscape
- Introduction of Outcomes Based Education
- Change in the government's approach to higher education
- Introduction of new higher education policies

The occurrences presented above were not presented in any order of importance or preference during the interviews. However the first point, the merger, was mentioned or referred to by all the respondents. It is also noted that the change that took place in higher education post-1994 are perceived as interrelated events, as one person stated: *"The government's approach to tertiary education has changed. The mergers took place, and everything that flows from that."* Another subject presents the change as follows: *"Huge change, dramatic change has taken place since 1994 within the rationalizing of higher education, refocusing of targets and initiatives. The biggest one is the rationalizing of the higher education landscape from 36 to 21 institutions. That impacts on where we are now."*

### **Expectations and challenges presented by state regulation.**

The respondents presented a wide variety of expectations and challenges that are presented by higher education state regulation. The expectations addressed by most of the subjects are the need to address and include transformation, equity and accessibility in higher education. One person summarised these expectations as follows: *"Transformation, redress, addresses, equity, those are the main issues."*

However the expectations and challenges presented by the state in higher education policies are described as being idealistic and unrealistic. A subject commented that: *"There are so many expectations. Many of them are quite unrealistic"*. Another subject raised the following concern: *"Policies bring change and*

*one should not forget about the culture that you want to create in this new merged environment. The biggest concern for me is that there are huge contradictions in these policies”.*

## **The subjects’ knowledge of higher education state policies**

During the interviews a number of subjects indicated that they were not familiar with the state policies and one respondent clearly indicated: *“I can not answer this question”*. General statements were made during the interviews in relation to the policies; such as: *“All of them [policies] impacts in us”*. The majority of the subjects had a vague and unclear understanding of higher education policies. One respondent identified that: *“I am not familiar with the particulars of every document. I leave it to my manager to study the documents and implement them”*.

The respondents that are familiar with titles of state policies and to a lesser degree the content of the higher education state policies, identified a wide variety of state policies as drivers of change in post-apartheid higher education state regulation. In total these subjects refer to six different policies and one framework.

## **Alignment of the faculty regulation to state regulation**

The subjects had divergent opinions regarding the current alignment of the FADA to higher education state regulations. Their opinions ranged from a very convincing; *“O ja, I think it is very aligned”* to a doubtful; *“I do not think so”* and finally; *“I have no idea. I know that there is an intention to be aligned”*. The subjects that consider the faculty to be aligned base their opinion on the fact that the faculty forms part of an institution that is forced to be aligned to state regulation. This opinion is expressed as follows: *“We have been forced to be aligned to the policies”*.

## **The benefits and challenges for the merged institution**

The merger presented both benefits and disadvantages for the subjects that form part of FADA. The main benefits that were identified by the subjects are that the facilities and the educational environment have improved. The institution has increased in size and is currently the third largest higher education institution in SA. This is perceived as a benefit since larger university offers a broader range of programmes and access to a broader range of modules within other faculties. A number of subjects identified an increase in status that was experienced by changing from a technikon to a university. This observation is expressed by a subject as follows: *“South Africans are snobs. Give them the choice from a degree from a technikon or a degree from a university, South Africans will generally choose the university degree.”*

However the transformation from a technikon to that of a university context also raised concerns and is perceived as a challenge. This shift is identified as follow: *“How possible is it for people to suddenly go into a new head set, in term of understanding what academics are all about as laid down by the expectations of a university which is a highly academic institution which we are now part of ?”* A further challenge presented by a number of respondents relates to the amount of change that the faculty will have to address. One subject observed that: *“Qualifications have to be upgraded and we have to rethink the way in which we conduct our business.”* The change is further expressed as follows: *“We are expected to change dramatically in our whole approach towards education”*.

## **Proposals to restructure and rearticulate faculty programme offering**

A number of subjects describe the faculty’s current position within the comprehensive institution as an opportunity to align with the degree stream as presented in the HEQF. The current position will enable the faculty to restructure the diploma to degree programmes. The opportunity is identified as follows *“We have an opportunity to realign our programmes into a single qualification framework or standardized qualification, which is also internationally aligned.”* The proposed conversion from diplomas to degrees is seen as the preferred and best option for the faculty.

However the following concern is expressed by a subject: *“One has to be strategic about what one wants to emphasize.”* The increase in degree entrance requirements will also impact on the intake of previously disadvantaged students. This concern is expressed as follows by a subject: *“The selection requirements are*



*shifting. It means that the previously disadvantage students will be eliminated in the process. How are we going to cater for the learners who do not make the cut off point?"*

## **Challenges and expectations in relation to programme offering**

The research subjects from FADA identified a wide variety of challenges and expectations that have to be addressed by the faculty in order to restructure. One subject summarised the challenges as follows: *"The challenges start to kick in at various levels. It poses a challenge to staff qualifications. It poses a challenge to the curriculum, the academic architecture and content of the curriculum. It poses challenges to the student profile. It poses a challenge to the support structures in the faculty. It poses a challenge in the way that we envision ourselves and how we are going to portray ourselves outside and inside the institution. It is a whole reconfiguration of the faculty"*. This description presented an overview of the challenges and expectations that were presented by the remaining subjects.

The challenges that relate to staff qualifications were identified by most of the subjects. The majority of staff have Technician qualifications, and although a number of staff have increased their qualifications to a Masters level, it is required that they increase their qualifications further to even Doctoral levels. This requirement is motivated as follows: *"People will have to improve their qualifications. The Department of Education indicates that we have to have a certain level of qualification in order to offer a qualification at certain levels."*

## **Perceptions relating to strategic management within higher education**

An aspect identified by a large number of the subjects is that the focus in education has moved towards including business strategies and business models in educational operations. This aspect is presented as follows by one person: *"Education has become much more of a business. The faculty is now operating as a business."* Another subject stated that: *"There has been a move from aligning academic institutions to corporate models."*

The majority of the subjects observed that the notion of strategic management has increased in higher education since 1994. The shift to a management paradigm was described as follows: *"There is an increasingly new move to a management paradigm which was quite foreign to the institutional environment, quite difficult in that people did not really think in those terms. Resistance, because it seems to be something that was against the ethos of what an academic institution was all about."* The description was supported by another subject who observed that: *"I think there has been a move from academic management to strategic management."* A research subject considers strategic management as an important component of large institutions. This subject stated that: *"It has become such a big thing now, that management becomes even more important, especially strategic management. The bigger the institution is the bigger the demand is for good strategic management."*

Strategic management is not only a function that is associated with university executive management or faculty management, but it is required of all academics to include strategic thinking in their programme planning and projections. A subject commented as follows: *"In the faculty there is much more thinking about where we are going and why we are doing specific things."* This observation was repeated by another subject who stated that: *"The new management has themselves made statements that strategic management will be part of the highest levels down to management at the various different levels below."*

## **Faculty experience and training in relation to strategic management**

The focus on strategic management within the institution has placed a demand on academics and faculty managers to identify strategic directions and present strategic plans to the faculty and its departments. It became evident during the interviews that strategic projections and presentation are delivered in most cases, by subjects who have very little or no experience or training in strategic management. More than 50% of the subjects that were interviewed have experience or training in management but a very small group within the faculty has strategic management experience or training. The training that was received in strategic management was mostly through short courses or workshops.

A number of subjects expressed the opinion that strategic management should be a function of the head of department and the dean. This opinion was expressed by one subject as follows: *"If I understand where the institution is going, they are going to drive it [strategic management] down and they will look at the department*

*as a unit. If you look at the department as a unit then certainly the person who stands at the head of that unit should have the capacity to think strategically at that level.”*

The majority of the subjects agreed that it would be important for faculty managers to receive training in strategic management in order to fulfil the requirements that are associated with this form of management. The following observation was presented by a subject: *“Now with the strategic shift in our responsibilities you need a strategic background. I often think people that are recruited now as head of departments are very different to before.”*

## CONCLUSIONS

The limitations that were experienced in this study resulted from the ambiguous interpretations of state regulation and the extremely slow development that is made over a number of years. The following example explains this point; the first draft HEQF was published in 2004, the second draft in 2006 and the final publication in October 2007. Each draft was followed by a wide range of interpretations and debates that took place within the various higher education institutions. The slow progress further impact on the literature study in that there is a reluctance to engage in matters that are not finally approved and purely postulations. Breytenbach (2007) identified in a study relating to implementation of the White Paper knowledge economy expectations that, after ten years of publication the majority of academics interviewed for the study, were not familiar with the key terminology and expectations presented within the White Paper.

It was determined in the study that the Higher Education state regulations have been completely transformed and reformed by the post-apartheid government. However, the change in state regulation raises serious concerns with some authors, in that the increase in the number of state education policies indicated an increase in state authority in South Africa. This has resulted in an apprehension among higher education institutions, who maintain the right to academic freedom and the ability to practice institutional autonomy.

It was required of higher education to institute rapid change through the introduction of a vast number of reformed state policies and procedures. The literature review indicated that expectations to change resulted in a situation where the capacity and ability for managerial evolvement became crucial. The literature review identified that a paradigm shift took place within higher education which is referred to as the managerial phase. The paradigm shift indicates a move from collegial academic self-rule to academic managerialism.

Strategic leadership and management are required to inform and implement strategic changes which would aim to position the institution, the faculties and the programmes offerings. The study indicated that academic staff are often reluctant to engage in the planning and implementation of institutional strategic plans, but wish to only focus on teaching and research. During the interviews a number of respondents considered it the responsibility of their managers to study and implement state and institutional policies.

The research respondents identified that the increase in the number of higher education policies has resulted in an increase of bureaucracy within higher education. The reformed higher education system is described as being rigid with an increase in constraints. The subjects claimed a substantial increase in the administrative workload, which impact on teaching contact time and interaction with students. The subjects also identified that the changes within the reformed higher education system require academics to approach, present and deliver education in a new, different and transformed manner which require a complete paradigm shift for staff.

The faculty is required to rethink and revisit their entire programme offering. Traditionally the faculty has presented vocationally orientated programmes; the intention is to restructure to an academic focus, which will require a different student profile. The research subjects from FADA identified a wide variety of challenges and expectations that have to be addressed by the faculty in order to restructure. Challenges that relate to staff qualifications were identified by most of the subjects.

## RECOMMENDATIONS

**Ensure that the faculty management team is experienced and trained in strategic management**

The literature review identified a transition from a collegial academic self-rule to academic managerialism environment. In order for faculty management to have the strategic ability to align the state and institutional vision and objectives, it is recommended to provide relevant strategic management training to managers.

## **Include of a market orientated approach in the strategic planning**

Cloete *et al* (2002) identify that international reform thinking suggests that universities should be steered by market forces and not by governmental or state mechanisms. It is suggested in the literature that the leadership challenge is to reconfigure institutions to become more competitive and market orientated. It is recommended that faculty management should include strategic vision and planning within a new changing and competitive environment. International trends suggest that higher education is a service-company with society as its marketplace.

## **Avoiding a top-down strategic management approach**

Le Roux (2004:8) suggested that the old model of strategic corporate management where a new strategy is decided on in the boardroom, and then executed through the organisation hierarchy, is outdated in a rapid changing business environment. This study recommends that FADA should avoid a strategic management structure that is top-down in which decision making resides with faculty management, and excludes concerns and expectations of the academic staff. The faculty should ensure that everyone in the faculty must be included in a strategic information feedback loop that can provide results to those that have to make or change strategic decisions.

## **Reduce the negative impact of change within state regulation**

The majority of the respondents indicated that the increase in the number of higher education policies has introduced a high level of bureaucracy within higher education. This results in an increase in administrative workload, and impact on the teaching contact time and individual interaction with students. The literature review identified that this type of bureaucratic dilemma has the potential to block activity and stifle ingenuity. It is recommended that faculty management should place greater emphasis on the expected direction presented within state regulations. This would enable lecturers to use national policies as a guide to facilitate effective and efficient behavioural responses rather than perpetuating a bureaucratic paper-producing machine.

## **Ensuring continuous staff development**

Le Grange (2005) indicates that higher education should commit itself to staff development and training which could ensure that continuous growth and development takes place within a true learning environment. The study recommends that the faculty should identify training needs that are relevant to; programme offering; state regulation requirements; strategic planning and development.

## **Address the challenges that are presented to the academics staff**

Le Grange (2005: 6-10) identify the following challenges for lecturers in higher education that relate to the implementation of new national policies. It is recommended that these challenges should be addressed:

- New structure necessitated a call for new curricula.
- Higher education has an important role to play in the reconstruction and development of society and the economy, and lecturers have to ensure that these aspects are addressed in the curriculum.
- The transformation of the higher education environment does not only affect teaching systems but also necessitates to the introduction of new practices.

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# **HUMAN RESOURCE MANAGEMENT IN FOREIGN FIRMS OPERATING IN INDIA: ISSUES AND LEARNING**

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## **ABSTRACT**

*Over the last decade or so, a large number of multinational companies (MNCs) have established an India center to co-ordinate and control their operations in the country. This paper describes the roles played by human resource (HR) function in these India centers. The results highlight how the India center's HR function provides a range of services both to the units of MNCs operating in India in general and at times to other parts of the world. The India centers' HR function is typically responsible for developing and implementing HR policies and practices, and is a key instrument for organizational learning about HR.*

## **INTRODUCTION**

Effective management of human resources (HRs) in foreign firms operating in emerging markets constitutes a major challenge and can be decisively beneficial to the success of investments in these markets. Multinational companies (MNCs) establish country/region specific centres to create and transfer knowledge in order to co-ordinate and control their different operations. This article describes the roles played by the HR function in India centres in the same regard and highlight how the centre's HR function provides a range of services both to the units of MNCs operating in India in general and at times to other parts of the world. The India centres' HR function is not only responsible for developing and implementing HR policies and practices, but it is a key instrument for knowledge creation and organisational learning about HR. This paper is structured as following. In this introduction we discuss the key debates in IHRM, especially regarding the management of HRs in overseas subsidiaries of MNCs. Next we present information regarding the methods adopted to conduct this investigation. This is followed by the key research findings and implications.

With the growth of emerging markets and increased levels of internationalisation and globalisation of business, both academics and practitioners have shown an increased interest in the topic of international HRM (see Schuler et al., 2002). However, majority of the existing research in the field has been conducted mainly in developed nations of Western Europe or North America. So far less work has been done on the management of human resources involving emerging markets (one exception being the proliferation of interest on studies relating to China). However, there is a strong scarcity of information regarding the nature of HRM in MNCs operating in India. This paper makes an attempt to fill this significant gap.

Broadly speaking, MNCs have the option to choose from ethnocentric, polycentric, geocentric and regiocentric approaches to structure their international HRM systems (Perlmutter, 1969). While making a choice from these, an MNC is faced with a paradox: on the one hand it needs to develop control and co-ordination mechanisms consistent with effective and efficient global operations; on the other, it needs to be responsive to national/local interests which may impede world-wide activities (Jain et al., 1998; Prahalad and Doz, 1987).

In this regard, many large MNCs, after starting from small beginnings now have multiple operations in India. For example, today, the majority of GE's businesses world-wide have a presence in India, either through a joint

venture, a wholly-owned subsidiary, a strategic alliance or a business development and customer support presence. Similarly, many other foreign firms (such as Hughes Software, Siemens, Motorola, Excel Services, Avon Beauty Products and Honda) have established their representative offices in India, just after it liberalized its economy and opened it for international business. The challenge for MNCs like GE is to manage an increasingly complex network of affiliates scattered around the country. In this regard, many MNCs have established an India corporate centre (also called 'India headquarters' or 'India centre') to control and co-ordinate their various units in India. In most of such firms, the India centre includes a HR department with an HR manager for the country.

Establishing an HR department within India rather than somewhere else in the region is critical for a successful HR strategy. This is mainly due to significant differences in the socio-cultural, political, economic, legal systems and labour markets (both internal and external) of India and its regional neighbours (Budhwar, 2001; Budhwar and Singh, 2007). This creates a complex and unique challenge for the HR professionals of foreign firms operating in India. Therefore, it is sensible that the HR managers that are responsible for Indian operations should be based in India. In this paper we highlight the role played by the HR function in the India centres in order to co-ordinate and control their operations. In particular we report on: 1) how foreign firms staff their India centre HR department; 2) the services provided by the India centre HR department; 3) dynamics related to the application of global corporate HR policies in India; and 4) how the India centre HR department promotes learning across the firm's operations.

## RESEARCH APPROACH

We conducted 55 in-depth interviews during late 2002 and early 2003 with one top HR specialist in as many foreign firms operating in India. Access to the companies was gained from the researchers' previous research and with snowballing techniques that utilised contacts of contacts. Apart from core HR functions (such as what and how of recruitment and selection, training, appraisals, compensation, retention), a number of other key themes such as the nature of organisational structure, relationship between India units and headquarters and different learning experiences related to key HR functions were examined in the research. On average, each interview lasted for 90 minutes. The interviews were tape-recorded, transcribed and later content analyzed. The views presented of interviews in this paper are those of a minimum of forty percent of the interviewees. The majority of the research firms (67.7 percent) established their operation(s) in India after 1990. Other demographic details of the sample firms and respondents are provided in table 1.

| Table 1: Sample Profile of Foreign Firms Operating in India |   |              |
|---|---|--------------|
| Parent nationality  | Categories                                      | No. of Units |
|   | US  | 24           |
|   | European  | 15           |
|   | Asian   | 14           |
|   | Others  | 2            |
| Foreign ownership of the firm                               | <50%  | 27.7%        |
|   | 50-95%  | 12.3%        |
|   | >95%  | 60%          |
| Location in India   | Delhi and around (90%)                          |              |
|   | Other locations (5% each in Mumbai and Chennai) |              |
| Total No. of employees                                      | <100  | 6.2%         |
|   | 100<500   | 30.7%        |
|   | 500<1000  | 32.3%        |
|   | 1000 -  | 30.8%        |
|   |   |              |
| Industry  | Name  | %            |
|   | Transport and industrial equipment              | 3.1          |
|   | Chemical and pharmaceuticals                    | 13.8         |
|   | Wood, pulp and paper                            | 4.6          |
|   | Electrical equipment                            | 9.2          |
|   | Automobiles                                     | 10.8         |
|   |   |              |

|  |   |      |
|--|---|------|
|  | Food, tobacco and textile                 | 12.3 |
|  | Metal, rubber, stone, glass and leather   | 3.1  |
|  | Others (services, IT, telecommunications) | 43.1 |

## **FINDINGS AND IMPLICATIONS**

### **Staffing of the HR Department**

Most of the sample firms recruit their top HR manager to head their India centres from within India. The HR manager is either recruited from the Indian partner in the joint venture (31 percent), from an Indian company (40 percent), or from another Indian unit of the MNC (25 percent). The most commonly used job designations of the interviewees are HR manager, general manager and HR director. The sample managers have an average work experience of 12.4 years and have worked in MNCs and some managers (around 10 percent) are non-resident Indians who were working in some other affiliate of the MNC outside India. Such a background ensures that the HR manager is extremely familiar with the MNC's HR policies and practices and in many cases, in other Asia/Pacific regional centres.

There are a number of advantages of recruiting an Indian as the HR manager in India centre. As HRM is context-specific, hence a local HR manager has a better understanding of the local social, cultural, political and legal environment; can be recruited for a relatively small compensation package in comparison to an expatriate; knows the ways of working around the local system; can easily become part of relevant networks (not only related to HRM but also related to customers, suppliers, and distributors); and can easily be moved between different units of the MNC. If necessary, then the HR manager is given required training both in and outside India. The HR manager on average is given a training of 13 days per year.

At the moment, MNCs are not experiencing any serious problem in finding relevant human resources to staff their HR departments. This is primarily due to the existence of a large number of management institutes in general and a few related to HRM/HRD in particular in India which are producing a large number of management graduates (also see Yadapadithaya, 2000). As a result, MNCs operating in India are able to get human resources with a similar kind of academic knowledge like in their own home country. However, working in a MNC is a new experience for majority of employees. Considering the unique ways of doing things in MNCs (mainly related to their global standardised HRM practices), the HR department in India centre has to work very hard to change the established mind-set of new employees (who have not previously worked in a MNC) as per their own liking. Hence, a strong emphasis is laid on training, orientation and related programs. Sixty percent of the sample firms give up to 10 days of formal training to new employees.

### **Services Provided by HR Department**

The HR department of MNCs in their India centres is providing a comprehensive set of services such as recruitment, training and development, performance appraisals, compensation packages, retention efforts and various means to co-ordinate activities between HQs and their Indian operations. By having a centralised HR service provider has many benefits. First, a comprehensive set of services can be provided. Second, the required company specific HR tools can be developed. For example, companies like GE, Escotel (a joint venture between an Indian and a Hong Kong based firm) and Techumseh (a Brazilian manufacturing MNC) are using the concept of '6 sigma initiative' and '6 sigma training' for their own unique requirements to enhance their quality. Third, at times it is not easy to develop company-specific training tool-kit if there is no India centre HR department. Companies such as Hughes Software Systems and RSMI (a global IT services company providing 'Geographic Information Systems and Spatial Solutions', and application software services to clients world-wide) are good examples in this regard. Both these US based firms actively contribute in the development of company-specific tool-kits to train their HR staff in India centre. Apart from usual HR functional skills, a lot of emphasis is laid on different technical skills related to both software and IT – 'technical skills for non-technical people'. As the majority of the products and services of such firms are produced in India and then exported to other parts of the world (at times even to their HQs), therefore, it becomes more convenient to have an India centre with an HR department for the development of company-specific tool-kits.

Most operational units are headed by a manager who regularly interacts with and follows instructions from the HR department of the India centre. To ensure that the staff in the HR department of India centre is well equipped



with relevant skills and capabilities, the HR personnel are provided both internal and external and on-the-job and off-the-job training in a variety of areas. These vary from functional, behavioural (such as interpersonal, communication, coaching, mentoring, employee relations, interviewing), operational, and technical (such as by help of HR tool-kits, finance for non-finance people, about '6 Sigma' and ISO 9000-3). Mostly, the training to HR personnel at the India centre is provided within India; however, a few organizations such as Hyundai, GE, Honda, Motorola, New Holland Tractors and HSBC send selected people overseas for training. For example, Honda sends top HR managers to Japan mainly to inculcate the "Honda way of working" and Honda philosophy, Motorola sends people to its "Motorola University" in the US for training purposes.

## **HR Policy – Parent Versus Indian Operations**

Established MNCs are known to have a global set of HR policies. Also a tension exists between the MNC headquarters and their overseas operations (such as joint ventures, affiliates or wholly-owned firms) for a globally standardized approach to HRM and the need to make adjustments to local conditions (see for example, Beechler and Yang, 1994; Prahalad, 1976). The India centre HR department also experiences such tension at times. When the Indian operations of the MNCs were initiated, in the majority of the cases there was some sort of agreement concerning HRM policies and practices between the MNC and Indian units prior to the start-up. In such circumstances, on the one hand, the HR department has the responsibility to implement the agreed goals, core values and philosophies in India. On the other hand, it needs to make adjustments to some HR policies to suit the local Indian environment. Many sample firms have been successful in adopting the MNC's global HR policies related to recruitment, employee development, performance appraisals and compensation of local employees, to a great extent with some local adjustments.

## **Staffing**

Most MNCs are able to use global recruitment and selection policies with minor local adjustments. All the MNCs adopt a formal, structured and systematic approach to recruit new employees. Interestingly, this is not so in the case of majority of Indian national companies (especially in the private sector) which adopt an informal and unstructured approach to recruitment function (Sparrow and Budhwar, 1997). Nevertheless, sector based differences are quite strong. For example, research evidence from the business process outsourcing (BPO) sector (Budhwar et al., 2006) clearly highlight the existence of formal and structured HRM systems. As indicated above, a number of methods are adopted by MNCs to find new recruits. They include consultants, employee referrals, via net, campus interviews, and through advertisements. When it comes to adopting different criteria and methods to select new candidates, the global HR policies of the MNC are seriously considered. MNCs adopt different criteria during the selection process. It generally starts with job specification, by defining the profile of person(s) required, the kind of competencies one should have and finally matching the needs of the person with the company. A strong emphasis is given to the attitude of the person, along with different skills, educational qualifications and the institute from which the candidate has graduated.

The majority of HR managers have some kind of bad experiences with their recruitment programs, for example, with advertising of jobs in the newspapers or magazines. It results in too many applications with little potential. Another problem faced by HR managers is acquiring a new employee, after a formal job offer is made. At times, after getting the appointment letter, the candidates do not take up the job and use it to get a job in their preferred organisation. Further, at times the same candidate's profile comes to an organisation from two or three consultants. In such cases, it becomes a difficulty for the HR manager to figure out if there are different candidates or there is a single candidate. Moreover, many MNCs (which are not famous) are unable to get an early date for campus interviews. As a result, they end up with below average students. HR managers also report the need for new tests to suit the Indian context. For example, a Hong Kong based telecommunication firm has developed tests for customer sensitivity, service orientation and test around their core values.

HRM in India is known to be strongly influenced by social relations, political affiliation, informal networks, one's caste and religion (see Saini and Budhwar, 2007; Sparrow and Budhwar, 1997). However, it seems that such influence is almost non-existent in the case companies. And if it is there, then MNCs are using this to their advantage. For example, Honda cars, Avon Beauty Products, Grand Hyatt and many other firms use employee referrals with great success by mixing them with structured and formal approaches.

## Human Resource Development

Like the recruitment function, training and development programs are also clearly structured, formal in nature and most of the times linked to the performance system of the MNC (this is another strong deviation from local firms). The training programs used in India are to a great extent a reflection of the global training set-up of the MNCs. For example, companies like Max New York Life Insurance, Honda, Motorola, GE, Siemens, Hyundai and Hughes Software Systems have established their own 'management training centres' in India, where the courses offered are similar to those offered in other parts of the world in their affiliates or HQs. Apart from in-house training facilities, the help of external training consultants is also taken. A variety of area-specific training programs are provided by MNCs in their India centres. These include both soft (such as behavioural, supervisory, management, leadership, communication, ethics, culture, team building) and hard skills (such as operational, technical, quality). Training programs also cover most functional areas such as marketing, organizing, accounting, business strategy, human resource management, and production. Apart from these, most MNCs have also established induction and orientation programs for up to four weeks. These form part of the global training programs. The majority of the MNCs do not have any serious problem in adopting such training programs in the Indian context, but they do make amendments to them to suit the local context.

All the MNCs practise some kind of on-the-job training. It varies from a few days to a few weeks. Both internal and external experts are used in this regard and it is formal in nature. Most of the firms also adopt some sort of 'shadowing system' or 'overlap system' while providing on-the-job training. Moreover, all the MNCs formally analyze their training and development needs. It is generally conducted once or twice per year (at times on a quarterly basis) when the performance appraisal is carried out. This is mainly an outcome of the emerging training needs, which are either identified during the performance appraisal process or by the section heads or immediate supervisors through formal formats and regular discussions.

Despite the systematic and formal approach to employee development, the HR managers report some problems with the training programs. First, trainers, especially internal, find it difficult to train a higher status employee. India is known to be a high power distance country (see Hofstede, 1991). This aggravates both learning and communication problems between different levels of employees. Second, during the induction and orientation programs, due to less inter departmental co-operation (i.e., when new recruits are sent to different departments for orientation, they are not given the required attention), some MNCs find it hard to achieve the required training results. Third, at times, some companies do not have a sufficient training budget. Fourth, HR managers also report the scarcity of training experts in some specific areas (such as quality control and new management interventions). Lastly, a more serious problem is regarding the older employees, who do not have a proper university education and often hesitate to adopt new technologies and modern approaches to management.

To a great extent then, the structured, formal and thorough approach (consisting of both internal and external experts and venues), along with on-the-job coaching is proving to be useful in providing a successful training program for the MNCs operating in India. As the competition is increasing, with a strong emphasis on performance, it is expected that MNCs will be able to correct the above identified problems. Performance related pay and bonus (which is already practised in many MNCs operating in India) will further help in this regard.

## Performance Management System

A formal and structured approach to performance appraisal system is common in most MNCs under study. To a great extent, the majority of firms have introduced a periodic appraisal or assessment system, generally developed in their HQs, which form part of their global policies concerning performance appraisal in India. The majority of firms have a yearly-based appraisal system. Some firms like Hyundai, Carrier Aircon limited have it on a six monthly basis and some even on a quarterly basis tied to the yearly cycle (such as Glaxo SmithKline Beecham). All the firms have a structured format and a clear set of parameters for appraisals. In many cases the appraisal starts with a self appraisal, in which the individual writes about oneself and then s/he is appraised by the immediate supervisor. However, the general trend is that the immediate supervisor appraises the employee and gives their report to the person. They then read it and have to counter sign before it is submitted to the section head. If required, then adjustments are made by involving the section head. At times, the section head also appraises his section employees. A number of issues related to future movement, cross function movement, training needs identification, key performance areas and possible targets are analysed.

Most MNCs have an individual based performance appraisal system, though some (like Whirlpool and RSMI) also go for a group based system. Almost all the firms use some kind of rating scales, grading or ranking system and set targets for appraisals. For senior managers many firms are using techniques such as the 360 degrees. In over sixty percent of the research firms, performance appraisal is primarily determined by an objective measure of individual performance (such as sales). The above discussed appraisal system, which is quite comprehensive, has some drawbacks. However, the majority of HR managers are convinced that this is the way forward and believe that over a short period of time either employees have accepted it as a fact of life or are quickly getting used to it. Most organisations also use the appraisal system to identify their training needs. Still, there is scope for improvement in the existing system. For example, in the present system there is relatively less participation of individual employees regarding their goal setting (though few companies claim they are doing it). This reflects the hierarchical nature of Indian society. Perhaps, a more participative approach could be beneficial (as experienced by some Japanese firms operating in India).

## **Compensation, Promotion and Retention**

By far the most different amongst the global HR policies are the compensation of local employees in the Indian units. The main reasons in this regard are the low labour costs and the availability of large number of skilled human resources in India. To a great extent, the recent success of BPO and contact centres is based on these factors (see Budhwar et al., 2006). Still in comparison to Indian national companies the compensation packages of MNCs are far more attractive (see Venkata Ratnam, 1998). Firms like Escotel, JCB, Motorola, Honda Scooters, Whirlpool, GE and many others set up their compensation packages on the basis of market trends by conducting regular surveys and by bench marking their packages against the best payers. Many MNCs adopt a grading system to compensate their employees. Others, on top of it also practise performance related compensation – a mixture of company and individual based performance. Almost all the firms pay a bonus to their employees. A variety of bonuses are paid in MNCs operating in India, such as based on individual, group and organization's performance or a mixture of these. Many times firms pay up to twenty four percent of basic salary as an annual bonus.

Despite competitive compensation packages provided by the MNCs, most firms experience managerial turnover. However, at the moment, due to the recessionary conditions this is not a serious problem. It also varies according to the nature of firm. For example software and IT related firms report an attrition rate of up to nineteen percent. The main reasons identified in this regard are moving to better jobs, moving abroad, family reasons or for higher studies. Firms adopt a number of measures to retain employees such as salary surveys to stay as one of the best pay masters in the market, culture building exercises, exit surveys, counselling and career development. Some of the software and IT based companies have been recently more successful in retaining their employees. Possible mechanisms adopted by them include the 'fast track programs' where the potential performers get moved on to a fast track which means that you may jump levels, get higher responsibilities than many others. Another is the 'hot-skills program', where people with skills which are very much in demand in the market get paid better than others. The list of these skills gets published every year people can acquire those skills and move into that segment. Firms adopting such programs have found them useful. Other firms experiencing employee turnover problem should seriously consider them.

## **Globalisation versus Localisation**

To a great extent, many global HR practices can be adopted in Indian units with minor adjustments. Perhaps the key reason for this is the awareness of Indian employees about the way of doing things in different parts of the world (due to their management education system). Still, the importance given to social networks can be a big hindrance in further reducing the gap. The key task for the HR department of India centre is to identify and mould such social issues on the one hand and the preference of the headquarters on the other to develop an appropriate HR policy for India. For example, three Korean manufacturing firms examined during this research, during the initial years brought a large number of expatriates to inculcate their philosophy into their Indian operations. A strong emphasis was on the adoption of their manufacturing technology. In that regard, a number of Indian employees were and are still sent to Korea. However, over a period of time, the number of both the

Koreans expatriates working in India and Indians going to Korea has been significantly reduced. Now there are enough trained people to carry out the 'Korean way of working' in India.

Further, India is a large country with massive regional differences – cultural, economic and political. Accordingly, the employment conditions (such as for the availability of labour, cost of living, state taxes, etc) vary significantly. For example, it is costly to set-up a plant in one of the metropolitan cities in comparison to less populated and less costly areas. Hence, it is not sensible for MNCs to establish strict nation-wide policies such as for compensation and various benefits (such as housing and travel). On the other hand, if a particular MNC such as GE has many units in India spread over different geographical locations, then it might be useful to have India wide policies such as career development by moving personnel to different regional offices. It will not only help to integrate the various units with the India centre but will also help to share and possibly convince local joint venture partners to resolve HR related issues and refine their HR practices. There are then many opportunities for MNCs to learn from and teach to local partners in India. For example, at times, few corporate policies (such as related to training and development) are being created in the India centres (especially in IT and software related firms under study) and then transferred to other affiliates of a particular firm.

## **Learning and Sharing of Knowledge**

A number of established HR related networks exist in India. Almost all the HR managers of India centres are in one way or other affiliated to these. These networks form the part of many forums (such as Delhi, Bombay chapters of HRD network), professional bodies, national and regional HRD network, local and national management association (such as All India Management Association), confederation of Indian industries (CII), Indian Society for Training and Development. Such bodies organise a number of conferences, seminars and workshops. Information related to different HR trends such as compensation, recruitment practices, retrenchment, work environment, new developments in the area, staff welfare, competition, etc are shared during such meetings.

These meetings are held at regular intervals such as bi-monthly, monthly, quarterly, bi-annually or annually. The main outcome of such meetings and networks is to help HR managers to update themselves regarding developments in the field and share difficulties faced by them and at times are able to get useful solutions for the same. They also help them to develop an understanding about the latest trends in HR policies and practices (such as compensation benefits, market leaders – best payers, recruiters, etc.). This information is regularly shared with regional and world HQs of MNCs and accordingly modifications in HR policies for India and at times other regional units are made. All the above discussed points then helps HR centre to develop and transfer effective HR practices across MNC affiliates in India; transfer learning about effective and relevant HR policies and practices to their own company from both national and international firms; forward clear message to their corporate HQs regarding what will be an effective HR practice in the Indian context and possibly in similar developing countries around the world. With the existence of such a useful set-up of relevant networks, there is plenty to learn for the MNCs.

## **THE FUTURE OF HRM IN FOREIGN FIRMS OPERATING IN INDIA**

As more and more MNCs are lined up to enter India and as national firms are modifying their HRM systems in order to compete with foreign firms, the management of human resources has become crucial. However, due to the absence of reliable information, foreign firms find it challenging to successfully manage their human resources in the Indian context. An attempt has been made in this research to fill this gap. Despite of some significant limitations (such as only one level of managers was interviewed, the study has a small sample size and no expatriates were questioned), the study provides useful information regarding the type of HRM system suitable for foreign firms operating in the Indian context.

The India centres are proving very useful for not only implementing core HR systems but also in the creation and transfer of knowledge and integrating the various units (both within India and at times in the region). They play a crucial role in the transfer of core HR philosophy and organizational culture from headquarters to Indian affiliates. The study provides clear evidence regarding the successful implementation of many global standardised HR policies and practices and the successful adoption of a formal, rationalised and structured

approach to HRM in the Indian context (which to a great extent is opposite to what is adopted in the majority of Indian national firms). The adoption of the 'polycentric approach' to HRM is proving to be successful. However, to stay successful in the long run it is advised that HR managers of foreign firms should try to sort-out the problems (faced by the HR function) highlighted by our analysis and also give more consideration to the local context. For example, our results reveal that in comparison to national firms, MNCs under-score on informality, employee loyalty and importance given to the Indian context (such as importance of job security and career development – issues which are important in the Indian context).

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# SUBMITTING VEHICLE CLAIMS FOR AUDITING

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## ABSTRACT

*Nowadays, fraud is a major enemy of insurance companies. For the total of R\$ 28 billion in claims, an estimated R\$ 7 billions must be fraud. Since the claims represent 59.9% of the premiums paid by the companies, frauds represent 15.0% of them. Therefore, great caution is to be taken in order to detect the frauds and not to pay for these claims. One of the most important detection tools is the audit. But because it is an expensive service, it is not possible to audit all claims. On the basis of this caution, the goal of this work is to test some strategies of how to select claims to be audited. The strategies used become more complex, from the first to the fifth, starting with simple thoughts for the first three strategies, and the utilization of logistic models and neural network to estimate the probability of a fraud detection on the fourth and fifth strategies, respectively.*

## INTRODUCTION

An insurance contract involves a bilateral agreement between the insurance company and the beneficiary in which the company covers the risk. The policy holder's attitude regarding a claim is not always honest. Insurance companies have been more and more concerned with insurance frauds, since the claim represents a high cost that corrodes the company's profit margin.

Some theoretical studies on insurance frauds consider some audit patterns to control the frauds [1], [2]; however, the cost of these audits may render such action unfeasible. This action assumes that the company can obtain some information on the claim through auditing, but at a cost. It implicitly suggests that the auditing process always distinguishes a fraudulent claim from an honest one. The main discussion involves the preparation of a contract that minimizes the insurance company's cost by including the full payment of the claim plus the audit cost. Normally, the models that have this structure use the overall amount of the insurance to decide on applying monitoring techniques [1], [3]. In some other works, deterministic audits are compared with random audits [4], or the insurance company is supposed to accept an audit strategy.

Models have been designed to detect frauds; reference [5] used multiple linear regression models to select indicators of different types of fraud. Reference [6] utilizes fuzzy techniques to classify the claims. Reference [7] proposes a self-organizable neural network to create groups of claims by characteristics; whereas [8], [9], [10] suggest discrete choice models to estimate the likelihood of a fraud existing in the claim as based upon the knowledge of the data base on the portfolio of the insurant's behavior.

This paper aims at creating strategies to support the decision of paying for the insurance or forward it to auditing (including such procedures as investigation, inquiry etc.). The strategies will rely on simple thoughts and models that will estimate the probability of a fraud to be detected after auditing a certain claim. After estimating such probability, the multiplication of it by the value of the claim is an estimate of the savings produced should it be sent for audit to check for fraud.

It is important to emphasize that the fraud variable is a non-observable variable [11]; that is, the source of information used is the base of audited claims, with possible cases of undetected frauds. Another selection bias is the non-assurance that the audit result will reflect the reality, and in some cases of fraud it might not be detected, even after the audit. Therefore, the focus of this study becomes estimating the likelihood of detecting a fraud after the audit and, by this, selecting the claims that should be forwarded for auditing.

Such likelihood shall be estimated by a logistic model and by a Neural Network Model. After such estimate, the strategies of forwarding to audit will be tested in order to verify the best technique to be used by the companies. Such decision shall take into account the claim value and the audit cost.

## **FRAUDS IN INSURANCES**

The main role of insurance is to reestablish the financial balance caused by a physical, material or moral damage. By contracting insurance you protect your assets, since you will rely on the insurance company's support to pay for repairs or to replace your asset [12].

This financial balance provided for by the insurance companies protects their users and reflects a constant quest, on the part of the insurance companies, for a better relationship between both parties entering into the insurance contract.

On the other hand, one of the biggest obstacles to this relationship is fraud. It hinders the progress of insurance industry and penalizes not only the operators, but also the insureds [13]. A fraud can be understood as any deliberate, deceiving act committed against or by the insurance company, broker, service provider or the policy holder with a purpose of obtaining a non-guaranteed financial gain. The fraud occurs during the process of contracting and use of the insurance [14].

So, it can be defined as an exogenous factor that has been causing a rise in the price of insurance. The defrauders have taken advantage of gaps in the internal investigation systems of the companies to implement schemes that have become more and more elaborate and brought about damages to these companies for many years. The frauds can be committed by gangs or by the ordinary citizen; in the latter case the fraud is committed by reason of financial necessity or a tempting opportunity. The main insurance branches affected by the frauds are as follows: Cars, transportation, fire, health, personal accidents, life, civil responsibility, tourism.

A study ordered by the National Federation of Private Insurance and Capitalization Companies (FENASEG) assessed the economic impact of frauds in the insurance sector to be an estimated R\$7 billion out of a total of claim amounting to R\$28 billion in 2004. Such cost will only be reduced with a reduction in claims, thus causing the companies to reduce the price of insurance and broaden their market share.

There are cases of fraud in life, assets, health and travel insurance. However, the most common ones are those involving automobile insurance. Here there is a range of possibilities in which the defrauder can act, from the issuance of the policy to the occurrence of the claim. There is a false perception on the part of the population that this type of fraud is acceptable. The most common types of frauds in car insurance are as follows: Simulated robbery of vehicles and objects; aggravation of a claim in order to obtain total loss or a compensation for previous damages; contracting responsibility for third party claims; request of an overinvoiced receipt or in duplicate in order to get reimbursement of whole amounts; overpriced budget in workshops for self-benefit; connivance on the part of the broker to simulate a claim; connivance on the part of the preliminary surveyor for not reporting the damages on the vehicle. The good consumers end up being the main victims of this fraudulent system, for the value paid for their insurance is directly influenced by the increase in the prices.

The fraud is to date one the main challenges of the insurance market. It is necessary that more efficient measures and efforts be taken by the institutions in order to get this picture to improve [15]. Through such information, the companies are able to realize the best equipment acquisition and maintenance (or any other service) possibilities at a lower cost.

However, in many cases, surveying such information involves the collection of data throughout the company's several areas. This ends up bringing about a long delay or incomplete information (in the case of short terms). Even with all the information on hand, there still has to be a detailed comparative analysis of the information for a decision to be made.

In this context, the Maintenance Logistics Cost Simulator is a system that aims at simulating the maintenance costs of equipment, also taking into account its components, for a better logistic planning.

the Maintenance Logistics Cost Simulator will use both historical information and information from the equipment market used in the Company. Based upon the aspects informed above, this tool will help in the decision-making processes for the maintenance or purchase of equipment.

## **MODELS FOR PROBABILITY ESTIMATION**

### **The Logistic Model**



Regression models play an important role in many applications by providing prediction and classification rules and are used as an analytical data tool in order to understand the interactive behavior of different variables [16]. In the dichotomized case, the depending variable indicates the occurrence or not of a certain event. By defining the  $Y_i$  variable as the  $i$ -th individual in the sample to assume one of the two possible results, 0 or 1,  $Y_i$  has a Bin ( $n_i, p_i$ ) distribution, being  $p_i$  the likelihood of success.

$Y_i$  can be represented through a linear model

$$Y_{ij} = \beta'_j X_i + u_{ij} \quad (1)$$

Where  $X_i$  is a vector of observed characteristics to the  $i$ -th individual,  $\beta_j$  is a vector of unknown parameters to be estimates, and  $u_{ij}$  is the error associated with the  $i$ -th individual, whereas  $u_{ij}$  can be estimated by a discrete model. The type of model depends on the suppositions made on the distribution of  $u_{ij}$ .

The expected proportions  $p_i$  can be modeled as follows:

$$\eta_i = \log \left( \frac{p_i}{1 - p_i} \right) = \beta_0 + \beta_1 X_{1i} + \dots + \beta_q X_{qi} \quad (2)$$

By assuming  $\eta_i$  and performing some operations in the equation above, the probabilities can be represented

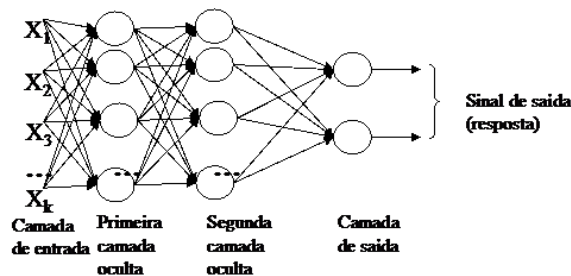
$$\text{like: } p_i = \frac{e^{\eta_i}}{1 + e^{\eta_i}} \quad (3)$$

Therefore, the output of the logistic regression is the likelihood of an 'i' individual to belong to the class assuming value 1. Such result is well used in classification problems and will be used in Strategy 4 as an estimate of the likelihood of a fraud to be detected if  $i$ -th claim is submitted for auditing.

## Neural Network Model

The neural networks are non-linear models that were developed on the basis of how the human brain works. These models have neurons (functions) that receive stimuli and spread them on to other neurons until the last layer is reached, the propagation of which is the model's response. There are several neural network structures; the one represented below was used in the fifth strategy tested and uses multiple layer perceptrons.

Multiple layer perceptrons consist of neural network trained in a supervised way through the error backpropagation algorithm. This algorithm is based on the rule of learning by error correction. Figure 1 shows the architectural graph of a multiple-layer perceptron with two hidden layers and one output layer.



### Translation:

Camada de entrada = Input layer  
 Primeira camada oculta = First hidden layer  
 Segunda camada oculta = Second hidden layer  
 Camada de saída = output layer  
 Sinal de saída (resposta) = Output signal

**Figure 1: Architectural graph of a multiple-layer perceptron with two hidden layers.**

This network can be used both in regression and classification problems. The use of it as a classifier must be employed with care when it is intended to estimate the probability of pertinence in a given class. According to the passage below from Simon Haykin's book, such utilization is possible, but a logistic function must be used in the output neuron and there must be a training set that is large enough.

"One multiple-layer perceptron classifier (using the logistic function as non-linearity) indeed approximates the subsequent class probabilities, since the size of the training set is large enough and the learning process does not get stuck to a local minimum" [17].

## CASE STUDY

The case study refers to data from 418 claims of a Brazilian company that were audited with an aim at detecting frauds in third party claims. For the study, an audit cost of R\$2.000,00 was adopted.

At a first moment, the data base was divided into two parts, one part of 40 cases separated for the study (20 fraud-detected claims and 20 with no frauds detected) and the 378 remaining cases were used to estimate the parameters for the models. Five audit forwarding strategies will be assessed within the data for the test, namely: Strategy 1: Not to audit any case. Strategy 2: To audit all the cases with a claim higher than the audit cost. Strategy 3: To use the probability prior in order to estimate the expectation of savings should the claim be audited. If such expectation is higher than the cost of the audit, the claim will be audited. Strategy 4: Utilizes the same logic as Strategy 3; however, the probability will be estimated by a logistic regression model. Strategy 5: Utilizes the same logic as Strategies 3 and 4; however, the probability will be estimated by a neural network.

## Strategy 1

No cases, the result is R\$ 0, since there was no cost with auditing and no claim to be paid for.

## Strategy 2

Upon auditing all the claim cases, higher than R\$ 2.000,00, of the test base an overall expenditure of R\$34.000,00 was spent to audit 17 claims. Overall, 7 frauds were detected and the savings amounted to R\$112.571,41. Therefore, the final output of Strategy 2 is savings of R\$78.571,41.

## Strategy 3

The fraud probability prior (25% as calculated on the basis of the FENASEG estimate) must be used in actual data, but for testing this strategy the percentage of utilization of 25% was not fair, since the test sample is balanced; that is, the number of fraudulent and non-fraudulent claims is the same. Therefore, the probability used for the calculation of the expectation of savings was 50%.

The auditing of the 14 cases selected generated a cost of R\$28.000,00 and savings of R\$109.003,81 due to non-payment of claims in which frauds were detected. The final outcome of this strategy was R\$81.003,81.

## Selection of Variables for Strategies 4 and 5

Strategies 4 and 5 used models to estimate the probabilities of a fraud to be detected after the audit of the claim. For that, some characteristics were used with the intent of modeling this probability from the explanatory variables. The variables to be tested can be seen in Table I.

**Table 1: Variables to be Tested.**

| Variable | Description   |
|----------|---|
| X1       | Nr. of installments of the insurance contract         |
| X2       | Adjustment factor for the vehicle value               |
| X3       | Value of premium paid / market value                  |
| X4       | Driver's age  |
| X5       | Quantity of claims / quantity of policies             |
| X6       | Age of the vehicle                                    |
| D1       | Partial loss claim                                    |
| D2       | Total loss claim                                      |
| D3       | Claim involving a third party                         |
| D4       | Total loss coverage contracted                        |
| D5       | Robbery coverage contracted                           |
| D6       | Third party coverage contracted                       |
| D7       | Personal accident coverage contracted                 |
| D8       | State of the claim different from Traffic Dept. State |
| D9       | 00:00 < claim time < 06:00                            |
| D10      | Policy holder's sex                                   |
| D11      | Claim informed between 1 and 60 days                  |
| D12      | Claim occurred within the first 60 days of policy     |
| D13      | Suspicious words: ex.: obstacles, light post...       |

The variables of Table I were normalized and went through two variable selection algorithms. The SIE method (Table II) described in [18] selected six variables. One other method used was the LSE () described in [19]. By using a cutting point at 80% of accumulated significance, this method selected nine variables, out of which five coincided with the SIE method. Following this selection of variables, specialists were consulted in order to verify the need to force any variable into the model that is deemed indispensable. The specialist pointed only the D12 variable.

**Table 2: Sie Method.**

| Simplification | Significance | Accumulated Significance |
|----------------|--------------|--------------------------|
| X3             | 66.17%       | 66.17%                   |
| X4             | 5.69%        | 71.86%                   |
| D3             | 5.43%        | 77.29%                   |
| X6             | 4.27%        | 81.56%                   |
| X1             | 4.12%        | 85.68%                   |
| D4             | 3.97%        | 89.65%                   |

**Table 3: LSE Method.**

| Variable | Significance | Accumulated Significance |
|----------|--------------|--------------------------|
| D1       | 14.8%        | 14.8%                    |
| X6       | 13.3%        | 28.0%                    |
| X1       | 11.8%        | 39.8%                    |
| D13      | 11.1%        | 50.8%                    |
| X5       | 10.3%        | 61.1%                    |
| X4       | 8.1%         | 69.2%                    |
| D3       | 5.1%         | 74.3%                    |
| D5       | 4.8%         | 79.0%                    |
| D4       | 4.1%         | 83.1%                    |
| X2       | 3.2%         | 86.3%                    |
| D6       | 2.9%         | 89.2%                    |
| D2       | 2.5%         | 91.7%                    |
| D11      | 2.3%         | 94.0%                    |
| X3       | 2.2%         | 96.2%                    |
| D12      | 1.4%         | 97.6%                    |
| D7       | 1.2%         | 98.8%                    |
| D8       | 0.8%         | 99.5%                    |
| D9       | 0.4%         | 100.0%                   |
| D10      | 0.1%         | 100.0%                   |

## Strategy 4

Strategy 4 makes use of a logistic regression model to estimate the probabilities of fraud so it can assess whether or not it is necessary to conduct an audit of a certain claim.

On the test base, the results were 75.0% of correct classification and one Mean Square Error (MSE) of 0.199, thus pretty close to the value of the base used for the estimate (MSE=0.198). The values presented by the MSE in other sets of variables were very close to the values presented in this set. For this MSE value, a 66.7% correct classification percentage was obtained on the estimate basis.

Strategy 4 selected 12 claims for audit, out of which 6 were detected for frauds. The overall cost of the audits was R\$24 thousand, whereas non-payment for fraudulent claims resulted in savings of R\$109.003,81. Therefore, the final result of Strategy 4 is R\$85.003,81.

## Strategy 5

Strategy 5 uses a neural network to estimate the probability of a fraud to be detected after an audit. For this end, the neural network must have an output neuron with a sigmoid function [17]. Now, the number of neurons in the hidden layer and their functions may vary. In order to select the best network topology, the estimate data were divided into two groups: the first one having 70% of the overall data was used to estimate the parameters; the remaining 20% were used for validation (having in mind that 10% were separated for tests). At a first moment, the number of neurons in the hidden layer was tested, having a variation between 3 and 9. The results (Table V), after a cross validation with 100 combinations of fitting set and validation, show superiority of mean correct classification, and a lower Mean Square Errors (MSE) for the network with 5 neurons in the hidden layer.

**Table 4: Result of the Cross Validation for Performance (100 combinations).**

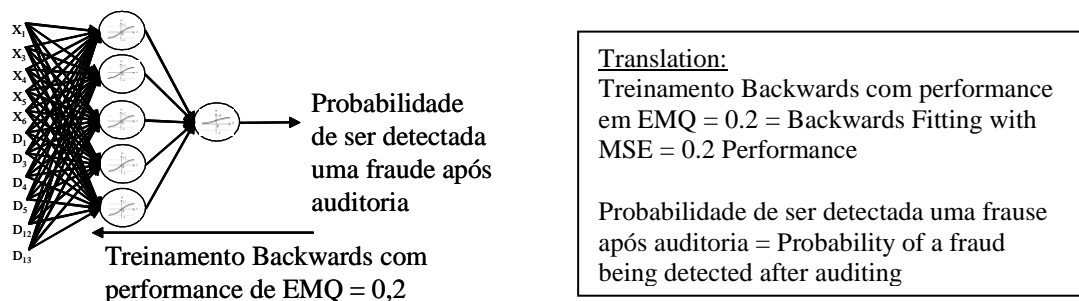
| Statistics  | Number of Neurons in the Hidden Layer |       |       |       |       |       |       |
|-------------|---------------------------------------|-------|-------|-------|-------|-------|-------|
|             | 3                                     | 4     | 5     | 6     | 7     | 8     | 9     |
| Mean of MSE | 0.227                                 | 0.228 | 0.221 | 0.225 | 0.220 | 0.223 | 0.225 |
| MSE Minimum | 0.167                                 | 0.189 | 0.183 | 0.168 | 0.175 | 0.167 | 0.163 |
| Mean Hit    | 65.4%                                 | 65.0% | 66.0% | 65.1% | 65.8% | 65.5% | 65.1% |
| Maximum Hit | 76.5%                                 | 74.1% | 75.3% | 75.3% | 75.3% | 78.8% | 76.5% |

After selecting the number of neurons, the definition of a criterion to choose the moment of stop of the fitting is required so as to avoid overfitting. For this end, some performances (measured by the MSE) were tested in the training by using a cross validation similar to the previous one. The results (TABLE IV) of this test show superiority when the network is fitted with a MSE of 0.20.

**Table 5: Result of the Cross Validation for the Number of Neurons (100 combinations).**

| Statistics  | Performance (MSE) in the Training |       |       |       |       |       |       |
|-------------|-----------------------------------|-------|-------|-------|-------|-------|-------|
|             | 0.17                              | 0.18  | 0.19  | 0.2   | 0.21  | 0.22  | 0.23  |
| Mean of MSE | 0.234                             | 0.222 | 0.221 | 0.221 | 0.224 | 0.226 | 0.235 |
| MSE Minimum | 0.180                             | 0.162 | 0.171 | 0.174 | 0.164 | 0.167 | 0.191 |
| Mean Hit    | 65.4%                             | 65.9% | 65.9% | 66.5% | 66.2% | 64.8% | 62.7% |
| Maximum Hit | 74.1%                             | 75.3% | 76.5% | 77.6% | 77.6% | 78.8% | 75.3% |

After these results, the network topology has been well defined by using the eleven variables selected. This topology can be summarized by Figure 2.



**Figure 2: Topology of the neural network**

The set of tests was used for the purpose of strategy comparison; however, before calculation the strategy results, the network performance will be analyzed. As for the estimate of probabilities, the mean square error (MSE) on the test basis was 0.18, whereas 75% of cases were classified correctly. The results to Strategy 5 were obtained through the estimated network probabilities. In this strategy, 11 claims are selected for audit, out of which 7 were detected for fraud. The overall cost of the audits was R\$22 thousand, whereas non-payment for fraudulent claims resulted in savings of R\$112.571,41. Therefore, the final result of Strategy 5 is R\$90.571,41.

## CONCLUSIONS

As it could be seen in this work, the intelligent techniques can help companies save capital by selecting the claims that should be audited. As the complexity of the selecting intelligent algorithm increased, the results were get better; however, in terms of classification, the models showed positive results, though not so good. The models had a correct classification percentage of 75%. The MSE are not so good either; they are relatively high for a probability estimate. When the logistic model was used, the MSE in the test basis was 0.2, a result that, upon taking the square root, represents an absolute mean error of 44.6%. The neural network had a little better result, with an absolute mean error of 42.3%. Therefore, the probability of a fraud being detected after the audit is not so predictable. Other models can be used such as the TOBIT [11], which is an alternative for those cases where the response variable is not observable, but similar results to the logistic one are likely to exist. Other explanatory variables should be analyzed in order to improve the performance of predictions. The result of the comparison of strategies (Table VI) somehow was a little predictable; as the strategies become more complex, in a more robust manner, they get more efficient. Therefore, Strategy 1 has the worst result, since it is not inhibiting the fraud. Strategy 2 has better results, since fights fraud, even in a non-structured way. The other strategies are different from the previous ones, since they input the selection, in an intelligent manner, of the cases to be audited. While Strategy 3 uses the simplest method to estimate the probability of fraud (the probability prior), Strategies 4 and 5 make use of both statistical and computing intelligence to estimate them.

**Table 6: Ranking of Strategies.**

| Ranking | Strategy   | Result        |
|---------|------------|---------------|
| 1       | Strategy 5 | R\$ 90.571,41 |
| 2       | Strategy 4 | R\$85.003,81  |
| 3       | Strategy 3 | R\$81.003,81  |
| 4       | Strategy 2 | R\$78.571,41  |
| 5       | Strategy 1 | R\$ —         |

To select the claims, which must be sent for audit is an extremely difficult task, especially due to the high audit cost. However, such difficulty is to be faced. One of the most effective devices to date is the denunciation by phone to the insurance companies; but only a small share of frauds is denounced; once again, what really matters is the selection decision of fraud-suspected cases, which must be audited. There are cheaper mechanisms to detect frauds, though less effective. This paper used only the audit and an instrument.

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# **FIVE THOUSAND YEARS OF ORGANIZATION CHANGE: THE IMPACT OF PROCUREMENT**

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## **ABSTRACT**

*Organization change is often thought of as a contemporary issue. However, areas of the management discipline have developed and changed over time, one of the lesser known being procurement, which can be defined as "the art and science of buying and supply". Over the past twenty years this discipline has attracted international interest because of its growing importance as organizations increasingly outsource. Its management status has consequently changed in many organizations – in government as well as business. This paper sets out a brief international history of the discipline with the aim of uncovering elements that have implications for current management practice. The management advantages of adopting the progressive features of this former clerical function conclude the paper.*

## **INTRODUCTION**

Procurement is an old profession, yet it has attracted little attention from historians and not nearly as much as another profession with the same name and with which it is sometimes confused! Because procurement is a cross-disciplinary activity, the choices to be made exploring its past are very diverse. Is procurement aligned to the growth of trade, the emergence of large organizations, to the growth of bureaucracy or to globalization? This voyage of historical exploration is influenced by which part of the overall procurement picture one starts from.

As a starting point, it has been assumed that the development of procurement began with the emergence of sophisticated societies and their demand for trade perhaps 5000 years ago. There is little doubt that the need for some types of procurement policies and practices can be linked to the ensuing growth of organizations and their bureaucratic rules. These rules could also be linked to the need for standardized procedures and documents, the separation of owners and managers in private sector businesses and the requirement for transparency of public sector decisions and operations.

Due to the diversity of activities associated with procurement broadly defined as 'the science of buying and supply' for the purpose of this paper - what follows could be called a 'disjointed history'. It is organized around several themes from the ancient history of China, Greece, Rome and the Middle East; selected incidents from medieval Sweden, Britain, and France; the impact of the Industrial Revolution on procurement; and some reflections on procurement's development during the late-twentieth century. The narrative attempts to recognize some of the institutions which have shaped and nurtured the practices and traditions of procurement, as well as suggesting some surprising links between the procurement practices of times long gone and what we would call 'best practice' today. For example, the evolution of the contract under Greek, Roman and Anglo-Saxon Law shows a respect for trust, ethical behavior, obligation, relationship management, not to forget terms and conditions. Many of these elements are often thought to be products of the twentieth century!

## **PROCUREMENT IN THE "ANCIENT WORLD"**

There is strong evidence of active trade between China and what were then the city-states of the region we now call Greece nearly 3000 years ago, according to the Chinese scholar Shen (1998). As the centuries passed the

Silk Road from Asia to Europe provided an important transfer point for products and ideas from China and other Eastern cultures and the emerging societies in Europe (Blainey, 2004). Most had quite sophisticated social networks and this trade was probably linked to the emergence of work specialization in Greek societies as agriculture developed into cultivation and animal husbandry. Blainey (2004) suggests that possibly ten percent of the people in this region lived in villages and towns and performed non-agricultural tasks that were assisted by local as well as long distance trade and contracting.

Similarly, more self-sufficient societies also emerged around this time in Egypt and Mesopotamia where the growth of large cities, often of substantial construction, was associated with more sophisticated organizations and societies. As Roberts (1983: 73) notes:

*Their brick technology was advanced enough by the end of the Sumerian period to make possible very large buildings with columns and terraces ... by 3000BC the wheel was being used from transport. Another invention of the Sumerians was glass, and specialized craftsmen were casting in bronze... This example of innovation ... raises further questions: where did the raw materials come from? There is no metal in southern Mesopotamia... Clearly, a widespread network of contacts abroad is in the background, above all with the Levant and Syria, huge distances away, but also with Iran and Bahrain, down the Persian Gulf. Before 2000BC Mesopotamia was obtaining goods – though possibly indirectly – from the Indus Valley [now the site of modern Pakistan]. Together with the evidence of documentation ... it makes an impression of a dimly emerging international trading system already creating important patterns of interdependence.*

Numbering systems, so essential for contracting, finance and risk assessment emerged and were eventually dominated by the decimal system in use to this day. While the machinery of trade and contracting in ancient civilizations is not well recorded, the picture changed with the emergence of Rome. Moving forward some 2000 years, we find that Livy (15BC), whose writings have long challenged students of Latin, recorded that following the success of the Roman armies in Spain in the summer of 215BC, the army ran short of food, clothing and pay (though probably not wine). The Roman Senate sought to relieve the soldiers' position by sea, but found that the traders, who had the ships to do the job, also had risk management policies in place. The limited number of suppliers who came forward negotiated exemption from military service, "while employed in that public business, the second that their shipments should be made at the state's risk against attacks of the enemy or storms. On obtaining both their requests, they entered into the contracts, and the affairs of the state were conducted with private funds" (Livy, 15BC: 224).

The Romans created some sophisticated aspects of contracts that we still observe in some ways today. Maine (1861: 261) tells the story:

*At the earlier dawn of jurisprudence, the term in use for a Contract was ... nexum, and the parties to the contract were said to be nexi ... The notion that persons under a contractual engagement are connected together by a strong bond or chain, continued to the last to influence the Roman jurisprudence of Contract; and flowing thence it has mixed itself with modern ideas.*

One of the challenges created by the notion of a contract was that, even in Roman times, the issues of contract management and finalization were a difficulty. Maine (1861) records that a sale of goods contract, where the money and the goods were swapped by the parties at the time of the deal, was readily accommodated. But what happened when the delivery of either the goods or the payment was delayed? Maine (1861: 267) says that in these circumstances "the *nexum* was artificially prolonged to give time to the debtor". Thus the term *nexum* which had originally meant a conveyance (transfer) came to be a 'contract' but with some important essentials: agreement (a 'pact' or 'convention') plus an *Obligation*.

But wait, there is more to this. Roman contracts, according to Maine (1861:270), eventually came in four versions: "the Verbal, the Literal, the Real and the Consensual" each with its own formalities to be completed before the legal obligations were enforceable. The Verbal was a form of spoken agreement, the Literal was a form of written agreement, the Real Contract created legal duties between the parties (enshrining the sense of obligation between the parties), while Consensual Contracts comprised four types:

- *Mandatum* - a 'commission' or 'agency'
- *Societas* - a 'partnership'



- *Emtio Venditio* - a 'sale'
- *Locatio Conductio* - a 'letting' or 'hiring'.

The way these rules translated into a contemporary system of contracting was very complex, but the evidence suggests that most of the contractual styles we observe today, and some of the legal difficulties courts have had to adjudicate over the years, existed in the Roman Empire, if not before.

## SOME DEVELOPMENTS IN MEDIEVAL EUROPE

Just as early civilizations established trade relations with private suppliers, the monarchs of Europe would have also needed such undertakings. For example, after his conquest of the Anglo-Saxons in 1066, William the Conqueror ordered the creation of the Domesday Book to provide a systematized record of ownership. As Plucknett (1956: 12) notes, the Domesday Book, or 'the record' created centralized authority for the monarch. "The land was described county by county, village by village, the owners and their subtenants were listed and their holdings valued, even the farm stock was recorded, with a view to settling clearly the rights of the Crown and the taxable resources of the country". This complex task enabled the wealth of the nobility to be measured and for a tax system to be created. This form of supplier measurement was resented at the time but it established a basis for orderly procurement of funds and services by the Crown, both taxes and service.

Gustavus Vasa, King of Sweden, provides us with a terminal example of sixteenth century buyer-supplier relations with his oft-quoted statement (Gadde & Hakansson, 1993:1):

*By virtue of the grace invested in my royal office, I have decreed unto you to forge one thousand suits of armor and ten thousand arrowheads.*

*You have failed to obey this command!*

*At the peril of having your heads fall to the axe, to the amusement of the inhabitants of Stockholm, in the city square one holiday eve at my discretion, I once again command you to comply with my wishes.*

In France, Marshall Vauban (1633-1707) was a military engineer and a remarkable designer and builder of fortifications for the French monarchy. Vauban's contribution emerged from his insistence on qualification of suppliers whose selection was thus not just left to price. The following comments were sent by Vauban (1685:1) to his Minister (obviously in an age when public servants were permitted to provide frank and fearless advice):

*There remains several remnants of the works of the last years that are not finished and will never be finished, simply because, your Eminence, of the confusion caused by the frequent cuts which are made to these works. Breaking of contracts, failures to honor verbal agreements and new adjudications, only serve to attract those firms which do not know which way to turn, rogues and ignoramuses, and to make those with the knowledge and capability of directing firms, beat hasty retreats. I would add that they delay and inflate considerably the cost of these works, which are the worst since these cuts and the cheapness sought are imaginary. For the contractor is ruined, and like a drowning man who clutches at anything, he clutches at anything he can as a contractor. He does not pay the merchants who supply the materials, pays badly his employees, cheats on those he can, has only the worst, and since he is cheaper than the others, uses the poorest materials, quibbles about everything and is always crying for mercy from this one and that one. That is enough, your Eminence, to show you the folly of this way; leave it and in the name of God, go back to plain dealing; pay the price for the works and do not deny an honest salary to a constructor who fulfils his duties; that will always be the best deal you can find*

Again in France, Bernstein (1996:3) has reported on the birth of probability theory, so valuable for the assessment of risk, in the following way:

*In 1654 ... the Chevalier de Méré, a French nobleman with a taste for both gambling and mathematics, challenged the famed French mathematician, Blaise Pascal to solve a puzzle. The question was how to divide the stakes of an unfinished game of chess between two players when one of them is ahead. The puzzle had confounded mathematicians since it was posed some two hundred years earlier by the monk Luca Paccioli [inventor of double entry bookkeeping]. ... Pascal turned for help to Pierre de Fermat, a lawyer who was also a brilliant mathematician. The outcome of their intellectual collaboration was intellectual dynamite... that led to the discovery of the theory of probability, the mathematical heart of the concept of risk.*

*Their solution to Paccioli's puzzle meant that people could for the first time make decisions and forecast the future with the help of numbers*

Britain has been a rich, though not the only, source of historical procurement artifacts, having made good use of some of the most important aspects of procurement including negotiation and bargaining, strategic alliances, competitive pricing and supplier management. From around 1500, the so-called Mercantilist era, which lasted about 150 years, was centered upon the accumulation of gold, the development of shipping (to help develop the British Navy) and a firm focus on the rise of Britain as a nation-state. Economic development was based on a national commercial perspective, supported by parliament.

This became associated with colonial power in the hands of both government and the development of major corporations such as the East India Company and the Hudson Bay Trading Company. These companies were given monopoly power by Parliament at the expense of individual traders. It is an interesting aside that the power of the East India Company grew so great that British governments of the late-eighteenth century struggled for economic authority over the Company. For example, there is evidence that the British Government had to gain the Company's approval to create a settlement in New South Wales. However, the Mercantilism economic approach, with its focus on the accumulation of wealth through international competitive advantage, gave way to the combined influences of the increasing power of the middle classes in the Parliament and new economic ideals such as those espoused by Adam Smith.

Without being able to foresee the emergence of the Industrial Revolution of the eighteenth century, at least in Britain, the political and economic framework of industrial development was sown in the name of establishing national economic supremacy. Trade was seen to be important and as parliamentary democracy emerged, merchants and other members of the lower classes were granted a voice in the House of Commons. Thus, at the start of the Industrial Revolution, Britain had strong domestic markets, the potential of export markets and Parliamentary support for commerce. Indeed, the spirit of commerce was a driving force. Further, the notion of the Contract had developed to the point that, as Maine would report, it contained elements of obligation, ethical behavior as well as the foundations of a legal relationship:

*... a signification by the promising party of his (sic) intention to do the acts or to observe the forebearances which he promises to do or to observe. Secondly, a signification by the promisee that he (sic) expects the promising party will fulfill the proffered promise.*

Adam Smith documented the market-managed elements of procurement (1776: 406-7) and suggested that:

*... manufacturers could not afford to retail their own goods as cheap as a vigilant and active shopkeeper, whose sole business was to buy them wholesale, and retail them again. The greater part of farmers could still less afford to retail their own corn, to supply the inhabitants of a town, at perhaps four or five hundred miles distance from the greater part of them as a vigilant and active corn merchant, whose sole business is to purchase the corn wholesale, to collect it into a great magazine, and to retail it again.*

Status has also been a problem for purchasing practitioners. As long ago as 1915, Twyford (p. 11) noted that while organizations ignored the importance of purchasing at their peril, there was also "too great a tendency to belittle purchasing and treat it in a negligent and offhand manner". However, the issue of status is gradually diminishing as an issue as enhancements to the function, activities and responsibilities of procurement professionals take hold. Business policy has also changed, particularly in relation to outsourcing; a poorly explored process which is widely practiced in public and private sectors.

## **THE RISE AND RISE OF PROCUREMENT**

Until the technological developments of the past 20 years, conventional ideology regarded procurement as the practice-based administrative process of buying the goods and services required to satisfy the functional needs of managers. Rules, regulations, procedures and protocols were typical of the process. Procurement staff stood as financial and operating sentinels between the managers and their material requirements, centralising the supply

task and creating management control over expenditure. Procurement was both a powerful and sometimes hated position with its virtual monopoly over acquisition.

Some researchers suggest that the modern evolution of procurement is characterized by the principal business and government requirements of the time. For example, Monczka, Trent and Handfield (2002) suggest that the evolution of procurement can be traced through a number of stages: emergence around the mid-nineteenth century (in their view), through a period of recognition before World War II, rapid increase in sophistication in procurement during that War, followed by a period of quiet gestation. However, in the last 35 years, the profession has moved into a period of major reform in materials management and faced the challenges of globalization, technological change and the emergence of supply chain management.

An aside about Defense procurement is worth recording here. As Weidenbaum (1998) reports, defense "procures products that are not yet designed or for which production experience is lacking and at prices for which there is little precedent." But that is not all the story: defense procurement often generates extraordinary levels of contract variation.

During World War II, the Douglas Aircraft Company (Douglas) was contracted by the US military to produce the A-26, a twin-engined light-bomber produced. This aircraft represented a significant advance in aircraft design and technology for the period and its development and construction was painful for all parties, not the least US General Henry 'Hap' Arnold who is reported to have made the following observations:

*'We cannot have more A-26s although we have plenty of fuselages, but not enough wings. We could have more wings if we had more spars, but we cannot build more spars due to difficult output of machinery. We might be able to build more wings if we were able to get more machinery, but whether we will be able to get more machinery I was unable to determine, and nobody could give me the answer. One thing is certain: I want the A-26 for use in this war and not for the next war. If something drastic is not done, we cannot hope to replace the B-25s, B-26s and A-20s with the A-26.'* Although the [A26] Invader looked pretty much the same throughout its production life, the aircraft was beset by hundreds of changes; as many as 35 a day ....

Those who have experienced the problems associated with product development and delivery problems, would readily identify with Arnold!

And to conclude this history, it is time to jump forward to the last 30 years of this story. By the late 1980s, the demands on procurement processes were shifting and, with it, traditional ideology and methods began to change. Procurement began to be mentioned in terms of a new concept called the *supply chain* (Oliver & Webber, 1982; Kuglin, 1999) and the importance of procurement was also recognized by Michael Porter's notion of the *value chain* (Porter, 1990). These changes were almost imperceptible until the capacity of computer technology became linked with the revolution in procurement processes.

Then quite suddenly, a routine clerical process operated by "unglamorous individuals" (Stewart, 1994) and designed to control the purchasing policies adopted by an organization began to be seen as having different potential. As part of the supply chain, procurement practitioners began to be seen as initiators within the procurement process. Coupled with developing concepts such as total quality management, customer service, supplier performance management and just-in-time inventory management, imaginative supply managers saw the opportunity to begin to manage their supply chains through the procurement process. So, rather than assuming their segmented role of days gone by, procurement practitioners began to view the entire extended enterprise and to, therefore, strategize with other key business functions to meet organizational objectives and to add value to the acquisition process.

## PROCUREMENT AS A CHANGE AGENT

The definition of procurement and the development of a uniform code of practice (and body of knowledge) remains a fundamental weakness of the notion of procurement. Traditional definitions emphasize the transactional or process focus of this function. For example, van Waele (2002, p. 10) suggests procurement means "all the activities required in order to get the product from the supplier to its final destination", and which:

*... encompasses the purchasing function, stores, traffic and transportation, incoming inspection, and quality control and assurance ... also salvage and environmental issues.*

However, Porter (1985, p. 41) defined procurement as "the function of purchasing inputs used in the firm's value chain, not the purchased inputs themselves ..." while Gadde and Hakansson (1993, p. 13) took a quite different view, describing procurement as an activity that "comprises a company's behavior in relation to its suppliers". Oakland (1991) widened the definition of procurement by including services, a critical change in definition that is, arguably, one of the fundamental reasons for the rise (and rise) of procurement – enormous growth in contracting for services. Oakland (1991, pp. 94-95) defined the goals of procurement as ensuring the "correct equipment, materials, supplies and services in the right quantity, of the right quality, from the right origin, at the right time and cost ... also ... providing information on any new products ... and services."

The emphasis on services is significant. It reflects one of the most significant forces driving the increasing sophistication of procurement decision making: outsourcing or contracting out. Historically, it was reflected in a complete change in the outlook of many manufacturers, as demonstrated by the comments of Sloan (1941, pp. 93-94):

*The Dodge brothers had started to make Dodge cars only a year or so before. In the trade world we believed they had changed from parts manufacturers into automotive makers because they believed their biggest customers contemplated making parts previously bought from Dodge. The same uncertainties that troubled makers of parts were valid worries of those who bought our parts. Suppose Buick or Willys-Overland or Ford suddenly got the idea it might be cut off from an important source of supply? Lack of one tiny part might hold up their assembly line. That fear was the nightmare of the business.*

Today the story is reversed: many organizations, especially those in high-cost economies, seek to outsource or contract out as many of their activities as possible. So the previous affinity with in-sourcing expressed by Sloan (1941) seems to have lost favor since the 1980s, to be replaced by outsourcing. As Ronan (2005, p. 7) notes, "outsourcing involves the sourcing goods and services previously produced internal within the sourcing organizations from external suppliers ... the term 'outsourcing' is most commonly used in relation to the switching of the supply of product or service activities to external suppliers".

While it is difficult to select one reason for the growing popularity of outsourcing, the rise of global sourcing, though well established in the history discussed earlier, has become more powerful as organizations seek to achieve their lowest cost goals. Could the influence of Peters and Waterman (1983) be greater than expected? Similarly, what has been the cumulative impact of the drive for small government, reduced taxation and more streamlined public and private sectors (Osborne and Gaebler, 1993) have also played a role? The popularity of Just-in-Time models of inventory management was undoubtedly driven by a need to liberate working capital from the potential waste caused by overstocking.

Significantly, outsourcing or contracting out creates involuntary organization change. Manufacturing and support staff are usually be redeployed to new tasks or retrenched. The specifications for outsourced goods or services have to be developed and managed to ensure that the contractual relationships ensure the quality and regularity of supply. The chain of command within the sourcing organization is exchanged for the legal contract. But it is clear that that is not sufficient. Some organizations attempt to create relationship structures with their suppliers to improve the reliability of their contracts and to gain additional benefit from the outcomes. Each of these seemingly incidental issues, adds to the scale of organizational change.

The definitions from Porter (1985), Oakland (1991), Gadde and Hakansson (1993) and van Waele (2002) typify the changing emphasis in the definition of procurement over the past decade and reflect the diversity of its origins (Goubeau, 1963; Zenz, 1994). The focus of these activities moves away from transaction processing, traditionally associated with procurement, towards a focus upon behavioral, interpersonal and strategic roles. This is epitomized by the Burt and Doyle model of strategic procurement (1993, pp. 28-29) which suggests that procurement involves a range of responsibilities including:

*... the identification of threats and opportunities in the firm's supply environment ... manufacturing and outsourcing decisions ... the development of supply base and strategic alliance plans and active participation in the corporate ... planning process ... through several links of the supply system from the supplier's supplier at one end to environmental disposal and recycling strategies at the other ... also ... how the firm interfaces with its present and potential suppliers.*

It is the behavioral area that is most testing for organizations in the case of procurement. Some of the analytical tools used by practitioners inherently create organizational change. The activity of conducting a "spend analysis" enables an organization to examine the precise nature of its expenditure. This is not an aggregation of funds flows within an organization's accounts or a re-examination of the profit and loss. It is a deconstruction of the expenditure accounts to show the exact products and services purchased across all sectors of an organization. This activity may use the standard Chart of Accounts as its basis but it amalgamates expenditure in each category to provide a statement of "Who Bought What?" This information can be used by executives to better manage expenditure patterns. It should be also used by procurement managers to negotiate better contracts for particular items of expense, to suggest alternative sources of supply, to focus on managing the aggregate impact of all types of expenditure.

## THE MANAGEMENT ROLE OF PROCUREMENT

Often seen in the past as a pedestrian, ill-developed function of government and business organizations, procurement practitioners are increasingly responsible for supervising the basis on which large amounts of expenditure is undertaken. Some aspects of supply management, such as outsourcing, more sophisticated contracts management, the use of e-commerce and partnering strategic alliances, have received growing academic attention as awareness of the financial and operating impact of the profession has developed.

The emerging versions of procurement will demand a strategic focus, a customer service focus, a capacity to interpret financial, political, legal, operational and other supply chain risks, and the capacity to operate as a senior executive. The purchase requisition of yesterday has not entirely disappeared but in the minority of organizations that have harnessed a version of e-commerce or e-business, electronic ordering will free the procurement professional to focus on the strategic issues and work to solve some of the challenges for procurement that are evident from this paper.

The function demonstrates an often unannounced type of organizational change which nevertheless can have a substantial impact on buying behavior across an organization, providing management with a new set of analytical tools to understand the spending patterns across their organization.

For management, development of the science of procurement can be harnessed more effectively to manage organization-wide expenditure, to better understand the nature of cost, and to make global sourcing decisions. Internally, contemporary procurement practices can enable management to make intra-organizational changes that help to align organizational strategy with acquisition strategies that support innovation and enhance the eternal problem of maintaining adequate management control.

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# A CALL DETAIL ANALYSIS - GETTING INSIGHT INTO CUSTOMER BEHAVIOR

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## ABSTRACT

*No other business has better information about the behavior of its customers than telecommunications. Since the main product of the telecommunications company is the call, its customers create hundreds of thousands transactions per day. Call detail record is an important marketing data that service provider can analyze to improve customer relationships. These records can be used in conjunction with demographic data in order to get better and more valuable results. All the data can be put together and stored in an OLAP (Online Analytical Processing) cube. As it will be presented in this paper, an OLAP system can help the telecommunications company to get better insight into its customers' behavior and improve its marketing campaigns and pricing strategies.*

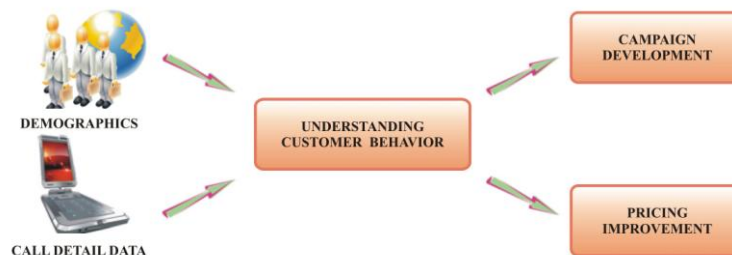
## INTRODUCTION

After years of being a monopoly market, the telecommunications market is now highly competitive. A monopoly does not change much, but competitive markets change a lot. Customers are able to switch providers easily, because there are many of them available. This is why many telecommunications companies use call detail analysis to achieve competitive advantage. By understanding customers' characteristics and behavior, it is possible to successfully tailor services that meet customers' needs.

There is no doubt that telecommunications companies have to be focused on their customers. The good news is that customer behavior is in the customer data and patterns of calls. The telecommunications industry has advantage over other sectors because it has a voluminous amount of customer data. Telecommunications companies collect various demographic data (such as name, address, age and gender information) and store call detail records. Call detail records usually include information about originating and terminating phone numbers, the date and time of the call and its duration (Weiss, 2005).

Demographic and call detail data analysis can provide a significant insight into customers and improve campaign management and pricing strategies, as it is displayed in Figure 1.

**Figure 1: Demographic and call detail data analysis**



To create a better environment for managing customer relationships, companies need to look at a new approach called CRM (customer relationship management). Customer understanding through data analysis is referred to as analytical CRM (Srivastava, Wang, Lim and Hwang, 2002). This topic is discussed in the following section.

## ANALYTICAL CRM

CRM is defined as a set of activities that a business performs to identify, qualify, acquire, develop and retain loyal and profitable customers by delivering the right product or service, to the right customer, through the right channel, at the right time and the right cost (Galbreath and Rogers, 1999). The right product or service means that only a product or a service that meets customers' needs should be considered. The right customer means that not all the customers are alike, so the company's interactions with customers need to move toward segmented marketing campaigns that target individual preferences (Sumathi and Sivanandam, 2006). There are a number of mediums available, so the company should choose the right one (that is what the right channel means). The right time is a result of the fact that there are continuous interactions with customers (Sumathi and Sivanandam, 2006). The goal of every company is to reduce costs. However, as the success of the company grows, so does customer inertia. The company often loses the desire to please its customers and focuses more on how it can reduce costs rather than on delivering meaningful and differentiated experiences (Strativity Group, 2007). This opens the door for its customers to be tempted by competitive offers, so the right cost component should be carefully considered.

Meta Group classifies CRM into three different types:

- Operational CRM, which is concerned with automation of business processes involving front-office customer contact points (Payne, 2005). The benefit of operational CRM is to personalize the relationships with the customer and to broaden the company's response to the customer's needs (Xu and Walton, 2005).
- Analytical CRM, which is in charge of the analysis of the information previously collected by the CRM system or from other sources, in order to establish customer segmentation and identify their potential to reinforce the relationships. (Bibiano, Mayol and Pastor, 2007). According to Smith (2006), analysis of customer data is a key part of CRM. A good analysis enables the company to get insight into its customer preferences and behavior. Analytical CRM systems include tools that can process the unmixed volume of customer data to support the provision of strategic customer information (Xu and Walton, 2005), such as data mining and OLAP tools.
- Collaborative CRM includes the use of collaborative services and infrastructure in order to enable interaction between a company and its channels (Payne, 2005).

This paper is focused on analytical CRM applications in telecommunications, especially those that use an OLAP tool. Armed with an OLAP system, a company can obtain better understanding of the needs of individual customers.

The telecommunications industry, as mentioned earlier, has advantage over other sectors because it has a vast amount of customer data. However, existing operational systems are application-oriented and they support day-to-day operations (Inmon, 2005). This means that the operational data is primarily highly detailed current-value data (Han and Kamber, 2001), and the time horizon normal for operational systems is often very short.

The fact that operational environment has current-value data is even bigger problem than the time horizon. If a customer e.g. changes the address, the new address simply replaces the exiting one. The time of the change is usually not recorded in the system. Nevertheless, capturing changes is relevant to CRM analysis.

Another problem that telecommunications companies have to face is the customer data integration. Customer data is often spread redundantly in separate applications, so the key is to create a single, comprehensive view of the customer across the company (Levine, 2002).

There is the unique solution to all of these problems – the customer-centric data warehouse. A central data repository provides the platform for OLAP and data mining.



An OLAP cube can provide multiple and dynamic views of data. Furthermore, many data mining functions, such as classification, prediction and clustering can be integrated with OLAP operations (Han and Kamber, 2001). Armed with an OLAP system, every organization can get a significant insight into customers. Extracting patterns from customer and usage data and their visual representation is a great help for understanding customer behavior.

The next section demonstrates the insight gain from data exploration of call detail and customer demographic data maintained by a mobile phone carrier that declined to be identified. The project is altered so that no company is recognizable.

## **CALLING PATTERNS RECOGNITION - A CASE STUDY**

Understanding customer behavior is the key for implementing a successful CRM strategy. Telecommunications companies have to learn from experiences and notice customers' needs and preferences. Gathering intelligence from the information captured, is becoming a critical success factor to remain competitive (Bain, Benkovich, Dewson, Ferguson, Graves, Joubert, Lee, Scott, Skoglund, Turley and Youness, 2001).

The project presented in this section demonstrates the value of analyzing the great amount of call detail records and some demographic customer data. Call detail data is aggregated for three-month period. The project consists of several activities, grouped in four phases: defining the problem to be solved, assembling and preparing the data, building the OLAP cube, interpreting the results and results application. In the first phase business objectives and requirements need to be defined. The main business objective is to identify calling patterns in order to understand the behavior of individual customers. It is wise to make a list of interesting questions. The list can include several important marketing questions, but for the purpose of this case study, the three that the author finds the most interesting are selected. Those are the following:

- What could the data tell us about patterns of telephone calls during the day and during the week?
- Is there any difference in mobile phone usage between men and women?
- Is there any difference in mobile phone usage between different age groups?

In the second phase, the data needed for the purpose of the analysis (by the OLAP tool) should be collected and transformed. The data is accessed from the call detail data mart. Since the data was preprocessed before entering into the data mart, no further transformation is necessary. The data mart contains true archival detail data at the lowest granular level (the more detail data there is, the lower the level of granularity), since atomic data provides maximum flexibility. Call detail analysis provides a level of granularity that surveys or some other devices are unable to deliver (Strouse, 2004).

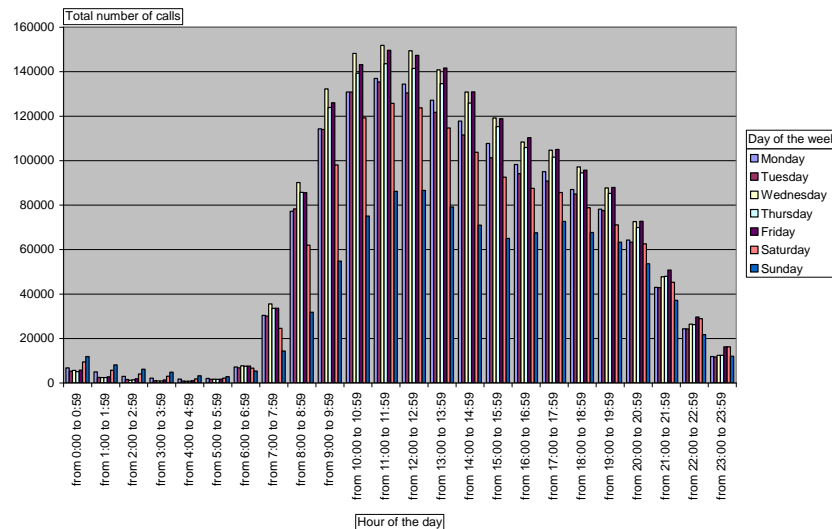
In the third phase, the OLAP cube should be built. The cube has to include all necessary dimensions and measures. Measures are numeric data needed for analysis purposes (e.g. the total number of calls, the cumulative duration of calls etc.). Some measures are more interesting when combined and these are called calculated measures (or calculated members). E.g., the average call duration is interesting for the purpose of calling patterns recognition. It is calculated by dividing the cumulative duration of calls by the total number of calls (made during the three-month period). A data cube allows data to be viewed in multiple dimensions (e.g. customer gender, customer age group, day of the week, hour of the day). After being processed, the cube is ready to be used. The results should be interpreted and applied. Results can be presented visually, which enables improved comprehension. Visualization can help answer the questions asked.

The study first examines the question: What could the data tell us about patterns of telephone calls during the day and during the week? The histogram in Figure 2 shows the pattern of calls made throughout the day during the week. There is an alternative way to visualize the same pattern as shown in Figure 3.

Figure 2 shows that the total number of calls (made during the three-month period) has an interesting peak through middle of the day, at about 11:00 A.M. (an hour later on Sundays). Calls are low in the early morning and they are increasing during working hours, reaching the maximum value at about 11 A.M. and declining afterwards. Calls are quite low in the evening. Figure 2 also shows that the total number of calls has two peaks

on Sundays - at midday and at about 5:00 P.M. Both Figure 2 and Figure 3 show that the total number of calls is lower on weekends. It seems that the calling pattern is quite the same throughout the week (a peak is almost at the same time all week long). An interesting thing to be noticed is that people like to make telephone calls on Wednesdays and Fridays. Both Figure 2 and Figure 3 depict this pattern.

**Figure 2: Total number of calls histogram by day of the week and by hour of the day**



**Figure 3: Total number of calls by day of the week and by hour of the day**

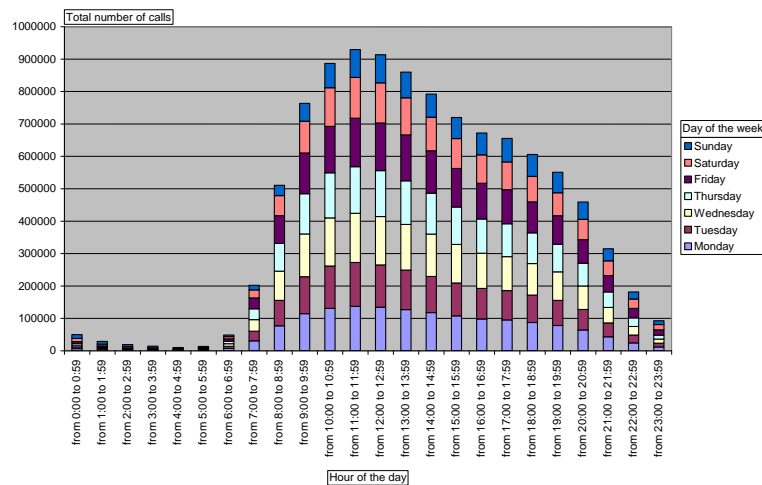
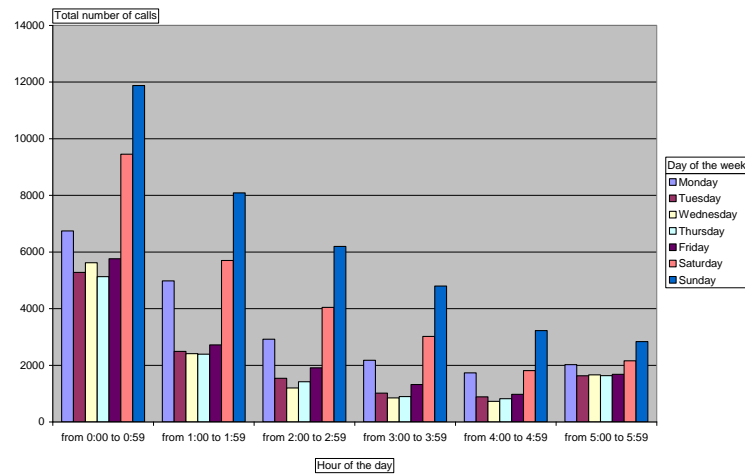


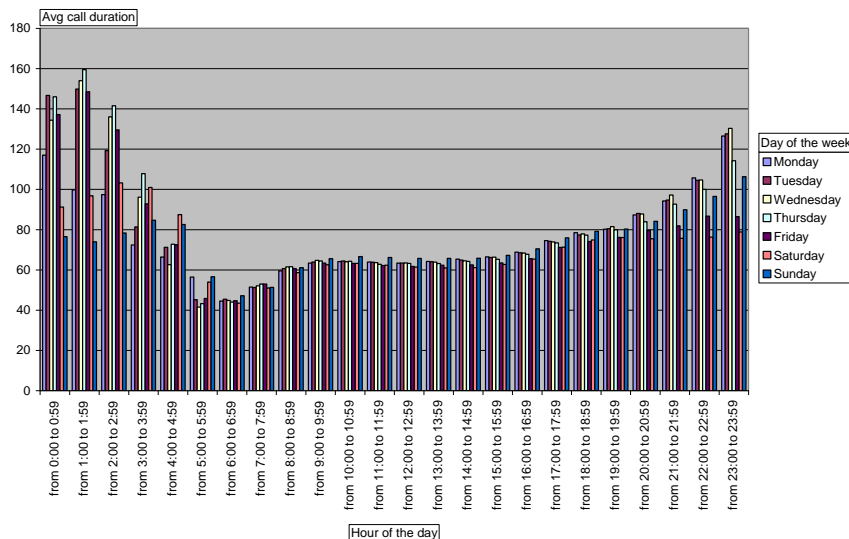
Figure 4 shows that the number of calls made between 0:00 A.M. and 6:00 A.M. is higher on weekends than on the other days of the week, but it is also quite high on Mondays, too. However, since this number is generally low comparing to the rest of the day, patterns of night calls are not so interesting to marketers.

Figure 5 shows the average duration of calls in seconds throughout the day during the week. It seems that people generally like to talk longer in the evening. Even though the total number of calls is high during working hours, those calls are significantly shorter than e.g. calls made after 9:00 P.M. The longest calls are late evening calls.

**Figure 4: Total number of calls made between 0 A.M. and 6 A.M. by day of the week and by hour of the day**

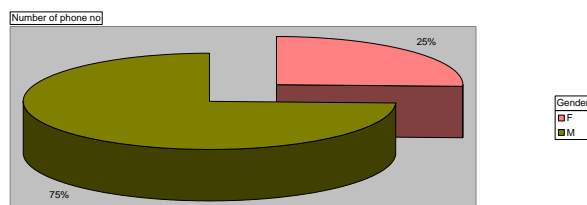


**Figure 5: Average duration of calls (expressed in seconds) by day of the week and by hour of the day**



Two more questions need to be answered: Is there any difference in mobile phone usage between men and women? And what about different age groups? Figure 6 shows the mobile phone number ownership by gender. Evidentially, there are more male than female subscribers. Only 25% of all subscribers are women.

**Figure 6: Phone number ownership by gender**



Since there are more male customers than female customers, the total number of calls made by men is expected to be higher than the total number of calls made by women (as it is displayed in Figure 7). However, both genders have similar calling behaviors: calls are increasing in the morning, reaching the peak through middle of the day, and declining in the afternoon. The total number of calls is low in the evening, no matter the gender.

**Figure 7: Total number of calls by gender and by hour of the day**

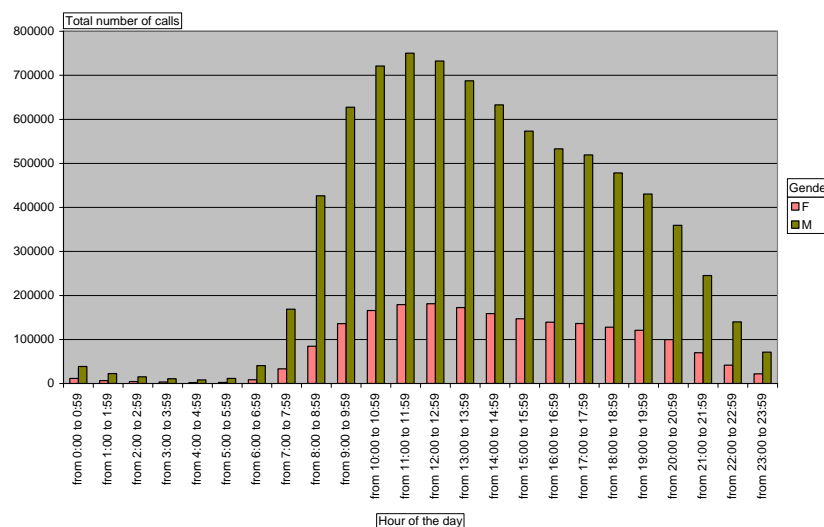
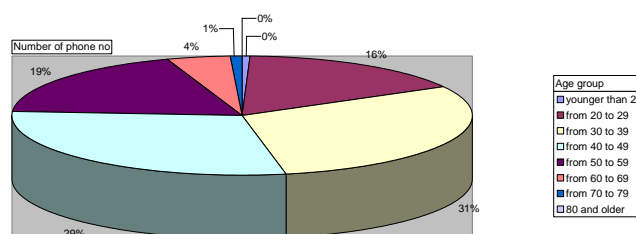


Figure 8 depicts phone number ownership by age group. The figure shows that less than 1% of mobile phone numbers are owned by customers younger than 20. There is a low percentage of older adults' phone number ownership as well. The difference in phone number ownership of different age groups is significant, and this information can be valuable to marketers.

**Figure 8: Phone number ownership by age group**

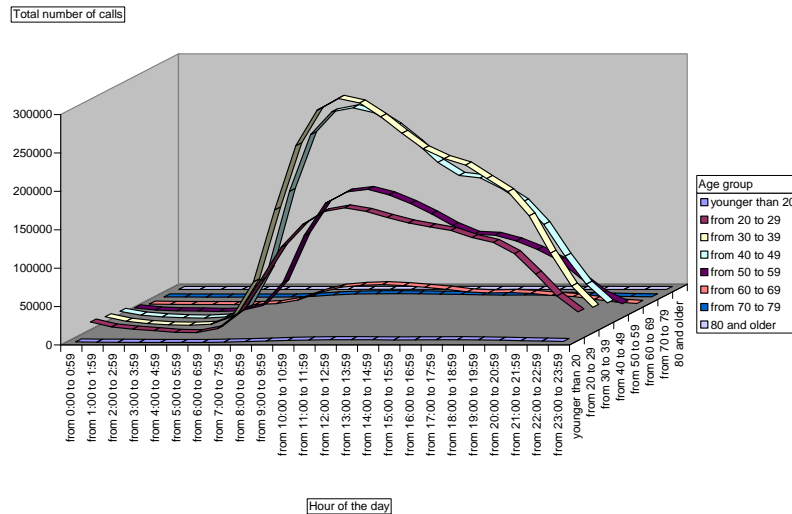


The mobile phone usage by different age group is seen in Figure 9. Customers in the 30 to 39 and the 40 to 49 age group are heavy mobile phone users. This is also the case with two other age groups: age 20 to 29 and age 50 to 59. Mobile phone usage is very low among users younger than 20 and older than 60.

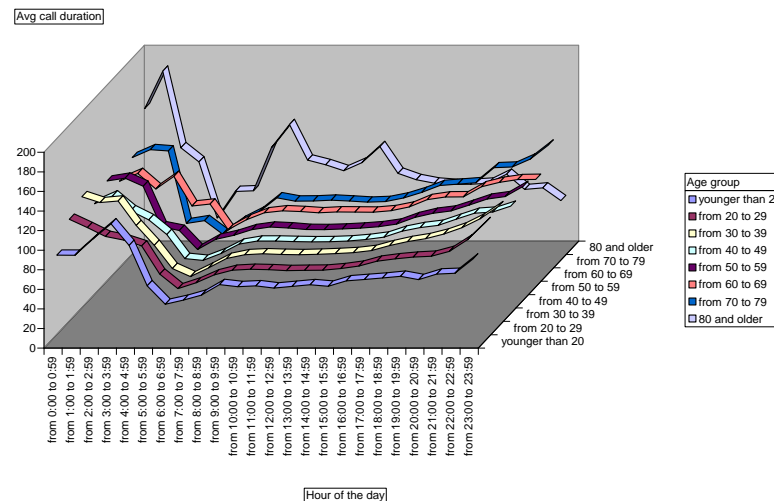
Since the total number of calls is, the cumulative number of calls made during the three-month period, the more customers in certain age group there are, the higher the total number of calls (although the high frequency of calls, obviously, results in the high total number of calls as well).

Figure 10 shows the average duration of calls in seconds throughout the day by age group. Even though there is less than 1% of mobile phone numbers owned by customers older than 80 (see Figure 8), those subscribers generally make longer calls. This could be interesting information for the company in order to provide its older customers with optimal service and rate plans.

**Figure 9: Total number of calls by hour of the day across different age groups**



**Figure 10: Average duration of calls (expressed in seconds) by hour of the day across different age groups**



Result interpretation is followed by its application. This is the last phase in the process of analyzing the data. OLAP analyses are more than simple data analyses - they enable understanding of a business environment, so that relevant questions can be answered by deploying appropriate tools on the properly selected data (Sumathi and Sivanandam, 2006). The key is to incorporate the patterns discovered into the business. The patterns noticed can be used in development of appropriate marketing campaigns and pricing strategies. For example, customers should be motivated to make more phone calls on weekends or in the evening (a better rate for evening and weekend calls would be a good idea). Some special price plans could be offered to school children and senior citizen, since the mobile phone usage is very low among them. Since the “seniors” tend to talk longer, it would be wise to offer them low cost call rate. Women should be targeted by a special campaign, as well. Special offer on Mother’s day, for example, could be a good idea.

The case study presented in this paper gives just an insight into customers and business. Nevertheless, there is a hope that business people will realize the great possibilities that OLAP has to offer.

## CONCLUSION

Telecommunications deregulation led to a highly competitive environment, and this placed increasing dependence on understanding customers. Today, most telecommunications companies collect and refine massive amounts of data, and call detail analysis is one of the hottest areas of exploration in the telecommunications industry. To increase the value of current information resources, OLAP tools can be used. CRM benefits greatly from OLAP as it helps in the understanding of customer behavior.

In this particular case study involving the improvement of marketing campaigns and pricing strategies, OLAP has been applied with much success. The OLAP cube helped a lot in giving answers to some important marketing questions. It seems that OLAP can be a very effective means of helping telecommunications companies to better understand their customers and to redefine and reinforce customer relationships. In today's competitive business landscape the customer is a king, and the soon one realizes it, the better.

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# MARKETING OF TECHNOLOGICAL PROJECTS IN THEIR UPSTREAM PHASE

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## ABSTRACT

*The recent and significant development of public research valuation structures raises the question of the precise role of marketing's intervening moment as well as its exact role within the chain of innovation.*

*The goal of this paper is to present a new marketing approach exclusively dedicated to the problems associated with the valuation of technological projects at the heart of public universities or laboratories when said projects are in their upstream phase; in other words, still in a gestation period on-site at a laboratory.*

*This approach is based on the concept of modal marketing and strives to define the future of the technological project, meaning choosing its optimal market-entry mode between its association with existing businesses, sale of the technology, and autonomous development of start-up style.*

## INTRODUCTION

Several authors have examined the role of marketing within the generic context of technological innovation. For Mohr (2004), a technological innovation project is characterized by a triple uncertainty: technological, competitive and market, and where the role of marketing would be to identify a potential market in an unstable environment which can alter the competitive landscape at any given time. Other authors (Schilling and Thérin, 2006; Fernandez-Walch and Romon, 2006) argue that a major function of marketing would be to value a product or service resulting from innovation after having researched different possible applications born out of a single technology. These works all commonly situate marketing's essential action as being in the implementation phase of a technological project, when for example it concerns defining the main coupled functions/applications, or determine the outline of economic potential presented by the project, or lastly quantify the number of foreseeable buyers. But the downstream introduction of marketing reflection, so as to evaluate the best mode of innovation-produced valuation, is not generally evoked, whereas two levels of accompaniment must be differentiated according to the maturity of the project.

In the upstream phase, when uncertainty is at its peak and the project is in its initial phase, the accompanying function of innovative projects is in particular carried out by swarm units at the heart of companies themselves, or by research valuation cells inside universities or public research laboratories. Farther downstream, when the risk probability becomes foreseeable and the project is in its execution phase, the accompaniment is carried out by the company's breeding-ground, and/or by incubators for example within Business or Engineering schools or a university which make it possible for the creator to access resources and shared methods in order to facilitate the strategic development of the project (studies, business plan elaboration, researching capital) as well as operationally putting it into place (creation of prototypes, applying for patents, logistical support).

For this reason, marketing's mission within the specific setting of the valuation of technological innovations in their initial highly uncertain phase, and developed within the heart of public research laboratories still remained to be precisely defined.

The goal of this article is to present a marketing approach dedicated to the issues of the valuation of technological projects during their upstream phase, inside public laboratories and universities in France. The

authors have been able to (within the context of their activities supporting projects of different valuation structures in public research) develop a specific marketing approach devoted to the valuation of technologically disruptive projects in their beginning phase, during which there exists an all-encompassing incertitude about the project's usefulness. This approach, henceforth called modal marketing for the valuation of technological projects, is successfully implemented today not only within research valuation university structures (French member-universities of the Curie network), but also at the heart of incubators inside ivy-league engineering schools, like Télécom Paris.

Based on the marketing modal concept, this approach aims to allow laboratories and universities to define the best market-entry method for technologically strong innovative projects amongst their association with existing companies, sales of the technology, or autonomous development such as start-ups.

## **EXISTING COMPANIES FACING RESEARCH ON DISRUPTIVE INNOVATIONS**

The publication of Christensen's work (1997) renewed the debate about the market's role in the formulation of a response to technological innovations by introducing the concept of disruption, or disruptive innovation. Up until then, the majority of studies (Henderson and Clark, 1990; Tushman and Anderson, 1986) identified the destruction of internal competencies generated by innovations as a major hindrance to the introduction of new generations of technologies (at the heart of existing large-scale companies). Christensen redirects this analysis and points out the (negative) role of top-level management within these companies. This management style would focus its attention and resource allocation on existing clients and on sure profitability, rather than allotting the resources to disruptive innovations destined for hypothetical new buyers, i.e. unsure profitability (Henderson, 2006). However, several subsequent studies present this absence of large existing companies' significant involvement in the development of technological disruptions as a rational approach from the shareholders' point of view.

Adner (2002), Adner and Zemsky (2005) and Danneels (2002, 2004) show that important changes in demand structure are present behind the disruption phenomenon and that the established routines at the heart of big companies already present on the market make it difficult for them to perceive and subsequently act on this evolution of demand. Moreover, Christensen and Raynor (2003, p.55) follow by modifying their initial position and indicate *"...Because disruptive strategies are predicated upon competitors doing what is in their best and most urgent interest: satisfying their most important customers and investing where profits are most attractive"*. This change reinforces the idea that directors of large-scale companies who don't seek out disruptive innovations are in fact acting in the best interest of their company.

Treacy (2004) goes even farther and suggests that disruptive innovation should be a last resort growth strategy because innovation generates risk and as a result managers must first consider the possibilities for increasing profitability without innovating, meaning by minimizing the taken risk. For example, securing existing loyal clientele or improving new customer targeting and recruitment can significantly increase company profits. Large-scale companies are very conscious of this situation and Silberzahn (2006) highlights that companies established on recognized markets handle with risk situations whereas for example start-ups introduce disruptive projects that must face an uncertain position in the "Knightian" sense of the term. Knight (1921) differentiates risk, a future whose possible distributive states are known, from uncertainty, a future whose distributive states are not only unknown but are impossible to know. This uncertainty is due to the nature of the phenomenon itself; faced with such a situation it becomes impossible to define objectives and different possible market studies will only be able to elaborate on the extrapolations from the present onward. Thus it becomes more rational for an already installed company to transform this uncertainty, which is linked to radical innovation, into risk probability.

One of the methods to reach this position consists of entrusting radical innovation development to specialists in risk management, with this occurring just before the quantification of possible markets. Furthermore, integrating this innovation should only occur when the probability of success for said innovation becomes an acceptable risk, in other words once its market has already begun to emerge. For Markides (2006) the logical consequence of this analysis is that rather than using up resources for the development of disruptive innovations within their core, existing companies should focus themselves on the creation, backing, and support of a network of small



feeder firms, meaning entrepreneurial projects which are external to these existing companies and which seek to create new niche markets.

Established companies can act as venture capitalists for these small feeder firms, or can develop strategic alliances with them or provide capital participation to them. As such, when the time comes to consolidate the market, these already existing companies can create a new mass market by drawing on the platform of disruptive technology that these feeder firms have provided. Having neither the resources nor capital, nor the power nor distribution needed to permit their creation to change market scale, these feeder firms should in principle be happy to form an alliance with a big company.

This approach has an even bigger sense when you create a distinction of disruptive innovation depending on its nature. In his original formulation, Christensen (1997) concentrates first on technological innovation and studies the way in which new technologies come to impose themselves onto existing technologies. With time, he broadened the idea of this concept of technological innovation to also include new products and new business models, encompassing for example (Christensen and Raynor, 2003) discount supermarkets, budget airlines, and low-cost mass-produced products like motorcycles or photocopiers. Along the same lines, Treacy (2004), in his seminal article, distinguishes product innovation, meaning what the company actually produces, from economic-model innovation, meaning the way in which the company puts the product on the market. Markides (2006) reworks and broadens this distinction and differentiates “*business-model innovations*” from “*radical new-to-the-world product innovations*”. These two types of innovations present several differences: the markets created are of different kinds, and what’s at stake for existing companies is radically different, as are all the implications for managers. For Markides, business-model innovation is the invention of a business model fundamentally different in an existing market, such as Amazon, EasyJet or Dell. To be innovative, this new model must expand the existing market either by attracting new consumers or by increasing current consumer consumption. Conversely, radical product innovation creates disruption both for consumers since it introduces products which profoundly alter habits and behaviors, and for producers, because it undermines the skills upon which already market-present players have built their success.

For this reason, these innovations rarely stem from demand, but most often from supply, devised according to the development of new technologies (Markides and Geroski, 2005). Numerous works (Klepper and Simons, 2000; Utterback, 1994) show that supply-born markets share four characteristics which are: (a) the presence of a significant number of new entrants, (b) a very large variety of products and maximum innovation rate, (c) subsequent emergence of a dominant design which marks the start of market growth, (d) the major role of the length of time before the market becomes structured. One of the consequences of this situation is that the pioneers who created these new markets are rarely the ones who then evolve them into mass markets. This is due to the fact that evolution such as this calls for very significant investments to make the most of economies of scale, to progress on the learning curve, to develop strong brands, or to control distribution circuits (Markides, 2006). Subsequent entrants possess the resources to enlarge the market by changing the competition bases via distancing themselves from the only technical performance put forward by the pioneers. This is in order to make the market evolve towards other attributes like quality and accessible price, by producing a product whose performance without being the best *technically* possible, is sufficient for consumers and costs less than the market price.

Because of these characteristics, companies already in place on markets must rather concentrate themselves on what they are good at, in other words the consolidation and transformation of these emerging markets into mass markets. These companies shouldn’t themselves try to create disruptive product innovations, but leave the job of creating these new markets to small businesses or start-ups who have the attitude, skills and talent to pull it off (Markides and Geroski, 2005). If we consider it from the point of view established by Markides and Geroski (2005) and Henderson (2006) then it is rational for the companies already present on the markets to focus themselves on existing markets, and take the necessary measures so that highly innovative projects are first developed by these smaller up-and-coming businesses who focus on the market placement of the technological innovations that they themselves generate.

This development requires assistance and backing which can come from private parties such as the large-scale companies themselves using swarm procedures or venture-capitalists. This support can also come from public parties such as university research valuation cells or para-public parties as with the incubators. Therefore, various structures have ad hoc been developing over the course of recent years in several countries in order to accompany highly innovative projects which companies don’t know how to, don’t want to or don’t have any desire to accept responsibility for within their core.

This development of accompanying units upstream of the disruptive innovation, under the influence and with the aid of public power, raises the question of marketing's precise role and that of its intervening moment during the innovative chain. When the technological project is in its gestation period, it is necessary to define what will be its possible future.

## MODAL MARKETING

Valuation structures need to be capable of continuously arbitrating between the different projects they control, in order to define the pertinent valuation strategy to adopt. This could mean for example to define if a patent has to be taken out, if a prototype needs to be financed, if contacts with companies need to be implemented, or if a project must first be valued.

Within the aforementioned logic, we can consider that the fundamental major goal of marketing technological projects in their initial phase is to value this technological innovation by defining its market-entry mode. This entrance onto the market can be executed following three modes which are: (a) Internal Development, (b) Alliances (c) Sale of the Technology.

Modal is a logic term that is used to introduce propositions containing conditions or restrictions. This is particularly the case with a proposition in which – unlike categorical propositions – the terms of a problem relate to the resolution of a preceding statement. The modal dimension is therefore particularly appropriate to qualify a method devoted to highly innovative technical projects, because it is they who are characterized by a permanent and successive sequence of inputs -- either favorable or restrictive for the project's entry into the market. The modal character of the model allows for the integration of the permanent uncertainty generated by the environment and by the project itself, at the heart of a process which makes the completion of technical projects conditional, unpredictable, and non-determinist. The term modal refers to the necessarily reiterated dimension which characterizes the analysis of rapidly changing environments in order to integrate permanent environmental modifications through a permanent retrofit.

The modal approach is a marketing method specific to technological projects, based on the separation of three stages in the technology's development and one which takes into account the interdependent liaisons necessary for the success of these projects.

Modal marketing is directed towards the definition of the most appropriate valuation mode according to the measured appeal of the project, of validating its feasibility, and of its permanence. The modal approach breaks down the initial phase of the innovation process into three steps, which are: detecting innovative projects (Stage D), selecting the most attractive projects (Stage S), and valuating priority projects (Stage V). A matrix analysis of multicriteria allows for the establishment of scores, permitting qualification of these parameters. Pre-established veto thresholds avoid having evaluations that are too weak on criteria considered as critical being counterbalanced by too favorable evaluations on criteria viewed as being less essential to the project's success.

The model includes permanent retroalimination which allows for the integration of environmental modifications, the emergence of new competitive technologies, or the impact of disruptive technologies being put into place on the market.

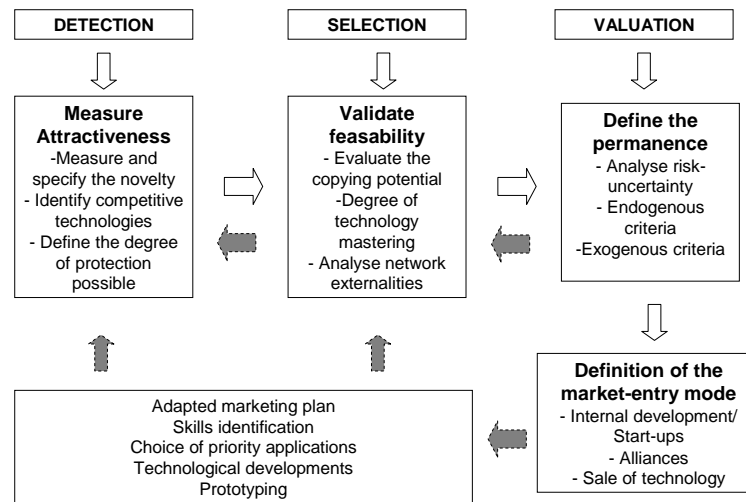
Figure 1 presents the general model that is implemented.

Once the matrix position is established by weighting attractivity and feasibility indicators, an additional permanence indicator permits evaluating the nature of the durability and sustainability of the competitive advantage linked to the studied technological innovation.

The sum of the scores obtained from each indicator defines an innovation level referred to as "AFP" (Attractivity, Feasability, Permanence), which can effectively be compared to the database drawn from previous or current evaluations (as would be the case for the creation of a comparative evaluation between projects simultaneously present in the valuation cell established for other innovative projects in their initial phase. Within each scoring phase, retroalimination occurs thus enriching or altering the matrix score.

Once a project's level of AFP innovation is established, modal analysis integrates the impact of the time factor on the deadlines of the project's culmination along with the means necessary to put the innovation on the market. Time-to-market is a pertinent indicator of the autonomy of an innovative project and one which is integral to its value evaluation because the resource requirements – financial, in particular – that are necessary for innovation development and market entry are subjugate to the time separating the project from its completion. Time-to-market directly influences the estimation of resources necessary for the development of a project from its uncertain phase until its risk phase, and as a consequence has a direct influence the technological project's valuation mode.

**Figure 1: Modal marketing's general model for technological projects**



Time-to-market will be evaluated by responses given to several questions such as: How much time will the project take? Is it a good strategy to be a pioneer of this technology? If the project is delayed, what kind of impact will that have on the value of the project? How much will the project cost? What is the potential variation of said costs?

A hybrid matrix integrating the AFP innovation level and the time-to-market can then be devised, either for a particular innovative project or for a portfolio of projects. The AFP evaluation combined with the foreseeable deadlines for market-entry therefore allow for a determination of an adequate valuation mode for a technological project, such as this one presented in Figure 2.

Four different valuation options can be differentiated according to the innovation level and the time allotted to reach market-entry.

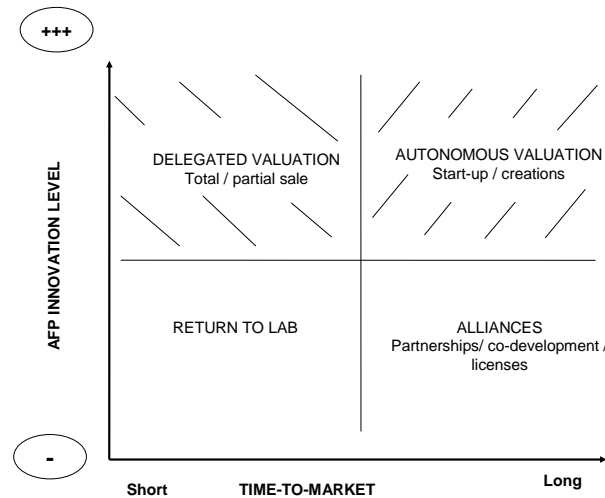
- The first valuation mode is that of the selling the technology, which permits getting the necessary resources (for example: capital, sales and marketing structure, distribution network access) for a project's rapid market entry. This should be the preferred mode when necessary, for example to participate in setting the standards for an emerging market, or when other technologies can structurally alter the foreseeable market set-up.
- In the second possible mode, innovation is highly differentiating and can take its time to penetrate the market, for example if applying for a patent. The preferential valuation mode is that of autonomous valuation which allows the project's carrier to increase the value of said project, perhaps through a subsequent sale to a large-scale group already installed on the market. This valuation mode is, strictly speaking, start-ups and incubation projects. It assumes the carrier's capacity to find funding to develop the innovation up to its entry into the market, which could be a long ways away.
- The third mode, "Stay in lab" assumes that the innovation is still in its developing phase and needs to be worked on, with a goal for eventual valuation.
- The fourth mode, alliance covers different market-entry options. The strategic aim is to enrich the innovation before putting it on the market. For example, this can be by initiating co-development so as to insure more technological added-value in the development phase and to eventually morph into start-up mode.

Therefore modal marketing introduces a marketing vision from the technological project's upstream phase and simultaneously integrates the environmental and competitive modifications into the innovation's development; the objective being to evaluate the perspectives and methods required to ensure the project's development and completion. The modal approach, founded on the definition and use of specific criteria for each of the three indicators – Attractivity, Feasibility and Permanence – equally facilitates the comparison and selection of projects according to the internal priorities of public valuation structures, and to the relative value created.

The AFP innovation level and the amount of time needed to enter the market can naturally be very different depending on the domains involved. For example, biotechnologies require a longer time for market entry due to

numerous clinical tests than do innovations coming from information technology. The modal approach, because it is situated at the start of the market entry, can be utilized for the majority of highly innovative projects.

**Figure 2 : Selection of market-entry method of innovative technological projects**



## CONCLUSION

Numerous recent works suggest that large companies already present on existing markets generally do not have any interest in taking on directly at their core the development of disruptive technological innovations, and that the most rational approach for them is to maximize their profitability by minimizing their environmental level of uncertainty. This maximization has a short and medium-term effect of playing on levers such as new client recruitment, the increase of quantities consumed by existing clients, and a rise in customer loyalty. From medium to long-term, this maximization can be generated by the capacity of these large-scale companies to massively expand emerging markets created by disruptive innovations, initially developed by small structures focused on this creation. This model raises the question of an evaluation for these innovations, particularly in their initial phase, when the uncertainty which accompanies them is not yet able to be acknowledged as a quantifiable risk. This question is particularly important for public and parapublic research valuation structures which are forced to arbitrate between different projects that they control, accompany or finance. This is in order to define the pertinent valuation strategy to be adopted, and to determine which disruptive projects must be valued in priority.

We have presented a new approach, called modal marketing. Modal marketing is founded on the use of multicriteria matrixes which, by a reiterative process, allow for the integration of the extremely progressive environmental nature of highly innovative technological projects in order to determine the market-entry mode of innovative projects. This modal method allows for an evaluation first in the absolute and then in a relative manner (between projects) of the possible valuation level of a innovative project, including the time-to-market dimension – meaning the necessary financial means to get the developed technology up and running.

It is currently applied in the context of French public research laboratories as well as in private evaluation activities for disruptive technological projects.

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# MUSIC SHOPPING ONLINE AND OFFLINE

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## ABSTRACT

*Music industry is facing ever growing challenge when customers can now download what they want and pay for it online. Traditionally, music was purchased at stores and/or through mail orders. Since e-Commerce started, download music has become an online trend that has surfaced in the recent decade and is increasingly becoming very popular. This has many consequences, many impacts on the music industry and its related affiliates such as stores that sell it. Thus, studying the interaction between the medium of music and its consumers is necessary, and greatly needed to better understand and fulfill the needs on both sides.*

*The following study that has been conducted helps create a better understanding of just what consumers want in terms of accessing music. Valuable data was collected from subjects on several aspects of preference on accessing music. The research results reveal that more consumers prefer downloading music online today as opposed to purchasing it at store locations due to convenience.*

## INTRODUCTION

Online retail sales in 2007 reached \$175 billion, a 21% increase over \$144.6 billion in U.S. in 2006 [Forrester Research, 2008], as the global Internet users reached 1.3 billion by the end of 2007 [internet world stats, 2007]. The emergence of shopping on the Internet has a big threat to the traditional retail businesses where the customers needed to go to the stores to complete the transactions. When the deliveries of goods and services can be made on online, it presents ever bigger challenges to the traditional retailers, offers convenient shopping for customers. Purchasing and downloading music online for the past twelve years has overwhelmingly challenged record companies and private stores that sell albums. For example, Tower Records, the largest music store chain, closed all its retail stores in the U.S. on December 22, 2006, after a failed attempt to emerge from bankruptcy, witnessed the shifting trend in the industry [wikipedia, Tower Records]. Many websites flourished by having customers pay to download music such as iTunes, after Napster was forced to stop free music sharing [Guardian Unlimited, 2003]. New technologies and gadgets, combined with the high speed internet access, it is now easier than ever to create your own "album" of music with all the songs being of your own preference.

Many consumers have switched from purchasing music disks at stores to simply downloading the same music online [Beal, 2004]. As the shift in the medium of purchasing music has taken place, the new generation is more prone to using the internet to obtain their music. In theory, if a customer is able to download his/her favorite music from the Internet at a lower or substantially lower price with reasonably good quality, that customer would not need to go to purchase the CD at a local music store.

This study intends to examine the various factors that affect the customer's choice between purchasing music through the different methods of downloading from the Internet and visiting stores, in order to provide

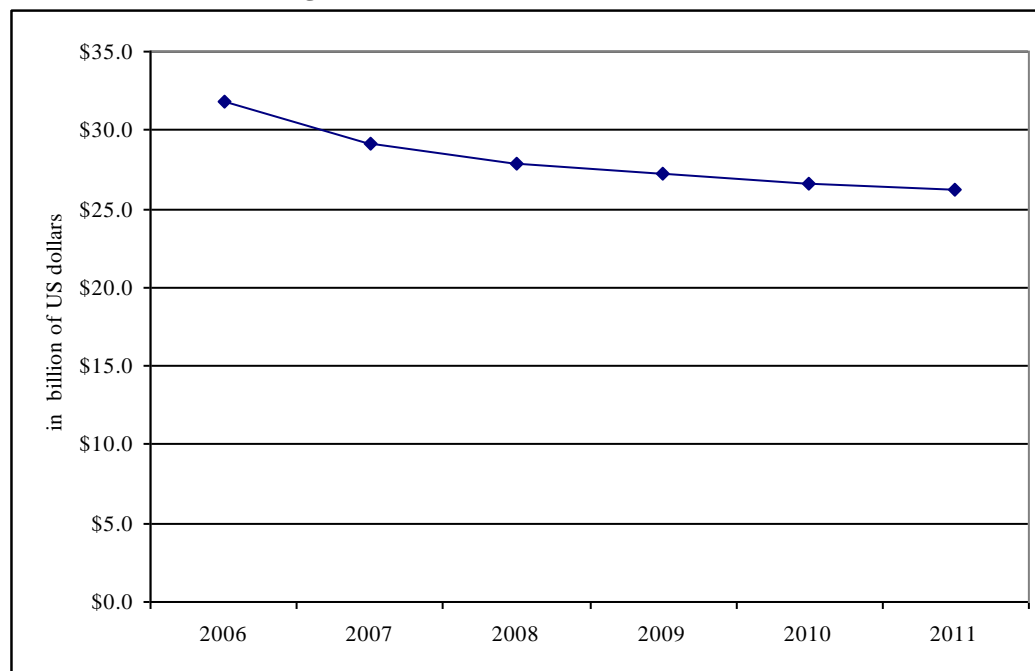
some insights about music shopping behavior for record companies and music retail stores, and how they could improve their performance.

## REVIEW OF LITERATURE

In the recent years, music industry has experienced a great pressures, as overall music sales decreases. In 2007, the total volume sales dropped by 15%, even the downloads increased more than 50%. [Holton, 2008].

Figure 1 illustrates the global downward sales trend in music industry as a whole in dollar terms [Verna, 2007].

**Figure 1: Global recorded music sales trend**



Source: Paul Verna, Recorded Music: Digital Falls Short, *eMarket*, November 2007.  
[http://www.emarketer.com/Reports/All/Emarketer\\_2000472.aspx?src=report\\_head\\_info\\_sitesearch](http://www.emarketer.com/Reports/All/Emarketer_2000472.aspx?src=report_head_info_sitesearch)

As part of its response to such a drop in global music sales, the music industry is calling on Internet service providers to take more responsibility for illegal file sharing by either disconnecting those who repeatedly upload music or preventing illegal tracks from being downloaded. Many ISPs have so far proved reluctant to take any action, but the music industry is hoping this could change following a move by French President Nicolas Sarkozy to block Web access to those frequently downloading music or films illegally [Holton, 2008]. The closure of Napster's free music sharing in 2001 was a result of legal battle between music industry and a website music sharing.

Due to the convenience of downloading music from websites, more people are able to get the music they desire at the click of a mouse rather than going to the store to buy a CD with limited songs. Table 1 illustrates the growth of music downloads from 2003 to 2007 in the U.S, while the sales of album dropped by a double digits, the download share of total album unit sales was only about 10% [Palenchar, 2008].

**Table 1: growth of music downloads from 2003 to 2007 in the U.S.**

|  | 2003  | 2006  | 2007  | % change 2006-2007 |
|--|-------|-------|-------|--------------------|
| Single tracks downloaded*                | 353.0 | 581.9 | 844.2 | 45%                |
| Full albums downloaded                   | 16.2  | 32.6  | 50.0  | 54%                |
| Total album sales**                      | 618.9 | 588.2 | 500.5 | -15%               |
| Overall album sales***                   | 654.1 | 646.4 | 584.9 | -9.5%              |
| Download share of total album unit sales | 2.6%  | 5.5%  | 10%   |                    |

\* Excludes tracks on downloaded albums, includes cellular over-air full-track downloads

\*\* Includes CDs, LPs, digital albums, but not track-equivalent digital albums, where 10 individual tracks equal one album

\*\*\* Includes all albums and track-equivalent albums Sources: U.S. market by Nielsen SoundScan (www.nielsensoundscan.com), International Federation of the Phonographic Industry (www.ifpi.org) © TWICE 2008

Apple Computer captures the #1 music retailer position in the USA. The news was announced recently in an email that was sent out to a few Apple employees. A few months ago Apple breezed past Best Buy to secure the number #2 spot. The same report estimates that one million consumers dropped out of the CD buyer market in 2007, a flight led by younger consumers. In fact, 48 percent of U.S. teens did not purchase a single CD in 2007, compared to 38 percent in 2006. [Tribble, 2008]. Professor Strumpf comments on iTunes stores sold three billion songs in 2007, claiming that there was surprisingly little evidence to support the claim that file sharing had significantly hurt record sales in the present downturn. Instead several other factors are suggested: (1) industry has failed to find genres that capture the interests of consumers; (2) much of the reduction in sales is the direct result of industry cost-cutting, as the major record labels have cut large numbers of staff and severed ties with many artists; (3) recorded music has had trouble competing against other products that vie for consumers' entertainment spending; (4) the rise of paid digital downloads are made popular by iTunes [[http://blogs.allofmp3.ru/music\\_news/category/market-statistics/](http://blogs.allofmp3.ru/music_news/category/market-statistics/)].

Digital downloading has changed the way people purchase their music and videos looking at the statistics more people are opting for this service. The continued growth in legal download sites is encouraging, yet the industry struggles to improve the value of each digital customer. Apple has continued to improve iTunes making it even more attractive for its users. Not only do you have the option to purchase a variety of music and videos. Apple recently added movie rentals to iTunes including an attractive weekly 99 cent rental. iTunes has also improved the compatibility with Apple TV. It will be interesting to see whether Apple holds onto the #1 spot. With so many baby boomers and gen-Xers entering the market, there are certainly opportunities to sell more digital albums, promote older catalog titles, or create bundles that will raise revenues. In the near term that's going to be the best means available to narrow the gap on dwindling CD revenues.

Why are customers shifting from buying music in the traditional stores to downloading online? What lessons can music industry learn from the recent buying shift online vs offline? These are the focal questions this research attempted to answer.

## METHODOLOGY

With the focal questions in mind, this research studied the views of consumers with regards to how they obtained their music in the past and the present. A survey was developed to investigate the pros and cons in the consumer preferences on products and their quality, price and promotion, deliveries, together with other features available using different shopping methods. The following variables were based on literature reviews.

### Variable Selection

The following variable selections affect how and where consumers make their purchase decisions.

1. *product quality, purchased music is of good quality*
2. *variety of selection: present customers with large selections of music*



3. *freedom of choices: enable customer to buy only what they want and need*
4. *attractive price: offer attractive prices*
5. *easiness of purchases: enable customers least efforts to buy music*
6. *security and safety: transactions (including trips to store) are secure and safe.*
7. *privacy: private information is kept confidential*
8. *cost of obtaining is kept low*
9. *enable customers to make their own album*
10. *buying those songs I do not want to listen is a waste*
11. *can obtain free music legally*
12. *enable customers to learn what are popular, try, and know the feedback of others*

## Sampling, hypothesis, and test of hypothesis

The hypothesis for this research is to find if there is a significant increase of online downloading music purchase versus actually buying music in retail music stores based on present consumers.

### The hypothesis for this study states:

- H: There is no significant difference in methods of consumer music purchase decision online and offline.

Alternatively, there is significant difference in methods of consumer music purchase decision online and offline.

Due to the nature of this empirical study, the questionnaires were distributed in a shopping mall in a metropolitan area. The respondents were asked to evaluate the selected variables in a five point Likert scale, with 5=strong agree, 4=agree, 3=neutral, 2-disagree, and 1=strongly disagree. Since the data collected are of ordinal scaling, the Mann-Whitney nonparametric statistic test was used to test the hypothesis. The Mann-Whitney U test, often referred to as the rank sum test, was applied to test the null hypothesis. If the null hypothesis that the two samples were drawn from the same population were true, the totals of the ranks (or equivalently, the mean ranks) of the two samples would be expected to be about the same. The null should be rejected if the significance level is less than or equal to 5% in any one criterion.

## RESULTS

Two hundred fifty questionnaires were distributed, with one hundred eighteen returned usable questionnaires, which represent 47.2 percent of the total. Table 2 presents the general information of the respondents.

Table 3 presents Mann-Whitney nonparametric statistic test results. The test results show the significant differences exist in eight of twelve variables. Therefore, the null hypothesis is rejected. In other words, shopping music online and offline presents significant differences. These greater differences can be seen particularly on these variables as the significance level is zero:

2. *variety of selection: present customers with large selections of music*
5. *easiness of purchases: enable customers least efforts to buy music*
6. *security and safety: transactions (including trips to store) are secure and safe.*
7. *privacy: private information is kept confidential*
8. *cost of obtaining is kept low*

**Table 2: General information of the respondents**

| <i>Variables</i>  | breakdowns | %     |
|---|------------|-------|
| <i>Age</i>  | <18        | 14.00 |
|   | 19-35      | 69.00 |
|   | 36-55      | 11.00 |
|   | >55        | 6.00  |
| <i>Income</i>   | <30k       | 26.00 |
|   | 30-50k     | 30.00 |
|   | 50-75k     | 35.00 |
|   | >75k       | 9.00  |
| <i>Own cd players</i>   | Yes        | 66.00 |
|   | No         | 34.00 |
| <i>Own mp3player</i>  | Yes        | 65.00 |
|   | No         | 35.00 |
| <i>Methods of purchase music</i>                                | download   | 30.00 |
|   | in stores  | 22.00 |
|   | both       | 48.00 |
| <i>If your answered "both" in previous question, % download</i> | <20%       | 22.00 |
|   | 20-50%     | 30.00 |
|   | >50%       | 48.00 |
| <i>You purchase music online in the form of</i>                 | albums     | 18.00 |
|   | songs      | 21.00 |
|   | both       | 61.00 |
| <i>How often store purchase last month</i>                      | >5         | 10.00 |
|   | 3-5        | 29.00 |
|   | 1-2        | 56.00 |
|   | none       | 5.00  |
| <i>How often downloads last month</i>                           | >5         | 40.00 |
|   | 3-4        | 18.00 |
|   | 1-2        | 42.00 |

A few other variables show the significance levels between 1-3%:

1. *product quality, purchased music is of good quality*
3. *freedom of choices: enable customer to buy only what they want and need*
9. *enable customers to make their own album*

## MANAGERIAL IMPLICATIONS

The rejection of the null hypothesis presents that the music industry trend favors online purchases from the consumers' perspectives, while offline purchases are still an important vehicle for consumers purchase decision. This finding is important and suggests that the music industry will preliminary be focusing on the internet for heavier demands for the years to come.

The music industry is definitely going through a major transition in terms of the medium it is conveyed in. Just as vinyl records, cassettes, and CD's have slowly declined, there will soon be no need for consumers to be stepping foot in a store location to purchase music.

**Table 3: Mann-Whitney test results**

|   | Mann-Whitney U | Z     | Sig. |
|---|----------------|-------|------|
| <i>1. product quality, purchased music is of good quality</i>                               | 5805           | -2.28 | 0.02 |
| <i>2. variety of selection: present customers with large selections of music</i>            | 4929           | -4.03 | 0.00 |
| <i>3. freedom of choices: enable customer to buy only what they want and need</i>           | 5565           | -2.68 | 0.01 |
| <i>4. attractive price: offer attractive prices</i>   | 5970           | -1.85 | 0.06 |
| <i>5. easiness of purchases: enable customers least efforts to buy music</i>                | 5048           | -3.67 | 0.00 |
| <i>6. security and safety: transactions (including trips to store) are secure and safe.</i> | 4088           | -5.63 | 0.00 |
| <i>7. privacy: private information is kept confidential</i>                                 | 4679           | -4.47 | 0.00 |
| <i>8. cost of obtaining is kept low</i>   | 4282           | -5.25 | 0.00 |
| <i>9. enable customers to make their own album</i>  | 5884           | -2.16 | 0.03 |
| <i>10. buying those songs I do not want to listen is a waste</i>                            | 6136           | -1.61 | 0.11 |
| <i>11. can obtain free music legally</i>  | 6301           | -1.30 | 0.19 |
| <i>12. enable customers to learn what are popular, try, and know the feedback of others</i> | 6268           | -1.45 | 0.15 |

Through our findings, music downloading became more popular in recent years. The online retail stores such as iTunes, Napster, Rhapsody, Amazon etc. can increase their sales in many ways. They need to emphasize to the consumers that they will not receive any type of computer viruses and that they are a trustable site to shop from. Once a consumer receives positive online shopping experience they will be more likely to shop with them again. Internet sales can be increased by having sales, deals, and more discounts to attract consumers. Deals such as buy 2 or more songs, get 1 free, have online coupons (25% or 50%, etc.), and instead of having songs for 99 cents they can sell songs for 75 cents or less. Once consumers know of these special offers, they will feel more likely to purchase more songs online than going to the music stores and buying a tangible CD.

The recorded music industry is declining overall because of the inability of digital sales to grow enough to offset the decline in tangible sales. A trend that plays a role in this decline is the fact that many people today are listening to individual songs, rather than to an entire album, just as the original research presented earlier in this paper suggested as well. Revenue may come from individual songs, and that it is much harder to get revenue from entire albums and therefore making it harder to sell CD's. This is also supported because more people preferred just downloading one song off an album. It is very convenient for people to just put all the songs of their preference into one single device and play them whenever and wherever they want. At the same time, the traditional music stores may need to further enhance their online stores for their lost time and revenues.

As revealed in this study and many other studies, music industry is matured where only a limited growth in U.S. and many Western countries. However, in the emerging market, i.e. India and China, the demand for music remains strong. The problems in those countries are illegal downloading, and mass produced pirated cds sold in those markets that can never be translated to sales. So for the music industry as a whole, protecting intellectual property is an important task and the industry has to seek the supports from the law enforcement from the local government authorities, so far only limited results were produced.

In addition, the industry needs to further promote digital downloading, since it can reduce the cost of delivering music. This will be a cost side game, rather than focusing on the revenue.

## **LIMITATIONS OF THIS RESEARCH**

Due to the limited sample size and the rapid change in the music retail industry, this research has many limitations that can lead to future research projects.

We have found more issues and problems after we finished the research, i.e. how consumers switch from going to physical stores for their music need to digital downloading. The music retail industry is currently divided into two focuses: stores vs web. What are the fundamental differences in their strategic approaches? How do these strategies work? Are there any of these strategies eventually prevailing? These are the questions need to be answered in the future research.

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## APPENDIX

The Mann-Whitney procedure is used to test whether two independent samples have been drawn from populations having the same mean. Hence, the rank sum test may be viewed as a substitute for the parametric t test or the corresponding large-sample normal curve test for the difference between two means. If any difference between the two population distributions is due only to the difference in location of the two distributions, then the Mann-Whitney test is equivalent to testing whether or not the two population means are equal. This is similar to the two independent sample t-test, where we must assume that the two population variances are equal.

The Mann-Whitney test is based on the notion that if the two independent random samples have been drawn from the same population, then the average of the sample ranks  $r(x_i)$  and  $r(y_i)$  should be approximately equal. If the average of the  $r(x_i)$  is much greater or smaller than the average of the  $r(y_i)$ , then this indicates that the two samples likely came from different populations. In order to carry out the test, the Mann-Whitney statistic  $U$  is calculated. This test statistic depends only on the number of items in the samples and the total of the ranks in one of the samples. It is defined as follows:

$$U = n_1 n_2 + \frac{n_1(n_1 + 1)}{2} - R_1$$

The statistic  $U$  provides a measurement of the difference between the ranked observations of the two samples and yields evidence about the difference between the two population distributions. Very large or very small  $U$

values constitute evidence of the separation of the ordered observations of the two samples. Under the null hypothesis stated earlier, it can be shown that the sampling distribution of U has a mean equal to

$$\mu_U = \frac{n_1 n_2}{2}$$

and a standard deviation of

$$\sigma_U = \frac{n_1 n_2 (n_1 + n_2 + 1)}{12}$$

Furthermore, it can be shown that the sampling distribution approaches normality very rapidly and may be considered approximately normal when both  $n_1$  and  $n_2$  are in excess of about ten (Hamburg, 1977, p. 530).

# UNDERSTANDING TAIWANESE BUSINESS LEADERSHIP STYLES

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## ABSTRACT

*Asian economies have grown rapidly. Enterprises run by Chinese in Taiwan, Hong Kong, other South East Asian countries and in the People's Republic of China have become increasingly prosperous. This phenomenon has attracted attention from researchers in business leadership. Due to changes in the Chinese society of Taiwan, large business enterprises also have changed. They no longer function in the traditional family style. It is argued that a "hybrid" style of business leadership is emerging in modern Taiwan as well. Chinese leadership has been influenced by Confucian culture, and Daoism – the study of rules, moral philosophy, and ethics - with an emphasis on the relationship between individuals and the group. This paper explores this leadership style, proposing a research agenda concerning the nature of an hypothesized "hybrid" Chinese leadership style or styles in contemporary Taiwan.*

## INTRODUCTION

Many Asian economies have grown rapidly. Enterprises run by Chinese in Taiwan, Hong Kong, South East Asia, and in the People's Republic of China have become increasingly prosperous. With the end of martial law in Taiwan in 1987, Taiwan experienced major political and economic reforms. The changes gone through in the Chinese society of Taiwan resulted in a move toward democracy (Sheng and Chang 2004), and large business enterprises appear to have changed as well. Although the overall organization has not completely changed towards the western style, they no longer function in the traditional family style. Zheng and Lin (1998) called the result a "hybrid" style of business organization. The structures of many organizations have changed from family-owned to public trading corporations (Wong 1993). This phenomenon has encouraged a number of researchers to study the changes in organizational structures and leadership behavior (Smith and Wang 1996).

The purpose of this study is to explore the nature of emerging Chinese leadership styles, and how they affect the relationship with subordinates, particularly in Taiwan. Researchers point out that a distinctive *paternalistic* leadership style is the typical leadership style in Chinese business organizations. Leaders act as father figures, and possess clear and powerful authority. They are usually related to the business owner. Therefore, "guanxi" (the interpersonal relations between leaders and followers) play a very important role in Chinese leadership. Is this style of leadership really evident within Chinese, and specifically in Taiwanese, business organizations?

## Literature on Leadership

Such is the importance ascribed to 'leadership' in business, an enormous amount of research has addressed the phenomena over a long period. (Fleishman et al., 1991), yielding literally dozens of schemes attempting to define, describe and theorize concerning the nature and dimensions of leadership. We have settled on a *definition* of leadership as 'a process whereby an individual influences a group of individuals to achieve a common goal' (Northouse 1997 p2). Early research focused on special *traits or characteristics* of individuals (Bass 1990). Other approaches address *acts or behaviour* which perform to achieve group goals (Blake, R.R. and ;McCanse 1991). A significant literature focuses on the dimension of *power* within the relationships of leaders and

followers (French and Raven 1959), and more recently on leadership as an *instrument of goal achievement for group members* (Fiedler and Chemers 1984). Indeed, recent research has a focus on the *transformation* of followers through vision setting, role modeling and individualized attention (Northouse, 1997, p3).

## Differences between the cultures of West and East

Adler (1997) stated that within Eastern and Western cultures, different leadership styles have formed. In Western leadership there is a kind of equality between leaders and followers. Within Chinese business organizations, there is a clear hierarchy and set of role expectations between leaders and followers, from the outset (Tsai 2002). Therefore, Western leadership theories are not necessarily suitable for an understanding of business leadership in the East. Chen et al. point out that the main culture value differences between East and West are: 1. individualism versus collectivism. 2. power distance. 3. influence of the Confucian work dynamic.

Chinese leadership is influenced by Confucian culture (see below), Daoism – which emphasises rules, moral philosophy, and ethics - and the example of three thousand years of autocratic rule by Chinese emperors. Chinese leadership emphasises the relationship between individuals and the group, and their interaction. Chinese thinking is largely concerned with stable and harmonious relationships. Chinese leadership philosophy is based on traditional cultural norms and a family concept that is termed *collectivist*. Collectivist culture is also called “high-context”, in that leaders are concerned about their followers’ feelings. Communication between leader and followers has an indirect but succinct style which enables everyone to maintain “face”. In Chinese organizations there is much use made of *inspiration* and *consultation*. Chinese believe that a good leader-follower relationship is built on warm-heartedness. Inspiration and consultation will improve work effectiveness (Chen 2005) It is a reward-oriented strategy (Wu 2004). Chinese thought pays great attention to understanding the whole picture, combining separate parts, elements, or substances into a whole (Yang 1981).

Western organization is characterised by *individualism*, an emphasis on the individual person. People look after themselves and their immediate family including parents and children. The focus is on competition and ambition. The culture is “low-context”, and characterised by the use of a direct, equal and exact personal communication style (Wu 2004). Western thinking emphasises an analytic style which resolves complicated sections into different elements, which are then researched in depth (Yang 1981). Within western organizations use may also be made of menace, ultimatum and the like. In a punishment-oriented strategy (Wu 2004). This is argued to be very different from the collectivist ethos of the East.

Eastern culture maintains clear power distance. Followers accept the work from leaders, and whatever decision the leader makes, they follow and do not complain. According to Eylon and Au (1999) if leaders ask followers’ opinions or ask them to make decisions, followers will not trust their leader and will feel their leader has no ability to lead the group. The followers get used to obeying and being faithful to leaders or to the whole organization. Huang (1988) points out those family business owners always adopt an authoritarian style of leadership. Followers respect authority. Even if they have a different opinion, they will never argue, but will accommodate their leader (Cheng 2004). In western culture the distance between leaders and followers is usually smaller. Followers believe that an unfair situation should not arise in the organization, and that leaders and followers should stand equal, have the same rights, and participate relatively equally in decision making. Followers want leaders to play a supporting role (Brockner et al 2000).

Confucian thought emphasises that superiors should be concerned about the juniors, and juniors should have respect for and be faithful to their superiors. This results in:

1. a difference in seniority, gender, role, and position (this concept being similar to that of power distance)
2. a focus on harmony and cooperation with each other.
3. a belief that you do not force other persons to do things that you do not want to do.

## Leadership Style(s) in People’s Republic of China and Taiwan

Silin (1976) studied Taiwanese leadership in a privately owned enterprise. He found distinctive Eastern styles of leadership. The view of participative leadership was quite different from that of America and Japan. Silin found differences between the Eastern and Western standards of *morality* and *authority*. Redding (1990) studied the structure of Chinese family enterprise and its management style, in Hong Kong, Singapore, Taiwan, and Indonesia. He found Chinese business culture had a distinctive style he called “Chinese capitalism.” Patriarchy is one of the most important elements of this style. Yet he proposed the style of leadership was based on “benevolence”, and pointed out that Chinese societies have a strong legacy of *personalism* – a reliance on interpersonal bonding as the basis of transaction.

Westwood (1997) investigated South East Asian Chinese owned enterprises, developing a *headship* concept. A father is thought to possess both benevolence and authority, and the ‘headship’ role is the combination of discipline with a fatherly benevolence. Westwood (1997) stated that his *patriarchal (headship)* style is likely to occur where 1) structure is centralized, and 2) there is not a high level of complication in systems and procedures. The style will feature a general relationship context emphasising harmonious relationships, moral leadership, and personalism, where the leader allows personal opinion to be included in decision-making. In summary, Chinese leadership is generally termed “paternalistic”. Because this is based on elements of Chinese culture, such a style is thought to be effective in Chinese organizations. (Cheng, Huang and Chou 2002; Wu, Hsu, Cheng 2002; Cheng, Hsieh and Chou 2002). Farh and Cheng (2000) state that this type of leadership is more suitable than others for Chinese family business organizations. Chinese leaders tend to control information, passing it to an in-group only. The style is said to suit leadership in simple environments where there is no requirement to use a lot of modern technology.

According to Brockner et al. (2000), research in Taiwanese leadership is quite rare. Redding and Wang (1986) point out that in Chinese business organizations, the leadership style is “directive and authoritarian” (p278). Chinese followers are said to be more comfortable with this type of leadership than other styles, because an authoritarian leader is considerate towards followers (Bond and Hwang 1986). Traditionally, Taiwanese leaders tend to use an autocratic leadership style, controlling the information, refusing followers participation in meetings, only giving them limited information, and instructing them to do what he or she wants them to do, all with the purpose of preserving the leader’s position, power and control of the business (Wu 2006). The style emphasises a leader’s prestige, individual authority and control of followers via autocratic behaviour, belittling of followers’ ability, rectification of image saving “face” and admonishment. Followers respond with obedience, submission, reverence, and shame. Although leaders use an authoritarian style of leadership, they still want to keep good relationships with their followers. Therefore, they do favours for them, look after followers individually, and defend followers’ reputations. Followers feel grateful and seek ways to return kindness. (Zheng 1995a, 1995c)

Wren (2005) stated that the paternal model was a continuance of male-dominated culture. This focuses on the *leader’s* needs. Workers, just like children at home, need parents’ guidance, direction, and a father’s wisdom. Leaders do all important thinking, make important decisions, control all information, and command all of the activities as fathers normally do at home in traditional Chinese cultures. Children (followers) only do what father (leaders) order; if any problem occurs, leaders take the responsibility. Laub (2003), states that although autocratic or paternalistic leadership can cause damage and have the opposite of the desired effect, this type of leadership will remain firmly rooted, influencing organizations strongly. Anderson (2005) states that although a paternalistic leadership style has negative aspects, it also has very positive points. For example:

- Contrary to argument that followers, like children, are always being passive, doing what the leader (adult) says, and never growing up, there is another view, that one day children will become adult, in response to the challenge of being someone else’s parent.
- In regard to the treatment of the children, the positive viewpoint argues that parents treat every child according to their interests, personalities, skills, and abilities.

Paternalism comes from the Latin “pater.” The leader acts like a father at home, and treats followers as children, and acts for the good of others, as parents do for their children. This is an hierarchical pattern. A father makes decisions on everything for everyone in the family. Also, Weber stated that the critical subject is “domination”. He divided this domination into three standard models: “legal domination”, “traditional domination”, and “charismatic domination”. Under “patriarchalism” (headship), every single human being’s lifestyle is to a great



extent influenced by the related social whole. The patriarchal authority controls this relationship. This leadership style has gradually been discarded by Chinese in Western countries, but is still popular among Chinese family enterprises (Hamilton 1990). In terms of Blake and Mouton's managerial grid, Chinese paternalistic leadership style fits as types 1.9 mixed with 9.1. The leader-follower relationship is just like the parent-child relationship at home. The reward comes from the 1.9 types, and punishment comes from 9.1.

According to Farh and Zheng (1998c) the Chinese family enterprise paternalistic style has the three important elements of authoritarianism, benevolence and morality. Regarding the last of these, *morality*, leaders in this context have to display a higher level of personal integrity and self-cultivation, personal virtues, self-discipline and unselfishness, and must treat staff equally without discrimination. As noted, paternalism manifests in a context characterized by centralization, low formalization, harmony building and personalism. Chinese patriarchal leadership style combined strict and impartial discipline and authority, with a father's kindness, honesty, and moral integrity expressed in a personalistic atmosphere (Farh and Cheng 2000). The relationship between leaders and followers is complementary (Pye 1981). According to Zheng (1995), in a patriarchal (headship) style, leaders did not treat every follower equally. They divide followers into *insiders* (in group members) and *outsiders* (out group members). Leader's behaviour towards insiders is to "do favours", treating them differently to the outsiders. Depending on "guanxi" (relationship), "loyalty", and "ability", people are put into different categories.

**Table 1: Paternalistic leadership style summary:**

| Authoritarianism:  | Benevolence:   | Morality:   |
|--|--|---|
| <b>Leaders:</b> <ul style="list-style-type: none"> <li>• have absolute authority</li> <li>• do not tolerate any challenge</li> <li>• control followers</li> <li>• not willing to empower</li> <li>• control information</li> <li>• control communication</li> <li>• ignore followers' opinions</li> <li>• defend leader's dignity</li> <li>• show leader's self confidence</li> <li>• request high effort</li> <li>• rebuke poor effort</li> <li>• provide guidance</li> </ul> | <b>Leaders:</b> <ul style="list-style-type: none"> <li>• have long term care for followers' holistic individual or familial welfare or well being.</li> <li>• treat followers as a family member</li> <li>• ensure the work</li> <li>• help in crisis</li> <li>• encourage and uphold</li> <li>• show consideration</li> </ul> | <b>Leaders have to</b> <ul style="list-style-type: none"> <li>• better personal integrity</li> <li>• self cultivate</li> <li>• have better personal virtues</li> <li>• perform with self discipline</li> <li>• demonstrate unselfishness</li> <li>• treat equally without discrimination</li> </ul> |

## Towards a 'Hybrid' Taiwanese Leadership Style?

Taiwan is a small island country, surrounded by sea. After 20 years of democracy, Taiwan has become freer not only in politics and business, but also in education. Increasingly parents sent their children overseas for study. Because of the influence of Western education and cultures on the young generation, their thinking has tended to become much more westernised. Society in Taiwan has begun to change, older generations thinking about handing over the businesses that they built to the next generation. However, they do not give their businesses to the young people with a free hand to run them, for as parents they frequently try to maintain an influence over the running of the business. Business leadership styles in Taiwan would be expected to be changing from the traditional paternalistic leadership style to a more democratic (participative) leadership one. However the body of research on Taiwanese leadership theory and leadership style is still very small.

Drawing then on the broader body of leadership research, and placing alongside the characterisation of Chinese/Taiwanese leadership styles discussed above, we propose a research agenda designed to assess empirically 1) the nature of Chinese/Taiwanese leadership 2) any detectable difference in the business leadership evident amongst Chinese businesses in the Taiwanese context.

Further, we propose the development of measurement instruments specifically designed to assess 'Chinese' elements of leadership style. We note that possibly to an even greater extent than in the west, Chinese business leadership positions will tend to be 'assigned', rather 'emergent' (Northouse 1997 p5). This fact, and the 'authoritarian', 'paternal' or 'headship' styles of leadership described above seem to lend themselves towards measurement with instruments which focus on leadership *behaviours* and their *context*, rather than the assessment of specific (possibly innate) personal *traits* of business leaders.

We propose the use instruments incorporating elements of tools such as the Leadership (managerial) Grid (Blake and McCanse 1991) - which measures spatially against dimensions of concern for *people* and concern for *results* - the Situational Leadership II model (Blanchard, Zigarmi and Zigarmi 1995) - which measures *supportive* and *directive* behaviours - and Least Preferred Co-worker (LPC) Scale as developed by Fiedler and Chemers (1984). The latter enables close scrutiny of leader - member relations, within different types of task and position contingencies, and hence seems well adapted for the 'collectivist' Chinese cultural context. Another tool which could be incorporated is the Path - Goal Leadership Questionnaire (Indvik, cited in Fulk and Wendler (1982). This provides data on how leaders motivate subordinates to accomplish designated goals, drawing on knowledge concerning worker beliefs (specifically 'expectancy theory', which examines work beliefs regarding the capabilities, likely outcomes and payoffs/rewards). Again, the notion of reward and punishment seems germane to authoritarian/ paternalist/ headship styles of leadership. Given the connotation of masculinity often associated with Chinese leadership style, we propose testing of any gender linkages to leadership style by incorporation of equal numbers of males and females within the research design developed.

## Research Questions and Proposed Research Design

We propose the following research questions for research.

1. Can key elements of a distinctively Chinese leadership style - in terms of behaviours, contexts, contingencies, leader-member relations and worker expectancies and beliefs - be measured?
2. Will such measurements allowing comparisons to western styles of leadership,
3. Will such measurements allowing comparisons between various sub categories of Chinese style, such as may be found in Taiwan and amongst other Chinese communities? Is there a 'hybrid' Taiwanese leadership style?
4. If the existence of traditional and hybrid 'Taiwanese' leadership styles can be demonstrated, are there empirically demonstrable *gender differences* in the prevalence of such leadership styles?
5. If such differences can be established, are they age related, in terms of the ages of leaders and followers?

Once the above questions are answered, it may be possible to move forward to consideration of issues of the effectiveness of Chinese or hybrid styles of business leadership.

In order to answer these questions, the following design will be used:

- 1). Initial qualitative *exploratory research*. Interviews will be carried out with 25 female business leaders in each of the two countries examined (PRC and Taiwan) from a wide range of ages (25-60), and with 25 male business leaders from the same age groups.
- 2). Empirical *Survey based study*: In order to clarify distinctive characteristics of eastern leadership quantitatively, a survey instrument regarding leadership will be developed and administered to appropriate and substantial sample groups in Taiwan and China. The survey instruments will utilize scales as discussed above.
- 3). Case Studies: in order to further identify and analyze eastern leadership styles, detailed case studies will be conducted within individual businesses within Taiwanese and other Chinese contexts.

Thus, we propose methodological triangulation (Oppermannt 2000), via a combination of quantitative, qualitative and case study research methods. The findings should be of much practical value in understanding the nature of Chinese and Taiwanese leadership, and in subsequent comparisons.

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# **GAINING SUSTAINABLE MOMENTUM IN MARKETING TECHNOLOGICAL INNOVATIONS: INSIGHTS FROM A NETWORK APPROACH TO STRATEGY**

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## **ABSTRACT**

*A firm's sustained competitive advantages are often derived from its inter-organizational relationships (e.g. Baraldi et al. 2007). For those technology-based companies who need to cope with constantly changing conditions, technological prowess as well as a firm-level strategic thinking may not be able to guarantee the success and provide sustainable momentum in marketing technological innovations. By using the insights from a network approach to strategy, we suggest that a firm should be equipped with four types of strategic ability to gain sustainable momentum from marketing a technological innovation: network orienting, network building, network enhancing, and network mobilizing.*

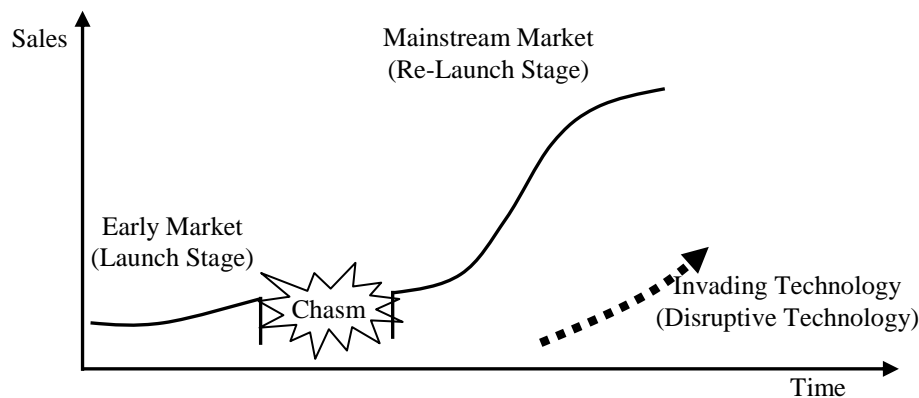
## **INTRODUCTION**

A successful technological innovation must be able to make the products or services based on it spread from the early market to the mainstream market (Easingwood and Harrington 2002; Moore 1991), generating fresh impetus to boost the firm's growth. In technology-intensive industries where the phenomena of technological uncertainty, market uncertainty, and competitive volatility prevail (Mohr et al. 2004), technological prowess no longer guarantees success in the markets. Moreover, in a "no business is an island" environment, a firm's competitive advantages and long-term sustainability are not only determined by its internal capability but its networking competence with other organizations (Håkansson and Snehota 1989). By building a linkage between Moore's (1991) *Crossing the Chasm* and Christensen's (1997) *Innovator's Dilemma*, the study aims to elaborate on how a technology-based firm can achieve sustainable momentum using the perspective of network strategy (or interaction approach to strategy).

## **MARKETING TECHNOLOGICAL INNOVATION**

Moore's (1991) influential work *Crossing the Chasm* mainly addresses three fundamental parts: the early market and the mainstream market separated by a chasm, the valley of death (see Figure 1). In his work, the first wave of momentum in commercializing technological innovation hinges on the firm's selection of the initial market segment and its strategy to appeal to this group of adopters. However, the strategy that achieves the initial success in the early market may fail to attract the adopters from the mainstream market and cause the innovation (or products based on it) to become stuck in the chasm due to the critical differences of needs between early market customers and mainstream market customers.

**Figure 1. Technology adoption curve (adapted from Moore 1991)**



In order to sustain the momentum, the firm has to adjust its strategy, including the construction of the whole product in particular, to surmount the chasm and facilitate the penetration of the mainstream markets. Here, the development of the whole product refers to the efforts of a firm to combine complementary resources (e.g. the combination of software and hardware products) to create a safer atmosphere of innovation adoption. In addition, the existence of a chasm has been validated by Goldenberg et al.'s (2002) empirical data from the consumer electronics industry, showing that between one-third and one-half of their cases encountered a saddle, a slump in sales after initial peak.

Built on Moore's work, Easingwood and Harrington (2002) prescribe a four-step procedure for managers to launch (marketing to early market customers) and re-launch (marketing to mainstream customers) a technological innovation: marketing preparation, targeting, positioning, and execution. Following these principles high-tech firms are able to accumulate momentum from the launching stage to the re-launching stage, shorten the chasm period, and propel a technological innovation to its potential (see Figure 1).

Furthermore, in Slater and Mohr's (2006) work which can be viewed as an extension of Moore's work, the technology adoption curve is combined with Christensen's (1997) *Innovator's Dilemma*, suggesting that technology-based firms should develop contradictory skill sets to be successful across a range of innovations. From his research in the hard disk drive industry, Christensen (1997) argues that the incumbent firm who has successfully brought the technological innovation to the mainstream market may be disrupted by the new entrant who introduces a different set of performance and price attributes relative to the existing technology, if the incumbent firm is inattentive to the emergence of this invading technology or reluctant to take responsive actions.

Although Moore (1991) and Easingwood and Harrington (2002) stress the importance of utilizing partnering to cross the chasm and penetrate the mainstream market, a great deal of attention in their work and others (e.g. Slater and Mohr 2006) is placed on the firm-level strategies and competences. In a business environment in which each company (or actor) has an embedded context with its connection with other actors (Halinen and Törnroos 1998), the firm-level strategic thinking provides a limited explanation of momentum accumulation from one technological innovation to another. Thus, the rest of the paper aims to use the insights of network (or interaction) approach to strategy to expand our understanding of gaining sustainable momentum on the basis of Moore's (1991) and Christensen's (1997) work.

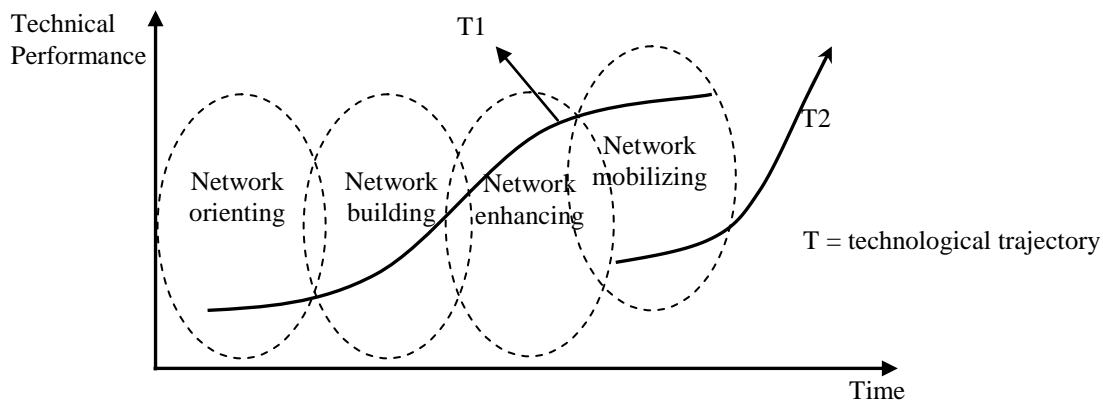
## **INSIGHTS FROM THE NETWORK APPROACH TO STRATEGY**

The network approach emphasizes that it is the interplay between actor bonds, resource ties and activity links that makes a business environment come into being (Håkansson and Snehota 1995). The results of interaction

embed a firm in a web of exchange relationships and create a unique network position, influencing and being influenced by other actors (Johanson and Mattsson 1992). Thus, a firm's performance is determined by its interaction with other organizations; and such network phenomena have not only a strategic significance but also a relevance to the firm's long-term sustainability (Baraldi et al. 2007).

In order to have its momentum sustained, a firm must be able to manage its relationships, that is, to integrate, build, and reconfigure its internal and external resources and competences through interaction with others (Eisenhardt and Martin 2000), especially in the face of a highly dynamic technology-intensive environment. Based on the insights from the network approach to strategy, we propose four types of strategic ability for the company to build a firm stand in the early market, cross the chasm, achieve success in the mainstream market and bridge technological discontinuities accordingly, generating the sustainable momentum (see Figure 2).

**Figure 2. Four types of strategic ability**



## Early-market strategy: Network orienting

The adopters in the early market, consist of two groups and are termed by Moore (1991) as technology enthusiasts and visionaries, appreciate a product based on the technological breakthrough instead of improvement. Their endorsement is crucial to the survival of the product. However, their opinions can guide a firm in diverse market directions and in a highly risky environment. To build the initial momentum in the early market, we propose a *network orienting ability*. This ability focuses on a firm's efforts in seeking for inter-organizational commitments on the investment of the technology as well as in getting access to new complementary resources, so as to reduce the risks, create core capabilities from a cosmopolitan learning (Kash and Rycroft 2002), develop the best possible technology (Mohr et al. 2004), and cultivate a winner image (Easingwood and Harrington 2002).

Nokia's entrance into the market of mobile payment services (Dittrich and Duysters 2007) can be a good example of network orienting strategy. By utilizing joint R&D agreements with Nordea Bank and Visa International, whom it did not collaborate with before, Nokia explored this new market with a new software development, that is, a pioneering pilot to test and verify mobile payment services based on dual-chip technology. This strategy is characterized by relatively weak ties, low commitments and opportunistic behaviors (Dittrich and Duysters 2007). Although it is a period of trial and error (Kash and Rycroft 2002), this allows the company to better develop its core competence and understand its network position to facilitate future network building.

## Crossing-the-chasm strategy: Network building

The fundamental difference in needs and wants between early market customers and mainstream market customers may cause a product based on this technological innovation to be stuck in the chasm if a technology-



based firm doesn't adjust its strategy that is successful in the early market (Moore 1991). To sustain the momentum, the priority for the firm is to minimize the time in the chasm by transforming the product into a "whole product" that aims to be the best solution possible (Mohr et al. 2004). This strategy can be complemented by *network building ability* in which we take into account Ford and Saren's (2001) technology bundles and Ritter (2004) and his colleagues' identification of four types of firms and organizations in a value net. These two concepts are explained in the following.

After going through a cosmopolitan learning and exploration process in the early market, the firm needs to define its core competence (either product technology or process technology or marketing technology; that is, one of technology bundles suggested by Ford and Saren (2001)) and combine this with complementary technologies performed by other business actors to build a whole product. The latter requires the firm to develop its relationship portfolio which may consist of suppliers, competitors, customers, and complementors (the four types of firms). Take the relationships with competitors for example, it concerns a firm's ability to co-develop, co-invest, or co-promote with competitors for a product or technology standard which is decisive to the success in the mainstream market (Easingwood and Harrington 2002). Thus, as Ford et al. indicate (1998), "...technological resources are only valuable if they are important to other companies and when they are combined with the technologies of those other companies (p. 227)".

Matsushita's triumph in the videocassette recorder (VCR) standard competition and Microsoft's dominance in the operating system for personal computers (PCs) just illustrate the importance of network building strategy (Wonglimpiyarat 2005). In addition to the development of their core competences, both Matsushita and Microsoft were good at combining external complementary resources to construct the whole products and increase their market acceptance. For Matsushita, its utilization of channel partners and the efforts in extending recording capacity to encourage film studios to release films on VHS format could account for its win-out of VCR standard battle and the later prevalence in the mainstream market. As for Microsoft, although it faced the challenges from IBM's OS/2 and Apple's MacOS, its strategy of low-cost licensing of its Windows via OEM agreements with hardware manufacturers, the strategy of product bundling to include software applications and the collaboration with Intel's microprocessor (known as Wintel machines) allowed it to establish a solid basis in the mainstream market.

## **Mainstream-market strategy: Network enhancing**

When a network is built, the firm embeds itself in a deep relational structure and obtains a unique position, producing and delivering values (Halinen and Törnroos 1998). In addition to be able to surmount the chasm with a whole product, the fundamental choices of business partners allow the firm to establish a beachhead (or a kingpin) in the mainstream market (Easingwood and Harrington 2002; Moore 1991). To deeply penetrate the mainstream market (or generate the bowling-alley effect termed by Moore (1991)), we suggest that the firm should strengthen its cooperation and collaboration with partners; here, we term this as their *network enhancing ability*.

In the mainstream market where a technological trajectory is well established and market segments are well defined, network enhancing ability concentrates on broadening and strengthening the knowledge of established technology and exploiting complementary resources within the business network (Dittrich and Duysters 2007; Kash and Rycroft 2002). Along the technological trajectory the company may participate in a range of value systems (or business nets), such as vertical nets or horizontal nets, and even enter into a renewal net by enhancing and adjusting its core capabilities (Möller and Rajala 2007). Thus, the firm's utilization of network enhancing ability is the source of sustained momentum while it is penetrating the mainstream market.

Intel's success with respect to microprocessors for PCs can exemplify the application of network enhancing strategy in the mainstream market. A key factor of its success hinges on its cooperation and collaboration with network members (including software providers, hardware manufacturers, and channel partners) to continuously release derivative products around the whole product to fill the technological gaps without holes in the mainstream market (Tabrizi and Walleigh 1997), enabling its momentum to be sustained. The network enhancing strategy stresses the firm's ability to exploit network aggregated resources to pursue business net

efficiency and maximize the market coverage, meeting the diverse needs of mainstream market customers, e.g. low-end and high-end segments (Dittrich and Duysters 2007; Kash and Rycroft 2002; Möller and Rajala 2007).

## **Bridging-technological-discontinuity strategy: Network mobilizing**

The works by Christensen (1997) and Slater and Mohr (2006) have shown that a firm who rests on its laurels in the mainstream market and ignores the emergence of new technology may easily lose its momentum and suffer from the invasion of a new entrant who embraces a new technological paradigm. Moreover, Suárez and Utterback (1995) indicate that investing in a new technology (e.g. T2 in Figure 2) is a pivotal event that gives fresh impetus to a firm's growth. Actively bridging technological discontinuities (e.g. from T1 to T2), thus, could help the firm avoid innovator's dilemma and produce long-term sustainability.

The accumulation of adaptations (the efforts to eliminate the mismatches in interaction (Halinen 1997)) enables an actor, who embeds itself in interconnected relationships, to function better (e.g. achieving operational efficiency) in the mainstream market; however, it also produces constraints on the firm's interaction with others (Håkansson 1989). Besides, making a transition to a new technological paradigm or trajectory may make a firm's existing investments obsolete (Afuah 2000; Slater and Mohr 2006) and require it to expand, explore or eliminate its core capabilities that could result in its entrance into a new business net (Kash and Rycroft 2002; Möller and Rajala 2007). Here we suggest that a *network mobilizing ability* can help bridge technological discontinuities successfully. This ability stresses how a firm balances its network positions in serving both existing and new business nets by mobilizing the resources and actors. The concept of mobilization comprises Lundgren's (1992) network integrative mobilization and network changing mobilization in which the former refers to the process of extending and expanding the existing activity cycles while the latter refers to the process of establishing new activity cycles or breaking old ones.

Although Toshiba's withdrawal of HD DVD business in early 2008 puts an end to its format war with the rival format Blu-ray disc which was championed by Sony (Moses 2008), this case at least highlights an important issue concerning sustainable momentum. Technological discontinuity necessitates new investment and consequently investments in existing technology may become redundant. This is especially important for firms whose business operations rely on existing DVD technological dependences, such as the manufacturers of optical recording media. In order to successfully make the transition to the next generation of DVD, these manufacturers need to overcome these obstacles, including differences in product design (e.g. laser tracking requirements) and incompatible production systems (Weiss 2007), which result in major changes in the existing actors-resources-activities structured network. Consequently, these firms may formulate their strategies accordingly, e.g. integrative mobilisation or changing mobilization (Lundgren 1992), by reviewing their portfolio of relationships and network positional resources (Baraldi et al. 2007).

## **MANAGERIAL IMPLICATIONS**

In this paper we address a firm's pursuit of sustainable momentum in technology-intensive industry by drawing on an interactive and network perspective of strategy and propose four types of strategic ability in accordance with the development of technological trajectories. To apply these four abilities in the practical settings, we find three crucial inter-connected managerial issues: organizational interfacing, network adaptation and the balancing of network positions.

First of all, a firm's relationships in the business environment is the source of competitive advantages (Håkansson and Snehota 1989), but it is also the result of its functional departments' interaction with other actors', such as R&D, sales and marketing, and procurement. That is, building a sound organizational interface (e.g. R&D-marketing or R&D-production) can help develop the firm's core competence and identify the needs of complementary resources for the whole product establishment (Moore 1991), technology bundle (Ford and Saren 2001) and network member selection (Ritter et al. 2004). Moreover, in the face of the emergence of technological discontinuity, a good interfacing mechanism is able to remove organizational friction (Håkansson and Waluszewski 2002), reach common grounds (e.g. the willingness to sacrifice some of exiting investments) and identify new initiatives (either product or process) required for bridging the discontinuity (Lundgren 1995).

Secondly, in order to enhance the function of an established network (e.g. network efficiency (Möller and Rajala 2007)) while penetrating the mainstream market, the firm will increase its commitments with its counterparts, develop collective goals and fine-tune the inter-firm interfaces accordingly (e.g. Firm A's QA with Firm B's Production), including the development of routines and procedures and elimination of mismatches (Halinen 1997). Through this adaptation process an actors-resources-activities structured network is reinforced (Håkansson 1989). Last, but not least, a firm's resource mobilization following its bridging of technological discontinuity provides the firm with multi-positions, serving both the existing business net and newly developed nets. In terms of balancing multi-positions, the firm has to take into account when to adopt the new technology, how to maintain the competitive advantages of the existing net, and how to adjust the portfolio of relationships. For the first question, a good organizational interface could generate useful information (e.g. readiness of technical development) for decision making. For the last two, examining the impact of technological change on the firm's co-opetitors' (e.g. suppliers and complementors) performance and capabilities (Afuah 2000) could help adjust the firm's resource deployment and portfolio of relationships, such as phasing out of the product or developing alternative suppliers for the cost-down of the product in the existing net.

## CONCLUSIONS

No business actor can have all the resources that are required in developing and commercializing a technological innovation, that is, no firm can escape from interacting with others. Moreover, Baraldi et al. (2007) stress that strategies emerge from interactions, showing that firm-level strategies may not be able to cope with rapidly changing conditions in technology-intensive industries. This paper expands the strategic thinking of marketing technological innovations from the firm-level to the network-level by incorporating the insights from the network approach to strategy into the works by Moore (1991) and Christensen (1997) and proposes four types of strategic ability for technology-based firms to pursue the long-term sustainability. However, the most challenging task for a technology-based firm would be learning and using the network mobilizing ability. This ability involves a firm's elimination and/or exploration of capabilities which may in turn result in radical changes in its relationship portfolio. Our understanding of when an actor decides to bridge technological discontinuities, how it uses this network mobilizing ability, and what accompanying impact on its relationships is quite limited. It would be fruitful if more efforts, both theoretical and empirical, are devoted to this area.

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# KNOWLEDGE TRANSFER THROUGH NETWORKS: THE CASE OF TURKISH SMALL AND MEDIUM SIZED ENTERPRISE (SMES) DEVELOPMENT AND SURVIVAL.

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## ABSTRACT

*This research paper proposes a Knowledge Transfer and Networking approach to the development of SMEs in Turkey. The modern world is frequently referred to as a world of knowledge. The study examines the knowledge transfer process of SMEs business networks in the Turkish Textile Industry. The problem firms face is how to manage knowledge to gain efficiency and competitive advantage forced modern companies to think about Knowledge Transfer and its applications. However, many Turkish SMEs seem to be unaware of the importance of managing this process. This research reviews and develops a **FirstAid model and Pipe- Line(P-L) Model** for SMEs in Turkey in order to implement or better the existing knowledge transfer procedures. This also helps one understand the level to which the process of knowledge transfer is entertained in SMEs to survive.*

## INTRODUCTION

To understand how the Knowledge Transfer (KT) and Networking operates in the Turkish Textile industry, will give insight into the competitiveness of SMEs. Knowledge Transfer Networking(KTN) has been defined by Seufert, Von Krogh, and Bach (1999), as “signifying a number of people, resources and relationships among them, who are assembled in order to accumulate and use knowledge primarily by means of knowledge creation and transfer processes, for the purpose of creating value.” In order to survive and grow, there are many methods that firms can use. Firstly, networking can be an end in itself according to Gilmore et al (2001) and has proven a successful tool for smaller firms. In order for firms to appreciate the importance of networking and to consciously and successfully implement the networking concept through planning, they need to overcome the regular problem of lack of networks expertise. The difference between the success and failure of small firms can be the availability of and access to the relevant information and support services that have become increasingly common (Summon 1997). The business support infrastructure such as IT, government support and support by private organization that we see today are of great value to struggling SMEs (Sparrow 1999) and the benefits of this form of knowledge transfer are perhaps not emphasized enough. Knowledge transfer is, therefore, a critical factor in improving the growth prospects of many smaller businesses via networks. An understanding of the development and implementation of SMEs` Knowledge transfer is also crucial given the importance of innovation to the improvement of Network processes within organisations. The development and introduction of networking activities are directly related to changes in Knowledge Transfer practices such as management style, the flow of information and training. In the following sections, the relevant literature is reviewed to identify the gaps with respect to knowledge transfer and network in Turkish Textile Industry.

## THE CHARACTERISTICS OF KNOWLEDGE

One of the most used and consistent definitions for “Knowledge” is proposed by Davenport and Prusak: Knowledge is a flux mix of framed experiences, values, contextual information, and expert insights that provides a framework for evaluating and incorporating new experiences and information. Knowledge has some specific

characteristics. Firstly, knowledge is hardly measurable. Secondly, knowledge can be transferred from one person to another person, but the original owner of the knowledge will not lose the knowledge. Because of this knowledge is called a non-rivalry good. Thirdly, knowledge is cumulative, for example, if one wishes to absorb new knowledge one should at least have already an adequate base of knowledge (Kerste et al, 2002). The most simplistic approach to defining the characteristics of knowledge was proposed by Polanyi (1966) and later reiterated by others such as Nonaka and Takeuchi (1995) who made the distinctions between explicit and tacit knowledge. Explicit knowledge is knowledge that is easily codified and shared; an example of this is product specifications. In contrast, tacit knowledge is personal, rooted in values and routines and is difficult to share, for example, presentation skills (Polanyi, 1966). Both Szulanski (1996) and Simonin (1999) highlight the fact that the tacit content in knowledge can make it harder to understand and requires more social interaction before those involved have a similar understanding. These authors see this knowledge as knowledge with impact, because it is the transfer of these tacit elements and that give knowledge its unique nature and strategic value. For example, the knowledge management literature highlights the need to recognise the tacit elements in knowledge so that it can be managed by using sufficient social interaction to ensure its transfer (Nonaka & Takeuchi 1995; Simonin, 1999).

## Understanding Knowledge Transfer

Transfer of knowledge includes two actions: one is transmission which means sending knowledge to potential receiver and another is absorption meaning that knowledge must be incorporated either by a person or a group. As such, Davenport and Prusak have expressed this concept as “*Transfer = Transmission + Absorption*”. (Davenport & Prusak, 1998). Nonaka and Takeuchi (1995) describe knowledge creation as a spiralling process that starts with the individual and then moves across the organisation in a never-ending process of knowledge transfer (Nonaka & Takeuchi, 1995). This highlights the value that needs to be placed on understanding knowledge transfer in SMEs. Transfer of knowledge from one set of individuals to another has been a key area of interest for knowledge management and knowledge transfer researchers. The terms, knowledge transfer (Gupta & Govindarajan, 2000a), knowledge flows (Gupta & Govindarajan, 2000a), and knowledge distribution (Huber, 1991) appear to be used interchangeably in the literature to describe the process of knowledge transfer. The literature identifies that knowledge transfer is a dynamic process between the individual or group and the organisation's knowledge stocks. Alavi(2000) highlights the importance of knowledge transfer by suggesting that for superior performance of a social entity, knowledge generation and its successful transfer needs to take place. Cross, Parker, Prusak, and Borgatti (2004, p. 62) also posit the value of knowledge sharing in today's economy, "where collaboration and innovation are increasingly central to organizational effectiveness." Knowledge transfer can be defined as a “Knowledge systematic approach that obtains, organise, restructures, warehouse or memorise, deployment and distribute knowledge to points of action where it will be used for sharing and adopting best practices” (Wiig, 1997). Therefore this highlights the importance that need to be placed on understanding SMEs networks for knowledge transfer which are explained in brief in the following section.

## SME Networks

In a successful knowledge transfer, the experience of one network actor affects another (Argote and Ingram, 2000). While individuals ultimately have to perform the transfer of knowledge, this article focuses on knowledge transfer between business units, extending the work of previous authors at this level of analysis (Hansen, 2002, Tsai, 2001). SME networks have been classified as ‘personal’, ‘support’ and ‘industrial’ with emphasis being given to the sets of dyadic relationships that comprise the network (Shaw & Conway, 2000: 367). Industrial networks are the exchange relationships involving customers and suppliers forming part of SMEs value adding processes. These three types of networks are central to the existence of many SMEs (Martin, 2000). In practice an SME's personal, support and, even sometimes, industrial networks may overlap significantly. Interest in personal networks has been stimulated by attempts to understand how involvement in these networks can help create, develop and grow small firms (Shaw & Conway 2000: 370). Personal contact networks, it has been found, help generate social support for the owner, extend strategic competencies in terms of identifying opportunities and threats, and can supplement internal resources to resolve major operational problems. Owners can save significant time and money by accessing information, advice and resources through their personal

networks. Social networks help build relationships that can give the small firm access to new markets, technology, finance and political protection (Doukas & Kalantaridis, 2000). After a thorough analysis of existing literature on Knowledge Transfer and Knowledge Networks, this research paper came to a conclusion where there is a wide gap in between the communication systems in SMEs and would like to propose a model below to bring down the communication gap to offer a better Knowledge Transfer process.

## First Aid Model

The Network First-Aid model is a new concept this research would like to propose. The below diagram shows that any department within the organization should start by listening to each other, understand, trust and collaborate with each other in the network.

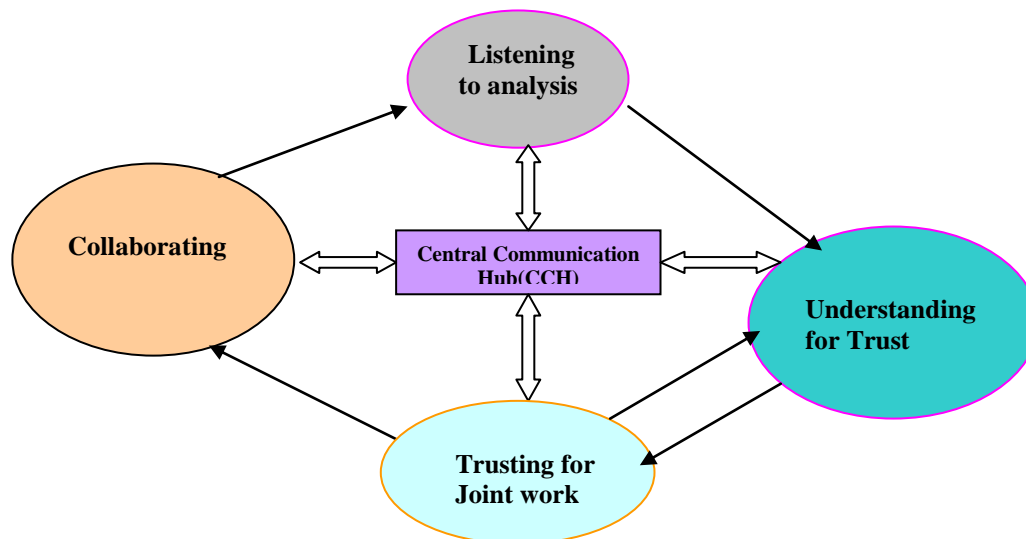


Diagram 1: Network First Aid Model for SMEs.

In any form of knowledge transfer business network, listening, trusting and collaborating are the main elements to connect each other to businesses that are geographically separated. The Listening section of the above diagram shows that any conversation in the network is gathered and passed on to the understanding section. Understanding the gathered knowledge is trusted and then collaborated with the entire organization to share the knowledge. Network **First Aid** forms a central communication hub which helps the entire knowledge transfer process within the organization. Central communication hub could be a set of expertise, group of IT experts or a computer that receives and forwards the information to other sections. It is a reserved knowledge that constitutes experienced knowledge transfer professionals and could be contacted for any sort of procedural help that may be required by other sections. The Central communication hub may be able to develop SME training presentations, design and develop various awareness materials, maintenance of existence database systems and develop a web strategy for collecting and storing information related to knowledge transfer procedures. Knowledge transfer becomes incomplete if the information being shared is not trusted and the entire process is complete only when the information is trusted once it is clearly understood. In practice, for example, when two firms are aimed a particular task and only one firm end up with its product then there is a loss in the final product. So, both firms needs appropriate communication and this is where Network First Aid box plays its important role. Similarly, collaboration, trust and understanding elements will contact the Network First Aid with the help of IT for any sort of help that they might need to ensure that the final product is completed in a stipulated amount of time.

Scott (2000) argues that the method is best suited for network analysis, where some players act as key information distributors within a network and others act as bridges between networks. For example, if an organization receives advice from a network partner, the organization should be prepared to help them in the future. Partners who are willing to pass on skills to each other will establish the network as a centre of excellence or expertise and facilitate future collaborations. A well established network will thrive if its participants play an active role in keeping the network topical and relevant (Dwyer, 2000). On the other hand, Central Communication Hub (CCH) create reliance for others by having the option to deny, make known, and modify information and influence other external Networks . CCH also creates more attention among beneficial partners



in its network. In support of this argument, Podolny (1994) finds that, especially in situations characterized by high uncertainty, organizations rely on structural position as a tangible basis for discriminating among potential transaction opportunities, while centrality creates resource dependencies for others, their independent access to other units makes Central units less dependent on others (Brass and Burkhardt, 1993). In addition to increasing a central units control over information flow, centrality also increases structural autonomy; that is, the degree to which a unit is free to pursue its own goals (Floyd and Wooldridge, 1999). A centrally located unit that directs, concentrates, and legitimates information received by others enjoys the advantage of having its interests represented in a positive light, at the right time, and in the right places. From a learning perspective, network centrality increases a central units knowledge of its interfirm network power distribution and the accuracy of its assessment of the political landscape (Burt, 2000). This, in turn enables the unit to better control and exploit worthwhile opportunities for knowledge transfer. At the same time, centrality also reflects the total experience of the focal unit in cooperating with other external units. Therefore, the more central a unit is the stronger the units collaborative experience in how to extract value from these relationships (Gulati et al., 2002). In support of the above arguments, Powell et al. (1996) empirically demonstrate that a central position in interfirm learning networks for biotechnology start-ups is related to their rapid subsequent growth. The individual benefits of a unit's centrality in the interfirm network therefore positively impact its ability to acquire knowledge from its alliance partners (Jorge et al. 2007). Therefore the first aid model may be play as bridges between networks in SMEs.

## SMEs PIPE-LINE(P-L) MODEL

After explaining Network First Aid Model for SMEs, we have come up with another new model for start-up business in Turkey. Which are basically gives the general concept of starting new business for real success .Starting a new business is exciting, but it is full of challenge and competition in Turkey. A businessman can see the opportunities ahead but it need to so many things to do, it is very important to know all knowledge about where to start and stop. Here is the SMEs *Pipeline* model explained to knowledge transfer system to get successful business. This model firstly gives the direction of SMEs development of knowledge transfer via *Pipeline* for starting a new business for survival, which is explained below.

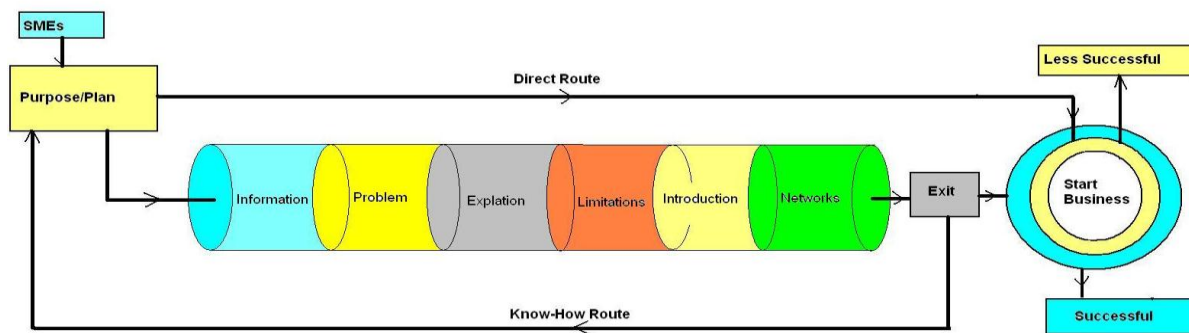


Figure 1: Knowledge Transfer via Pipe-Line (P-L) for SMEs

## Pipeline Definition

**Pipeline:** a sequence of one or more shell commands separated by a pipe symbol ( | ). The standard output of each command is sent as standard input to the next command. Each command is run as a separate process, but the shell waits for the whole series to finish before issuing a new prompt. ([www.eos.ncsu.edu/guide/glossary.html](http://www.eos.ncsu.edu/guide/glossary.html))

**Pipeline:** Pipeline is a sequence of block explanation shell which supply the information to get the decision for starting the plan ( researcher definition).

In this above model SMEs have two choice to do the business, the first one is Know-How route which is explained in the model. According to the *pipeline* process plan is the most important thing which starts first, after getting the plan ,SME have to generate all kind of information which might be tangible or intangible. After having all information, they need to know about the problem. In this problem section they will face two types of problems such as known problems-which are easily to get solution and the second type is the unknown problem

which occurs throughout the process. Therefore these sorts of problems should be given enough explanation by the research and development department, until getting full explanation it is hard to get the limitation of the business process. In limitation should give the boundaries of business implementation, after that SMEs need to introduce the plan to the network people, then the *pipeline* model give the SMEs enough knowledge to exit for doing business or re-thinking the plan or purpose again and again until SMEs would not take the decision to start the business. Using this model will give the SMEs to share knowledge transfer to get success. The second route is direct route where SMEs do not use any knowledge or sharing any kind of *pipeline* which is short route to start business, therefore it takes heavy risk to do business. Start the business with direct route it shows less successful in SMEs overall in Turkey.

## The explanation of pipeline

“P” as purpose which indicates whole business plan, target, objective or aim of the market. “I” as information which indicate whole business resource and market competitiveness. “P” as problem, which indicate three questions as give below.

a) What is going on? b).What is in hand? c).What is out of hand?

“E” as explanation, which indicates set of all possible problem solution, pay attention to the solution, and clear problem identification.

“L” as limitation, which indicates the boundaries of upper and lower case and also explains the upper and lower support. “I” as introduction indicate business name and frame, location, HR, R&D etc. “N” as networks, which indicate the business size and gender, business culture, partners and parent company closeness. “E” as exit which indicate not to leave, but rethinking or start.

## METHOD OF RESEARCH

The entire process of collecting and processing the data is schematically represented as shown in diagram 3.

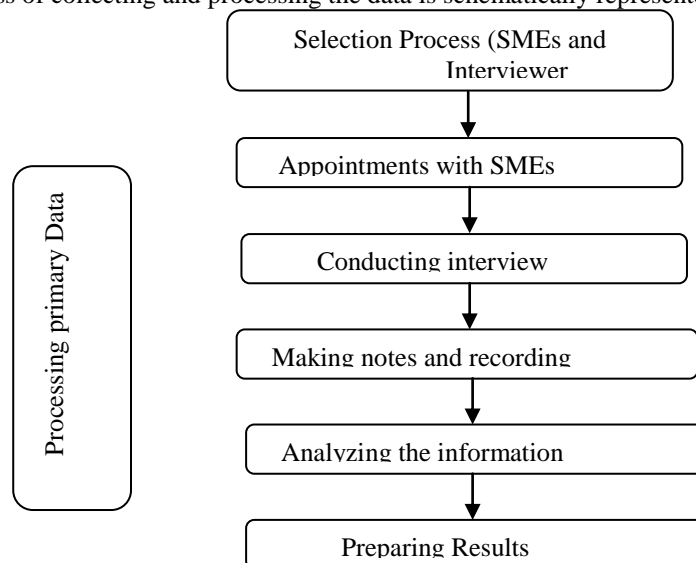


Diagram 2: Interview Process

Primary data is believed to be used to explore a specific research objective, which will be gathered using interview techniques. According to the nature of the topic, we decided to use semi-structured interviews which facilitated a better understanding to gather data on Knowledge Transfer practices within the Turkish Textile SMEs under research. An interview is a survey method designed to collect extensive information from each respondent. It is an ordinary conversation, with one individual at a time that has been extended and formalized in order to collect data. Keeping in mind the purpose, the research method was to interview the managers, owners/founders and CEO in order gather as much information as possible. Moreover, the interviews are expected to provide information that reflects the opinion of both their customers and employees in SMEs. The process of interviewing implies not only asking questions but also a systematic recording and documenting of responses. All the interview questions were originally written in English and then translated into Turkish

language. An appropriately designed semi-structured questionnaire was more likely to encourage the interviewees to express their points of view accurately. After finishing each interview, the taped interviews were uploaded in the computer and also stored in CDs for the safety of the collected data. Twenty interviewers had a copy of the recorded interview to clarify any confusion by referring to the record whenever needed. The entire interviews of respondents were noted down. The draft of each interview was made in order to select the information that is interest of this paper. Finally, the corrected version of primary data of each interview was processed and framed in the paper. The interviews were conducted in Company's offices. Most interviews lasted between 30 to 60 minutes.

**Table 1. Summary of the responses to Key Issues**

| <b>Question asked</b>   | <b>Number of respondents</b>      |                                  |                                    |                     |
|---|-----------------------------------|----------------------------------|------------------------------------|---------------------|
| What are the advantages of doing business in Turkey?  | Easy to communicate: 6            | Turkey's Geography: 13           | No Answer: 1                       |                     |
| <b>What type of information/resources do you share with other SMEs?</b>                       | <b>IT and Management: 14</b>      | <b>Management Skills: 3</b>      | <b>Marketing Strategies: 2</b>     | <b>No Answer: 1</b> |
| What are the most important obstacles in Knowledge Transfer (Idea Sharing) to SMEs in Turkey? | <b>Trust: 17</b>                  | IT support: 2                    | Lack of KT Awareness: 1            |                     |
| <b>Why do you think Knowledge Transfer (Sharing Ideas) in SMEs is important?</b>              | <b>Share ideas: 15</b>            | <b>Improve business ideas: 3</b> | <b>Get closer to other SMEs: 2</b> |                     |
| What kind of IT resource you use for KT?  | Internet: 18                      | Existing Knowledge: 1            | Company Database: 1                |                     |
| <b>Why do you use private and public knowledge in your company to develop any product?</b>    | <b>Develop business skills: 2</b> | <b>Improve Trust: 3</b>          | <b>Collaboration: 15</b>           |                     |

Focusing on the textile industry in Turkish SMEs the research was capable to explain the theoretically driven assumption and to show the relation between the concepts of Knowledge Transfer and SMEs network. Twenty SMEs responded to this survey and majority of the responders are in the higher position in the company and aged between 24 and 48. They have good business ideas but not many were familiar with modern technology. However, they were happy to implement and hire expertise when they are in need. Some of them were not happy with business because they are still using old technology which makes it difficult to cope up with the market demands. From the above survey results, we have decided to describe the following three key 'knowledge sharing' factors: (1) *having strong trust* (2) *believe in collaboration*

## **Factor 1: Having strong Trust**

In particular, trust as a control mechanism is based on the belief in the other partner's reliability in terms of fulfillment of obligation in an exchange (Appleyard, 1996). Trust allows both parties to assume that each will take actions that are predictable and mutually acceptable (Uzzi, 1997). Trust also affects the depth and richness of exchange relations, particularly with respect to the exchange of information (Lee and Al-Hawamdeh, 2002.) This process of exchange innately hinges on trust as crucial for the provider to take initial action based on a belief that the receiver will respond in like kind at some future point (Coleman, 1988). Szulanski (1996) explain that both applied and scholarly research have made it clear that relationships are critical for knowledge creation and sharing and that ineffective relationships can block knowledge transfer. This factor was considered one of the most critical for the success of the SMEs in the process of knowledge transfer. In Turkish SMEs

knowledge sharing by being the first ones to do so, and by setting the ground rules to establish the trust that gave other members the confidence to share their knowledge. One of the respondents indicated that Trust is the most important aspect for SMEs in order to share information/resources with others. Other respondents explained that business with other SMEs is impossible without Trust. However, we lose our profit margin because of sharing business skills with others where trust is not considered important. Some of the respondents formed the equation **trust = risk**. Textile industry in Turkey is very competitive industry and every SME wants profit without sharing the information. We can conclude that if a firm X want to get involved with firm Y, they need to trust each other in order to achieve a common profit. Therefore it is clear that the issue of trust arose during the discussion of collaboration.

## **Factor 2: Believe in Collaboration**

Collaboration of Networks is established for collective benefits and is most successful and effective where there is give and take by participants and members. This involves sharing organizational experiences through dialogue and interaction with other partners, as well as learning from theirs. For instance, the organization could attend debates and discussion groups to contribute their ideas and experiences or offer to speak at a conference. Other related research efforts have analyzed communities of practice (Wenger, 1998), actor-networks and networks of strong and weak ties (Granovetter, 1973). In his proposition, Granovetter explains that regular flow of information depends on the presence of multiple short paths between persons, as opposed to a local bridge does not represent a likely path of information flow, though it represents a possible path of such an information flow. Participants agreed they needed to believe in collaboration in order to share knowledge. One respondent said that collaboration has to be delivered on time similar to exchanging trust and get access to the resources/information. Few mentioned that collaboration is a big asset of knowledge sharing. Large SME are thinking twice before they shake hands with smaller SMEs. This forms a gap in the understanding that directly affects effective knowledge transfer. SMEs owned by family members and friends find it easy to collaborate no matter the size of the SME and SMEs in the same area/groups collaborate with each other with ease.

## **DISCUSSION**

The results of this study have implications for the research and practice of business engaged in knowledge Transfer. Three of those implications are now considered. First, there is a need to conduct a survey of SMEs in Turkey to find out the detail their approach to KT. This survey would increase the validity of the factors we have identified in this study offering us a better understanding of KT in Turkish SMEs. Second, one of the key factors identified in this study is the role of the SMEs Trust development. Finally, we believe the results from this study could be used as a key element of SMEs knowledge transfer in Turkey. For example, an inventory of factors influencing knowledge transfer could be used as an instrument for examining where the SMEs stand in relation to deploying knowledge transfer process in their business development and survival.

## **CONCLUSION**

Knowledge is an important asset and is vital for enhancing capability and competitiveness of Textile firms. Without any mechanism to deploy that knowledge, Turkish firms may not cope with changes and challenges in the dynamic business environment in today's world. New technologies find and increasing demand and quickly introduced into the market in order to meet global needs. While in many developed countries new technologies have to replace the previous ones step by step, Turkey, an emerging market, implements state-of-the-art systems from the beginning. Effective Knowledge Transfer implementation helps SMEs with free flow of information, ideas and resources. But, this often may not be easy as there might be a communication gap between various entities in or between Turkish SMEs. The main challenge faced by most businesses is to manage the flow of information among different entities. Firms may not be able to handle complex knowledge transfer procedures with the changes and challenges in the dynamic business environment. Therefore, SMEs need a clear understanding on what to be shared, when to should be shared or accessed and with whom the resources has to be shared. Therefore this study has made an attempt to identify and examine several important development factors such as *First Aid Model* in order to reduce the communication gap with the help of Trust and Collaboration in knowledge transfer process in Turkish Textile firms. Turkish SMEs will be able to achieve a

desired level of participation in Knowledge Transfer process with the help of the startup SMEs **PipeLine(P-L) model**. Turkish firms have to find a favourable position in their external network of cooperating organizations and also manage the internal relationships between their business units so that they complement and support each others. This is challenging managerial cooperation assignment which offers a set of opportunities that are reaching of a link of organization Networks. However, firms that are able to shape the arrangement of their external and internal relationships in a manner not easily imitated or substituted might gain competitive advantages for survival. For these reasons, research into the nature of knowledge Transfer environment is important and constructive and should be conducted on a continuing basis.

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# **THE ROLE OF SISTER CITY RELATIONSHIPS IN THE ENHANCEMENT OF TRADE: LATROBE CITY (AUSTRALIA) AND TAIZHOU (CHINA)**

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## **ABSTRACT**

*Traditionally the role of Sister City relationships has been a political and cultural one involving local governments across the world. Over the decades this role has been questioned in both its efficacy as well as its focus. Hundreds of Sister City relationships have developed and in Australia very few can be said to have produced long term and worthwhile outcomes. New interpretations of the functionality of Sister City relationships in Australia (and elsewhere) has resulted and has shifted towards an inclusion of a consideration of the commercial utility of such relationships and not solely cultural (O'Toole 2001). Today especially with current strong trade relations with China, new models are sought to provide sustainability and long term prospects to such relations. This paper examines the possibility of special sister city relations between Australian and Chinese cities using their sister city links. Specifically an examination in this paper is undertaken of the City of Latrobe and Taizhou as a case study of interest which provides sustainable trade potential between two strong small medium enterprise (SME) economies.*

## **INTRODUCTION**

The aim of this paper was to underscore the role of existing sister city relationships and how they can be vehicles for sustainable trade vital for the life of SMEs in both localities – Latrobe City and Taizhou. This conceptual paper explores the potential of the economic focus for Sister City relationships to acquire greater importance and impact. Sister cities are defined in different ways across different countries. They are referred to as Sister Cities, twin cities, friendship cities, *partnerstadt* (in Germany) and *Gemellaggio* (in Italy). On the whole however there is little confusion about what they actually do. There are some 20,000 towns and cities across the worlds which have a relationship of one description across borders. The figure continues to grow by the day. Moreover they have very different roles in different parts of the world. The approach towards sister cities in Australia is very much different from that in Asia. Moreover in some parts of the world like Germany and Europe they have been instrumental assisting peaceful relations and collaboration before and after the end of the Cold War. Formally rival nations, Germany and France have used sister city relationships to pursue peace and establish better relations. Casagrande from the European Council of European Municipalities (CCRE) indicated that “twinings have not only improved relations, they have made them possible” (Weyreter 2003:37).

Researchers in the field of local government and Sister City relationships have highlighted the sheer lack of serious research in this area overall and the lack of studies across these relationships across countries (de Villiers et al, 2006:9). Moreover the small amount of research has emerged mostly from Anglo-Saxon/English speaking countries reflecting the narrow base from which our studies are based. Using a case study approach of two existing cities, Latrobe City in Victoria, Australia and Taizhou in China, which have a Sister City relationship this paper is to explore the extend of this relationship. More importantly both cities are seeking economic sustainable projects to allow their respective SME's to engage in sustainable and long term economic exchange based on their trust established through the Sister City relationship. In order to achieve this, the paper begins with presenting a good understanding of Sister City relationship especially its historical development. It leads further on to the Sister City relationship in Australia.



## WHAT ARE SISTER CITY RELATIONSHIPS?

A Sister City relationship is a broadly-based, officially approved, long-term partnership between two communities in two countries (O'Toole 2001: 403). A Sister City relationship becomes official with a signing ceremony of the top-elected officials of the two local jurisdictions, following approval by the local city councils. Sister City programs are also unique in that they inherently involve the three main sectors in a community: local government, businesses, and a wide variety of citizen volunteers (and civil society or non-profit organizations).

The origins of Sister City, county and state affiliations date back to the immediate aftermath of the Second World War. Two towns, one Ludwigsburg in Germany and Montbeliard, France were in 1950 the first such Sister City arrangements. However the concept was most embodied and driven by the US and developed into a national initiative when President Eisenhower proposed the people-to-people program at a White House conference in 1956. The history of the Sister City relationships as a post-war phenomenon is most comprehensively presented by Cremer et al (2001). However it is important to note that when the Sister City Program began in 1956, it had little or no explicit reference to international trade and economic co-operation as one of the objectives of the relationship and its significance in the globalisation and economic development of both Australia and China.

## THE EVOLVING NATURE OF SISTER CITY RELATIONSHIPS

The nature of Sister Cities and twinning of cities is not one that remains fixed. The concept over the decades has evolved. Different roles have emerged for the Sister Cities as O'Toole (2001) has identified. O'Toole highlighted how the emphasis of Australian sister cities in the recent period has changed from friendship ties to those of exchange of economic development. In part definitions of the relationships have reflected this change of emphasis especially in the last decades of the twentieth century characterised by growing forces of globalisation (de Villiers et al, 2006).

O'Toole has provided for many scholars of Sister City studies a model to interpret and understand the levels of development and maturity of Sister City relationships (2001). He had evidenced the evolutionary nature of the sister cities and provided labels for their respective stages (see below). They are defined in the following way:

1. Associative phase (twinning based on friendship, cultural exchange);
2. Reciprocatative phase (twinning based on educational exchange, people exchange); and
3. Commercial exchange phase (twinning based on economic development).

There is much to be said for this model which highlights the very real way in which Sister Cities have evolved and in which they mirrored the new priorities of governments in the post-war period. Moreover O'Toole explains that the commercial exchange phase is a phase which developed in a later period but, interestingly not at the expense of the Associative and reciprocative phase. It was in effect an additional activity (O'Toole 2001:405). More to the point the additional commercial phase reflected the changed geo-political circumstances in which not only was there the end of the Cold War and an opening up Eastern Europe, but more importantly the Chinese economy underwent significant reforms allowing for global trade relations with the west like never before.

Alongside the O'Toole model is a comprehensive approach of successful benchmarks of successful and less successful Sister City arrangements. De Villiers et al (2006:10) has listed four criteria which have according to their study covering sister relationships in South Africa defined their relative success or otherwise. In an abbreviated version they include:

1. Proper partner selection
2. Marketing of the Sister City to all stakeholders
3. Management quality

#### 4. Well conceived business plan

While the criteria offered by de Villiers has a “motherhood” quality, it also illustrates that Sister City relationships have in the past failed often for more basic reasons than a lack of vision and relevance. The authors in their study concluded that their success factors required further research to ascertain the validity of the above findings (2006).

## SISTER CITIES IN AUSTRALIA

In Australia, the genesis of a Sister City relationship occurred in 1939 when the Shire of Parkes, New South Wales, (NSW) claimed a Sister City affiliation with Coventry in England. A relationship was established between Saddleworth in South Australia and Saddleworth Parish in the United Kingdom in 1941, while one has existed officially between Hunters Hill and Henley-on-Thames since 1950, and one between Bega, NSW, and Lyttleton, Colorado, United States of America, since 1956. Today Australian cities have over 475 Sister City Agreements in place throughout the world and this number increases every year (ASCA 2007).

Over the last decade Sister City relationships have received unfavorable publicity and comment from the media. Sometimes this has flowed over to outright hostility by the media against “money wasting” Sister City relationships by local government. While serious academic research is not influenced by this negativity it has acted as a brake on Sister City development and the fear of only addressing economic development issues. One example of the media attention on the question of Sister City relationships involved the debate over Christchurch in New Zealand. It may well have been any city in the world. Negative media coverage was sparked by the following incident:

“An independent study which shows Christchurch gains little economic benefit from its Sister City relationships has some senior councilors questioning the international links” (Watson 2003).

A similar incident, and again in New Zealand, received the following media coverage:

“A council report [in Palmerston North] to Monday night’s meeting noted that the city needed ‘to be realistic’ about how much money should be spent on international relationships. It could be difficult to justify this spending as the most effective way to achieve council growth targets. Benefits were more likely to be social or cultural” (Mathews 2003).

The evolving nature of the Sister City agreements are in fact influenced by this fear of investment and equally hysterical attitude of the “financial return”. In other media outlets accusations of “junkets” and other critical commentary because in essence the “peace” factor is no longer sufficient to justify this allocation of local government funding and government can no longer live simply on playing a social and political role but must also respond in economic terms. These new political pressures on local government to fend off these criticisms make Sister City relationships very difficult to pursue.

Sister City partnerships have the potential to carry out the widest possible diversity of activities of any international program, including every type of municipal, business, professional, educational and cultural exchange or project. It is common at times for academics to highlight the scarcity of literature on a certain theme or interest of study. Sister City relationships fall into this category also. It suffers not from a lack of journalistic exposure and debate, where it does well (Macnicol 1998; Mathews 2003), but from more rigorous academic and critical scrutiny.

Over the recent period a very few number of scholars have examined international Sister City relationships as a policy instrument to facilitate business relationships between countries with different cultures (Ramasamy and Cremer 1998). As has been demonstrated this includes the ability of local government to play a role in promoting business and being a facilitator between its own jurisdiction and business with other countries. Some have even postulated that this relationship provides a hybrid form of entrepreneurialism “municipal-community entrepreneurship” in which is a valuable facilitator of economic and social vibrancy of cities (Cremer et al, 2001, p. 377).

## GLOBALISATION AND LOCAL GOVERNMENT

There is no doubt that the nature of local government and the role it plays in economic development, sustainability and trade promotion can be more significant than it has traditionally been. As has been acknowledged by O'Toole that for Australia there is no "direct overarching public policy directed at Sister City relationships" (2001: 404). Moreover new interpretations of the functionality of Sister City relationships in Australia have shifted towards an inclusion of a consideration of the commercial utility of such relationships and not solely cultural (O'Toole 2001). Sister City programs inherently involve a unique kind of partnership and involvement of the three main sectors that make for a vibrant, productive community: the local government, business and private voluntary sectors. Sister City programs--perhaps more than any other international program--involve the widest possible diversity of exchanges and projects. Basically, anything that goes on in a community can become--and has, in one city or another--the subject of a Sister City project, including every type of municipal, business, professional, environmental, educational and cultural exchange.

Germany's twinning arrangement, another term for Sister City have been documented as being primarily cultural except "in the case of China (where 16 twinings with Germany had existed even before 1989) inter human aspects were not a priority, but helping to build local Chinese infrastructure, transferring technology and introducing Germany's unrivalled vocational training system in China were. In return Germany was rewarded with a huge new market to sell new technology" (Weyreter 2003, p. 42). Zelinsky (1991, p. 1) claims that Sister City arrangements are not random but based on specific and shared concerns, one of these is clearly economic.

As early as 1990, Zelinsky made the observation that shared economic interests actually account for numerous Sister City relationships within the United States. These included examples such as Pittsburgh with metallurgical centers such as Sheffield in the UK, Houston is twinned with oil rich Baku in ex-Soviet Union Baltimore twinned with ports like Genoa and Rotterdam in the Netherlands (1990). As such the use of Sister Cities was also seen as a trade and economic mechanism of economic enhancement. In closing Zelinsky summarised the economic potential in the following way:

"The right sort of Sister City partnership can only be positive for almost any American town. The immediate reward is cultural enrichment. Later, with luck and ingenuity such cooperation can bring real economic dividends" (Zelinsky 1990, p. 46).

Forth and Howell (2001) have indicated in their paper the manner in which Sister City relationships with China have enhanced trade between China and Australia and have provided ever increasing important "sub-national relationships" between different layer of governments between the two countries. They state:

"Since 1979, an important aspect of this relationship has been the development of 42 Sister City type formal agreements between Australian and Chinese state and local governments" (Forth & Howell 2001).

Experts in trade have been reticent and at times skeptical about Sister City relationships and their impact on trade. Former Australian Trade Minister, Tim Fischer once remarked:

"Where it is properly managed, it [Sister City relationships] would give impetus and support to small and medium sized exporters opening up new markets with new products" (Fischer 2002).

With limited exceptions Fischers words have not been heeded. While the Sister City relationships are assuming, an economic emphasis, they are still distant from being effective instruments for SME sustainable growth. The Latrobe City and Taizhou example provides a successful initial model for this to happen.

## **FUTURE RESEARCH – LATROBE CITY AND TAIZHOU**

The sister relationship between cities in Australia and China co-exist within a framework of strong economic trade between the two countries. The economic importance of China to the world and to Australia is clearly evidenced by rapidly increasing trade figures. Trade between Australian and China has grown from \$A13 billion in 2002 to \$A45 billion or 14 percent of the total trade in 2006 (DFAT 2007). Since 2004 China has been Australia's second largest trading partner and in 2006 it became the largest source of imports reaching \$A25

billion or 15 percent of total Australian imports (DFAT 2007). China has become an essential economic partner for the Australian economy and has altered the pattern of trade

In the period between 1945 and 2005, while world trade growth grew 20-fold, GDP growth only increased by six times. Moreover the ratio of world exports to GDP has more than doubled since 1950. Globalisation is today more than just an activity for large corporations. Global business involves more and more the smaller, medium enterprises (SMEs). While in Australia only 4 percent of all companies actually export, this figure can be increased (Austrade 2007).

For SME's located in Latrobe City in Victoria, 150 kilometres east of Melbourne, China can represent significant opportunities for future growth and sustainable trade. Out of the total 2835 businesses in the Latrobe City, 2632 are small and 161 are medium sized businesses (ABS 2002). Moreover it is an SME base which has transformed itself from a semi-depressed economic state of the 1990s to an actively engaging community. In 2000, Latrobe city established a Sister City relationship with Taizhou city in Jiangsu province China. The relationship was initiated by the Taizhou City in 1998 with a strong economic and trade desire in its earlier visits from Taizhou city. Latrobe city however has been following the long tradition of establishing cultural ties parallel to its exiting Sister City relationship with Takasago Japan. All delegations have been to China for the purpose of cultural exchange with the exception of the one in 2007, a group of local business people took part in this delegation.

Are Sister City relationships effective trade drivers between cities and regions and their external partners such as Latrobe Valle and its Sister City in China, Taizhou? How can SMEs in the Latrobe City area more effectively enter the supply chain of trade between Australia and China? We set to further research on how the Latrobe Sister City arrangement will be able to assist in transforming and strengthening the role of SMEs within the local business community to the benefit other regional centres and nationally.

Building on the strong economic growth of China in the recent years and the increasing important role of China in the world economy, Latrobe City has been actively pursuing a more proactive role in establishing a working relationship with China. In part economic officers within local government are obliged to provide this form of local government marketing and business development. According to Taylor:

"Most local government in Australia now have economic development officers whose role it is to ensure that there are strategies in place to ensure "growth" in the local economy. Even though there is no typology of local "growth" in the local economies and therefore no strategy for local economic development, many localities still assiduously look for 'models' that they can emulate" (Taylor 1997).

Leo Billington, Latrobe City's senior economic development officer, suggested:

"I have learnt a great deal about the importance of the business relationship – what it is based on and how it is built. Having a strong and effective relationship network (guanxi) is one of the single most important factors for business success. There are vast differences compared to what we do here but this is all part of learning and understanding cultural differences" (Billington 2007).

Recent research suggests that cultural barriers are a major impediment for Australian businesses when entering the Chinese market (Chung, 2006). We proposed for a future research to provide a sustainable trade model utilising the Sister City arrangements which would provide the evidence, impetus and sustainable driver strategies to overcome cultural barriers for Latrobe City based SMEs venturing into and consolidating within the Chinese market. This model would then be used by the La Trobe City Economic Development Unit as a way of providing a template for the local business community to grow the economic performance of the SMEs within that area. This research proposal resonates strongly with the City Council's strategy of "supporting existing business investment and facilitating investment opportunities" (Latrobe City, 2007). The model developed and lessons learnt from the La Trobe City-Taizhou experience could then be applied in other regional areas throughout Australia to the benefit of both these regions and the Australian economy as a whole.

Trade between China and Australia has become important and will continue to be so for the foreseeable future. Given the resources trade boom with China, regional Australia has a special case in seeking out trade opportunities not normally provided. What many are seeking are sustainable methods and approaches which will enhance this relationship and provide it a commercial focus alongside the cultural one. Cremer et al, (2001) postulated that this trade oriented Sister City relationship can provide a hybrid form of entrepreneurialism

“municipal-community entrepreneurship” which is a valuable facilitator of economic and social vibrancy of cities (p. 377). The paper examines the tentative approaches made by these two cities to further their relationship in an economic sense using their traditional Sister City relationship as the means for this.

## CONCLUSION

This paper sought to underscore the role of existing Sister City relationships and how they can be vehicles for sustainable trade vital for the life of SMEs in both localities – Latrobe City and Taizhou. Like other Sister City relationships, this particular one also started in traditional cultural fashion and slowly progressed towards a more enduring and economic one. In part this evolution was influenced by the growing globalisation but also by the specific needs of the two business communities in both countries. Moreover the economic officers in both cities were conscious of this necessity and pro-active in their determination to pursue these economic ventures. There is only circumstantial evidence to confirm the validity of these sister cities and more and properly measured tests are needed to establish that Sister City relationships can become effective and successful vehicles for economic transactions and trade in a sustainable fashion. The research case study intended and emerging from this paper seeks to establish the necessity but also the validity of this hypothesis and a model applicable to other Australian cities especially in regional and rural Australia.

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# **EVALUATION OF COLLABORATIVE STRATEGIES USED IN THE MANAGEMENT OF ENVIRONMENTAL PARKS IN RIO DE JANEIRO**

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## **ABSTRACT**

*This paper exposes the main conclusions of an exploratory research that aimed at analyzing the management of eight environmental parks in the city of Rio de Janeiro. Considering the participative management guidelines proposed by Law 9985 ("NSCU"), the findings revealed that governmental agencies have been making an effort to establish more participative management by means of advisory councils, but the initiatives are still mostly ineffective. The cases have shown different forms of partnership maintained with varied organizations but factors such as bureaucracy, lack of management autonomy and the inadequate use of managing tools are barriers to the expansion of such collaborative strategies.*

## **INTRODUCTION**

Under the inspiration of the 1992 United Nations Conference for Environment and Development, that took place in Rio de Janeiro, Law 9985 was introduced in 2000, creating the National System of Conservation Units (NSCU) and legalizing the management of different types of environmental conservation units in the country in order to improve their protection. Unfortunately, the results of the actions meant to create and manage conservation units are not always as expected. This is due, in great part, to the lack of financial and human resources by the Governments responsible for their administration, to the projects complexity and, according to the opinion of many scholars, to the lack of effective participation of society (Araújo, 2004; Horowitz, 2004). Taking the city of Rio de Janeiro as the main focus of this study, one can verify the existence of great quantity and variety of natural areas and conservation units (PCRJ-SMAC, 2004), specially environmental parks. These are Integral Conservation Units with the basic objective of preserving nature, being allowed just the indirect use of its natural resources, with just few exceptions made by NSCU Law. Thus, extrativism, agriculture and cattleling activities are prohibited in these units (Brazil, 2000, Chapter III, Article 7<sup>th</sup>, 1<sup>st</sup> Paragraph). Each one of the seventeen environmental parks in the city of Rio de Janeiro is managed by a responsible government agency, which delegates part of its functions to a park manager (SMAC, 2006). Nevertheless, it has been evidenced that the majority of the environmental parks in Rio de Janeiro do not have enough financial, human and management resources in order to assure its self sustainability. (PCRJ-SMAC, 2004; TCMRJ, 2005).

NSCU Law identifies five main objectives of an environmental park (Brazil, 2000, Chapter III, Article 1<sup>o</sup>): 1-To preserve natural ecosystems of great environmental relevance and scenic beauty; 2-To make scientific research possible; 3- To develop educational and environment interpretation activities; 4-To develop recreational activities in touch with nature; 5- To develop ecotourism. These objectives, if effectively accomplished, may contribute to the self maintenance of conservation units and the sustainable development of urban communities in its surroundings. One can also identify two main NSCU guidelines that embody the participative management and collaboration, mentioned above (Brazil, 2000, Chapter II, article 5<sup>th</sup>): 1- To ensure effective participation of local population in the creation, implantation and management of Conservation Units. 2- To look for support and cooperation of non-governmental organizations, private institutions and citizens for development of studies,

scientific research, environmental education practice, leisure and ecotourism, maintenance and other conservation units managing activities.

Based on these two collaboration guidelines and in the NSCU objectives an exploratory research has been made with the final goal of identifying how collaborative strategies used by park management are implemented and how they affect management objectives. This paper presents the main research results and conclusions and proposes a conceptual model that seeks to understand the parks sustainable management issue based on the use of collaborative and competitive strategies that would result in lower or higher management effectiveness.

## **THEORETICAL REFERENCES**

### **Urban Environmental Conflicts**

It is fundamental to bring up the eminently conflictuous character of the environmental issues. According to De Mio *et al.* (2004) the environmental conflicts are caused by environmental degradation, by the development option and by the exclusion of some sectors of society. In the new model of sustainable development, the interests that were conflictuous and excludent need to be integrated in order to have the conflict solved. Costa (2004) states that the environmental practice in Brazil has become extremely complex due to its great social heterogeneity. That can be easily verified in the larger cities where problems due to the wealth unfair distribution coexist with those caused by the excessive consumption of the upper classes. Thus, one can verify in large urban centers irregular occupations in environmentally protected areas (hillsides, river and lagoon shores, mangroves). There is also the issue of sewer treatment and the increase of garbage and pollution, this one caused by the ever increasing number of vehicles. The public policies conceived to treat these problems end up affecting the different and complex interests of several social groups. Costa (2004) denounces the logic of money valorization in the urban space: *"It ends up causing the exclusion of great part of the population to basics rights such as housing, which leads consequently to illegal occupation of environmentally protected areas such as conservation units"*. The collaborative strategies can be used as a form of reducing the urban environmental conflicts.

### **Collaborative Strategies for Environmental Issues**

To Presas (2001) the transition to sustainable development requires a new way of thinking based, no longer in the traditional top-down approach, but in a collective learning mechanism, that results from the dialogue among all social actors. In this context, it is necessary to define what collaboration in the social-environmental issues is and also identify the different kinds of collaboration that are being used in this area. Gray (1985) defines collaboration as *"the aggregation of tangible and/or intangible resources by two or more stakeholders in order to solve a group of problems that none of them could solve by themselves"*. Based on Healey (1997) one can affirm that traditional society planning and developing strategies, purely based on economical criteria and without any participation during the planning process are no longer plausible. There is a need of a social-environmental approach, keeping in mind the interests of the social actors involved. Such initiative begins with the identification of those members of society that may lead to local changes and also of new ideas on governance that may unite the social actors and local communities. Her approach recognizes that the active work of social construction does not happen on a neutral field, since power disputes are involved in this process. Healey's "institutionalistic" approach could be used then as ground for a collaborative planning, focusing on community networks that generate intellectual and social wealth. Healey reminds us, however, that such relational and social networks may vary in terms of space and relational reach, becoming frequently the origin of local conflicts. In practical terms, this means that collaborative planning processes are multicultural and must take conflicts on account. Understanding and respecting the need of the parties involved is essential. On that matter, it is necessary to mention the work of Wondolleck e Yaffee (1997) on the collaborative dimension of the ecosystem management and its decision process. They focus their work on the non-conflictuous solutions of disputes regarding threatened areas, trying to identify the factors that facilitate and those that obstruct the collaboration and coordination among the geopolitical borders that divide ecosystems. Nevertheless, Wondolleck e Yaffee (2000) alert to the institutional and structural barriers present in the complex environmental conflicts.



The main barriers are: lack of opportunities and incentive; opposing objectives; lack of policy flexibility; limited resources; lack of mutual trust. Wondolleck e Yaffee (2000) suggest actions to overcome these barriers: to eliminate misunderstandings among partners and stimulate mutual understanding through frequent and even informal contacts; to focus on the individuals instead of the organizations; and to stimulate trust and mutual respect. In this work, the term “collaborative strategies” embodies several types of collaborative arrangements, temporary or not, with several or few participants, formal or informal, including some traditional forms as strategic alliances or networks, such as: Simple Partnerships; Multiple Partnerships; Coordination between government agencies (Wondolleck e Yaffee, 2000); and Participative management of Conservational Units – including the participation of a community that is established around a Conservational Unit through an Advisory Council (Brazil, 2000).

## RESEARCH METHOD

Based on Creswell (2003) and Remenyi *et al.* (1998) an exploratory research was chosen, since the goal was to achieve knowledge about a field of study not very well known in Brazil: collaborative strategies applied to conservation units management. This led to the option of a qualitative approach (Creswell, 2003) and the choice of multiple case studies strategy. Based on the study case protocol proposed by Yin (1994) the use of multiple sources and its triangulation tried to ensure the validity of the studied concepts. The generalization capacity was partially assured by using multiple study cases. In the eight study cases the three spheres of government are represented: the only National Park in the city (Tijuca National Park), the only operational State Park (Pedra Branca State Park) and six City Natural Parks (Chico Mendes, Marapendi, Prainha, Bosque da Barra, Bosque da Freguesia e Dois Irmãos). With an area of 12,500 hectares (48.26 square miles), the State Park of Pedra Branca is considered the world’s largest urban park. During data collection 78 interviews were made with central organ managers, park managers and representatives of several groups of stakeholders (non governmental organizations, companies, teaching and research organization, among others). From all these interviews, 71 were used. Data was also obtained through bibliographical and documental research, besides direct observation in the parks. The data collection phase lasted from November 2005 through December 2006, with a follow-up from January 2007 through March 2007. Data treatment was eminently qualitative, using the content analysis software Atlas 4.2.

## RESEARCH RESULTS

The research results were grouped according to the two collaborative guidelines selected from the NSCU law (Brazil, 2000).

**Guideline 1-** To ensure the effective participation of local population in the creation, implementation and management of Conservation Units.

The process of constitution of the Advisory Councils and how they work in each park has been analyzed as a management instrument that implements NSCU’s first guideline: the parks collaborative strategy of participative management. Advisory Councils are deliberative organs formed by representatives of public agencies and civil society organizations, which help the park manager. There are a series of rules for the formation and working of theses Councils. During the research, only one out of the eight studied parks (Bosque da Freguesia Park) had a working Advisory Council, even though it existed as a pilot initiative. Among the other parks, four of them were in process of forming their Councils and three had not even begun the process. Among the parks that were in process of establishing their Councils during the research period, the Tijuca National Park was undoubtedly the most advanced, having its Council finally established in 2007. However, the most important aspect refers to the methodology used on establishing the Councils. On that matter, the Tijuca National Park calls the attention for using a participative methodology, making the whole process democratic and, above all, inclusive and motivating for all stakeholders involved. On the other hand, the Pedra Branca State Park uses a more centralized and bureaucratic process, despite the whole process of forming the Council has been regulated. The process of forming the Pedra Branca’s Advisory Council has been largely affected by political conflicts between political parties that formed the State Government. Five out of six City Parks did not have rules or procedures for de Councils, what led to conflicts between park managers and stakeholders. Besides, the idea of

an Advisory Council itself does not seem to be well accepted yet among most City Park managers, indicating the need to recycle them about this issue.

**Guideline 2** - To look for support and cooperation of non-governmental organizations (NGOs), private institutions and citizens for development of studies, scientific research, environmental education practice, leisure and ecotourism, maintenance and other conservation units managing activities.

The main evaluation points by objective are listed in Table 1. Three city parks (Chico Mendes, Marapendi, and Prainha) were grouped together due to the great similarities and collaboration among them. Other two City Parks (Bosque da Barra and Bosque da Freguesia) have many common points that justified them together in Table 1.

**Table 1 - Evaluation of Objectives Achievement by Park**

| <b>Park</b>  | <b>Ecosystem Conservation</b>  | <b>Environmental Education</b>   | <b>Recreation and Ecotourism</b>   | <b>Scientific Research</b>   |
|--|--|--|--|--|
| Chico Mendes; Marapendi and Prainha City Parks     | Partially achieved.<br>No Management Plan.<br>Lack of human and financial resources.<br>Informal partnerships to control pollution in Marapendi and Chico Mendes lagoons and fires risks in all parks.<br>Multiple partnerships to create ecological corridor between Chico Mendes and Marapendi.<br>Prainha more isolated from communities. | Fully achieved<br>Centralized strategy at City Environmental Organ.<br>Use of Center of Environmental Education (CEA) of Marapendi and Prainha parks.<br>Centralized partnership with City Education Dept.<br>Budget reduction may jeopardize results. | Recreation objective partially achieved.<br>Partnership between Prainha Park and Atlantis Institute brings companies to the park.<br>Ecotourism poorly exploited. No centralized strategy.<br>No partnerships to maintain trails.  | Poorly achieved.<br>Centralized accord with Iguacu Institute provides undergraduate part-time trainees to do research.<br>Limited quality of research.<br>Loose control over research and its results. |
| Bosque da Barra and Bosque da Freguesia City Parks | Partially achieved.<br>No Management Plan.<br>Lack of human and financial resources.<br>Large areas of park are anthropomorphized.<br>Informal partnerships with local companies bring resources.  | Partially achieved.<br>No CEA at the parks.<br>Bosque da Barra Park manager created partnerships with theater company for environmental Education activities.  | Recreation objective partially achieved.<br>Partnerships between park managers and local companies.<br>High visiting rates.<br>Ecotourism poorly exploited. No centralized strategy.   | Poorly achieved.<br>Same situation of parks above.   |
| Dois Irmãos City Park                              | Partially achieved.<br>No Management Plan<br>Lack of human and financial resources.<br>Centralized partnership recovered large forest area in the park.<br>Park threatened by slams expansion and drug dealers.<br>Tension between poor and rich segments in the surroundings.   | Poorly achieved.<br>Lack of CEA at the park.<br>No partnerships identified.  | Recreation objective partially achieved.<br>Informal partnership between park and local community provide sports and cultural activities. Low visiting level due to difficult access and surroundings problems.<br>Ecotourism poorly exploited. No centralized strategy. | Poorly achieved.<br>Same situation of parks above.   |
| Pedra Branca State Park                            | Poorly achieved.<br>No Management Plan.<br>Strong urban pressure   | Fully achieved.<br>Centralized strategy.<br>Partnership with State   | Ecotourism poorly exploited. No centralized strategy.  | Fully achieved.<br>Centralized strategy.   |

|                      |  |  |   |   |
|----------------------|--|--|---|---|
|                      | threatens park limits. Restoration Programs on course due to international accord. Firemen Partnership reduced fire risks. Poor integration with communities.                                      | Education Dept. "Moving Forest" Program takes information on the park to schools. Visiting Center operating with educational activities. | Park unknown to majority of city population.  | Partnerships with reputed universities. Tight control over researches and results.  |
| Tijuca National Park | Partially achieved. Management Plan under revision Urban expansion and violence are strong threatens. "Water in Conservation Unit" Program is well succeeded partnership with NGO and communities. | Fully achieved. Decentralized strategy creates educational networks within communities and forms multipliers.                            | Recreation fully achieved, with high visiting rates. Ecotourism partially exploited through external agreements and dedicated sector that promotes trekking and maintains trails with the help of Park Fiends' Society. | Partially achieved. Centralized strategy. Partnerships with reputed universities Loose control over researches and results. |

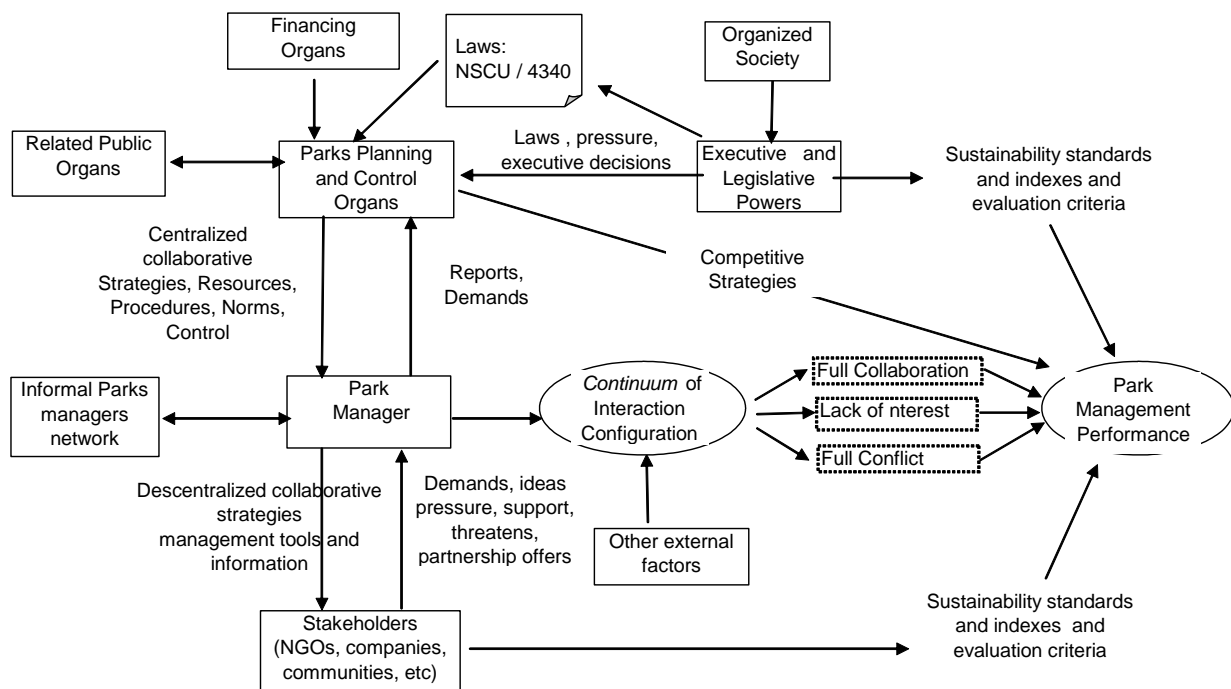
## DISCUSSION AND CONCEPTUAL MODELING

When comparing the eight parks management at a centralized level, it becomes obvious that the Federal sphere, represented by IBAMA Regional Agency, responsible for Tijuca National Park, has reached the highest degree of participative management and collaboration with stakeholders aiming at the five NSCU objectives for parks. The implemented model at that park arises as the one to be followed by other environmental agencies in managing their parks. The State Forest Institute of Rio, responsible for Pedra Branca State Park is quite ahead in the search for agreements and partnerships that may provide it with financial resources in order to manage this park and other thirty six state parks. However, this agency still hesitates within the process of creation of the Advisory Council of Pedra Branca Park, specifically in the development of a democratic process. Anyhow, the challenge is huge due to the enormous proportions of the park and the urban threatens. Finally, at the city level, the Environmental City Department is the most belated of all in the Advisory Council forming process and in the search for new partnerships. The difficulty factor for this agency is the lack of financial e human resources in order to cope with the great number of parks and other environmental units under its responsibility. On the other hand, as the city parks are relatively small and well known among the population, there is a greater chance of forming partnerships with local companies and NGOs. One remarkable example of this potential is the recent "adoption" of a small city park in Rio by a large building company. Also, the concepts of mosaic management and partnerships with NGOs contemplated by the NSCU law could help the city agency in improving the management effectiveness of its parks. A common point to all three spheres of government is the prevalence of political interests strongly affecting those environmental agencies, either in the dispute for budgetary amounts or in the prioritization of conservation actions. These interests change at every new mandate causing a serious problem of management discontinuity.

As a result of the findings, it was possible to devise a model (Figure 1) of the interactions disclosed in the cases studied and a series of theoretical propositions to explain how collaborative strategies are influenced by the different factors and how these strategies can affect the success of park management procedures. This model can be groundwork for future research in order to verify the validity of these principles and to measure the effectiveness of a park management *vis-à-vis* sustainability criteria and standards. As seen in Figure 1, considering a given park as the focus of the model, it is possible to identify that the main stakeholders usually involved form a complex network of interaction and collaboration or conflict. The park manager is the official representative and main contact between the park management and its local stakeholders. He also receives from its central agency human, financial and technical resources as well as strategic and operational orientation, norms and procedures to be followed. On the opposite direction, the park manager passes to its central agency the

stakeholders demands, local partnerships proposals and periodic managerial reports. The Park manager and the central agency should interact with the different stakeholders through management tools such as the Park Management Plan and collaborative strategies such as the Advisory Council, informal or formal partnerships or simple meetings. The result of this permanent interaction is a continuum of configurations such that, on one extreme, there may be a conflict between the park manager and its stakeholders, and, on the other, a wide network of stakeholders integrated to the park management and helping it in planning and managing the park. Among these extremes, it is possible the occurrence of isolated actions or different partnerships between two or more stakeholders, which are structured for specific projects or in a more permanent way. It is also possible to imagine an indifference point in the stakeholders' attitude towards the park. It is plausible to suppose that the greater the number of partners involved, the lower the level of conflict of interests, but, on the other hand, greater operational conflicts generated by different visions will arise. Thus, the model contemplates the possibility of evaluating the management performance of an environmental park based on greater or lower collaboration degree, seeking to capture significant differences among the performances of different emerging strategic configurations. The central thesis on which such model rests is that only through a combination of collaborative strategies, structured in the form of network among the stakeholders, and effective competitive strategies (that promote the park and capture financial resources), a park can arrive to effective and permanent results, measured by a set of sustainability indicators democratically established. It would just not be enough the isolated action of governmental agencies as it is usual in Brazil. The community consciousness and active participation, of non governmental organizations, entrepreneurs and other organizations is fundamental to create the synergies that will make such parks feasible.

**Figure 1 – Proposed Conceptual Model**



The main theoretical propositions related to the conceptual model are presented below:

1. Advisory Councils that operate steadily, with clear rules and skilled members are a success factor for the park management.
2. Advisory Councils that operate partially without clear rules and skilled members tend to generate conflicts among its members.
3. A greater number of stakeholders committed with the park management reduce the risk of conflict.
4. A greater number of stakeholders committed with the park management increase the operational difficulties.
5. A greater number of stakeholders committed with the park management increase the chances of identifying most of the local issues concerning the park.

6. Communication and negotiation skills are fundamental for park managers while dealing with the stakeholders.
7. A greater number of partners in any park project increase the level of operational conflicts due to different visions and interaction difficulties.
8. If two or more parks apply equivalent competitive strategies, those that present a “high level of collaboration” configuration should perform better than those parks that present a “low level of collaboration” or a “conflict level” configuration.
9. The implementation of effective collaborative strategies is necessary but not sufficient for the success of the park management. Effective competitive strategies are also necessary.

## **CONCLUSIONS AND RECOMMENDATIONS**

One of the main conclusions of this research is that the management of environmental parks in the city of Rio de Janeiro is a complex and hard task that imposes enormous challenges to all three spheres of government, each of them with its own characteristics, but affected simultaneously by the same social-economic and environmental problems. Considering the participative managing guidelines proposed by Law 9985 (NSCU), the initiatives are still mostly ineffective. However, in the new environmental context it is mandatory that governors of urban centers implement actions towards sustainable development, which will only be accomplished through adequate urban planning that encompasses the basic social needs of the people, the foment of economic activities and the environment conservation. The urban environmental parks and other units may assume a relevant role both as the “green lung” of the cities and as a source of income, leisure and education. Thus, Environmental Education arises as a fundamental strategy, of competitive and collaborative nature, for parks management. Through it society members become aware of the conservation units existence and of the environmental issue as a whole. As a natural consequence, more people will be eager to help preserve the natural areas of their cities. This is a major point, since it became evident from the eight case studies that the lack of human and financial resources prevail in most governmental agencies in Rio de Janeiro.

The findings revealed that governmental agencies have been making an effort to establish more participative management by means of advisory councils, yet, with the exception of one park – The National Park of Tijuca- these boards had not actually been implemented at the time of this research. The process of organizing and conducting such councils is slow and inefficient and can cause controversies among social players (stakeholders) and the management teams. The diversity of social actors and intervening factors such as lack of funds, economic and political pressures, uncontrollable urban growth and violence can be aggravating issues. The cases have shown different forms of partnership maintained with varied organizations – ranging from informal to complex; involving multiple actors and even different governmental powers. Factors such as bureaucracy, lack of management autonomy and the inadequate use of managing tools can be barriers to the expansion of such collaborative strategies. Again the National Park of Tijuca appears as the successful model to be copied due to its partnership with an environmental NGO that led to the implementation of a series of infrastructural improvements as well as the establishment of a democratic and fully participative advisory council. Considering the operational and financial difficulties faced by all government agencies in managing their environmental parks, a proposal of intergovernmental partnerships arises as an interesting and promising alternative should political disputes among them be overcome. It is also the opinion of the authors that Brazil needs a clearer vision of its conservation units performance and the best way of planning and managing them in a sustainable and democratic way. In this sense it is necessary that environmental agencies and society together establish adequate sustainability indicators. The proposed conceptual model seeks to fulfill the theoretical gaps about collaborative and competitive strategies applied to the management of environmental parks. Finally the research indicated that a wide participative process including different social segments may be the answer to overcome the present barriers to an effective management.

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# VALUATION OF STRATEGIC ALLIANCES THROUGH REAL OPTIONS

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## ABSTRACT

*The objective of this essay is to reinforce the importance of strategic alliances valuation through the theory of real options. Since one of the current most important inhibitors for the decision taking involving the entrance, maintenance, transfer or closing of an alliance is exactly the previous valuation of the future results of that decision, the theory of real options appears as an appropriate and robust tool. Besides, the broadening of studies involving the trade-off between commitment and flexibility may amplify to compare the implications and assumption of the real options to explain ambiguous empirical findings regarding alliances.*

## INTRODUCTION

Strategic alliances have grown vastly during the last decade due to its increasing recognition as an important form by which firms update their capability sets (Eisenhardt and Martin, 2000). Strategic alliances help firms spread risk, increase market power, share resources, and gain organizational learning (Mitchell and Singh, 1992). Alliances also allow organizations to obtain the desired benefits without the added costs of governance (Williamson, 1985).

A real options perspective offers a complementary approach to normative models of investments under uncertainty borrowed from the fields of finance and economics. Where finance theories are based on assumptions of efficient markets and static equilibrium, real option presumes information asymmetries, path-dependent accumulation processes, and uncertainty (Miller, 1998). The assumptions borrowed from the field of finance seldom fit managerial realities, leading to lack of support for hypothesized relationships and to observed inconsistency in managerial application (Dixit, 1992). A reason for such inconsistencies may be the actual imperfection of the markets in which firms compete despite the assumptions in underlying models from finance might suggest (Chatterjee, Lubatkin, and Schulze, 1999). Nonetheless, powerful ideas from finance offer an economic rationale for observed managerial behavior.

The stream that has characterized strategic alliances as real options suggests that when a firm initiates an alliance, it gains access to a growth option for future expansion or for acquiring its alliance partner, while retaining the option to defer completely commitment. Real options theory explains equity alliances commitment (Folta and Leiblein, 1994) among others, but a careful examination of the assumptions underlying real option pricing models in finance and deviations from those assumptions where necessary to allow for market failures, and managerial and organizational realities still misses (Folta and Miller, 2002).

Moreover, real options offer a perspective from which to develop ideas that are relevant to the problems facing decision-makers in established firms. Mc Grath and Nerkar (2004) suggest that decision-makers in practice may deploy a pattern of investment choices that is consistent with real options reasoning, and conclude suggesting that real options concepts might offer a useful perspective for those seeking to develop a theory of investment for the field of strategic management.

This essay calls for the importance of real options theory as an important tool to provide ex ante assessment of strategic alliances future results so that we can motivate the research in that needing area of

objective ways of ex ante assessment.

## REAL OPTION AND STRATEGIC ALLIANCES

In recent research there has been intense interest in understanding how real options might usefully complement net present value-based approaches to investment decisions (Mitchell and Hamilton, 1988; Trigeorgis, 1996; McGrath, 1997).

Kogut (1991), Bowman and Hurry (1993), and Sanchez (1993) were early advocates of resolving the tension between the rationality of finance based models and the observations of behavioral researchers through an options lens. As they point out, real options accommodate the value of flexibility, differing resource allocation horizons, the process of retrospective sense making, and path dependence. A critical issue is whether managers' investment decisions under uncertainty are foresightful or simply based on feedback from past experience.

Real options approach permits decision-makers respond to the value of the right to preserve decision rights in the future in their investment choices. Since real options can explain some of the differences between actual managerial investment behavior and theorized investment behavior, it would be of most use as a theory of investment appropriate to the strategy field, mainly to decisions covering alliances commitment.

A firm that invests in any alliance, being it an equity or nonequity commitment can create a unit of new knowledge. It can secure its claim to commercialize this knowledge and subsequently may elect to proceed to extend the knowledge, commercialize its knowledge, to do nothing with it, or to seek to leverage the knowledge in some other way, for example by sharing it in a further alliance.

Investing in real options can allow firms access to a greater variety of opportunities than would be possible if each investment represented a sole project. Once uncertainty is reduced, an investor can then elect to exercise only those profitable options and allow the remainder to expire. By investing relatively small amounts in learning about several promising technical directions simultaneously, a firm can broaden the range of alternatives it can apprehend, generating conceptual variety with parsimony (McGrath and Nerkar, 2004).

The basic intuition behind the recent interest in the application of real options in business strategy is that if low-outcome draws can be costlessly discarded, then greater variance in the sample, holding the mean constant, increases the expected value of those draws that are adopted (Gavetti and Levinthal, 2000). Since alliances resource commitments before the relationship between these commitments and their potential performance outcomes are fully understood, options are an important mechanism through which firms reduce the strategic risk of making commitments (Chatterjee et al, 1999).

At its core, the real options perspective is like other theories of investment in that it is concerned with identifying the factors that influence the investor's in respect of the point at which to decide about investing or not. What makes the real option perspective distinct is that it seeks to establish this threshold while acknowledging that some investments are not fully reversible. This assumption is critical because if investors cannot fully recover sunk costs, the initial investment decision depends on expectations about uncertain future cash flows (Miller and Shapira, 2004).

Real options analysis provides an important complement to other approaches while departing from neoclassical investment theory. It also takes into account that most investments are at least partially irreversible since they cannot be fully recovered and costlessly redeployed in the event of a negative shock and that managers can adapt and revise their strategies in response to unexpected market developments that cause cash flows to deviate from their original expectations.

Engagements in alliances almost always involve investments that are at least partially sunk, or irreversible, uncertain, in domains distant from partner's core capabilities. Under such conditions, real options models (e.g. Kogut, 1991; Bowman and Hurry, 1993; Arora and Gambardella, 1994; Kim and Kogut 1996, McGrath 1997) help to understand the investments made by firms in exploration of new commitments.

Nevertheless, although strategic decisions under uncertainty appear to conform to some general expectations based on real option theory (e.g., Folta, 1998; Folta and Miller, 2002; Kogut, 1991), there is compelling evidence that managers and organizations are badly equipped to handle real option decisions and often do not explicitly use real option analytical techniques (Busby and Pitts, 1997; Graham and Harvey, 2001; Howell and Hegle, 1997). In other words, despite their biases, managers' alliances decisions may employ real option reasoning imprecisely (Triantis and Borison, 2001). Even when quantitative analyses may not be feasible, qualitative assessments employing real option reasoning can guide investment decisions (Miller and Waller, 2003), which means that managers' investment decisions direction may be correct even if biased.



Elegant solutions based on unrealistic assumptions about managerial rationality and organizational routines can cause unintended problems in practice. Given cognitive and organizational constraints, and environmental complexity, researchers may best serve managers by developing robust heuristics (Miller and Arikan, 2004) rather than complex option pricing models.

## Some works

Strategic management research has long focused on understanding differentials in performance across firms (Helfat, 2000). While innumerable empirical studies have linked alliance to superior performance and many scholars have offered theoretical insights on decision making surrounding alliances within firms, little empirical research integrates theories developed largely in finance, and behavioral theories emerging from organizations research regarding the drivers of decisions to invest in alliances commitments.

Whether option pricing may seem unrealistic, neither the evolutionary or option reasoning approach consistently dominates the other. In the absence of explicit option pricing, we can make no *ex ante* claims about the value added from pursuing investments in strategic alliances. Hence, option reasoning may be justified as a way to manage risk, but it may or may not enhance firm value nor is clearly advisable in every competitive situation.

As far as we can affirm, only one work was motivated by an integration of real options theory with the resource-based view (Vassolo *et al.*, 2004). The results partially confirm a central claim in real options theory that exogenous uncertainty influences whether firms exercise their real options. This is one of the reasons why there has been an increasing interest in understanding how real options may complement the net present value approach to alliances decisions as a tool to reduce the strategic risk of making commitments that firms face in their daily operations.

Chi (2000) has argued that significant resource asymmetries must exist between partners for a real option to have strategic value. Chang (1995) modeled international joint ventures as a platform into international markets, where a platform is represented by an investment that offers expansion opportunities due to path dependency (Kim and Kogut, 1996; Kogut and Kulatilaka, 1994). However, Adner and Levinthal (2004) point out that such path dependency can arise out of endogenous rather exogenous factors.

Researchers have used transaction cost theory to diagnose whether a firm's alliance history reduces or accentuates opportunistic behavior in the context of repeated alliances with the same partner. Network theorists also have studied firms with multiple alliances, but their emphasis has been on the role of social networks as a substitute for hierarchy. Moreover, they have not been concerned with transitional governance decisions.

The value creation by the right of postponing decisions seems to be ideal for those firms considering the engagement in sole or a net of alliances since it allows access to a greater array of opportunities than would be possible if each alliance were assessed solely and only in terms of its net present value. Besides, the cost of an option on an asset is insignificant when compared to the cost of an eventual purchase of the asset, allowing for the exploration of more opportunities with the same resources.

The proponents of the option approach tend to emphasize value creation through the development of strategic and organizational flexibility (Bowman and Hurry, 1993; Sanchez, 1993). However, one of the issues that the transaction cost approach puts its emphasis on is the use of commitment, at the expense of flexibility, to reduce opportunism (McGrath and Nerkar, 2004). When trying to apply these two approaches to the analysis of alliances structuring, therefore, one can easily find them to suggest conflicting solutions.

## Some missing works

Despite the normative work on real option valuation, we know little about how managers actually value real options. A few researchers (Bowman and Hurry, 1993; Kogut and Kulatilaka, 1994; McGrath, 1999) have called for studies on the behavioral aspects of managing real options. Lander and Pinches (1998) indicated that managers have limited understanding of existing option pricing models and the real option pricing problems they face often violate the assumptions of these models. The limited survey evidence we do have shows managers' assessments of real options deviate from nonadditive models (Howell and Jagle, 1997), organizations lack systematic approaches for assessing real options (Busby and Pitts, 1997), and managers apply real option analyses in only a small minority of their capital investment decisions (Graham and Harvey, 2001).

With few exceptions, a characteristic of previous studies in the real option literature is a focus on

isolated options that are independent of other options held in a firm's portfolio. However, interactions between real options are a common phenomenon. In the presence of interactions, the valuation of a portfolio of related options is not straightforward. Failure to consider the effect of interactions on investment decisions would lead to misleading explanations.

Other limitation of this line of research is that it has not emphasized insights from the resource-based view and capability perspectives (Zhou and Peteraf, 2002). Since interactions between alliances are a very common and important phenomenon in alliances (see Madhok, 1997 for R&D alliances), an emphasis on synergistic benefits across real options is needed to fully understand the configuration of a portfolio of strategic alliances.

The development of an option model typically involves the use of advanced mathematics, leaving room for simple approximation methods that entail only some basic tools of quantitative analysis. Although finance research has helped managers frame decisions under uncertainty in option theoretic terms, normative models for pricing options overlook key aspects of the behavioral and organizational contexts in which investment decisions occur (Chi, 2000).

The effort to keep option problems the simplest possible leave the researches unresolved in respect of the valuation of compound options, which is a common type of investment problem managers face when making decisions about alliances. Compound option investments are challenging due to be subject to behavioral phenomena such as myopia (Laverty, 1996; Levinthal and March, 1993; Miller, 2002) and escalation of commitment (Staw, 1981).

We already know that the multistage nature of many real options affects exercise timing, although the nature of these effects is not all that apparent. What we do not know is why we do observe firms making successive investments in uncertain technologies and markets over time if maintaining maximum flexibility adds to the value of compound options. To the extent that uncertainty can be reduced and uncertainty reduction enhances value, managers should accelerate their multistage investments relative to when uncertainty is beyond managerial control. This motivation is distinct from the rationale for exercising simple options discussed earlier.

A further theme that is central to real options but not yet to theories of strategic investment, mainly alliances, is the idea that investments in uncertainty reduction erode in value over time. Future research on the erosion of option value and the expiration of real options should test whether firm adopting real options for investments do let options expire as uncertainty associated with the underlying option is reduced.

The theoretical and empirical works explain why alliances may have real option characteristics, and why such a perspective illuminates the context of strategic alliances. Despite these previous contributions, there remains considerable opportunity for further study. A particular limitation of this literature is that all previous studies focus on a single real option in isolation. McGrath (1997; McGrath and McMillan, 2000; McGrath and Nerkar, 2004) emphasized this concern when she suggested that future studies should consider the cross effect of strategic alliances.

Future research would need to show evidence of applicability to nonequity strategic alliances such as research agreements. The argument that such alliances also represent firm options, and should be considered a legitimate part of a firm's portfolio needs evidence.

It would also be useful to compare the implications and assumption of the real options and the network approaches. Recent studies have used network theory for explaining ambiguous empirical findings regarding alliances, and substantially contributed to the understanding of the configuration of the portfolio of alliances (e.g., Powell et al., 1996). In general, network theory suggests a distinct cooperative element in the behavior of firms while the real option approach transactions as its main element of analysis, which would require to compare and to integrate predictions from these different behavioral traditions.

Factoring portfolio considerations into option valuations presents a major challenge to managers. Because of possible correlations in the prices of their underlying assets, the value an option adds to a portfolio may differ from its value on a stand alone-basis. Trigeorgis (1996) calls this the problem of nonadditivity of option values. Another possible extension is to explicitly consider the effect of the presence of competitors, since multiple options analysis is even more challenging when the firm faces rivalry for the investment opportunity (Kulatilaka and Perotti, 1998).

Finally, researchers should pay more attention to the criticism that academic research on human choice behavior pays surprisingly little attention to the difficulties facing a decision maker whose current model of the world usually has a substantial probability of being misspecified (Cohen and Axelrod, 1984). The real options as well as other literatures to date have tended to focus on individual investment despite the solid knowledge that firms often consider a set of simultaneous and overlapping strategic investments, particularly in searching for new Technologies (Nelson, 1961).

## DISCUSSION

Most related work in strategic management has used real options as a metaphor (Miller and Folta, 2002). This has been an effective way to initiate discussions of real options, but it leaves room for developing models generating refined insights.

The understanding pattern in the literature is that firms have a greater propensity to initiate alliances under high uncertainty. This helps reconcile Williamson's understanding that transaction cost analysis should not be applied without deep concern when investments are exploratory in nature, such as those in uncertain research and development, since significant resource asymmetries must exist between partners for a real option to have strategic value. Also, it is important to point out that alliances may offer expansion opportunities due to path dependency, although one should detect whether such path dependency exists, and whether it arises out of endogenous or exogenous factors.

Real options offer a complementary approach to models of investments under uncertainty and theories of decision making due to the fact that real options presume information asymmetries, path dependence accumulation process, and uncertainty. Real options also reduce the disconnection between finance and managerial realities, created by the actual imperfection of the markets not contemplated by finance models, although this area usually offers economic rationale for managerial decisions.

While the theoretical and empirical works explain why alliances may fit in the real option characteristics, helping to give light to the context of strategic alliances, there remains a considerable green field for further research. Innumerable studies have linked strategies to superior performance, but only little empirical research integrates theories developed in finance with those emerging from strategic researches, mainly in respect of alliances.

Since Kogut (1991) first demonstrated the power of viewing joint ventures as options, the option perspective has become widely recognized as an essential analytical framework for understanding the strategic nature of joint ventures. Although further conceptual and empirical work based on this approach has yielded additional insights into the nature of alliances, there has been limited effort to scrutinize the properties of alliances options through rigorous theoretical modeling.

Recently, Adner and Levinthal (2004) have argued that the literature on real options has overextended the application of this concept. They point out that real options formulations are valid in application only when there is an explicit option or when the source of uncertainty is exogenous. Vassolo *et al* (2004) were able to show that the majority of alliances contains some version of an explicit option clause and that alliances in a technological domain predict further alliances within that domain in the future. Therefore, it is to believe that the dominant form of uncertainty is exogenous, which is appropriate for the continuity of works assessing alliances by means of real options formulations.

Real options explanations for alliance formation and dissolution (e.g., Hurry, Miller, and Bowman, 1992; Kogut, 1991) may be less compelling than applications of real options in contexts that are proprietary, such as internal R&D. For an internal venture, the firm faces an exercise price that is determined by the technical characteristics of the project itself. By contrast, in the context of alliances, implicit buyout options are exercised at prices that result from bargaining processes involving two or more partners (Miller and Folta, 2002). Just as firms may want to move away from alliances in their search to capture option value, strategy researchers may do well to move away from their focus on alliances to test real option propositions.

What remains unclear is to what extent Kogut's findings (1991) still prevail. In other words, if a joint venture contract does not give either partner the right to acquire or divest the venture at an ex ante specified price, it is of no use to endure the ex ante valuation of alliances by means of real options. Those who strongly believe in alliances of any kind as a means of firms' reducing competition and improving performance levels need to believe there is a way out.

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# INCREASING SERVICE EXPORTS: A KEY CONTRIBUTOR IN THE GROWTH OF THE GLOBAL KNOWLEDGE ECONOMY

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## ABSTRACT

*In a global knowledge economy both business leaders and government policy makers have identified service exports as key outcomes of innovation based strategies and areas in which to achieve sustainable competitive advantage. This Australia based study of service exporters identified key barriers to success and potential role for government agencies. Key findings included misunderstandings over defining service exports, incorrect classifications of exporters, the need for appropriate and timely planning, challenges in obtaining financial support, need for qualified and appropriate human resources, and the need for government incentives and support aimed at increasing innovation and export orientation amongst service exporters.*

## INTRODUCTION

In a globally competitive marketplace, many organisations are turning to knowledge management and innovation to gain a competitive advantage. The challenge for government regulators is to identify both industries and organisations with best practice entrepreneurial characteristics to become success models that others can emulate. As knowledge and innovation are key components of the service sector, one would expect service exports to be a leading indicator of government innovation policy success. This paper reviews a government sponsored survey of service exporters to help clarify what risks and barriers they may have to overcome to thrive in a global knowledge economy.

Before developing any strategy to encourage service exports it is important to understand the sector and its potential for innovation leading to international demand. In Australia, an industry innovation survey (IBM-Melbourne Institute, 2007) found that within the service sector some industries had achieved rapid innovation increases over the previous 15 years, such as communication services 68.7%, and finance and insurance 87.9%. However, over the same time period, other service industries achieved very few innovative changes, such as property and business services 4.5%, and cultural and recreational services 12.3%. A recent government study (DITR, 2007) helped identify why these innovation discrepancies exist. These researchers identified skill shortage as a leading deterrent to service based industry innovation. It was also found that larger organisations were the most innovative and less likely to suffer from skill shortages. On the other hand much of the service sector outside of communication, finance and insurance was found to be dominated by small business which lacked the capacity to innovate and had difficulty in attracting the most knowledgeable and innovative job seekers.

Governments at all levels are interested in the development of innovation and competitive industry that leads to export growth. According to Smith (p.6, 2006) exporting “enables government policy makers to enlarge foreign exchange reserves, increase employment levels, improve productivity, and promote societal prosperity”. However it could be argued governments encourage exports for a more fundamental reason: to pay their way in a global economy. According to the Australian Department of Foreign Affairs and Trade (DFAT), the 2006-07 balance of trade deficit was AUD \$12 Billion and for the past five years imports have exceeded exports. Although the net trade deficit has been declining each year since it peaked at AUD \$22.6 Billion in 2004-05 the subsequent debt needs to be serviced (DFAT, 2007). Service exports based on knowledge management and

innovation are seen by many governments as a way to fast-track export growth and in Australia service exports have consistently exceeded service imports growing by 5% in 2007 to \$46.2billion (ABS, 2007).

Although a small number of large companies still make the greatest contribution to service export revenues (ABS, 2007), smaller companies, which employ less than 100 people, have the potential to grow and become larger companies of the future. The total number of Australian service exporters in 2006-07 was only 2638, making up only 5.95% of all exporters in Australia. This suggests there a great deal of potential for further expansion service export numbers and value considering this is the largest employment sector in the country. Doubling the number of small and medium exporters could boost Australia's overseas earnings by \$8 billion a year (Callick, 2003). While travel and transportation services dominate the service export sector with 73% of total service exports, the fastest growing area by value between 2005-06 and 2006-07 were computer and information services 23.5% and other business services 21.7% (ABS, 2007). The 10.5% growth by value in the previous year for service exports suggests this sector is not only important, but the rapid increase in the major knowledge sections within this sector highlights the importance of knowledge management and innovation in growing service exports. Past research also suggests government export development policy may need to be targeted at industry level rather than the broad service sector level.

## **LITERATURE REVIEW**

The growth of service exports was covered briefly in the Introduction; a definition, their characteristics, similarities and differences between goods and services exports, challenges they face and the role of government support will be considered in this section. Some of the findings are re-visited in later sections as a result of interviews and the survey conducted for this project.

### **Defining Service Exports**

While service exports are becoming more widely researched a definition of services is still a much-debated issue (Gani and Clemes, 2002). Different authors adopt different definitions, and some authors even change their definition from time to time (Carter, 1984). Although service exports can be understood as service activities that are internationally traded between residents of different countries (Austrade, 1994), the term services covers a heterogeneous range of intangible products and activities that is more difficult to encapsulate within a simple explanation (Department of Economic and Social Affairs, 2002).

Simple definitions of services include "anything that you cannot drop on your foot" (Austrade, 1994) and "generally cannot be held in your hand" (Business Victoria, 2008). In an attempt to gain a better understanding of the concept of services, some authors have divided services into categories (Sacks and Malbon, 1992, Lovelock and Yip, 1996). Current detailed classifications incorporate: transportation, travel, communication, construction, insurance, financial, computer and information, royalties and license fees, other business services, personal cultural and recreational, and government services (Australian Bureau of Statistics, 2007). This method of export service definition is based on the Organization of Economic and Cooperative Development's (OECD) trade in services classification. It is compatible with Australia's Balance of Payments statistics, and is compiled in accordance with the latest international standard determined by the International Monetary Fund (Market Information and Analysis Unit, 2002). This definition appears most appropriate and was used as the base for this survey.

### **The challenges facing exporters**

The literature highlights some common challenges to all exporters. This section reviews these challenges and adds specific issues related to service exporters under the headings of planning, finance, resources and role of government.

#### **Planning**



When moving into a new market a range of planning issues emerges. Many companies make their decision to export without carefully screening markets, conducting research, considering costs, or weighing alternatives. When early export efforts are unsuccessful because of poor planning, the company can be misled into abandoning exporting altogether (Reif et al., 1997).

According to Sacks and Malbon (1992), before exporting there are trade barriers in the host country to consider. These barriers are many and varied and can be divided into three categories: government monopolies, government regulation, and industry regulation. The literature identified that like goods exporters, service exporters find that trade barriers generally prevent them reaching their full potential. For example, in one Australian study undertaken by the Australia Trade Commission (Austrade), more than one quarter of respondents identified trade barriers, especially product standards and certification, and 13% cited intellectual property protection as regulatory constraints on their ability to more successfully deliver their services offshore (Austrade, 1994).

State and Federal service export support agencies, (e.g. refer Business Victoria, 2007; DFAT, 2007; and Harcourt, 2002), highlight the need for businesses to consider some basic issues in setting objectives and making the commitment to export. These export support agencies were found to all emphasise that for international success, potential exporters must have the right product or service. Their literature highlighted that the product or service must satisfy the needs of the end user, and be of high quality. They also suggest that firms must have the management capacity to develop and cope with overseas demand. Price, as well as effective implementation of appropriate technology and training linked with an understanding of how to sell the product or service to non-Australian audiences is also identified as important.

Although Yip (2003) noted that exporting services is easier than goods, Reif et al (1997) stated that the decision to export a service is nonetheless, an equally serious one. Like goods exporters, service exporters must do market research to familiarize themselves with the differences in language, culture, and business practices in target markets (Industry Canada, 2003). Businesses that do not prepare adequately may miss opportunities and fail. A common theme of Australian State and Federal export support agencies is to suggest that the success of export activities often depends on the effort put into understanding the target market. Through such a process a firm will be able to examine the driving force of demand of their service (Harcourt, 2002).

Services need to make globally integrated moves as much as product-based companies. But the key feature of such moves, cross-country coordination, can be both easier and more difficult. Coordination can be easier for those services businesses that reproduce a strong core formula around the world. In such businesses, corporate headquarters play a continuing role in monitoring the strategies of overseas units. However, the prevalence of franchising in services, and its concomitant dispersion of ownership, makes global coordination much harder (Yip, 2003).

Difficulties may arise within some firms regarding the maintenance of a high level of commitment (Industry Canada, 2003). Commitment is important for the flexibility in handling foreign clients. It is a combination of willingness to commit time, effort and follow-ups. However, according to Austrade (1994), young companies with less than five years in business often become exporters by accident, through unsolicited external enquiries, rather than because of a strategic plan to expand internationally. This suggests that the businesses may treat exporting more like a sideline than a commitment.

## **Finance**

Lack of capital has been found to be a major barrier preventing non-exporters from exporting (Patterson, 2004). Service exporters usually face problems in securing finance as financial institutions are usually very conservative in their lending policies for service firms. Financial institutions have not developed a high level of sophistication in dealing with service exporters (Austrade, 1994). This situation is compounded by the difficulty in translating assets to access finance, as assets may not be tangible (Parliament of the Commonwealth of Australia, 1996). Lenders insist on borrowers providing, as security, traditional collateral such as inventory and other fixed assets, which includes plant and equipment (Shuman, 2002). Typically,

service exporters have nothing to pledge as security other than an assignment of the proceeds of a service (Shuman, 2002). This situation occurs because the most valuable asset a service company has is usually the intelligence and competence of its people, which is not shown in the balance sheets. For smaller firms, which make up the bulk of service exporting firms, asset bases are limited and many are ill prepared to provide the financial information required when they seek finance and equity (Austrade, 1994).

Although exporting opens the doors to new customers, increased turnover, and greater profits, there is always the chance, no matter how much confidence a firm has in its customers, that there will be non-payment problems. Unforeseen political, social, legal and commercial factors can prevent payment to Australian exporters. In the experience of the Australian Export Finance and Insurance Corporation (EFIC), a significant number of non-payments occur even though the firm has enjoyed a long-standing trading relationship with an overseas customer. Often, non-payment is a result of circumstances outside that customer's control. A non-payment can be devastating, especially for small-to medium-sized businesses dependent on cash flow (EFIC, 2003).

According to Austrade, apart from the problem of collateral, many firms seeking finance have been identified as being ill - prepared, poorly organised and in some cases not well administered. Lack of collateral, non-compliance with application criteria, and risks were cited as key reasons why finance was refused (Austrade, 1994). Austrade advises that exporters and financiers need to better understand each other's requirements. In particular, financial institutions need to appreciate the real risks involved in providing finance to service enterprises, and to develop ways to better manage this risk (Austrade, 1994).

## **Resources**

As in all businesses, the ability to hire suitable people is a huge challenge. There is a need for the firm to invest in its people, especially for an export business, where the employees must be willing to adapt and cope with an unfamiliar system. According to Kaplan and Rieser (1994), the operation must be supervised directly by quality employees who can maintain high levels of excellence. Fisher and Fisher (1998) added that firms should invest in hiring and developing competent senior export professionals. These authors advise that attracting and retaining good export professionals to deliver excellent services is a major challenge for firms.

According to Austrade (2007), when considering market entry strategies, exporters are often encouraged to replicate a service they have established in Australia. However, it can sometimes mean less control over how the service is delivered. It could leave the service originators open to having their service taken over by local partners, although demonstration of best practice and protection of intellectual property can help reduce this risk.

Similarly, piracy has limited the opportunities for legitimate players in the market. Maintaining pressure to protect intellectual property rights is very important for Australian exporters because of the highly intelligent service component apparent in services export. The extent of this risk is reduced to a limited extent by the Agreement on Trade-Related Aspects of Intellectual Property Rights which helps to promote widespread acceptance of standards and enforcement of regulations (Austrade, 1994).

## **Role of government**

Czinkota (2002) noted that there are three basic reasons for government intervention in exporting – overcoming market barriers abroad; bridging market gaps; and alleviating the trade deficit. Essentially Czinkota (2002) sees the role of government as overcoming macroeconomic issues as well as assisting and facilitating organisations handle more immediate concerns. At the strategic level, Australia is pushing most of its major trading partners to open their markets to service industries by lodging a series of proposals seeking the removal of barriers to trade in services (Davis, 2002). This activity has come about since the World Trade Organization (WTO) introduced the General Agreement on Trade and Services (GATS), which contains fundamental principles including most favoured nation, national treatment, market access and transparency. GATS has helped liberalise international trade in services as it allows organisations to obtain exact information on the regulatory framework of their priority markets. It also gives governments additional opportunities to negotiate the removal or reduction of barriers by targeting restrictions on market access in the financial services, telecommunications, legal services, environmental services and education sectors (Sacks and Malbon, 1992).

Apart from government agencies, Australia has more than 350 associations representing service companies; many are focused on accreditation and maintenance of standards, and have limited resources to assist members in exporting. However, it was noted by Austrade (1994) and confirmed by Coulthard (2003) that the majority of service exporters were unaware of the support schemes, especially those provided by various government agencies.

To assist organisations in Australia, both State and the Federal governments have initiated export support programs through a variety of activities. First, information and advice has been provided via a series of plain English brochures and fact sheets; trade information on the Internet, and a wide range of trade advocacy and outreach activities in both metropolitan and regional Australia. The State and Territory offices of both the Department of Foreign Affairs and Trade and Austrade played a major role in these efforts (DFAT, 2003). Second, government subsidies and incentives have been provided through schemes such as The Export Development Grants Scheme, the Export Facilitation Program and the Export Finance and Insurance Corporation's financial support scheme. Further direct support is given through the organisation of trade missions and fairs, seminars and workshops. All these activities are aimed at increasing exporters' revenue, reducing their tax liability, reducing their production and marketing costs and speeding up the process of government approvals.

## METHODOLOGY

This exploratory study used both qualitative and quantitative methods to ascertain the current situation regarding service exports in the Australian state of Victoria. The study was sponsored by the Department of Innovation, Industry and Regional Development (DIIRD), a Victorian government agency. Following a literature search a questionnaire with a letter of support from DIIRD was sent to approximately 400 businesses. The database for the mail out was derived from a variety of sources, including government agencies, industry associations and local telephone directories. The database search helped identify a broad range of services being exported from Victoria including: education, tourism, engineering consulting, financial services, cultural/applied art, IT software including games, environmental services including water treatment, legal services, medical services, landscaping architecture, nursing, logistics, serviced apartments, insurance. Only 49 (12.25%) questionnaires were returned. Of these 41 were usable and 8 were not completed. A further 25 questionnaires were returned to sender unopened. This disappointing response was analysed via random telephone contacts and it was found that many firms were reluctant to respond due to concerns about why the government was seeking this information. This response highlighted that researchers must weigh up the consequences in overtly highlighting sponsors, in particular government agencies. Time constraints did not allow a follow-up quantitative survey to be undertaken.

Semi-structured interviews were undertaken with 12 randomly selected Victorian organisations involved in service exports. This approach was considered most appropriate for the study because as noted by Lee (1999, p 62) the researcher is free to pursue matters as the situation dictates. The interviews involved two basic groups working in the service exports area - actual exporters of services, and suppliers of support services to those businesses. The former group included IT, law, business consulting, logistics, events management and project management firms; the latter group included industry organisations, government support agencies and private sector consulting firms. These interviews were taped and transcribed for further analysis and identification of common themes.

## RESULTS AND DISCUSSION

Because the questionnaires provided limited responses both in terms of quality and quantity the main focus of this paper is on the qualitative aspects of the research. Some findings from the questionnaire that were noted follow:

**Perceived performance:** When asked how well you believe your service exports had performed against major competitors, seventy four percent of respondents felt their performance was either excellent or above average. When analysed it was found it this positive perception on performance was common no matter whether the

respondent organisations had large or small service export sales levels, or whether they had few or many employees.

**Use of Government Export support services:** The only thing that was clear from the surveys was that seventy percent of service exporters either did not know or had not bothered to use Government export support services whilst the other thirty percent had used these services only once. Though this might suggest a failure by government export agencies to promote their services or an unwillingness of potential users to seek out financial or advisory services from government agencies, no definitive conclusion can be drawn as only ten organisations responded to this question.

The qualitative results were segmented based on the key themes identified in the literature review. Respondent's comments and suggestions were analysed and applied to the following topics: service export planning; financing exports; identifying resource requirements and role of government. Before reporting on these factors a brief comment is made on the problem of defining service exports highlighted by this survey.

The Australian Bureau of Statistics (ABS) definition is based on internationally accepted definitions and allows for direct comparison between countries. Or at least that is the idea. Preliminary investigations into the sub-sectors of services suggest that there is widespread confusion regarding how to categorise a range of businesses. As businesses grow they may diversify their activities. The result of this diversity is they might find their operations defined in one of the "other business" categories to the detriment of statistical accuracy and meaningful cross-nation comparison. Given that most people relate to products more easily than to services, which are invisible, developing a meaningful definition is a challenge. It becomes even more so when narrowing the definition down to service exports. This is because people have different connotations as to the meaning of exports versus other activities and often relate exporting to mean the physical transfer of a product to an overseas destination. At the same time they often dismiss the royalty based income they receive from overseas as something other than exporting. The questionnaire found the majority of businesses did not understand that a service could be exported, and none of the respondent manufacturers involved in exporting acknowledged value-added services or at least did not identify them and their monetary value. Whether value-added services are provided is unclear and further investigation will be required to clarify whether manufacturers are taking the opportunity to differentiate themselves from competitors via the use of complementary services. It was noted that a number of organisations incorrectly classified themselves or were incorrectly classified by others as "other exporters" This may result in a range of problems, including insufficient allocation of resources and support by government agencies, poor opportunity matching by service exporters and agencies, and inaccurate data being used in planning for export growth at both State and Federal levels of government.

## Planning

Developing locally and then expanding globally or going global from the start was a dilemma faced by many organisations. This issue was not clearly answered by respondents though it was acknowledged that some organisations are more likely to gain early access to international markets than others. In summary, it appears most respondents believed it was best to have developed a successful system at home first, knowing what works and meets local customer requirements before looking to the export market for growth.

Consistent with Harcourt's (2002) findings, it was emphasised in most interviews that no matter when the decision was made to export, unless the organisation had the resources (in particular financial and human resources), it may fail to take full advantage of international opportunities because it cannot meet the on-going demands of foreign customers. Respondents also emphasised the need to ensure there were enough resources focused on maintaining and growing the domestic market. These respondents felt it was essential to support international development and provide sufficient surplus capital to cover overseas start-up costs.

The importance of developing and maintaining effective networks to build overseas markets through a variety of strategies was emphasised. For example, build on existing contacts – in-country or in Australia; use of government export development bodies, networks, industry associations, banks, private consultants, trade shows. The importance of personal contact was highlighted, through activities such as attending trade shows, local Chamber of Commerce or network meetings, especially when there were guest speakers.

All respondents involved in advising exporters said the choice of which markets to enter required careful planning and market research. The exporters interviewed felt the level of research and planning depended on the proposed market, their past experience and the value of the project itself. Although exporter respondents agreed that the largest market opportunities may be in developed countries with high GDP/GNP, smaller niche markets in developing countries should not be ignored. Some respondents mentioned they had their greatest successes in developing countries where competition was less and the Australian services on offer were significantly more advanced than those offered by local providers. A note of caution was added – choose markets which are open to trade and have in-country incentives to ensure the host country has some stake in ensuring success.

The issue of who should undertake the market research was raised but responses varied from do it yourself to use Austrade recommended providers. Respondents agreed that this research was not a passive undertaking and no matter who assisted in data collection and analysis, the organisation needed to take a proactive interest and overall responsibility for the planning. This was necessary to ensure strategies were in line with the organisation's growth objectives and all those people involved in developing overseas markets were committed to the process. This finding is consistent with the findings of Reif et al, 1997.

Questions related to the appropriate type of organisational structure for the overseas venture were raised but not really answered. The most common point made was that the structure would depend on what was best for the organisation to achieve its foreign objectives and should take into account its current local operational structure.

## **Finance**

The key issue for all respondents was handling financial transactions, including getting paid. The responses were basically risk-reduction strategies and common to any exporter. They support the findings from the literature review, for example, EFIC (2003). Strategies included: taking out insurance; ensure tight audit clauses are in the contract and it is administered by a local firm; get advances and milestone payments; and/or performance and bid bonds; and hedge for exchange rate variation.

It was noted by most interviewees, and supported by the findings of Austrade (1994), that too often Australian organisations failed to budget correctly for their international expansion. Most suggested that significantly more time would be required in the start-up and on-going phases than planned; the same applied to cost estimations.

## **Resources**

Apart from accessing initial finances respondents identified access to human resources and protection of intellectual property as key resource issues. On a general level, getting access to resources to be competitive was critical to success. Respondents suggested many service exporters were comfortable growing their international business with alliance partners. For example, one respondent involved in large infrastructure projects advised they required a diverse range of skills and therefore for them alliances were common. Though respondents were in favour of growth through alliances, further research is required to identify whether service exporters have a greater attraction to vertical or horizontal alliances, what success level has been achieved and what strategies work best to achieve international success.

Whilst acknowledging there will be competition for experienced staff members a specific issue of public/private competition arose: how do I compete with government enterprises for human resources? There were a number of concerns raised about government involvement in international trade. The main concerns centred on the failure of Australian governments to support local business to the extent provided by foreign governments, such as the Japanese and USA governments, giving their own domestic organisations a priority in bidding for overseas government work. Two respondents suggested that governments should remove themselves from managing major projects and rather than competing for local resources, work with the private sector to win international projects. Other strategies to boost private sector expertise, supported by government involvement,

included encouraging the government to build a bigger pool of experts through, for example, an Ambassadors programme, or secondments, where people are encouraged to go overseas to gain experience.

The challenges of working in different cultures was the main human resources issue in all interviews and was a key point emphasised in the survey. Though many respondents raised the concern of language differences and the need to ensure documents were checked for their English translation by at least two different translators, other issues emerged. The most common one related to negotiations. Concerns were expressed that what was said may be different to what was meant, that face saving was important and respecting local cultural nuances would help the relationship develop. Issues such as working with people in other cultures emerged, particularly regarding the need to ensure Australians selected for overseas postings wanted to go and had a support structure for long-term success. Overall, it was generally felt that to be successful in international markets there was a need to understand that the legal, cultural and financial environments were likely to be different to Australia.

In service organisations intellectual property is a fundamental resource; how to protect intellectual property was a key question. Concerns raised were similar to those relating to goods though there was less concern here as it was felt many services adapted to individual project needs. Getting brands and domain names registered in-country was the most favoured strategy. This of course could be different for a licensor or franchisor where developing a quality image and building brand awareness may be their keys to international success. It was not clear from responses whether this latter point was an issue for the selected sample, however, it does need to be further investigated.

## **Role of government**

While Government influence occurs in all of the above areas respondents generally agreed that it was essential for State and Federal Governments, and their agencies, to work closely together in terms of providing support services. Many respondents appeared uncertain as to what services were available for service exporters. Developing more effective communication approaches outlining support and financial assistance packages available to service exporters appears necessary. Respondents were keen to see greater involvement by the Victorian Government in assisting service exporters. However, the only consistent response as to how this should be undertaken was monetary support. The best role for Government to take regarding assisting service exports requires further research. Suggestions for improving assistance to service exporters, based on these results follow in the next section.

## **CONCLUSION**

In view of the issues faced by the exporters, appropriate government support could be of significant benefit in expanding service exports. Support could be provided to assist service export organisations and their customers through:

- Increasing awareness of their services: Government agencies should more aggressively market their services ensuring they target service exporters with appropriate policies and support mechanisms.
- Reducing paperwork and streamlining the approval process: Dealing with bureaucratic processes appeared to be daunting for service exporters interviewed. Many opportunities to enhance the experience of service exporters were identified; including streamlining current large and complex application forms, reducing the number of applicant interviews, and speeding up the approval process by reducing the number of levels of approval required. Service exporters often cannot wait six to twelve months for government approval and receipt of support funding. They are used to responding to their clients in significantly shorter timeframes.
- Education: Government agencies can utilise their own knowledge and consultant network to develop education services appropriate to service exporters. Issues identified as appropriate included finding appropriate and trustworthy partners in overseas markets, protecting intellectual property and ensuring payment for work undertaken. Advice such as that given on the Victorian Government's website is only useful when potential users can find it or know it exists.

- Networking: Agencies could provide opportunities to match supply and demand. Opportunities include working with industry associations, business angels and business networks.
- Money: Organisations could be reimbursed for appropriate export development costs.
- Risk reduction: Agencies could ensure adequate finance and insurance is available, either directly or indirectly via the private sector.
- Export policies: Policies that encourage and reward new and existing exporters should be developed at both Federal and State level. These policies need to be integrated to overcome potential duplication.

There are several reasons why so little information is known about service exporters. First, it could be due to the fact that agreement has not been reached on a specific definition of services. Second, the difficulties and risks associated with exporting services are not well known. Third, not much is known about how the process of exporting services differs from the process of exporting products. Fourth, little is known about the information needed by service exporters to find overseas markets and deliver services to those markets.

This study highlights the importance of service exports to the global knowledge economy. It also demonstrates that much needs to be done by government agencies if they are to assist current and potential service exporters including the provision of incentives to innovate and export. However, before these policies can be implemented, basic definitions need to be agreed on, data collection improved, cross-country research undertaken and on-going advisory services improved and promoted so awareness of opportunities and support are recognised and accepted in the wider economy. This exploratory study hopefully provides a base for further studies and its limitations in terms of scope and respondents involved need to be recognised when assessing these findings and conclusions drawn.

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# THE GROWING LEVEL OF ICT USE DURING INTERNATIONALIZATION

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## ABSTRACT

*As the geographical boundaries of the corporation expand, complex organizations emerge which need greater information-processing capacity. Since internationalization proceeds step-by-step, success depends on the ability of the corporation to gather the necessary information during the process and effectively utilize that information. Therefore, information-processing plays a crucial role in the internationalization process. The findings of this paper concorporation a strong relationship between the incremental stages of internationalization and growing ICT intensity. Furthermore, taking an information-processing perspective on internationalization uncovered a significant challenge to mainstream internationalization theory. ICTs were found to speed up information intensive processes during internationalization. The impact of that affect is to speed up the process of internationalization.*

## INTRODUCTION

This paper is relevant because in the year 2004 alone, more than 2.5 billion Euros was spent by industries worldwide on information and communications technologies. The rate of investments in such technologies has been growing at twice the rate of the global economy (de la Torre and Moxon, 2001). Furthermore, the study of ICT use during internationalization has received limited attention in the international business literature. Moreover, 'accelerating technological developments are now forcing corporations to internationalize more rapidly than some decades ago' (Johanson and Vahlne, 2003, p. 83). During internationalization corporations need to adopt information-processing mechanisms, which allow them to process vast amounts of information and simultaneously deal with information overload. 'Information systems are a key integrating mechanism. Considering the phenomenal development of information technologies these days, information based integration will be a more important and effective form of integrating various business functions and operations in the coming years. The information-based mode should deserve far greater attention and should be a critical part of mechanisms for global integration' (Kim, Park and Prescott, 2003, p. 340). Furthermore, viewing organizations as systems that need to balance organizational information-processing capacities against information-processing requirements originating from the corporation's organization, strategy and environment supports the internationalization process (Axinn and Matthyssens, 2002).

For the corporation to internationalize, information has to be as broad as possible and relevant. This is because the international environment is highly uncertain, risky and containing excessive information. To determine alternative courses of action and identify opportunities and threats, information must be managed (Liesch and Knight 1999, Kim, et al., 2003). Furthermore, information-processing can help decision-makers make the right decisions. Therefore, increased information-processing can support uncertainty reduction, improve risk mitigation and help management identify opportunities during internationalization. During early stages of internationalization the information-processing capacity of corporations is limited. This explains why corporations tend to first expand into countries, which exhibit limited psychic distance. Slower internationalization is also due to undeveloped information-processing mechanisms. Rapid internationalization

occurs when there is a close fit between psychic distance, knowledge, learning and information-processing capacity.

There is limited research on the use of new information-processing mechanisms, such as ICTs, in the international business literature. Moreover, ICTs have the potential for reducing uncertainty, enhancing the learning process and facilitating the creation, transfer and retention of knowledge during internationalization (Petersen, et al., 2002, Galbraith, 2002, Petersen and Welch, 2002). 'Clearly, there is much empirical and theoretical research to be done in order to get behind the hype and develop a clearer picture and understanding of how the Internet is changing the world of international business – including that of corporations' foreign market expansion' (Petersen, Welch and Liesch, 2002, pg. 219).

## POSITIONING OF RESEARCH

This paper builds on the work of Egelhoff (1991). Egelhoff explored in detail information-processing within the context of the multinational corporation (MNC). However, this paper more deeply explores information-processing during the different stages of internationalization. Furthermore, this paper also builds on the work of Petersen, Welch and Liesch (2002). These authors conceptualized the likely impact, which the Internet might have on corporations' foreign market expansion. In this paper the phenomenon is more thoroughly explored through multiple empirical investigations. 'Because international environments are associated with uncertainty, it follows that internationalization leads to a significant increase in environment-related information-processing requirements. As the relative size of the foreign sector increases product interdependency should increase. Thus, internationalization would require more product-related information-processing capacity. Internationalization's influence on the volume of corporation-related information-processing depends on the market entry mode used. Although pure export-oriented strategies will not greatly increase corporation-related information-processing, internationalizing production often demands a higher level of corporation-related information transfer' (Wolf and Egelhoff, 2001, p. 124).

ICTs have the potential to improve market transactions, reduce search costs and improve response time to new opportunities during internationalization (Petersen et al. 2002). 'There is little doubt that the ICT revolution will indeed transform business processes, customer relationship management, supplier and procurement systems, the structure of industries, and, perhaps, the very nature of corporations...The field of international business is particularly vulnerable to this transformation. The act of crossing borders-whether by products, services, ideas, people or money-is at the core of our field. Such crossing, imply a multitude of processes that are information intensive' (de la Torre, et al., 2001, p. 618-619). However, this paper is exploratory because investigations on the impact of ICTs during internationalization are rare (de la Torre, et al., 2001, Petersen et al., 2002). There has been international ICT research addressing macro structural issues (Leamer and Storper 2001, Zaheer and Manrakhan 2001). The impact of ICTs on transaction costs in international business has also been investigated (Bakos 1997). Furthermore, research employing a combination of theoretical approaches has been completed. Unfortunately, few research efforts have been carried out which explore the organizational impact of ICTs during internationalization. Therefore, 'work on more micro aspects of the impacts of ICTs on International business is certainly needed' (de la Torre, et al., 2001, p. 631). Because of the exploratory nature of this paper, a mixed empirical methodology was employed (quantitative and qualitative). This was done to enrich the researcher's understanding of the phenomenon.

## Conceptual Framework

In this paper internationalization is operationalized through the different stages of internationalization (Figure 1). As a corporation progresses through each dimension the level of internationalization increases. Information-processing is operationalized by investigating a wide range of ICTs. The original theoretical proposition of this paper assumed a relationship between growing ICT intensity (cumulative and internationalization as:  $y = \alpha + \beta x$ ). The intensity (variety) of ICTs employed is the dependent variable (y) and the independent variable (x) is internationalization. The ICT mechanisms selected for this paper included: e-mail, Internet, Intranet, Extranet and EDI (electronic data interchange). ICT intensity was operationalized by using ordinal intervals. Therefore, a combination of mechanisms is used as the indicator of ICT intensity, rather than the use of individual mechanisms. E-mail was found to be the alpha ( $\alpha$ )

Figure 1. Internationalization Dimensions

| <b>Product Dimension</b><br>(product type) | <b>Operational Dimension</b><br>(operation mode) | <b>Market Dimension</b><br>(markets distance) |
|--|--|---|
| Goods                                      | Non-investment marketing activity                | very close                                    |
| Services                                   | Direct investment marketing activity             | Close   |
| Know How                                   | Non-investment operations                        | Medium  |
| Systems                                    | Direct investment operations                     | Distant                                       |

Source: Adapted from Luostarinen, 1994

## Information Processing

Galbraith (2002) is credited with conceptualizing and unfolding the vision of the organization as essentially an information-processing entity. He considered organizational diversity to be a result of strategies that organizations employ to cope with environmental uncertainty. He defined uncertainty as ‘the difference between the amount of information required to perform the task and the amount of information already possessed by the organization’. However, Egelhoff (1991) extended Galbraith’s work by developing a multidimensional framework to define information-processing capacities and requirements in international business. He felt that increased organizational information-processing capacity requirements result from the strategic and environmental impact of internationalization. Egelhoff differentiated between logistical and cognitive information-processing. Logistical information-processing is concerned with information-processing capacities and requirements inherent in the corporation strategy and environment. Organizational structures and processes to transfer and access information are the focus of the logistical approach. Vertical information systems and lateral relations are logistical mechanisms, which have the greatest capacity to process information. Vertical systems include computer-based systems and staff groups. Lateral

Mechanisms include: groups, E-coordination, integrators and matrix/line organizations. Based on the definition of ICTs applied in this paper mechanisms would also include: information systems, information technology and virtual-human interfaces such as e-meetings etc. (Galbraith, 2002, 2006). The cognitive perspective is not explored in this paper. Empirical studies verifying Galbraith’s conceptualizations and Egelhoff’s extension have been scarce in the international business domain (Petersen, et al., 2002, Premkumar, Ramamurthy, and Saunders, 2005). The role of information-processing and in particular the use of ICTs during internationalization, however, receives brief treatment (de la Torre, et al., 2001, Petersen, et al., 2002, Kim, et al., 2003). Therefore, conceptual and theoretical research on information-processing during internationalization has outpaced empirical research. ‘It is ironic that there have been almost no studies that examine comprehensively the role of information and knowledge acquisition during the internationalization of the corporation’ (Liesch et al., 1999, p. 384).

However, the internationalization process of corporations has been studied for decades (Johanson and Vahlne 2003). In those seminal studies internationalization was described as an incremental process during which learning plays an important role and psychic distance impacts the efficiency of information flows. Network theory, portfolio theory (Rugman, 1979), knowledge internalization (Nonaka and Takeuchi, 1995), resource based studies (Collis, 1991) and socio-competitiveness studies (Fouad, Mrad 2006) have also addressed information-processing during internationalization to a very limited extent. The presence of significant differences between global and domestic information technology requirements has also been researched (Tractinsky and Jarvenpaa, 1995). The alignment between technology and strategy has been the dominant stream in that research effort. However, ICTs have been the subject of analysis in few international business studies, especially from an internationalization perspective (Egelhoff 1991, de la Torre, et al., 2001, Kim, et al., 2003). By limiting this empirical investigation to ICTs the research neglects to consider other vertical and lateral mechanisms such as liaison roles, teams, and staff groups.

## Internationalization

The internationalization stages model is a process and behavioral phenomena. Experiential knowledge is emphasized in that process during which knowledge is acquired by operating on foreign markets. Additionally, the accumulation of experience is vital to future internationalization. Furthermore, internationalization is corporation specific and involves high risks. Internationalization is also a dynamic and multidimensional process involving buying, selling and different forms of co-operation. Furthermore, internationalization is incremental and involves a deepening commitment to different operating forms and a chain of activities. The internationalization process involves market selection and commitment based on; know how, human resources and technology. However, the process is unpredictable and market knowledge (both objective and experiential) plays a critical role. Therefore, information needs are affected by imperfect access to information and knowledge. This imperfect aspect impacts market selection and operational mode choices. Hence, country, institutional, culture, competitor, market and customer aspects all impact the information needs of the corporation during internationalization.

Furthermore, information-processing during internationalization is a means of knowledge accumulation (Johanson & Vahlne, 2003). The result of knowledge accumulation is the reduction of uncertainty and perceived risk. Because experiential knowledge is costly, difficult to interpret and harder to transfer, utilizing appropriate information-processing mechanisms supports the corporation during the internationalization process. Additionally, ICTs influence the corporation's initiatives, information search processes, and information evaluation. Therefore, 'ignorance, unfamiliarity and uncertainty related to international business activities can be reduced through collecting, interpreting and evaluating information on these matters' (Luostarinen, 1994, Eriksson and Johansson and Majkgard and Sharna 2000).

## **Propositions**

Based on the above discussion the following working propositions were postulated:

WP 1. As corporations develop their level of international business, the need for increased information-processing capacity grows and ICTs are increasingly employed

WP 2. As corporations increase their product offering (sales objects) during internationalization stages, the need for increased information-processing capacity grows and ICTs are increasingly employed.

WP 3. As corporations expand their use of operational modes (export etc.) during internationalization stages, the need for increased information-processing capacity grows and ICTs are increasingly employed.

WP 4. As corporations expand the number of markets served, during internationalization stages, the need for increased information-processing capacity grows and ICTs are increasingly employed.

## **EMPIRICAL DESCRIPTION**

In order to more fully understand the phenomenon in question it was considered necessary to employ mixed-method research. The advantages of the mixed-method approach are numerous. Two empirical investigations were implemented in order to better "understand the mechanisms that cause the outcomes rather than only relying on the statistical significance of correlations between attributes and outcomes" (Christensen, et al., 2003, p. 74). During the empirical phase, the researcher was conscious of the need to be able to make generalizations on the findings even though the work was exploratory. Study 1 used data from a large-scale domestic Finnish survey of ICT usage (Statistics Finland 2001). An Ordinary Least Squares (OLS) regression model was used to study the relationship between the dependent variables (Internet, Intranet etc.) and independent variables (imports and exports). Statistics Finland was able to gather import/export data for participating corporations. The results of the regression analysis suggested that there was a strong probability of a link between involvement in imports, exports and increased ICT usage. There were no assumptions made on the generalization of the findings. Rather, the findings were felt to be indicative of the relationship. A deeper investigation of that relationship was explored in Study 2.

Empirical Study 2 was a telephone survey made with 66 Finnish corporations. The results concorporated a strong and positive relationship between the stages of internationalization (POM) and growing ICT intensity. ICTs were defined as: e-mail, Internet, Intranet, Extranet and EDI. These information-processing mechanisms have been investigated in other international studies (Petersen, et al., 2002, Kim, et al., 2003).

## Results: Study 1

The results from the exploratory regression analysis suggest that an important relationship might exist between early stages of internationalization (imports-exports) and the increased use of ICTs. Most of the variables had strong significance or significance in relation to ICT usage (Figure 3).

Figure 3: Correlation of Imports/Exports and Information-processing Mechanisms Use

| ICTs   | <i>Import/Export</i> | <i>Pr&gt; t </i>         |
|--|----------------------|--------------------------|
| Corporation has www site (4119 observations)   | Import<br>Export     | 0.0154*** 0.1108         |
| Corporation has Intranet (3810 observations)   | Import<br>Export     | <.0001****<br>0.002****  |
| Corporation has Extranet (3810 observations)   | Import<br>Export     | 0.0141*** 0.1360         |
| Corporation has EDI (3681 observations)  | Import<br>Export     | 0.0002****<br><.0001**** |
| <0.01 = strong significance ****<br><0.05 = significance ***<br><0.10 = some significance ** |                      |                          |

The variables measured in this regression analysis represented only early stage activities (imports and exports). However, the regression analysis involved five (e-mail was employed by majority) different ICTs. Descriptive analysis, such as the above, can make some probabilistic statements of association (Christensen, et al., 2003). Nevertheless, one can only assert on average the attributes associated with results. Testing inductive proposition through different sets of data is one way to proceed. However, based on these regression analysis findings one can assume that some relationship exists between early stages of internationalization and ICT usage. These findings imply that internationalization is information-intensive (de la Torre, et al., 2001). However, one should not draw too many conclusions or argue that the results are applicable to the entire population of internationalizing corporations (Petersen et al. 2002). The sample (from 3681 to 4119 corporations) was considered representative of Finnish industry as a whole.

## Results: Study 2

Empirical Study 2 involved interviews with 66 Finnish corporations. The findings were analyzed using SPSS (Statistical Package for the Social Sciences). SPSS is a software package used for conducting statistical analyses, manipulating data, and generating tables and graphs that summarize data. The sample was considered representative in terms of industry variation. Large and medium size corporations represented 81% of the sample. Directors and functional managers represented 64% of respondents. The remainder were corporate communications personnel.

Empirical Study 2 revealed that a strong relationship (supporting WP1) exists between the stage of internationalization (products, operations and markets) and growing ICT intensity. However, know-how sales did not fully match the mainstream sales object pattern observed. One explanation for this could be that know-how corporations do not need certain ICTs because they don't sell physical goods. The findings revealed that as an internationalizing corporation progresses through different sales objects ICT intensity grows (WP2 partially supported). Regarding operational strategy, the findings revealed growing ICT intensity as corporation's progress from inward, outward and then to co-operative stages (WP3 supported). Regarding operational strategy, the findings also revealed growing ICT intensity as corporation's progress from inward, outward and then to co-operative stages (WP3 supported). Finally, there appears to be a trend towards growing ICT intensity as the corporation expands its market coverage. Therefore, WP4 was partially supported. Participants were also asked

to indicate the major benefits gained through the usage of ICTs during internationalization. Increased speed of business processes was considered to be the major benefit.

Furthermore, participants were also asked to elaborate on those benefits. Table 1 summarizes the major benefits gained through the use of ICTs during internationalization. These benefits have been categorized based on the product, operation and market framework (POM). Many of the benefits listed will have a positive impact on more than one POM variable.

Table 1. Major benefits gained during internationalization by employing ICTs

| <b>Product : Sales Object</b> | <b>ICTs: Major Benefits Gained During Internationalization</b>  |
|-------------------------------|---|
| <i>Products</i>               | on-line sales , on-line sales catalogues, electronic trading, more quickly solve problems   |
| <i>Services</i>               | Internet and Extranet based services, faster communication and data flows, easier exchange of files in original form, less paperwork  |
| <i>Systems</i>                | precise information available, easy to use tools, following technical developments, quicker and more direct information sharing, easier to acquire information  |
| <i>know-how</i>               | more effective networking, simplify and speed up communication, improved information quality, global availability of information, more diversified information available, quicker and less costly information availability                              |
| <b>Operations</b>             | <b>ICTs: Major Benefits Gained During Internationalization</b>  |
| <i>In-ward</i>                | easier to find and contact potential suppliers, electronic trading, better supplier information exchange, efficient order processing and invoicing  |
| <i>Out-ward</i>               | more effective communication with distribution channels, customers get better information, lower costs, faster data and information transfers, better customer feedback, improved information sharing with subsidiaries                                 |
| <i>Co-operative</i>           | all files in original form and easily exchanged, deeper interaction with core processes, speed of production increased, accounting systems improved, actions taken more quickly on problems, time saving  |
| <b>Markets</b>                | <b>ICTs: Major Benefits Gained During Internationalization</b>  |
| <i>close</i>                  | finding new customer easier, sales and service on Internet, marketing and sales promotion easier, increase sales  |
| <i>distant</i>                | build awareness, after sales service, quickly respond to customers needs, easier to communicate, improved competitive scanning  |
| <i>very far</i>               | provide more information to own personnel in network, good Extranet for contacts with customers, e-commerce opportunities, improved competitive scanning, better customer feedback, better communication in markets where infrastructure is undeveloped |

## Summary of Theoretical Contribution

This paper has demonstrated that ICT intensity gradually increases as the corporation internationalizes because of environmental changes and resulting changes in corporation strategy, organization and knowledge. These changes contribute to growing uncertainty and complexity. As corporation's progresses through stage dimensions organizational learning occurs, experiential knowledge is accumulated, and procedural knowledge is gained (Johanson et al., 2003). Furthermore, the corporation encounters psychic distance related barriers and lateral rigidity during internationalization. ICTs diminish the negative effects of growing complexity and psychic distance. Moreover, ICTs support increasingly cost effective and efficient transfers of knowledge from one product, operational and market context to another (Petersen, et al., 2002). ICTs can in fact accelerate the internationalization process. 'The Internet holds the potential of reducing the uncertainty associated with doing business in foreign markets. Since the uncertainty about foreign markets (as perceived by corporations' decision-makers) has been considered a major barrier to foreign market expansion, in the hands of international managers the Internet may be an instrument that accelerates foreign market expansion' (Petersen et al. 2002, p. 208).

Moreover, ICTs have a significant impact on internationalization and influence other elements portrayed in each loop of the framework. This paper demonstrated that ICTs accelerate the process of internationalization. The internationalization process was described as corporation specific and incremental. The central role of ICTs in the revised framework highlights the fact that ICTs support the growing need for information throughout the internationalization process, which is due to increasing environmental uncertainty. The cumulative effect of growing ICT intensity during the process of internationalization is the acceleration of that process (Arenius, Sasi and Gabrielsson 2006). This acceleration is a result of the positive role which increased information plays in knowledge accumulation and decision-making. Therefore, in this paper ICTs were found to support the acceleration of foreign market expansion. The circular/reinforcing feedback loop of the framework illuminates the dynamic interplay, which exists between ICTs (along with other information-processing mechanisms) and internationalization.

## MANAGERIAL IMPLICATIONS & FUTURE RESEARCH

There exists a need to reconsider the combined role of information and knowledge during internationalization. 'So far, the empirical data are scarce and anecdotal' (Petersen et al. 2002). Because this paper was exploratory, more research is needed in order to understand the enabling role of ICTs during foreign market entry and expansion. However, one should not view ICTs as the solution to all problems associated with internationalization. The empirical findings revealed that the primary benefit of using ICTs during internationalization was increased 'speed' of processes. It was determined that speed had an impact on a number of processes such as: information flows, money flows, communication flows, information capacity, up-to-date information and data transfer rates. Therefore, processes should be prioritized when considering the positive impact of ICTs. Individual business functions should also be accounted for when identifying the benefits that might be gained by increased ICT intensity. Furthermore, there is a need for more in-depth empirical research examining information-processing needs during the different internationalization stages.

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# EXCERPTS FROM DIGITALLY DIVIDED LIVES IN TURKEY

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## ABSTRACT

*In this study, lives of Turkish people have been examined through newspaper excerpts and interviews in the book 'Yoksulluk Halleri' by Necmi Erdoğan to see if there still is a digital divide problem in Turkey as of 2006. After grouping the collected data according to different headings of income, age, education, gender, geography, foreign language, and technological skills, the data has been studied from the point of view of four categories: physical, digital, social and human resources. Turkey seems to be well equipped with physical resources yet in the other categories it fares quite poorly.*

## INTRODUCTION

Turkey has been diagnosed with the problem of “digital divide” as early as 1997. (Geray, 2000). Saatçioğlu (2006) claims, Turkey still suffer from “digital divide”. One common point in the diagnostic analysis of both authors is the utilization of quantitative data such as the number of people who have computers or the extent of infrastructure for Internet or other such indicators.

However, it is the opinion of this author that social issues should be tracked via real life stories. The point of concern here is which aspects of their lives should be analyzed. Unfortunately, the literature does not provide an agreed upon definition of the term digital divide and its relation to various aspects of people’s lives. Therefore it is the purpose of this paper to first present the various interpretations of the concept and then apply the most suitable one to the case of Turkey.

The paper starts out with a review of the literature regarding the definition of ‘digital divide’, which is followed by the second section on research question and the methodology. In the third section, ICT usage in Turkey is presented via news excerpts. In the conclusion, a verdict is reached on the issue of digital divide in Turkey.

## What is Digital Divide?

A literature review of the term digital divide reveals a transformation of the term in time. According to Tipton (2002), and Quibria et. al. (2003) the digital divide separates those who are connected from those who are not. Souter (2004) defines the digital divide as “the disparity in ICT diffusion and use between industrial and developing countries”. According to Garcia et. al. (2006) digital divide is not only about access, but also about other characteristics that define the social opportunities of an individual such as gender, education, employment status, IT skills, and among others ability to speak foreign languages. DiMaggio and Hargittai (2001) lay out five dimensions of digital divide as “equipment, autonomy of use, skill, social support, and the purpose technology is employed for”. Robinson et. al.(2003) find the more educated a person is, the higher his/her chances of using the Internet while Chen and Wellman (2003) indicate that there are many divides and that it is a ‘multifaceted’ concept varying both within and between countries.

As presented by the various definitions above, the concept of “digital divide” does not have a strictly agreed upon version. However Warschauer’s (2003) categorical approach to the issue enables one to study the concept in a well structured manner. The categories consist of physical resources, digital resources, human resources, and social resources. Physical resources comprise computers and telecommunications. Digital resources encompass digital material in different languages. Human resources mean literacy and training or education to be able to effectively use the ICT devices, while social resources refer to the computer literate people around who are willing and able to help with ICT problems. This paper uses Warschauer’s approach to the issue of digital divide.

## **THE RESEARCH QUESTION AND THE METHODOLOGY**

Geray (2000), and Saatcioglu (2006) indicate that there is a digital gap in Turkey. However, their diagnosis rests upon the review of statistical figures on ICT use in Turkey and therefore corresponds to the physical resources category in Warschauer’s analysis. The digital, human and social resources are not touched upon in these studies. The aim of this study is to fill in this gap so that a full picture of the ‘Turkish digital divide’ can be taken in terms of Warschauer’s perspective.

A Turkish daily newspaper, *Hürriyet* has been used as one of the sources because the aim was to collect real life information on Turkish people. *Hürriyet* archives have been scanned over the Internet for the year 2006. All the ICT related news excerpts have been collected and filed as per the following dimensions: income, age, gender, education, geography, foreign language, and technological skill. A second source has been Necmi Erdogan’s book titled *Yoksulluk Halleri* (2007). This book describes poverty through the interviews with people living in the slums of Ankara and İstanbul.

## **A NEWS BASED OUTLINE OF ICT USAGE IN TURKEY**

### **Income**

One of the most repeated themes in the use of ICT by the rich is at housing applications. For example Hararlı, (2006) reports that Ajda Pekkan, a celebrity singer, has started to build a ‘smart house’ on her lot at Tarabya, İstanbul. After completion of the building, she will be able to water her plants via a touch on her cell phone. Apart from houses of the high-income earners, students’ lodgings at private universities and private hospital rooms are other places where Internet access and satellite TV can be found. (*Hürriyet*, 3 September, 2006). For the rich, gambling purposes seem to be a preferred use of the Internet. According to a research made by Ankara Chamber of Commerce, the size of the Turkish gambling market is 1 billion dollars. (Özbey, 2006)

On the poor side of the population the use of or access to IT is not even an issue. The words of Necmiye from the book *Yoksulluk Halleri* (2007) reflect the challenges these people need to fight every day. Necmiye:

“I wait from seven to ten in the morning for food to be handed out. Then I bring it home around ten thirty. We have our breakfast from ten thirty to eleven. So our lunch and breakfast is actually the same meal.” (Erdoğan, 2007)

In another case, Erkan and his wife Fitnat who live in the slums of Mamak, Ankara, complain that they do not have water, and admit that they use illicit electricity. When asked to Firnat, whether there is a TV at their home, she answers that they did have one, but it got confiscated. (Erdoğan, 2007)

### **Age**

Among 86 thousand subscribers of VW PoloCup, a virtual Internet game, 54.5% are in their twenties, 25.6% are under 21 years of age. (Yoldaş, 2006). The amount of time some of these teenagers spend on the computer is rather high. Okan Deniz, a 17 year old high school graduate says that he spends at least five hours every day on the computer. (*Hürriyet*, 15 October 2006). The significance of the matter is indicated by a letter

written by the minister of Family and Women, to four other ministries. In the letter, the minister offers partnership in projects dealing with problems such as Internet marriage, Internet crimes and Internet addiction. (Hürriyet, 1 October, 2006).

Despite all the harmful effects, if used positively at the right amount and for the right purpose, computers and Internet can change some young people's lives. Çakmakçı (2006) reports the case of Hüseyin Kaya, 18. The fourth child of his family, Hüseyin has managed to set up a computer system to the English language course he attended, and was offered a scholarship at the City of London College where he eventually became the IT manager.

However, when the lives of poor children in Turkey are taken into consideration, it is highly unlikely that most will ever follow Hüseyin's footsteps. For example, Zeynep, a 12 or 13 year old girl longs for a bicycle, and an "ateri" (misspelled form of 'atari', a computer game brand favored among children) while Emrah, 16, is lucky enough to attend the Society Center at Sincan, Ankara. When asked about what he does at the Society Center, he explains that he comes to the center to play on the computer and to get away from his old friends who are thieves. (Erdoğan, 2007)

In addition to computers and Internet, cellular phones are also a matter of longing for the poor youth. Ayşenur, 18, who lives at Yenidoğan, Ankara describes how 'the rich' pass in front of them slowly to show off their cell phones. (Erdoğan, 2007). As far as youth is concerned, from the above discussion, it can clearly be observed that, IT constitutes a major element in their lives, either as excessively used as in the case of the rich or excessively longed for as in the case of the poor.

However for the old, IT does not seem to carry much significance. In the year 2006, only one article was found in Hürriyet on this issue. Narlidere Nursing Home residents are reported as seniors who chat on the Internet with their children and grandchildren at the Internet café of the nursing home. (Hürriyet, 13 December 2006).

## Gender

According to a research study conducted by MyNet, 68% of the Internet users in Turkey are men. (Hürriyet, 3 March 2006). Even though this statistic hints on a gender wise difference in terms of Internet use, a piece of news that was reported in December 2006 corroborates this diagnostic. The article is about one of the historical *hamams*, (common baths) in Ankara. The manager of the Karacabey Hamamı is reported to say that most of their customers came to a close by car wash, and while waiting for their cars, they chose to get a bath themselves. Upon realizing most had laptops, the bath management launched a wireless Internet connection in the hamam. (Hürriyet, 11 December 2006). As it is not customary for Turkish ladies to go to public baths without preparation like clean underwear, and clothes, this service was introduced for male customers.

In another article Ayşegül Kalem, a clinical psychologist, cites two very similar cases of computer game addiction leading to divorce. In both cases the couples have bachelor's degrees. The husbands are so much into computer games that the minute they step into the apartment they go straight to the computer. In the case of S, she finally resorts to send a short message over the cellular phone to her husband in order to attract his attention. Unfortunately it does not work, and eventually they get divorced. In the case of D., she grows jealous of the computer but cannot divert her husband from it. Their seven year marriage ends with a divorce. (Hürriyet, 19 February 2006).

Aslı Boduroğlu de Munnink is the European, Middle Eastern and African regional director of HP for Internet and Marketing Services. She works from her home-office, managing a staff of 12 people from 7 different countries over the Internet. (Güzelay, 2006). Binnur Akhun who has a master's degree in movie making is not working due to childbirth leave. She has a one year old blog of her own on bread making. (Hürriyet, 17 September 2006). Even though these cases give the idea that some Turkish women have surpassed the world average in terms of Internet use, one article cites a story which is drastically different from the ones mentioned. It is about Fadime Conker who grew up in an environment where it was forbidden to go out for girls, so she could not get any schooling as a kid. However after attending a literacy course as an adult, she continued

her studies and is currently attending the junior year in high school. Her goal is to learn how to use computers and get a driving license. (Hürriyet, 4 November 2006).

The absence of Internet or information technologies in the lives of women apparently is not even an issue in Turkey, as this topic is not covered much by the media.

## Education

All primary and secondary schools in Istanbul have computers, overhead projectors and Internet infrastructure. (Hürriyet, 13 September 2006). For instance Kadıköy Anadolu High School has 3 'technology classrooms' equipped with a notebook, Internet connection and security systems. (Hürriyet, 5 January 2006).

One of the reasons for the provision of hardware to wealthy schools may be the persisting effort of private companies to create market for their products. Intel is reported to set a goal of establishing 350 computer centers by the year 2011. (Hürriyet, 24 June 2006). These are all nice intentions and given the attempt of the Ministry of Education to take Internet to poor schools over the lines of electricity, the picture seems rather rosy. (Hürriyet, 16 June 2006). However, in the presence of power shortages in a number of primary schools in some provinces, such as Adana, talking about Internet connection over lines of electricity presents a contradiction. (Hürriyet, 11 December 2006). In Lalapasa, Edirne, computer laboratories are turned into classrooms to make room in the primary school building for the newly founded vocational school and computers are locked up at a nearby warehouse. (Bayrak, 2006). In Yatağan, Muğla the IT course has been lectured 'theoretically' because computers could not have been set up by the technical personnel. (Yıldırım, 2006).

## Geography

According to the virtual Polo Cup car race statistics, 60 % of the competitors are mainly from the three big cities in Turkey. 37.6 % are from Istanbul, 14 % are from Ankara and 8.8 % are from İzmir. The rest is from all over Turkey. (Yoldaş, 2006). This data indicates a wide gap between the three metropolitan areas and the rest of Turkey. Yet, it is interesting to see a medical doctor who is appointed to Mutki, Bitlis reporting that he had access to Internet at Mutki. (Hürriyet, 8 October 2006). On the other hand, in the Sürügüden village of Muş, the husband of a woman in labor pain is reported to walk for 10 kilometers to call for help as there was no telephone in the village. (Aydın, M., 2006).

## Foreign Language

English as the dominant language of Internet and the IT sector in general is a barrier for most Turkish people. As for the magnitude of those suffering from this problem, Benmayor (2006), reports that out of a total of 50,000 IT people working in the sector, only 13,000 can speak English. Realizing the business opportunity in the need of content in Turkish, some private companies have initiated products to serve this market. Logomotif, one of the leading firms in the educative software market in Turkey, is providing services in Turkish from homework assistance to interactive newspaper and entertaining games. (Hürriyet, 13 September 2006).

## Technological skill

News on techno-savvy people in Turkey can be grouped under two different headings: Hackers and cell-phoners. Aydın Ç. (2006) reports the case of Ali Akgün and his team who have been caught after breaking into 10580 bank accounts. An indicator of the size of cell-phone savvy Turkish people could be the 550 thousand applications to Akbank's new cellular-loan service in a period of only two months. (Hürriyet, 20 February 2006).

After acknowledging the presence of the techno-savvy group in Turkey, the misery of the digitally illiterate ones begs to be pointed out. According to Gürkan Avcı, the president of the Independent Educators Union, school registrations conducted over the Internet are denying access to those parents who do not know how to use the Internet. (Hürriyet, 7 September 2006). While the goal may be the elimination of lines of frustrated parents,

due to digital illiteracy, another group of frustrated parents is generated; those who need to find digitally literate people to help them out.

## CONCLUSION

On the one hand there is Istanbul with all her primary and high schools equipped with computers and infrastructure for Internet, on the other hand, in Sürügüden, Muş, there is not even a single telephone to be used for emergency purposes. In terms of physical resources it seems like there is a large gap, particularly when we compare the east and the west. However, at the very least, there is awareness and there are some initiatives taken to reduce the gap. When we look at the digital resources, we can say with the introduction of homework assistance material in Turkish, children are able to find more material in their native tongue. Yet, given the fact that only 25% of people working in the IT sector can speak English, it would not be wrong to conclude that in terms of digital resources, Turkey still has a long way to go. The case of parents who cannot register their children to school because of IT-illiteracy, and schools that cannot set up computers due to lack of technical knowledge prove that as long as human resources are concerned, Turkey is far from the ideal state. Last but not the least, in terms of social resources, there are some efforts such as the establishment of society centers where poor kids can learn to use computers and access the Internet, but it is rather doubtful that these efforts will be of widespread use particularly because of the absence of a government policy regarding the matter.

In conclusion, this paper confirms the findings of Geray (2000), and Saatçioğlu (2006) that there is a digital divide in Turkey and furthermore underlines the different aspects of the divide as they relate to the digital, human and social areas in life.

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# **ABSORPTIVE CAPACITY AND FIRM OPERATIONAL PERFORMANCE: THE MODERATING ROLE OF STRATEGIC PLANNING FORMALITY**

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## **ABSTRACT**

*The purpose of this study is to evaluate the interrelationship between absorptive capacity and operational performance. The moderating effect of strategic planning formality on the relationship between absorptive capacity and operational performance is also investigated. A 34-item survey questionnaire was developed and 157 manufacturing small and medium enterprises (SMEs) in Malaysia were selected as the samples of this study. Face to face interview was conducted on the owners or managers of the SMEs. The results conclude that: the emphasis of absorptive capacity including knowledge acquisition, knowledge dissemination and knowledge exploitation, is associated with the operational performance. Though, the moderating effect of strategic planning formality on absorptive capacity-operational performance relationship is significant, it does not enhance the relationship.*

## **INTRODUCTION**

A firm's ability to make use of knowledge as a resource strategic has been recognized as a key factor determining firm performance. Zack (1999) has reported that firm such as Buckman Lab, Lincoln Re, Lease Co. and Image Corp have been successful firms because of their implementation of knowledge management activities such as acquiring knowledge from the experts, sharing knowledge from the universities and applying knowledge as part of their strategies. It has been shown that firms' performance will be influenced by knowledge as knowledge provides increasing returns as it is used. The more it is used the more valuable it becomes, creating a self-reinforcing cycle (Zack, 1999).

Knowledge could be the answer to overcome the problems faced by small and medium enterprises (SMEs) throughout the world. SMEs particularly in Malaysia are facing with not only domestic but also global challenges in achieving economies of scale and competing internationally (Saleh & Ndubisi, 2006). They are challenged with problems such as the low level of technological capabilities and limited skilled human capital resources, a low level of technology and ICT penetration, low levels of research and development (R&D), a substantial orientation towards domestic markets, a high level of international competition (for example, from China and India), a high level of bureaucracy in government agencies, and internal sourcing of funds (Saleh & Ndubisi, 2006). Therefore, knowledge could be used as part of strategies in small firms such as SMEs as they tend to have a high mortality rate compared to larger firms (Lau & Lim, 2005).

Knowledge management is the most popular issue in today's business world. In spite of its tremendous importance very few entrepreneurial literatures attempt to investigate the relationship between knowledge process and SMEs performance. In order to fill this gap this paper attempts to empirically investigate the absorptive capacity or knowledge process and its impact on SMEs business performance. This study also will examine the impact of strategic planning formality as moderating factor on the relationship between firms' absorptive capacity and operational performance.

# ABSORPTIVE CAPACITY

It is important not only to large firms to seek capability but manufacturing SMEs in particular need the combination entrepreneurial skill with commercial focus and continued knowledge acquisition and application as key drivers of success (Keogh, Mulvie & Cooper, 2005). They also believed that the SMEs need to pay attention to human capital especially at senior management and employee levels which are extremely important to the growth and development of the SMEs.

Cohen and Levinthal (1990) argued that the distribution of knowledge within the organization and the organization's ability to transfer this knowledge internally are critical to absorptive capacity. They also argued that a firm's stock of prior related knowledge determines the ability of a firm to absorb new knowledge and practices. According to Zahra and George (2002), like any other organizational ability, absorptive capacity should provide a competitive advantage only if barriers to competition prevent its efficient acquisition by competing firms.

Zahra and George (2002) reconceptualized the absorptive capacity as having four dimensions – acquisition, assimilation, transformation, exploitation where the first two dimensions form potential absorptive capacity; the latter two- realized absorptive capacity. They criticized the existing studies for using R&D intensity, number of scientists working in R&D departments, etc as a measure of absorptive capacity because the measures are too simple and do not fully reflect the richness of the construct.

According to Lim and Klobas (2000), km processes are easier to apply in smaller companies because easier to capture tacit knowledge in less formalized environments. There are a few studies (Liao, Welsch, & Stoica, 2003; Wang, Wang & Horng, 2004; Jantunen, 2005) have tested the concept of absorptive capacity as firm capabilities with performance amongst small businesses.

The aim of this paper is to add to the existing literature on absorptive capacity in two important directions: (1) the concept: in terms of the conceptualization and measurement of absorptive capacity, which follow the path of recent contributions (Zahra & George, 2002; Liao et al., 2003; Jantunen, 2005). This paper aims to focus on three dimensions (acquisition, dissemination and exploitation) of absorptive capacity with the assumption that SMEs have simple and less formalized structure; and (2) the development: by introducing strategic planning formality as moderating variable. Thus, it allows us to examine the possible effect of strategic planning process on absorptive capacity-performance relationship that is not often examined in the literature.

# STRATEGIC PLANNING FORMALITY

Sexton and Auken (1982) defined strategy as managerial planning proposed to adjust a small firm to its external environment in a way to achieve sales and profit goals. It is a dynamic process and involves change that does not necessarily translate into expensive programs (Moyer, 1982). Common belief holds that SMEs are simple users of strategic management, likewise they do not make strategy at all (Verreynne, 2004). Sexton and Auken (1982) also described small business planning behavior as unplanned, unpredictable and narrow. On the contrary, Naffziger and Mueller (1999) argued that small firms do plan and have generally indicated that planning has value, depicting that strategic management researchers demonstrate mixed views on strategic planning among SMEs.

The direct impact of strategic planning on performance is well covered within the literature. However, Rogers, Miller and Judge (1999) argued that researchers of planning studies neglected an important moderating variable when examining the direct link between strategic planning processes and performance. Thus, according to them, planning may not be empirically linked to performance without considering the moderating effect of strategy.

There are a few studies (Carpenter, 2002; Matsuno & Mentzer, 2000; Richard, 2000; Youndt, Snell, Dean & Lepak 1996) which have considered the moderating effect of strategy on several different predictor-performance relationships. The abovementioned studies however were more concerned on the strategic content rather than method of planning. According to Lyles, Baird, Orris and Kuratko (1993) formal planning is often associated to the adoption of key steps in the decision process. To date one study carried out by Olson and Bokor (1995) has considered strategic planning formality to be a moderating variable on strategy content-performance relationship. Thus, this study proposes to study strategic planning formality as a moderator which will or will not enhance the relationship between absorptive capacity (knowledge process) with operational performance.

## Interrelationship between absorptive capacity and operational performance

Arora (2002) argued that most research on knowledge management outcomes disregard non-financial performance. A few studies (Carneiro, 2001; Chong and Choi, 2005) claimed that financial indicators alone cannot measure intellectual capital adequately. A study by Prieto and Revilla (2006) supported that learning capability do increase non-financial performance. Therefore, this leads to the first hypothesis:

*H<sub>1</sub> : There is a significant relationship between absorptive capacity and operational performance*

## The moderating effect of strategic planning method

A few empirical studies have investigated the moderating effect of strategy type on the relationship between organizational capabilities and performance. For example, Liao et al., (2003), found that the more proactive the SMEs are, the greater the impact of knowledge acquisition on performance. Hitt, Ireland and Stadter's (1982) study suggested that a firm's grand strategy moderate the relationship of functional areas and company performance. Meanwhile, firm strategy was found to moderate the relationships between both peripheral and core outsourcing intensity and financial and innovation performance in Gilly and Rasheed's (2000) study. Nevertheless, one particular study by Olson and Bokor (1995) revealed that firm's sale growth rate was influenced strategy process (degree of planning formality) and content interaction. Therefore, it is expected that formal planning and absorptive capacity (knowledge process) will have a positive interactive effect on operational performance.

*H<sub>2</sub> : Strategic planning formality moderates the relationship between absorptive capacity and operational performance*

## RESEARCH DESIGN AND METHODOLOGY

### Research Model

This study investigates the interrelationship between absorptive capacity and operational performance. This study also attempts to verify the effects of strategic planning process. Based upon the above literature review, a more detailed research model was developed (Figure 1).

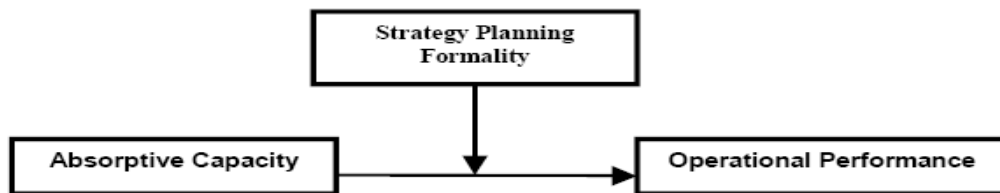


Figure 1: Research Model

### Population

The population of this study includes all manufacturing SMEs in peninsular Malaysia. The population comprises of seven main industries which represent 75 percent of the total establishments of SMEs. About 361 SMEs owners that registered with Small-medium Industry Development Centre (SMIDEC) were contacted. Nevertheless, only 157 respondents agreed to participate within the two month period. Once the owners had been contacted, a personal interview was carried out. All of the questionnaires were usable in the final data analysis.

# QUESTIONNAIRE DEVELOPMENT

The questionnaire was developed using established instruments that are readily available in the literature. As suggested by Sudman and Bradburn (1982), a booklet format questionnaire was used to achieve a good response rate. To determine the potential effectiveness of the research instrument and to ensure that it met the objectives of the study, a pretest and pilot study of the questionnaires was conducted. The pre-test was accomplished by having about 30 SME-owners from the Klang valley to complete and comment on the questionnaire. The questionnaire was revised based on the pre-test. Ambiguous questions were deleted or reworded for clarity. The refined questionnaire was then been prepared in three languages, namely Malay, English and Mandarin.

## Variable measurement model

Absorptive capacity which comprises of three dimensions; knowledge acquisition, knowledge dissemination and knowledge exploitation were measured with five, eight and seven items respectively. The instruments were developed based on Gold, Malhotra & Segars (2001), Akgun, Lynn & Reilly (2002) and Jantunen (2005) work. Operational performance was measured using multidimensional measurements adapted from Porth, Kathuria, & Joshi (1998). There are four dimensions of operational performance which consists of cost (3 items), flexibility (5 items), quality (3 items) and delivery (3 items). Strategic planning formality process was measured with a three-item instrument adapted from Robinson & Pearce (1983).

## RESULTS

### Characteristics of sample firms

The data were gathered over a 2 month period from January – February 2008. A total of 157 SMEs participated in this study. The respondents are as follows; Textiles , apparels and leather (19.6%), Food beverage & tobacco (22.2%), Metal products (15.8%), Publishing, printing and reproducing of recorded media (14.6%), Furniture (8.9%), Rubber & Plastic product (9.5%) and Wood & Wood products (8.2%). Moreover, over 50% of the respondent firms had been operating less than 15 years. More than 50 percent of the respondent firms have formal strategic planning. Almost 50 percent of the owners have a Bachelor degree and above. Finally, more than two thirds of the sampled firms claimed of having systematic way of processing knowledge; acquiring, disseminating and exploiting.

### Hypotheses Testing

**Table 1 : Pearson correlations among absorptive capacity, operational performance, strategic planning formality, strategic decision making process**

|                                   | Absorptive capacity | Strategic planning formality | Strategic decision making process | Operational performance |
|-----------------------------------|---------------------|------------------------------|-----------------------------------|-------------------------|
| Absorptive capacity               | 1.00                |                              |                                   |                         |
| Strategic planning formality      | .320**              | 1.00                         |                                   |                         |
| Strategic decision making process | .437**              | .294**                       | 1.00                              |                         |
| Operational performance           | .281**              | .255**                       | .499**                            | 1.00                    |

**\*\* Correlation is significant at the 0.01 level (2-tailed)**

Table 2 presents the Pearson correlations matrix for absorptive capacity, strategic planning formality, strategic decision making process and operational performance. The results of the correlation analysis indicate that absorptive capacity and both method of strategic planning have significant correlations with operational performance. Therefore, H<sub>1</sub> is supported.

### *The moderating effect of strategic planning formality (H<sub>2</sub>)*

Aiken and West (1991) suggested before the hierarchical regression analysis which testing the moderating effect could be carried out, the strategic planning formality (SPF), and absorptive capacity (ACAP) constructs' measure were mean-centered as to avoid the possibility of multicollinearity. Using variance inflation factor (VIF) to examine multicollinearity levels, this study found the result (VIF < 10) to be below a harmful level (Neter, Kutner, Nachtsheim & Wasserman, 1996). The moderating impact of strategic planning formality (SPF) on the relationship between absorptive capacity (ACAP) and operational performance (OP) was illustrated in Table 3.

**Table 3: Hierarchical Regreression Analysis**

|                                    | DV: Operational Performance (OP) |         |         |
|------------------------------------|----------------------------------|---------|---------|
|                                    | Model 1                          | Model 2 | Model 3 |
| <b>Main effects</b>                |                                  |         |         |
| Absorptive capacity (ACAP)         | .339**                           | .268**  | .267**  |
| Strategic planning formality (SPF) |                                  | .400**  | .257    |
| <b>Interaction</b>                 |                                  |         |         |
| ACAP x SPF                         |                                  |         | -.620** |
| <b>R<sup>2</sup></b>               | .079                             | .110    | .159    |
| <b>R<sup>2</sup> adj</b>           | .073                             | .098    | .143    |
| <b>Δ R<sup>2</sup></b>             | .079                             | .030    | .050    |
| <b>F</b>                           | 13.299                           | 5.273   | 9.083   |

**\*\* p-value < 0.00**

These findings were consistent with what Cohen and Cohen (1983) suggested, that the interaction effects produce a significant increment in R<sup>2</sup> (R<sup>2</sup><sub>1</sub> = .079, R<sup>2</sup><sub>2</sub> = .110, R<sup>2</sup><sub>3</sub> = .159). Based upon the result of hierarchical regression analysis above, H<sub>2</sub> was rejected. In other words, there is a significant association between operational performance and the two-way interaction involving absorptive capacity and strategic planning formality, but it does not enhance operational performance. This is because the results show that the coefficient (β = -.620, p = .003) is significantly negative

## **DISCUSSION**

This study found that the absorptive capacity had a positive effect on operational performance. This result provided evidence to support the hypothesis that better absorptive capacity or knowledge process enhances business performance which supports the study done by Pietro and Revilla (2006). Also, this study revealed that strategic planning process in term of degree of formality has a negative significant effect on the relationship between absorptive capacity and operational performance. This implies that the more formal the strategic planning is the weaker the impact on operational performance. Nevertheless, the result contradicts with the result found in Olson and Bokor's (1995) study whereby the interaction between strategic planning formality and content in terms of degree of innovation enhances the strategic content-non financial performance relationship.

## **CONCLUSION**

Absorptive capacity plays a crucial role in determining the success of organizational performance. This finding is consistent with studies done abroad. However, it has also proven that the relationship between absorptive capacity and operational performance amongst the Malaysian manufacturing SMEs is contingent upon informal strategic planning. This could be true for the Malaysian manufacturing SMEs which function better in less formalized surroundings.

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# **A COMPARISON OF IRISH AND INDIAN GROWTH AND THE ROLE OF USA VIA FDI AND OUTSOURCING**

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## **ABSTRACT**

*This paper aims to investigate and compare the growth patterns of Irish and Indian economy since these both countries have experienced similar growth trends at the beginning of 1990s - 2000. In this study, rather than to include both aspects of economic growth, the factors that are specific to Ireland's economic growth will be distinguished and discussed. Same structure will be applied to the case of India in order to exhibit the similarities and differences of these two different economies. This investigation shows that the role of USA on both countries contributes much to their growth performances.*

## **INTRODUCTION**

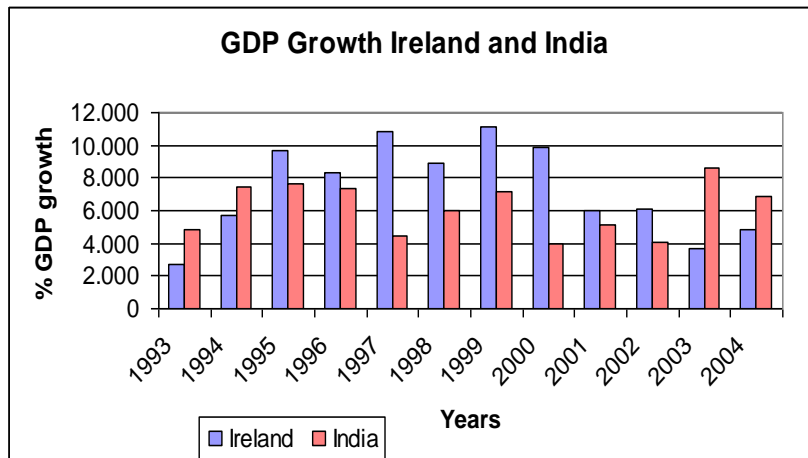
Economic growth has many aspects and it depends on many factors. Among them, the utilization of resources, the rate of population growth, the saving rate, the capital accumulation and technological progress have the most significant effects. We can also include other factors such as education, demographic change, expenditure on health, income distribution and the role of geography. Additional to those, there may be other unique factors that affect a country's development and growth.

In this study, first of all, I will present the growth performances of Ireland and India to exhibit the similarities in the same period. Then, I aim to compare the growth paths of European Union (EU) countries to distinguish the place of Ireland among them. The place of Ireland is deemed important because this experience may be a good reference for both EU member countries and the EU candidate countries such as Turkey. In the fourth section, I investigated the pattern of Irish growth. In this section, after having a brief look to the history of Ireland Economy, the role of foreign direct investment and trade, the role of education and technology will be discussed. Fifth section is structured like the fourth section for Indian economy in order to be able to compare these two countries. Sixth section displays the role of USA on Irish and Indian growth. Finally, last section concludes the paper.

## **COMPARISON OF IRISH AND INDIAN ECONOMIC PERFORMANCES**

GDP growth performances of both India and Ireland are impressive on the 1990s. Similar trend also can be observed in GDP per capita terms. However, Ireland's growth performance is superior especially in 1997 and 1999. We can observe this pattern in figure 1 which is constructed for 1993 – 2004.

**Figure 1: GDP Growth, Ireland and India, 1993 - 2004**



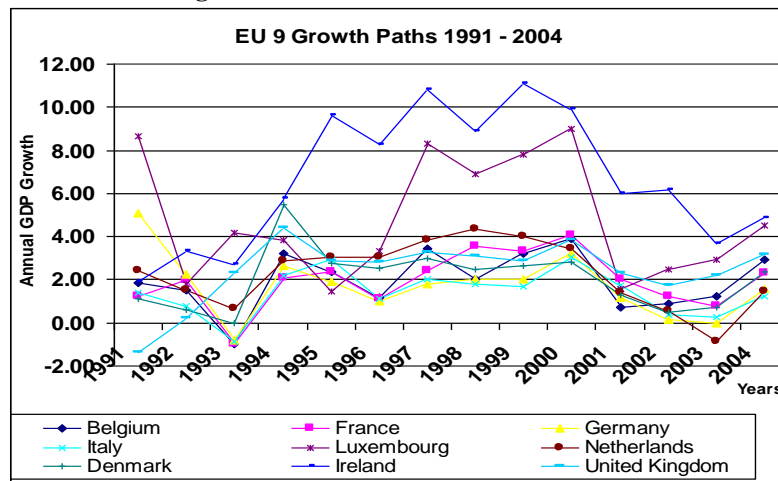
Source: World Development Indicators, 2006

## GROWTH PATHS OF EU COUNTRIES AND THE SUCCESS OF IRELAND

The purpose of this section is to compare the growth performance of the 9 EU countries to distinguish the place of Ireland among them. International comparison of growth performance is an intractable task since every country may have different size and unique properties such as geographic location or having natural resources. Being aware of these difficulties, the basic indicator to compare the countries will be the growth rate of gross domestic product (GDP) and the growth rate of GDP per capita.

According to the following figure, all the countries except Ireland and Luxembourg have nearly the same growth paths, however Luxembourg had experienced more fluctuations. For the years between 1994 and 2002, Ireland had experienced a relatively stable growth performance and moreover the growth rates are nearly 4 to 5 percent higher than the average growth rates of other EU countries. In that period, the lowest growth performance is attained by the United Kingdom which is -1,36. We can also observe the similar growth paths of all countries except Luxembourg and Ireland for this period.

**Figure 2: EU 9 Growth Paths 1991 - 2003**



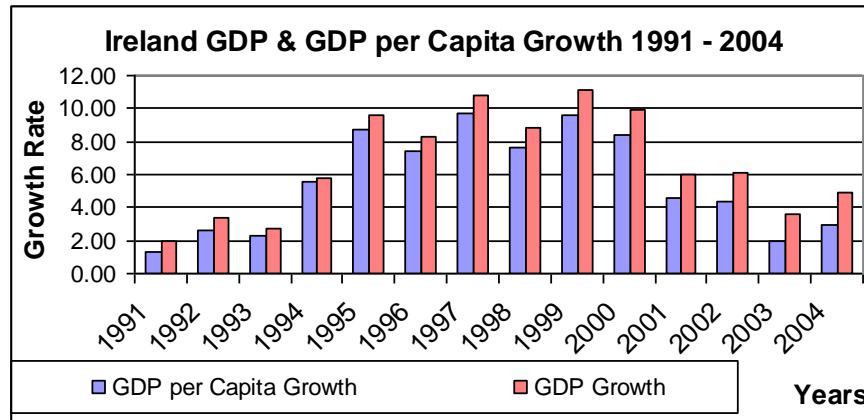
Source: World Development Indicators, 2006

## PATTERN OF IRISH GROWTH

In this section, the growth performance of Ireland will be analyzed in details for the period of 1991 and 2004. After having a brief look to the economic history of Ireland, the main determinants of the growth performance will be explained in subtitles.

In the following figure, it is very clear that Ireland experienced an expansion in the GDP levels beginning from 1994 up to the end of 2000. In fact, the growth rates for 2000 to 2004 are also higher than the average growth rate of EU countries in this period.

**Figure 3: Ireland Growth Paths 1991 - 2004**



Source: World Development Indicators, 2006

### A brief look to the History of Ireland Economy

Ireland's economic performance, after its independence in 1922, had been one of the worst one compared to the most of the European countries. This conclusion can be inferred from the following quotation.

*'It is difficult to avoid the conclusion that Irish economic performance has been the least impressive in Western Europe, perhaps in all Europe, in the twentieth century.'*

One of the most important problems of the Ireland Economy was the declining population and the main reason of the declining population was the emigration from the country because of the great famine and unemployment. After 1950s, while most of the Western European economies recovered from the damage of war and began to grow faster, Ireland economy could not experienced such a trend. Additional to the low employment levels, low labor participation of women was also contributed this stagnation period. After 1960s, the stabilization of the population was attained as a result of the increasing living standards. However, the living standards in the 1960s were still lower than it is in most of the European countries. In 1973 and the early 1980s, two oil shocks had a negative impact on the Irish economy. In 1973, Ireland joined into European Economic Community (EEC). This leads to improvements in the trade performance of Ireland as a result of the implication of the free trade regime. The most significant benefits did occur in the agriculture sector. The implication of the membership to EEC also affected the policy makers in the areas of trade and agriculture sector. In the agriculture sector, Ireland benefited from the transfers as a result of the Common Agriculture Policy (CAP) of the community. According to Matthews (1994), Ireland became a net exporter of farm goods which is about 2 to 6 percent of its GDP. After its membership to EEC, Ireland joined to the Customs Union (CU) with common external barriers and by 1977 it had no internal trading barriers. Under the new free trade regime, Ireland's exports grew rapidly from 38 percent of its GDP in 1973 to 60 percent by 1991. Ireland Joined the European Monetary System (EMU), in 1979. However, it affected negatively from the devaluation of Deutsche Mark, especially on 1983.

## The Role of Foreign Direct Investment and Trade

Beginning from the early 1930s and up to the 1950s, high tariff barriers was an important problem of the Irish economy and as a result of this, foreign ownership of firms was insufficient. Additionally, the 'Control of Manufacturers Act' had also prohibited foreign ownership. In the early 1950s, the government abolished this policy and replaced it with a policy that promotes foreign direct investment (FDI). Another event to promote FDI is the 'zero corporate profit tax' on manufacturing goods that are exported. With the help of these improvements, Ireland had export-oriented FDI in the manufacturing sector. According to the Barry and Bradley (1997), when the ownership of the plants in the manufacturing sectors are considered, it is clear that only 15 % of the local plants are foreign owned. However, they produce 60 % of gross output and engage almost 45 % of manufacturing employment. About 40 % of the foreign plants are US-owned, 16 % are owned by United Kingdom and 15 % are owned by German. According to the statistics, Irish owned plants export on average 35 % of its output, while foreign owned plants export almost 86 % of their output. This percent is 96 % for US owned plants.

Ireland also differs when we consider other leading countries of Europe in attracting foreign direct investment from US in the manufacturing sector. Following table shows US Direct Investment per manufacturing worker in US \$. According to this table, Ireland attracts the significantly higher direct Investment per manufacturing worker for the years 1983, 1992 and 1996.

**Table 1:** US Direct Investment per manufacturing worker in US \$

|                | 1983   | 1992   | 1996   |
|----------------|--------|--------|--------|
| <b>Ireland</b> | 14,417 | 19,846 | 29,948 |
| <b>UK</b>      | 2,306  | 3,763  | 6,423  |
| <b>France</b>  | 823    | 3,137  | 4,042  |
| <b>Germany</b> | 1,195  | 1,939  | 2,381  |
| <b>Spain</b>   | 619    | 2,040  | 3,042  |
| <b>EU 15</b>   | 1,273  | 2,627  | 4,189  |

Source: US Department of Commerce, Survey of Current Business:  
OECD Labor Force Statistics

## The role of Education and Technology

Walsh and Whelan (1976), using 1972 data estimated human capital earnings function for Ireland and found that returns to education is about 3 % per year. This return is lower than the average of international estimates. However, Reilly (1987), estimated the Mincerian type earnings function on a sample of young workers aged 15 – 24. This study considers some dummy variables for education and found a higher return than the study of Walsh and Whelan (1976). Sexton et. al. (1988) also found higher returns to education for Ireland. Although, the estimations in these papers do not include the same variables, it is clear that there is a substantial increase in the rate of return to education for Ireland after 1980s.

## PATTERN OF INDIAN GROWTH

As explained in the second part, Indian economic growth has a more volatile path compared to Ireland. Following sections attempt to clarify the pattern of Indian growth in a parallel way with the Irish case.

### A brief look to the History of Indian Economy

After the independence of India in 1947, the growth rate was around 3,5 percent and the per capita growth rate was 1,9 percent during the period 1950 to 1970. Sachs (2005), suggested that India's first economic breakthrough came in the late 1960s and early 1970s with the introduction of the Green Revolution into the country. He emphasized the importance of this event as the following;

*“... The resulting rise in food yields freed India from the chokehold of famine. After the Green Revolution, India was able to feed itself even in years when the monsoons failed. The seemingly endless saga of India’s fighting mass starvation came to an abrupt end, well before its market reforms triggered a sustained acceleration in economic growth”*

After this improvement, it will be useful to clarify the main pattern of the Indian growth especially after 1980s since India’s growth has accelerated over the past two decades. Bosworth et al. (2006) constructed a growth accounting model in which they began by looking at growth performance over the relatively long periods 1960 – 1980 versus 1980 – 2004. Their results indicate that the performance of Indian economy changed significantly around 1980. The statistics shows that GDP growth increases from an average of 3,4 % per year during 1960-80 to 5,8 % during 1980 – 2005. Their results suggest that this acceleration mainly concentrated in improvements in the efficiency of factor use. This improvement of total factor productivity depends on the policy regime that is implied around the beginning of 1980. These policy regimes include an ongoing process of liberalization and openness of the economy. However, they noted that, contrasting to the other East Asian Economies, the rate of job growth was modest in the India as a result of the modest rate of growth of both physical and human capital per worker. Beginning from 1993 – 1994, contribution of capital per worker began to increase on average 2,4 percent per annum which is a similar rate for the other East Asian countries.

## **The Role of Foreign Direct Investment and Trade**

Increasing trade volume is another factor that contributes to the Indian growth. We observe an increase in the openness ratio for the India. It was 9,8 % in 1970s and increased to 19,3 % in 1990s. USA is India's largest trading partner and premier export destination. From table 2, we can observe a positive and increasing trade balance as a result of the increasing trend in the exports to USA.

**Table 2:** India - US trade (in US \$ millions)

|                        | 1993  | 1994  | 1995  | 1996  | 1997  | 1998  | 1999  | 2000   |
|------------------------|-------|-------|-------|-------|-------|-------|-------|--------|
| <b>India’s Exports</b> | 4,551 | 5,302 | 5,736 | 6,169 | 7,322 | 8,237 | 9,071 | 10,686 |
| <b>India’s Imports</b> | 2,761 | 2,296 | 3,296 | 3,318 | 3,608 | 3,564 | 3,688 | 3,663  |
| <b>Balance (+)</b>     | 1,790 | 3,005 | 2,440 | 2,851 | 3,715 | 4,673 | 5,383 | 7,023  |

Source: web site of Embassy of India

## **The role of Education and Technology**

Both the education and the usage of technology are other common factors that promoted both Indian and Irish economy in the same period. Like in the Ireland’s case, these two factors are interrelated in promoting growth. Singh (2002), summarized this interrelation as follows:

*“Whether growth comes in revenue per employee or number of workers, there are implications for training. Increasing revenue per IT professional requires improvements in managerial and marketing skills, as well as the production of more highly trained IT people. Training more people in IT requires investments to increase the capacity of this component of the higher education sector.”*

There are basic improvements in the education sector of India to meet the skilled- labor need in the country. However, the investments on education need to be continuous. Kochhar (2006), suggests that India needs to improve higher education and remove the barriers to starting new institutions to create a pool of skilled workers who will be essential to enhance the growth.

## **THE ROLE OF USA ON IRISH AND INDIAN GROWTH**

In the table 3, foreign direct investment net inflows and outflows as percentages of GDP are available both for Ireland and India for the years between 1993 - 2004. The data suggests that especially net inflows to Ireland is very significant compared to India. In year 2000, net inflows to Ireland accounts about 28,7 percent of its GDP. One reason of this result may be the lower tax rates that are imposed in Ireland. Hence, different from India, Ireland attracts foreign firms (especially US firms as mentioned before) just because of this lower cooperation tax rates. This conclusion is supported for the case of India by Cravino et al. (2007);

*“In spite of the growing concerns about foreign direct investment being diverted from Latin America to China and India, the best available data show that Latin America has performed relatively well since 1997.”*

As a result, for the India outsourcing is more common than the FDI into this country especially in the relations of USA. According to Sachs (2005), from the point of view of economic reforms, India was internationally competitive and an export boom initially in services such as software engineering, data transcription services, computer graphics, back-office processing and other IT based activities was important factors that generate rapid economic growth. Sachs (2005), also mentioned that IT revolution meant that exports of information by the way of satellite linkups in mid 1990s.

**Table 3: FDI inflow and outflow (% of GDP), Ireland and India, 1993 - 2004**

|             | FDI net inflows | FDI net inflows | FDI, net outflows | FDI, net outflows |
|-------------|-----------------|-----------------|-------------------|-------------------|
|             | Ireland         | India           | Ireland           | India             |
| <b>1993</b> | 2.230           | 0.201           | 0.437             | 0.000             |
| <b>1994</b> | 1.531           | 0.302           | 0.799             | 0.026             |
| <b>1995</b> | 2.181           | 0.604           | 1.236             | 0.033             |
| <b>1996</b> | 3.588           | 0.629           | 0.996             | 0.062             |
| <b>1997</b> | 3.430           | 0.873           | 1.261             | 0.028             |
| <b>1998</b> | 12.683          | 0.637           | 5.695             | 0.012             |
| <b>1999</b> | 19.225          | 0.485           | 6.402             | 0.018             |
| <b>2000</b> | 26.856          | 0.784           | 4.887             | 0.111             |
| <b>2001</b> | 9.267           | 1.149           | 3.972             | 0.293             |
| <b>2002</b> | 24.472          | 1.106           | 9.186             | 0.330             |
| <b>2003</b> | 14.731          | 0.763           | 3.677             | 0.221             |
| <b>2004</b> | 6.079           | 0.772           | 8.708             | n/a               |

Source: World Development Indicators, 2006

We can infer that the IT sector is a common factor that generates growth both for India and Ireland. In order to compare this sector in terms of innovation, table 8 presents the patent applications for both countries. Patent applications are applications filed with a national patent office for exclusive rights for an invention, a product or process that provides a new way of doing something or offers a new technical solution to a problem. When we compare these two countries, despite the size and population advantage of India, we can observe that patent applications in Ireland are significantly greater than that of India. This difference is more obvious by the end of 1990s. We must also note that this difference is much more valid by the applications of non-residents.

According to the discussions in the previous sections, we can infer that for the Ireland the role of USA is more common in the form of FDI. On the other hand, USA contributes to the growth of India by outsourcing from this country in the IT sector. This conclusion is also supported by the patent application numbers for these countries since more patent application can be deemed as improvements in the technology in that country. In table 4, patent applications for both countries are available.

**Table 4: Patent Applications, Ireland and India, 1996 - 2002**

|  | Patent applications | Patent applications | Patent applications | Patent applications |
|--|---------------------|---------------------|---------------------|---------------------|
|  | nonresidents        | nonresidents        | residents           | residents           |
|  | India               | Ireland             | India               | Ireland             |

|             |       |        |       |      |
|-------------|-------|--------|-------|------|
| <b>1996</b> | 6632  | 52407  | 1660  | 925  |
| <b>1997</b> | n/a   | 82484  | 10155 | 946  |
| <b>1998</b> | 7997  | 111145 | 2111  | 1199 |
| <b>1999</b> | 38348 | 119569 | 14    | 1226 |
| <b>2000</b> | 60852 | 140241 | 90    | 278  |
| <b>2001</b> | 78288 | 155155 | 234   | 1334 |
| <b>2002</b> | 91704 | 162170 | 220   | 1255 |

Source: World Development Indicators, 2006

## CONCLUSION

In this paper we investigated and compared the growth patterns of Irish and Indian economy since these both countries have experienced similar growth trends at the beginning of 1990s - 2000. After exhibiting the Irish and Indian GDP growth pattern on these years, we concentrated on the growth performances of EU countries to distinguish the case of Ireland. We define the factors that are specific to Ireland's economic growth. Same structure is applied to the case of India in order to exhibit the similarities and differences of these two different economies.

Our investigation showed that the role of USA on both countries contributes much to the growth performances of these two countries. However, the role of USA differs. USA affects Ireland economy by foreign direct investment into this country. On the other hand, USA affects the Indian economy by outsourcing from this country especially in the information technology sector.

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# **CUSTOMER VALUE STARTS FROM WITHIN: DETERMINANTS OF INTERNAL CUSTOMER SERVICE QUALITY**

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## **ABSTRACT**

*Whilst service quality and its antecedents have been widely researched through literature and addressed in scholarly academic platforms; research on internal service quality and the relationship within internal customer satisfaction has not been given the same amount of prominence. An issue raised in literature, is an apparent lack of a conceptual framework that illustrates the understanding of the mechanics of service quality inside an organisation. This paper has sought to contribute further to the knowledge concerning internal service quality by developing an instrument to measure internal service quality within a particular functional unit based on the perceptions of those they serve in an organization. The internal service quality dimensions comprise five dimensions namely, credibility, accessibility/tangibility, preparedness, reliability and competence. The dimensions accessibility and tangibility, reliability and competence exerted the strongest influence on satisfaction.*

## **INTRODUCTION**

Survival in competitive markets much depends on the quality of services provided by internal employees through outstanding customer support to other service units within an organization (Gilbert, 2000). Effective internal supplier-to-internal customer service becomes a pre-requisite to the level of service quality eventually offered to external customers. Internal marketing literature suggests that the way to satisfied customers, is through satisfied employees and that the ability to meet customer requirements is vital, not only between two separate organisations, but also within the same organization (Heskett, Jones, Loveman, Sasser & Schlesinger, 1984). Perhaps the best way to ensure that external customers are satisfied is to establish the idea that every part of the organization contributes to internal customer service quality through its various micro operations that form an interconnecting network of physical and information flows within the macro operation (Pycraft, Singh, Phihlela, Slack, Chambers, Hartland, Harrison & Johnston, 2005). Hence, an internal service chain is developed before the product or service reaches the external customer (Paraskevas, 2001). High level of quality built into the internal service chain will consequently result in high level of quality products and services offered to the external customer.

The purpose of the study was to develop and empirically test an instrument that can be used to measure internal service quality. Within a company, administrators play a pivotal role in ensuring effective service delivery. Hence the current study examines the relationship between administrative staff (internal suppliers of service) with the Research and Development (R&D) employees (internal customers) within a petro-chemical company.

## **INTERNAL MARKETING AND INTERNAL CUSTOMER SERVICE**

The notion of internal customer services must be clearly distinguished from internal marketing (Berry, 1981; Grönroos, 1984). Internal customer service is about how employees from one department serve employees

in another department; while internal marketing is how the organization (mainly through its human resources department) serves its employees (Paraskevas, 2001). Internal customer service is defined as services provided by distinct organisational units or people working in these departments to other units or employees within the organization (Strauss, 1995). Nagel and Cilliers (1990) defined the internal customer as any member of an organization receiving products or services by other members in the organization. Hence, departments must consider themselves as members of a customer chain (Chaston, 1994) within an organization.

Berry (1981) was among the first authors who introduced the concept of internal marketing. The author appropriately encapsulates the internal marketing by viewing employees as internal customers, viewing jobs as internal products that satisfy the needs and wants of these internal customers while addressing the needs of external customers. George and Grönroos (1989) explain that internal marketing takes place when employees display a service-minded and customer-oriented behaviour by an active, marketing-like approach and when marketing-like activities are used internally.

Earlier, Shostack (1987) proposed that internal service levels could be improved through the use of service blueprinting. Service blueprinting entails illustrating the exchange and transactions in flow charts that create value between departments (Voss, Calantone & Keller, 2005) that are not customer visible (Lings, 1999). Departments receive services and goods from other departments within an organization. In this manner, certain departments serve as internal suppliers of goods and services to other departments who act as internal customers. To achieve the highest possible value delivered to the external customer, each department inside an organization must deliver the highest possible value (in the form of outputs) to internal customers (Conduit & Mavondo, 2001). The service delivered internally eventually culminates in the service level delivered to the external customer (Vandermerwe & Gilbert, 2001; Voss et al., 2005; Kang, James & Alexandris, 2002). Thus, the service production process is seen as a network of systems built up by interrelations and interdependence between various sub-processes (George, 1990).

Like external customers, employees engage in numerous service encounters to satisfy the needs they have in the course of carrying out their job responsibilities (Kang et al., 2002). These internal encounters include relationships between customer-contact staff and back-room staff, managers and the customer-contact staff, managers and the back-room staff and for large organizations, between head office and each branch (Lewis & Entwistle, 1990). Hence, the basic premise of internal customer service posits that every department in an organization exists to serve someone, whether it is the external customer or another department (Farmer, Luthans & Sommer, 2001). An organization therefore consists of an independent chain of individuals and functional units, each taking inputs from one another and turning them out into external customer service. Thus if the tasks of the front-line employees and departments are not performed efficiently and effectively, the results can be detrimental to service levels provided to customers, supply chain performance and to the financial-wellbeing of the organization (Voss et al., 2005). George (1990) further reiterates that if poor internal service exists the final service to the customer will be damaged.

## **SERVICE QUALITY**

Service quality on the other hand forms an integral part of service marketing. Service quality is about performing the service dependably and accurately. When a company performs a service carelessly, when it makes avoidable mistakes, when it fails to deliver on alluring promises made to attract customers, it shakes the customer's confidence and undermines its chances of earning a reputation for service excellence (Dhurup, Singh & Surujlal, 2006). From the customer's perspective, the proof of a service is its flawless performance (Berry & Parasuraman, 1991).

SERVQUAL, developed by Parasuraman, Zeithaml and Berry (1985, 1988) is an established framework for the measurement of external service quality. This framework which was widely used across a range of services (Galloway, 1998) was chosen as a framework for this study. These external service quality dimensions have been previously used in the measurement of internal customer service quality (Chasten, 1994, Nagel and Cilliers, 1990, Reynoso and Moores, 1995 and Varey, 1995). The justification for the use of an external model is that the interaction between the company and the external customer is simply one link in a large network of relationships; many of which occur inside an organization (Auty & Long, 1999). The implication is that the principles and techniques for the creation and measurement of external service quality can be transferred to the internal environment.

Whilst the original SERVQUAL instrument has been revised, refined and reformulated (Parasuraman, Zeithaml & Berry, 1991, 1994) its primary content remains unaltered. Zeithaml, et al. (1990) claim, that SERVQUAL, with appropriate adoption, can be used by departments and divisions within a company to ascertain the quality of service they provide to employees in other departments and divisions. Debates surrounding the validity and reliability of the SERVQUAL methodology have been lively for many years. However, relevance relating to the number of dimensions, perceptions and expectations score and questions designed to establish an overall quality perception are still debated (Galloway, 2000).

Unfortunately, of the prevalence of articles which are important in respect of identifying internal service quality dimensions, only a few could be considered as being methodologically useful from a reliability and validity perspective (Kang et al., 2002). Chaston (1994) for example, measured potential gaps in internal service quality by using a modified version of the SERVQUAL instrument. Young and Varble (1997) assessed internal service quality within a purchasing context by applying the original SERVQUAL measures. Edvardsson, Larsson & Setterlind (1997) used the SERVQUAL instrument to explore the relationship between the psychosocial work environment and internal service quality. In fact, Edvardsson et al. (1997:256) noted, that "...our way of measuring internal service quality is inspired by the SERVQUAL instrument", implying that the SERVQUAL instrument guided the development of the measures used. Lings and Brooks (1998) and Frost and Kumar (2000) also propose that the SERVQUAL instrument may be an appropriate tool to measure the quality of service delivered by internal suppliers to their customers. However, the findings of Frost and Kumar (2000) did not concur with the findings of Parasuraman et al. (1985), whose research found reliability as a dimension to have the most significant influence of all the SERVQUAL dimensions on the overall perception of service quality. In summary, the authors were of the view that substantial changes have to be made to the wording of the items to capture internal service quality construct.

## **RESEARCH DESIGN**

### **The Sample Framework and the Measuring Instrument**

The population comprised Technology R&D employees from different departments of a petro-chemical company. A database comprised a total of 519 employees in the Technology R&D departments. The survey method was used to collect data. A sample of 200 was deemed to be adequate to develop and refine the instrument (Finn, Baker, Marshall & Anderson, 1996; Frost & Kumar, 2000; Kang et al., 2002). Respondents were randomly selected and a total of 229 questionnaires were used for analysis. The SERVQUAL items were modified to measure the employees' perceptions of internal service quality. Where necessary, items were reworded to capture internal rather than external service quality. Pre-testing for the study was done with 10 different employees, including the Heads of R&D and Administrative departments, so as to ensure that the wording and the questions were appropriate and related to the study. Changes were made to a draft questionnaire with regard to re-phrasing, sequence, and appropriateness of the internal service quality attributes. The variables on the questionnaire were transformed to into a 6-point Likert scale where "completely fails to meet my expectation" = 1 and "exceeds my expectation" = 6, were used.

## **STATISTICAL ANALYSIS AND DISCUSSION OF RESULTS**

### **Factor Extraction**

The principal components factoring procedure was used and the analysis was constrained *a priori* to five factors in keeping with the number of factors extracted in the SERVQUAL model. Varimax rotation (using Kaiser normalisation) was applied in order to obtain a factor structure. Varimax rotation was also used in order to minimize the number of variables with high loading on a factor, thereby enhancing the interpretability of factors (Malhotra & Birks, 2003). Variable loading of 0.40 and above were retained (Churchill & Iacobucci, 2002). Item reduction and scale purification was then undertaken whereby items with low factor loadings, communalities and low-item-to-total correlations were investigated (Chandon, Leo & Philippe, 1997; Aldlaigan & Buttle, 2002). The iterative process was re-run several times until a clear factor structure emerged. The final

factor structure, eigenvalues, the coefficient alpha values is reported in Table 1. The eigenvalues in respect of the five dimensions ranged from 7.73 to 1.00. Together, these factors accounted for 63% of the variance which according to Malhotra (2004) is satisfactory.

**Table 1: Rotated Factor Loading Matrix**

| ITEM                                     | F1       | F2       | F3       | F4       | F5       |
|--|----------|----------|----------|----------|----------|
| Perform services effectively             | 0.603567 |          |          |          |          |
| Provides feedback to my requests         | 0.722603 |          |          |          |          |
| Consults with me in decision-making      | 0.560962 |          |          |          |          |
| Display honesty                          | 0.658718 |          |          |          |          |
| Accepts fellow colleagues decisions      | 0.667964 |          |          |          |          |
| Courtesy displayed                       | 0.588405 |          |          |          |          |
| Willingness to cooperate                 |          | 0.538225 |          |          |          |
| Provides services consistently           |          | 0.770799 |          |          |          |
| Accessibility of the unit                |          | 0.723117 |          |          |          |
| Appearance of materials and products     |          | 0.619542 |          |          |          |
| Provides advice and guidance             |          |          | 0.677319 |          |          |
| Demonstrates flexibility                 |          |          | 0.727781 |          |          |
| Knowledge and skills to perform services |          |          | 0.647802 |          |          |
| Understands my specific needs            |          |          | 0.491850 |          |          |
| Perform services, right the first time   |          |          |          | 0.783393 |          |
| Provides services at required time       |          |          |          | 0.773750 |          |
| Provide accurate information             |          |          |          | 0.627442 |          |
| Provide information as promised          |          |          |          |          | 0.495402 |
| Handling of confidential information     |          |          |          |          | 0.638318 |
| Understands our problems and constraints |          |          |          |          | 0.788807 |
| Eigenvalue                               | 7.93     | 1.31     | 1.21     | 1.11     | 1.00     |
| % of variance explained                  | 39.66    | 6.59     | 6.07     | 5.57     | 5.03     |
| Cumulative %                             | 39.66    | 46.25    | 52.33    | 57.91    | 62.94    |
| Reliability (Cronbach alpha)             | 0.83     | 0.76     | 0.78     | 0.79     | 0.66     |
| Standardized Cronbach alpha = 0.92       |          |          |          |          |          |

## Factor Interpretation

Factor one, labeled credibility comprised six variables and accounted for 39.66% of the variance. This factor relates, *inter-alia* the credible aspects of efficiency, honesty, feedback and courtesy afforded by the administrative staff to the personnel from the R&D department. Given the intangible nature of services and the inseparability of production and consumption of services, it is difficult for customers to undertake prior evaluation of a service. Thus the trustworthiness and authenticity of the internal supplier of service becomes a crucial determinant in internal service quality evaluation (Malhotra, Ulagado, Agarwal & Baalbaki, 1994).

The second factor, labeled accessibility and tangibility, comprised four variables and accounted for 6.59% of the variance. This factor incorporates issues relating to cooperation, consistency of services, accessibility and the physical appearance of the materials and products provided by the administrative personnel. Since production and consumption of a service is inseparable, a customer's ease of contact with and timely access to the service supplier becomes crucial.

The third factor, preparedness comprised four variables and accounted for 6.07 % of the variance. This factor emphasized that aspects such as guidance, flexibility, demonstrative skills, and understanding internal customers specific needs are high on the agenda in service quality evaluation. The premise of knowing and understanding customer needs serve as the underlying basis behind relationship marketing (Malhotra, et al., 1994).

The fourth factor labeled reliability comprised three variables and accounted for 5.50 % of the variance. The emphasis of this factor is on performing services right the first time, with timely and accurate provision of services and information. This was the only factor that incorporated most of the variables of the reliability dimension in the SERVQUAL scale.

The fifth factor labeled competence comprised three variables and accounted for 5.03 % of the variance. The emphasis on this dimension is on the provision and handling of information and understanding internal customer problems and complaints. This dimension varies significantly from SERVQUAL scale but similar to Lings and Brooks (1998) internal service quality competence dimension.

## Comparison with the SERVQUAL scale

Other studies on internal service quality also reported on dimensions that varied and were not totally in congruence with the SERVQUAL scale (Brooks, Lings, Martina & Botschen, 1999). Whereas the Parasuraman et al. (1988) SERVQUAL model is in part encapsulated in this scale, the types of dimensions lends support to the findings of Carman (1990), Buttle (1996) and Babakus & Boller (1992) that the service quality construct much depends on the service industry under investigation, its service settings and its related service attributes.

The difference between the external and internal service quality dimensions identified as important may also be explained by the standardized nature of the work involved in value adding activities undertaken by the administrative personnel. Interactions involving value adding functions, either as internal supplier or internal customer, will require attention to detail to ensure that the standardized operational nature of the work is not compromised. The main driver for internal service quality appears to be the external customer, who makes demands on the internal customer. Internal customers in turn then make demands on the administrative department within the value chain. This implies that an internal service quality wave-front, driven by the external customer, moves through the organization backward along the value chain and out towards the support functions, in this case the administrative staff (Brooks, Lings, Martina & Botschen, 1999). The ramifications of this mean that attempting to improve service quality by concentrating on customers facing staff only is inappropriate.

## Internal Consistency and Validity

Owing to the multidimensionality of the internal service construct, the internal consistency reliability of the five factor solution was established by computing the coefficient alpha value (Cronbach  $\alpha$ ). The standardized coefficient alpha for the entire scale was 0.92. The results are also reported in table 1. The coefficient alpha values obtained from factors one to five were 0.83; 0.77; 0.78; 0.79 and 0.66 respectively. The internal consistency reliability values for factors one to four were considered adequate *i.e.* above 0.70 (Nunnally, 1978), whereas factor five indicates marginal acceptance. The reliability value for factor five is deemed acceptable as this was an exploratory study (Hair, Anderson, Tatham and Black, 1998). In addition, the high coefficient alpha value reported for the total internal service quality scale (Cronbach  $\alpha$  = 0.92) supported the inclusion of the fifth dimension.

To ensure that the internal service quality scale satisfies content validity, a mixed methodology research process was followed. Content validity was also established by pre-testing the questionnaire. Discriminant validity, in this context, refers to the ability of the research instrument to assess the uni-dimensionality of underlying dimensions. Evidence of reliability and validity confirm the construct validity of the measuring instrument (Bosch, Boshoff & Louw, 2003). In assessing discriminant and construct validity of the research instrument, exploratory factor analysis was conducted. In each step of this procedure, scale purification was undertaken where individual items were removed from the research instrument to improve the discriminant and construct validity until all items demonstrated acceptable levels of discriminant validity (*i.e.* all the items load on a common factor only with no cross-loadings) and construct validity (*i.e.* all the items relating to each dimension have factor loadings of at least 0.40).

## Internal Service Quality and Satisfaction

In examining the relationship between the internal service quality dimensions and satisfaction correlation coefficient (Pearson product-moment) was used to determine the level of association between these two constructs. The range of possible value is from -1.00 for a perfect negative correlation to +1.00 for a perfect positive correlation (Malhotra, 2004). The following rule of thumb proposed by Huck, Cormier and Bounds (1974) were used in examining the level of association between the internal service quality and internal customer satisfaction.

- 0 to + 0.25 (or -0.25) = little or no relationship
- + 0.26 (-0.26) to + 0.60 (or -0.60) indicates a moderate relationship
- above + 0.60 (or -0.60 and above) indicates a strong relationship

The level of association between the internal service quality and internal customer satisfaction is shown in Table 2 below.

**Table 2: Correlations between internal service quality dimensions and overall satisfaction**

| Independent variables         | Pearson value (r) | p-value |
|-------------------------------|-------------------|---------|
| Credibility                   | 0.49              | 0 .05   |
| Accessibility and tangibility | 0.50              | 0 .05   |
| Preparedness                  | 0.47              | 0 .05   |
| Reliability                   | 0.49              | 0 .05   |
| Competence                    | 0.49              | 0 .05   |

The correlations between credibility, accessibility and tangibility, preparedness, reliability and competence are positive and moderate ( $p, < 0.05$ ) indicating that internal service quality is positively correlated to internal customer satisfaction. This means that the higher the level of credibility, accessibility and tangibility, preparedness, reliability and competence displayed by the employees from the administrative department (internal suppliers of service) the higher the level of satisfaction experienced by Research and Development (R&D) employees (internal customers).

Correlation however, only measures a linear relationship and does not necessarily infer a causal relationship between variables. The study proceeded to predict causal relationship between internal service quality and satisfaction with the use of multiple regression analysis. Table 3 reports on the results of the multiple regression analysis computed in order to establish the predictive power of the five internal service quality dimensions on overall service satisfaction. The five internal service quality dimensions were used as the independent variable and overall satisfaction was used as the dependent variable.

**Table 3: Regression analysis between internal service quality dimensions and satisfaction**

| Dependent variable: overall satisfaction  |           |        |           |           |
|---|-----------|--------|-----------|-----------|
| Dimensions (Independent variable)   | B         | BETA   | t         | p-level   |
| Credibility   | -0.108445 | 0.1113 | -0.111353 | 0.168458  |
| Accessibility and tangibility   | -0.172046 | 0.1846 | -0.184656 | 0.012065* |
| Preparedness  | -0.092006 | 0.0958 | -0.095835 | 0.207641  |
| Reliability   | -0.151519 | 0.1710 | -0.171025 | 0.017641* |
| Competence  | -0.169886 | 0.1869 | -0.186963 | 0.008492* |
| R= .60453485    R <sup>2</sup> = .36546239    Adjusted R <sup>2</sup> = .35123509    F=5,223    * p < 0.000 |           |        |           |           |

In terms of the relationship between the individual dimensions and the overall satisfaction rating, the adjusted  $R^2 = 0.35$  suggesting that the internal service quality dimensions explained 35% of the variance in the internal customers' overall satisfaction rating. The dimensions accessibility and tangibility, reliability and competence were statistically significant at  $p < 0.0000$ . Assurance and preparedness showed a moderate relationship with overall service satisfaction. Of the factors, competence of the internal staff showed the strongest association with overall service satisfaction. Aspects such as willingness to cooperate, consistency of service, performing services right the first time, meeting deadlines and the provision of accurate information were effective in influencing customers' overall service satisfaction. Whilst assurance and preparedness showed a moderate relationship between internal service quality and satisfaction, theory supports such relationship which is evident in the basic needs dimension of Kano's quality model (Zhang & von Dran, 2002). Basic quality is the minimum quality of service acceptable to the customer (Shen, Tan & Xie, 2000) and encompasses aspects consumers take for granted. Their presence goes unnoticed, but their absence will generate complaints and dissatisfaction. Customer satisfaction does not rise with a high performance of these services (Tan & Pawitra, 2000) as these services are naturally expected and customers normally do not verbalise or explicitly demand them (Matsler & Hinterhuber, 1998).

# RECOMMENDATIONS, LIMITATIONS AND CONCLUSION

## Recommendations

High levels of internal service quality lead to satisfied internal customers, which leads to high levels of cooperation between client and customer departments (Finn et al., 1996). A valid and reliable measure of internal service quality has been developed which can be used as a tool by administrative managers to improve internal service quality within organizations. Whilst many service quality attributes may influence an employee's perception of internal service quality, the results infer that some attributes have a greater impact on overall perception of internal service quality. An organization should have a checklist of best practices with regard to the dimensions of internal service quality and should monitor whether such practices are implemented. With this knowledge of internal service quality dimensions, service departments can judge how well employees performed on each dimension and managers can identify weaknesses in order to implement corrective actions.

## Managerial implications

This study provides a foundation for internal service quality evaluation that can be used by managers of an administrative department as a feedback mechanism. Measuring a department's performance gives managers a benchmark for tracking the effect of modifying components of the internal service quality delivery system. Tracking results over time is critical because improving internal service quality should be an ongoing process. In addition, internal customer expectations will change as departments react to the changing needs of external customers. Measuring internal customer service quality provides a quantitative baseline for comparing results over extended time periods and enables fact-based decision-making (Forst, 2002).

## Limitations

A limitation to the study was that the research was conducted on one site only. More data can be collected from other administrative departments of other types of companies to refine the measures described herein. Similar measurement development process can be undertaken in service departments within the organization for example, the Human Resources Department. Some universality of items may be possible across other service departments, but each service department may require a set of items tailored to the unique aspects of that service. The use of a single case-based approach to this research prevents generalization of these results to other organizations. The study concentrated on one organization within the service sector and it is possible that there are differences in internal service quality application both between organizations within the same industry sector and organizations in different industry sectors. It is also important to note that while the five dimensions measured were found to be important indicators of internal service quality, there may be other dimensions of internal service quality that may also be important.

## CONCLUSION

If quality services are to be delivered, employees must view themselves as an important link in the value chain. However, if employees endure poor quality of service from their colleagues and the organization as a whole, it is likely that services will suffer. The internal service culture may be difficult to create in large bureaucratic organizations where there are few mechanisms for receiving feedback about services (McDermott & Emerson, 1991). By focusing on internal customer service, providing value, and strategically marketing its service, an internal department can increase its value to the organization and in fact reduce the likelihood that it will become and candidate for outsourcing. Programs focusing on internal customer service can build accountability, improve employees' understanding of how to meet or exceed customer expectations and creates an internal culture that serves as a foundation for Total Quality Management. Future research work to identify other dimensions of internal service quality in different internal service settings is welcomed.

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# THE BRANDING OF CELLULAR TELEPHONES TO TERTIARY STUDENTS

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## ABSTRACT

*Cellular phones have spread to every section of the population and have become an all in one integrated communication tool. Companies in the telecommunication industry that are making profits and continue to survive are the ones that move to new markets or develop new products. One of the markets that started to use cellular products and services is the student market. For organisations to be successful, they have to distinguish their product offerings from other organisations' offerings. To do this, marketers develop their products into brands to create a unique position in the minds of consumers. This paper looks at the branding of cellular telephones and what is important to students in acquiring brands. There is also looked at pre-paid vouchers versus contract as subscription method.*

## INTRODUCTION

Cellular phones have spread to every section of the population and are being used by the youth, market traders, taxi drivers, vegetables vendors and many others. The ubiquity of the cell phone handset has revolutionised people's lives and empowered them to participate in national life, especially in the area of business and communication (Mutula, 2002). Since its introduction, a multitude of different cellular phone models with a variety of functions has become available on the market (Minges, Männistö & Kelly, 1999). The cellular phone has become an all in one integrated communication tool and has functions that previously were available only in specialised technological products such as radios, computers and video and digital cameras. The latest models of cellular phones are multimedia communication instruments that can take pictures and do what was only possible on personal computers in the past. Not only the cellular phone has improved, but also the service and packages provided by network operators and service providers (Frieden, 2000; Brodsky, 2001).

Polak and Kliener (2001) emphasise, the companies in the telecommunication industry that are making profits and continue to survive are the ones that move to new markets or develop new products. McCormick (1996) states that service providers and network operators should do four things to achieve success. First, they should determine the customer's real needs and wants and remember that not all customers buy according to price only. Second, they should focus on new services and improving existing services to add value based on customer expectations. In the third place, they should look for niche markets to develop in, and, finally, they should form alliances with other service providers who can provide complementary services.

With the expansion of cellular phones, one of the markets that started to use cellular products and services is the student market. As students represent a sizeable segment of the market, the cellular industry should take note of students' attitudes, behaviour and spending with regard to cellular products. In South Africa, approximately 600 000 students enrol at tertiary institutions annually (UNESCO, 1998). The spread of cellular phones in the larger population is the result of marketing done by the cellular telecommunication industry. For the purpose of this paper cellular telecommunication industry refers to the network operators, service providers and cellular phone manufactures. A wide variety of cellular communication products and services have become available to consumers with the development of cellular telecommunication technology. Therefore, the cellular

telecommunication industry has to ensure that their marketing mix is effective and efficient. This entails their product offering, the services they offer, how they promote, how they distribute, and how they price their products and services in the market.

In this paper branding choices in acquiring cellular phones will be discussed. Secondly student's choices regarding pre-paid vouchers versus contract will be pointed out, where students prefer to acquire pre-paid will be touched on and lastly why student prefer pre-paid vouchers or contract will be discussed.

## Concepts and literature review

Hoffman and Bateson (1997) indicate that the term "product" refers to both goods and services. Strydom, Jooste and Cant. (2000) agree with Hoffman and Bateson (1997) and define a product as "...a tangible good, a service, an idea or, more often, some combination of these that, through the exchange process, satisfies consumer or business needs". Kotler (2003) refers to a product as anything that is offered to the consumer that satisfies a want or need. In the cellular telecommunication industry, the different elements that make up the tripod deliver either products or services, or a combination of products and services. Cellular phone manufacturers, for example, provide a tangible product, namely the cellular phone, whereas network operators provide the service that makes it possible to communicate by constructing and maintaining the network towers.

Network operators provide consumers with a service. A service "is an activity which has some element of intangibility associated with it that involves some interaction with customers or with the property in their possession, and does not result in the transfer of ownership" (Payne, 1993). Kotler (2003) and Zeithaml and Bitner (2003) agree with this definition that implies that the customer does not take ownership of a service. Czinkota and Kotabe (2001) state that a service can be a pure service (the capability to communicate on a cellular phone) or a service that supports goods (after-sale service on cellular phones). The customers cannot see, feel or touch the service they receive from network operators, as it is intangible. To receive the service, they must have a cellular phone. In the cellular telecommunication industry, the different role players thus provide services, products or a combination of the two. For the purpose of this paper, product and service offerings are referred to as "the product offering", which then includes both these elements

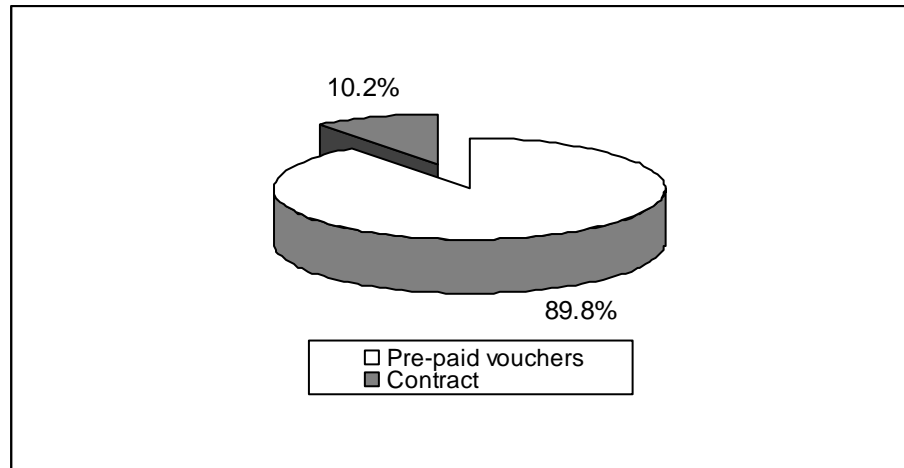
For organisations to be successful, they have to distinguish their product offerings from other organisations' offerings. To do this, marketers develop their products into brands to create a unique position in the minds of consumers (Jobber, 2004). Branding is used by the members of the cellular telecommunication industry to increase their success. Thus, branding will be discussed as part of the product offering. To create a distinction in the minds of consumers, organisations make use of the different product elements (Jobber, 2004).

According to Solomon and Stuart (1997), brand can be defined as a name, a term, a symbol, or any other unique element of a product that identifies one firm's products and sets them apart from those of other producers. An example of this in the South African cellular communication industry is the use of a dotted red "C" by one of the network operators. Aaker (1991) points out that branding focuses on a name or symbol of an organisation. Network operators rely heavily on branding as a way to build corporate image, since they sell a service and not a physical product. Palmer (2001) points out that organisations rely on branding as a way to differentiate themselves from their competitors and to build an image and service with a specific identity. Anderson and Heinonen (2002) point out that one way to improve consumers' knowledge of mobile services is to connect them to an existing traditional service brand. Branding is therefore not important only for cellular phone manufacturers, but also for network operators, to assist them in marketing the different products that they deliver to the market.

Nicholas et al. (2003) point out that teenagers yearn for connectivity. Although network operators have identified the potential of the youth market and developed packages aimed specifically at them, such as per-second billing, cheap phones and calls, they focus on the youth in general and not on the tertiary student *per se*. A large second-hand market for cellular phones was also created as people upgraded to new, improved cellular phones and discarded their old ones. The second-hand market for cellular phones and the lowering of in prices have resulted in groups of people that previously did not have access to cellular phones now also obtaining cellular phones (Ryan, 1997). According to Cant and Machado (2005) consumer has access to a variety of

cellular packages that differ in cost and the services that will be received. The two categories of subscription available to consumers is pre-paid vouchers where the consumer buys airtime or talk time, as they require it or contract where consumers usually pay a fixed amount on a monthly basis for airtime. Most contracts include free minutes in non-peak times and a cellular phone in the contract package. Even with the extras that are included in a contract student prefer pre-paid vouchers as method of subscription as determined in this paper and indicated in **Figure 1**. Selian (2004) indicates that young people prefer the pre-paid option since it gives them access to wireless services and it allows them to get extra minutes beyond the basic security plan that their parents might pay. Pre-paid therefore gives students control on how they spend their disposable income.

**Figure 1: Type of Subscription**



Pre-paid is readily available to students and as indicated in **Table 1** students acquire their pre-paid vouchers from different outlets.

**Table 1 Places where pre-paid vouchers are obtained**

| Places                                     | Number* | Percentage of total |
|--|---------|---------------------|
| Supermarket                                | 254     | 71.75               |
| Petrol station                             | 157     | 44.35               |
| Department store                           | 107     | 30.23               |
| Service outlet of network operator         | 130     | 36.72               |
| Street corner shop                         | 103     | 29.09               |
| Automatic teller machine (ATM)             | 89      | 25.14               |
| Someone else acquires my pre-paid vouchers | 77      | 21.75               |
| Vending machine                            | 65      | 18.36               |
| Stationery shop                            | 45      | 12.71               |
| Pharmacy                                   | 22      | 6.21                |
| Call to recharge                           | 15      | 4.24                |
| Internet                                   | 10      | 2.82                |
| Book shop                                  | 9       | 2.54                |
| Music shop                                 | 7       | 1.98                |
| Direct delivery                            | 2       | 0.6                 |

\* Respondents acquire pre-paid vouchers at more than one place (n=354)

**Table 1** indicates that 71.75% (254) of the students obtain or purchase their pre-paid vouchers from supermarkets. A substantial number of students namely 44.35% (157) obtained or purchased prepaid vouchers at petrol stations and 36.72% (130) students used service outlets to obtain pre-paid vouchers. Furthermore, 30.23% (107) students used department stores and 29.09% (103) used street corner shops (29.09%), which are also favoured distribution points. Supermarkets often have special offers on pre-paid vouchers, which could be the

reason for them being favoured by students to obtain pre-paid vouchers. It is interesting to note that service outlets are also favoured, although they are not as widespread as the other outlets.

## RESEARCH METHOD

### Research design

The study was completed in two phases. Firstly a literature study was done on the different aspects that could influence students' acquisition of cellular products and services. Branding as an aspect of the marketing mix were evaluated, as well as existing cellular phones and services and their pricing reviewed by means of the consultation of newspapers, magazines articles and research publications. Secondly primary research was completed to determine student's preference regarding brands and pre-paid or contract. Probability sampling and a self-administering questionnaire were used. The questionnaire was pre-coded and contained multiple and scale questions. In total 17 concise questions that deals with branding and pre-paid vouchers or contract were used in the questionnaire. The phrasing of each part of the questionnaire was closely examined so as to ensure clarity and ease of use. The amendments done after extensive piloting, are considered to have significantly increased the validity of the scale. The items were rated on a seven-point Likert scale from "Strongly agree", 7, to "Strongly disagree", 1.

A descriptive research design was used that uses a set of scientific methods and procedures to collect raw data and create data calculations that describe the existing characteristics of a defined target population or market structure. Descriptive research attempts to obtain a complete and accurate description of the situation and determines the frequency with which something occurs (Hair Bush, & Ortinau, 2000; Strydom, *et al.*, 2000; Churchill, 2001). Students studying at Tshwane University of Technology represented the survey population. The study population is the aggregate of elements from which the sample is actually selected and from this inferences can be made out of about the original population (Kinnear & Taylor, 1996). In the study a multi-stage cluster sampling method was used which consists of two or more steps in the selection of groups from the population that is broken down into sub-groups that are mutually exclusive and collectively exhaustive. There after a random sample of the groups was selected for further sampling (Dillon, Madden, & Firtle, 1994). Full time students at pre-selected faculties of Tshwane University of Technology made up the sample frame. The eleven faculties at Tshwane University of Technology were listed and departments were selected from the faculties where after a simple random sample of students was drawn from each department. 430 questionnaires were distributed and from the distributed questionnaires 422 were received back. Of these 410 were used. 12 questionnaires were rejected due to incompleteness.

### Data analysis

**Table 2:** Student's preference for pre-paid vouchers versus contracts

| Description of variable  | Scale                                   |       |       |      |       |       |       | Mean |
|--|---|-------|-------|------|-------|-------|-------|------|
|  | 7:Strongley agree - 1 Strongly disagree |       |       |      |       |       |       |      |
|  | 7                                       | 6     | 5     | 4    | 3     | 2     | 1     |      |
| V37-Price influences my choice between pre-paid vouchers and contract. | 34.8%                                   | 27.7% | 14.2% | 9.6% | 5.3%  | 3.3%  | 5.1%  | 5.47 |
| V38-I see a contract as expensive.                                     | 38.3%                                   | 20.6% | 12.7% | 5.6% | 8.6%  | 6.9%  | 7.4%  | 5.24 |
| V39-Pre-paid vouchers are more flexible.                               | 43.7%                                   | 28.7% | 11.4% | 5.1% | 4.3%  | 2.0%  | 4.8%  | 5.77 |
| V40-Acquiring pre-paid vouchers is easy.                               | 54.8%                                   | 25.4% | 8.1%  | 4.3% | 3.8%  | 2.3%  | 1.3%  | 6.11 |
| V41-I find getting a contract as being too complicated.                | 22.8%                                   | 21.1% | 12.7% | 8.6% | 11.2% | 10.2% | 13.5% | 4.52 |

|   |       |      |       |              |       |       |       |      |
|---|-------|------|-------|--------------|-------|-------|-------|------|
| V42-Pre-paid vouchers have more service options than contracts. | 12.7% | 9.9% | 16.8% | <b>19.8%</b> | 10.9% | 15.2% | 14.7% | 3.89 |
|---|-------|------|-------|--------------|-------|-------|-------|------|

Frequency for level of agreement and disagreement **table 2:**

- **V37** – Students strongly agree (34.8%) and agree (27.7%) that price influence their choice between pre-paid vouchers and contract. Seeing that a majority of students does not have fulltime employment this will influence their choice and predisposition for pre-paid vouchers.
- **V38** – The majority of students see a contract as being expensive and therefore strongly agree (38.3%), and agree (20.6%) with this statement. Students rely on family and part-time jobs for an income and therefore do not have the financial resources to have contracts and pay fixed monthly fees.
- **V39** – With pre-paid vouchers giving students the option on how much they spend the findings is that pre-paid vouchers are more flexible with student strongly agreeing (43.7%) and agreeing (28.7%) with the statement.
- **V40** – Students clearly see acquiring pre-paid vouchers as being easy with more than half strongly agreeing (54.8%) with this statement. Pre-paid vouchers are available at a multitude of different outlets and with this students will not see it as being a big an obstacle to subscribe to a network operator.
- **V41** – Students indicated by strongly agreeing (22.8%) and agreeing (21.1%) that they find getting a contract as being to complicated. This could be due to the prerequisite such as a pay slip and three month bank statement.
- **V42** – Students indicated that they neither agree nor disagree (19.8%) that pre-paid vouchers have more service options than contract. Service provided by the two subscription options is seen as being the same by students.

**Table 3:** Importance of brand name to students as a determinant in cellular phone acquisition

| Description of variable  | Scale                                   |       |       |      |       |       |       | Mean |
|--|---|-------|-------|------|-------|-------|-------|------|
|  | 7:Strongley agree - 1 Strongly disagree |       |       |      |       |       |       |      |
|  | 7                                       | 6     | 5     | 4    | 3     | 2     | 1     |      |
| V58-The brand name of a cellular phone will influence me when acquiring a cellular phone.                | 40.4%                                   | 31.0% | 10.4% | 5.1% | 3.0%  | 6.6%  | 3.6%  | 5.66 |
| V59-The guarantee will influence the brand name of the cellular phone I acquire.                         | 30.2%                                   | 35.8% | 16.0% | 7.4% | 4.8%  | 4.1%  | 1.8%  | 5.60 |
| V60-The features and functions of the cellular phone will have an influence on the brand name I acquire. | 41.6%                                   | 29.7% | 13.7% | 4.8% | 4.6%  | 4.1%  | 1.5%  | 5.81 |
| V61-Specials on cellular phones will influence my decision to buy a specific brand name.                 | 23.8%                                   | 26.4% | 22.6% | 8.1% | 8.1%  | 5.6%  | 6.3%  | 5.06 |
| V62-Before I buy a cellular phone brand I will consult my friends and family.                            | 14.7%                                   | 18.5% | 16.0% | 8.9% | 8.9%  | 18.5% | 14.5% | 4.08 |
| V63-The services that accompany the brand will influence my decision.                                    | 28.2%                                   | 34.8% | 18.5% | 6.6% | 4.6%  | 3.8%  | 3.6%  | 5.50 |
| V64-If the brand I prefer is not available, I will easily acquire another brand.                         | 6.3%                                    | 18.8% | 17.5% | 5.3% | 13.2% | 20.1% | 18.8% | 3.64 |
| V65-Price is more important than the brand that I acquire.   | 10.7%                                   | 13.2% | 15.0% | 7.1% | 14.0% | 21.8% | 18.3% | 3.61 |

|   |       |       |       |      |       |       |       |      |
|---|-------|-------|-------|------|-------|-------|-------|------|
| V66-Where I acquire a cellular phone is not important to me as long as it is the brand that I prefer. | 19.3% | 17.8% | 16.8% | 7.6% | 11.7% | 13.7% | 13.7% | 4.31 |
| V67-Advertising has an influence on the brand I acquire.  | 24.1% | 28.7% | 21.3% | 9.9% | 7.1%  | 2.8%  | 2.8%  | 5.23 |
| V68-The extras that I receive with the brand will influence my decision to acquire the brand.         | 22.8% | 30.7% | 24.4% | 8.4% | 6.3%  | 2.3%  | 2.3%  | 5.31 |

Frequency for level of agreement and disagreement **table 3:**

- **V58** – A majority of students strongly agree (40.4%) and agree (31.0%) that the brand name of a cellular phone will influence their acquisition of a cellular phone.
- **V59** – The guarantee given is important to students as most strongly agreeing (30.2%) and agreeing (35.8%) that it will influence the brand name of the cellular phone they acquire.
- **V60** – There is a strong indication that features and functions of the cellular phone will have an influence on the brand name students acquire since most strongly agree (41.6%).
- **V61** – Students strongly agree (23.8%), agree (26.4%) and slightly agree (22.6%) that specials on cellular phones will influence their decision to buy a specific brand name.
- **V62** – There is no clear indication that students will consult their friends and family before buying a cellular phone brand.
- **V63** – Services that accompany the brand will influence students decision to acquire it most students strongly agree (28.2%) and agree (34.8%) on this statement.
- **V64** –Students disagree (20.1%) and strongly disagree (18.8%) that if the brand they prefer is not available, they will easily acquire another brand.
- **V65** – On this statement student disagree (21.8%) and strongly disagree (18.3%) that price is more important than the brand that they acquire.
- **V66** – Where students acquire a cellular phone is not important to them as long as it is the brand that they prefer with most students slightly agreeing (16.8%), agreeing (17.8%) and strongly agreeing (19.3%) with this statement.
- **V67** – There is a strong indication that advertising has an influence on the brand students acquire with students slightly agreeing (21.3%), agreeing (28.7%) and strongly agreeing (24.1%) to advertising importance in their decision making.
- **V68** – Students are slightly agreeing (24.4%), agreeing (30.7%) and strongly agreeing (22.8%) that the extras that they receive with the brand will influence their decision to acquire a brand.

## CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

Regarding student's preference in pre-paid versus contract they indicated that price will influence their choice between pre-paid vouchers and contract, that they see contract as more expensive, that they see pre-paid vouchers as more flexible and that acquiring pre-paid vouchers is easy. Students of all income groups indicate that they are uncertain whether getting a contract is to complicate. There is also an indication that students don't see pre-paid vouchers as having less service options than contracts. Price of services should be researched more. Since price has an influence in the selection of pre-paid vouchers above contract, network operators could consider creating contract packages than could be controlled by the students themselves. The process of getting a contract could be revised to make contract subscription more available to students. In promoting contracts the different network operators must note the distribution points which students use the most to acquire pre-paid vouchers. These distribution points can be used as a point to promote contracts with students.

Students seem to be brand loyal and prefer specific brand names. The price of the cellular phone is less important than its brand name. Students also indicated that if the brand they wanted were not available, they would not easily acquire another brand, although special offers on cellular phones would influence the brand they acquire. However, students are not certain if they would consult friends and family when making a decision about purchasing a cellular phone. Students indicated that advertising and the extras received would influence the brand they acquire. There was an indication that students are uncertain about the importance of where the



cellular phone would be acquired, as long as it is the brand that they prefer. Cellular phone manufacturers could improve the functions on their cellular phones and should promote new technologies like the new Generation three (G3) phones. Guarantees should be honoured to ensure continued brand loyalty. Specials would influence students' selection of a brand. Therefore, there is still an opportunity for cellular phone manufacturers to persuade students to change brands by creating attractive specials on their brands. In view of cost being an important consideration in purchase decision-making, offering special deals specifically for students could ensure their subscription. There is no clear indication that students would consult friends and family before they make a decision. Therefore, there is an opportunity for in-store selling to influence the buying decision. Given the importance of advertising, advertisements specifically for the student market should be developed. Extras that can be included are hand-free sets, pouches, free downloads, etc., to convince students to buy a specific brand. Cellular phones should also be available at all possible outlets, since students are uncertain about the influence that an outlet would have on their selection of a brand.

Certain limitations can be identified in this paper. Firstly the research was limited to one university of technology. Secondly due to the speed at which technology is changing in the cellular telecommunication industry aspects that was not covered in the questioner might have an influence on the decision making of students such as the availability of television on cellular phones. Lastly a fourth network operator entered the market since the research was done and that can most probably also influence some of the findings.

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# EVALUATION OF ENVIRONMENTAL EFFECTS OF AIRPORT OPERATIONS: THE CASE OF TURKEY

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## ABSTRACT

*Airport operations have significant effects on environment both directly and indirectly. Some of these effects are so familiar (noise, air quality, water quality etc.), the others are not so easily identified (wildlife, land use etc.). For that reason, all responsible actors should aware and control of these effects for the sustainability of aviation.*

*The purpose of this study, firstly, is to determine the environmental impacts of the airport operations; and then to state the national legislation on environmental impacts of airports; finally to develop a comprehensive policy for the decision makers. In the first part of the study, airport operations and the possible environmental impacts are generally described. In the second part, Turkish legislation and authorities directly related to the airport operations' environmental impacts are determined. In the last part, in order to evaluate the responsibilities of all stakeholders in this field, the data were collected by using semi-structured interview method at the main international airports (Ataturk-İstanbul, Antalya, Adnan Menderes-Izmir and Esenboga-Ankara).*

*Finally, a strategy is proposed to implement the environmental management system among the related actors in an efficient and sustainable manner in Turkey.*

## INTRODUCTION

Aviation is one of the world's fastest growing industries, with a growing demand for aviation services. The global airline markets have shown an average annual passenger traffic growth of 4.8 percent and air cargo growth of 6.3 percent over the past 20 years. This growth was founded on world economic growth of 2.9 percent and further stimulated by liberalization of market regulations in many countries.

Looking ahead over the next 20 years, while the world economy is set to grow at 3.1 percent, the airline passenger traffic is expected to grow 4.9 percent and air cargo 6.1 percent (Boeing, 2006). In the light of the expected growth in air travel, one of the major issues facing the airline industry in the 21st century will be its ability to conciliate capacity expansion at major airports with the negative impact of increased airport operations on surrounding neighborhoods (Nero and Black, 2000). As a multi-disciplinary and unique research in this field in Turkey, this study is believed to contribute to the other developing countries for the requirements and the implementation of environmental management system at airports to achieve the environmental sustainability worldwide.

## ENVIRONMENTAL IMPACTS OF AIRPORT OPERATIONS

The total transport sector accounts for 20–25 percent of the global CO<sub>2</sub> emissions, and in 1992 aviation was responsible for about 13% of CO<sub>2</sub> emissions from all transportation sources. Hence, there is a concern that the predicted continued growth in air transport will increase CO<sub>2</sub> emissions substantially, and counteract any reductions achieved elsewhere, such as aircraft technology improvements yielding quieter engines and fuel efficiencies (Kaszewski and Sheate, 2004).

Global and local environmental pressures upon aviation will continue to mount and have a significant effect upon the future growth of the industry. The ability of cities to play a full part in and achieve maximum social and economic benefit from the global economy will be dependent to a significant extent upon the development of the airports that serve them. An issue that is in direct conflict to this growth is that many airports are at risk of reaching their environmental capacity before they are able to fulfill the demand for air travel due to local planning constraints (Maughan et al., 2001).

Airport operations include the activities related to operation and maintenance of runways, control towers, maintenance facilities, aircraft gates, baggage handling facilities, and airport operations such as passenger and vehicle traffic, ticketing, baggage handling, passenger security, and concessions. The operation of airports can have a variety of impacts on the environment. Airports, like other administrative offices, can generate large quantities of waste paper and consume large amounts of energy from lighting, heating and cooling systems, and computers. Concession shops and food service operations can generate significant quantities of solid waste, such as corrugated cardboard, paperboard, office paper, newspapers, magazines, wooden pallets, aluminum, plastic, and glass containers, as well as leftover food. Grounds keeping and landscaping activities can generate waste pesticides and herbicides. Airport ground traffic congestion can generate significant air emissions (EPA, 1998, 31).

The externalities generated from commercial flights have various impacts on air quality, noise, water quality, fuel consumption and energy, ecology (Morrell and Lu, 2000), erosion, sedimentation, soil compaction, chemical pollution resulting from aircraft maintenance and deicing, aircraft emissions, contaminated runway and grounds runoff, generation of waste construction materials, and litter and other debris from administrative and food service operations (EPA, 1998, 31). Despite the many benefits that the aviation industry brings there are a range of negative environmental impacts, which cannot be ignored and which have been debated with much controversy over recent years (Maughan et al., 2001). Potential environmental impacts resulting from airport operations are identified briefly in Table 1.

**Table 1. Airport operations and environmental impacts**

|   | Global/Local<br>air quality | Noise | Ground and<br>surface water<br>contamination | Waste | Land use<br>management and<br>wild life |
|---|-----------------------------|-------|--|-------|---|
| Aircraft  | X                           | X     | X  | X     | X                                       |
| Construction activities   | X                           | X     | X  | X     | X                                       |
| Ground support equipment  | X                           | X     | X  | X     |   |
| Auxiliary power units   | X                           | X     | X  | X     |   |
| Passenger related motor<br>vehicles   | X                           | X     |  |       |   |
| Fuel storage facilities   | X                           |       | X  | X     |   |
| Fire training activities  | X                           |       | X  | X     |   |
| Land/airside vehicular support  |                             |       |  |       |   |
| Ground transport  | X                           | X     | X  |       |   |
| Ground operations equipment   |                             |       |  |       |   |
| Maintenance activities  | X                           | X     | X  | X     |   |
| Apron activities (refueling,<br>engineering, fire training,<br>deicing/ antiicing | X                           |       | X  | X     |   |

Airports typically own and manage relatively large areas of land, which can provide good quality wildlife habitats for a wide range of species, including those that receive legal protection and/or are notable for their nature conservation value (AOA, 2006). Airports by their very nature cover large areas of land and create zones which are either hostile to wildlife (paved or built) or an ecological monoculture (such as mown grassland). The more distant areas surrounding airports can, however, often be of considerable ecological value, particularly if the airport is located in a green belt surrounding a major urban conurbation, as is often the case. The ability of an airport to extend its boundaries or even build upon parts of its own land can be restricted by the value of the habitats threatened (Upham et al., 2003).

## NATIONAL ORGANIZATIONS AND LEGISLATION

Turkey is strategically positioned astride Europe and Asia. With a growing population, rapid urbanization, a healthy foreign tourism industry and an active regional commercial base, Turkey has witnessed a need to further develop civil aviation and airport infrastructure in the current decade. Turkey is at the center of regional civil aviation development and has identified the following critical areas for development: renovation and modernization of existing airports; construction of new airport facilities; upgrading of ground and terminal equipment and systems; increasing the establishment of airlines; increasing general/business aviation services; privatization of the national airline/airport management operations; air traffic control improvements; and the upgrading of airport and airline security (CCA Market Overview Turkey 2005 ).

In Turkey, the governmental organizations related to civil aviation and environmental impacts of airports are Ministry of Environment and Forestry, Ministry of Transport, the Directorate General of Civil Aviation, the General Directorate of State Airports Authority. Table 2 shows that the national organizations with legislations related to environmental protection caused by airport operations.

**Table 2. National organizations with related legislation**

| <b>Organizations</b>                                       | <b>Related Regulation</b>   |
|--|---|
| Ministry of Environment and Forestry                       | Environment Law (1983, No:5491) (revised in 2006)<br>Air Quality Control Regulation (1986, revised 2005)<br>Water Pollution Control Regulation (1988, revised .....)<br>Noise Control Regulation (1986, revised in 2002 titled as Assessment and Management of Environmental Noise relating to the Directive 2002/49/EC by European Parliament and of the Council of 25 June 2002)<br>Control of Solid Waste Regulation (1991, revised )<br>Environmental Impact Assessment Regulation (16/12/2003-25318 ) Regulation on Control of Medical Waste (1993)<br>Control of Toxic Chemical Substances and Products Regulation (1993)<br>Control of Hazardous Wastes Regulation (1993, revised) |
| <b>Ministry of Transport</b>                               | Turkish Civil Aviation Law (1983, No:2920)  |
| <b>The Directorate General of Civil Aviation</b>           |   |
| <b>The General Directorate of State Airports Authority</b> | Directive of Airport Wildlife and Bird Control in 1984 and last revised in 2006 by adapting the ICAO, Annex 14 Aerodromes Volume 1, Bird Strike Hazard Reduction.   |

## METHODOLOGY

The main research objective is to determine the implementation of environmental management systems at airports for the sustainability of air transportation in Turkey. The method chosen for this study was a survey by means of semi-structured interviews. Semi-structured interviews are conducted with a fairly open framework which allow for focused, conversational, two-way communication. The semi-structured interview was intended to do with the responsible person from environmental impacts of airport operations. Four of the major international airports -Ataturk-İstanbul, Antalya, Adnan Menderes-Izmir and Esenboga-Ankara- in Turkey were chosen due to their high traffic (DHMI). Istanbul is the primary commercial air hub in Turkey. Other major facilities are located in Izmir, Ankara, and Antalya (CCA Market Overview Turkey 2005). However; it is observed that none of the airports has an environmental management department. For that reason, the interview was applied with the manager of Quality Management Department.

## RESULTS AND DISCUSSIONS

As a result of the survey, the findings can be briefly summarized in the following points. Traditionally, all of the airports were established out of the city, but now they are performing almost in the highly populated city center. There has been a significant increase in road traffic (surface access traffic) in recent years within the frame of the increasing aircraft movement and passenger traffic. Road traffic and its environmental impacts have been increased in relation to airports location. Antalya and İstanbul, Atatürk airports have maintenance centers. All the activities in the maintenance centers detrimental effects on environment. The entire airport operator stated that every airport have and will plan their terminal, apron, and runway capacity enlargement. Those construction activities also have environmental impacts.

All of the responders were asked to give the answer to the question of which operations cause what type of environmental impact such as noise, air quality, water quality, waste, energy and land use. As a result of the survey it is found that they are not aware/accept their operations' environmental impacts. So, they did not give the complete answer for the question of their actual protection methods/remedial actions for the possible environmental impacts of their operations. Only two of them stated that they have waste water treatment facilities.

The interesting results of the interviews with airport directors, airport tenants and the governmental organizations on aviation and the environment are as follows:

All responsible actors at airports believe that environmental management system is very significant, in spite of that fact none of them have this application. İstanbul, Atatürk airport operator stated that one of airport tenants (Turkish Airlines Technic) is preparing the documentation necessary for the ISO 14001 Certification. As evident from the findings, it is constanted that there is a tendency to have environmental management system certification (ISO 14001 or EMAS) in the airport sector as in Europe and USA.

In Turkey, not efficient and effective communication among governmental organizations, responsibilities are not delegated, duties and responsibilities are not clearly identified, and requirements of conventions and international organizations' specifications are not completely applied; even if there is some environmental legislation covering airport operations those are not efficiently applied. Moreover, there is no well-organized system to control the environmental impacts of airport operations continually. Airport tenants still do not aware of the importance of environmental management system. Tenants believe that their operations do not cause any environmental impact so, they do not have any systematic protection or precautions.

## CONCLUSION

Climate change is a major issue in the world. Scientists are focus on alternative solutions to eliminate this global problem. Air transportation is one of the sources that cause climate change. So to minimize the environmental impact of airport operations it is essential to be aware of the effects of airport operations on environment. Within the adaptation process for the European Union membership, Republic of Turkey Ministry of Environment and Forestry had renovated laws and regulations relating to prevent environmental pollution with a great success. Unfortunately, lack of coordination among the national authorities (such as Ministry of Environment and Forestry, Ministry of Transport, The Directorate General of Civil Aviation, The General Directorate of State Airports Authority) results in the inefficient application of these laws and regulations.

As it is known, international organizations have various rules and regulations on decreasing airport externalities. As a member of international organizations, Turkish civil aviation authority has only published wildlife hazard and bird control directive for airports and the noise regulation at airports adapted from ICAO publications. As a result of interviews, it cannot be said that these rules are applied as required by international standards. It is evident from this study that the growth of the aviation sector in Turkey is environmentally unsustainable at present and, with increased growth forecast, will be even worse in the future unless the necessary coordination among authorities is provided. It is concluded that, there is a lack of coordination between Turkish authorities (Ministry of Environment and Forestry, Civil Aviation Organizations). The regulations are not well-organized to handle environmental impacts especially related to the airport operations. It is observed that there is a tendency to apply environmental management systems but airport directors need to be forced and encouraged by national and international authorities and legislation.

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# ON THE CONVERGENCE OF DECISION-MAKING STYLE TYPOLOGIES

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## ABSTRACT

*The paper investigates the issue of identifying decision-making style of a manager. Different methodologies are available to handle the task, including those of A. Rowe, I. Adizes, A. Karpov, K. Brousseau, M. Driver, G. Hourihan, R. Larsson, D. Kiersey, M. Bates and others. Interestingly, the issue of correspondence of results obtained through application of different methods does not receive appropriate attention. There are few exceptions as in case of MBTI and I. Adizes typology. First, textual analysis of style descriptions is undertaken which leads to formulation of certain hypothesis. It is then complemented by statistical analysis.*

## THE NOTION OF DECISION-MAKING STYLE

The notion of decision-making (DM) style is widely used in managerial literature. Although we can find certain differences in definitions provided by different authors there appears to be a general understanding of DM style as a pattern of manager's behavior in situations where he/she is obliged to make a decision or is doing it voluntarily. For example, "Style of managerial decision-making – it is stable, preferred and what is also important possible for a given manager way of behavior in a problem situation" (A. Karpov, 2003). "Learned, habitual response pattern exhibited by an individual when confronted with decision situation" (Scott, Bruce, 1995).

This involves at least two difficult questions. The first one is differentiating between style of management and style of decision-making. Manager's DM style is not necessarily equivalent to style of management as far as it pertains to only one (although important) side of manager's activity. A good example of an activity, which is clearly complementary to decision-making is provided by the recent publication by (P. Clampitt and M. Williams, 2007) in which a notion of *decision downloading* is being introduced. By decision downloading authors understand the phase of communicating decision to employees. This phase precedes and creates necessary conditions for decision implementation and in turn includes a number of steps, such as planning, announcement, monitoring and responding (to employees' concerns). We will not go into further details as far as it takes us to a much more broad and sophisticated problem of the contents of management functions. Anyway, it appears evident that decision-making is only one of them, and consequently style of management and style of decision-making relate to each other as a part and a whole. Style of decision-making should be regarded as an element of management style in line with such other elements as for example communication style. Moreover, all these are highly dependant and may cause problems if there is insufficient fit among them. In spite of this in numerous publications, notions on decision-making style and management style are used either interchangeably (I. Adizes, 2004), or decision-making style as that of especially important and especially explicit function is regarded as a proxy for style of management (A. Karpov, 2003).

The second question is linked to the distinction between management and leadership. Can DM behavior of a manager and a leader be described in terms of the same set of patterns, or they are substantially different? Rowe et. al. suppose that of the four possible DM styles two (Conceptual and Analytic) pertain to the behavior of a leader, and two others (Directive and Behavioral) pertain to the behavior of a manager. Of course, in reality, every single person demonstrates elements of all four styles. However, in the suggested framework this simply means that everyone demonstrates elements of a manager's and a leader's behavior. (Rowe et. al., 1990).

A different view has been proposed by (K. Brousseau et al., 2006). They also consider four individual styles: Decisive, Hierarchic, Integrative and Flexible, but draw attention to the fact, that "...managers make



decisions differently in public settings, where they know they are being observed, than they do in private settings, where there is no need to explain or justify their process". Accordingly, they call the public mode "leadership style" (of decision-making) and the private mode "thinking style" (of decision-making). For the further discussion, we use the "thinking style" option of this methodology.

However, in both approaches we have styles of manager's DM and styles of leader's DM as separate entities included in more general characteristics of "style of management" or "style of leadership" respectively. These two are entities of a higher order for DM style.

If we want to look at the internal structure of DM style, we also find different approaches. Rowe et. al. consider manager's needs, problem-solving capacities, perceptual and cognitive skills, and leadership qualities as determinants and descriptors of DM style. A.Karpov offers an alternative view by drawing attention to the fact that making management decisions has two facets: individual (reflecting characteristic of the individual in the position of decision-maker) and inter-individual (reflecting the systems of his relations with peers and subordinates involved in decision and affected by it).

Finally, it seems justified to apply general process-like description to decision-making process and thus we obtain the triad inputs-transformation-outputs with their respective characteristics. Based on literature review and attempting to select features directly related to and affecting the DM process we come up with the following (accumulated) list of characteristics. Inputs characteristics include amount and form of information which decision-maker prefers to obtain. Process characteristics include Perceived organizational goal, Priority given to (result vs. process), Time reference (future vs. present), Local/global focus, Basic needs, Dominant criterion for selecting course of action, Attitude towards risk, Tolerance to ambiguity, Nature of preferred decision-making process (structured vs. unstructured), Focus in search for options (optimal option vs. acceptable option), Preference to rely upon logical analysis or practical experience, Speed of decision-making, Employees' involvement in DM process. Output is characterized by how the DM process result – selected option is treated: whether we stick to a single option and insist on its implementation, or alternatively, we regard our choice as a fuzzy indication of a course of action needed to be adapted as circumstances change and new information appears.

Note, that suggested characteristics may be attributed (although in some cases not in a unique way) as reflecting needs-capacities-skills-leadership qualities or, alternatively, individual and inter-individual patterns of behavior in DM situations, using the frameworks mentioned earlier.

## **COMPARISON OF THE FOUR DM STYLE TYPOLOGIES – TEXTUAL ANALYSIS**

Interestingly, the issue of correspondence of different methodologies for defining and determining (assessing) individual's DM style does not have appropriate attention. At the same time, this is an attractive research goal because if we succeed in establishing a kind of correspondence, then we get advantages of double-checking and extended interpretation of results not to mention better theoretical understanding of the construct.

For our analysis, we have selected four DM style typologies. These are: typology suggested by K. Brousseau, M. Driver, G. Hourihan and R. Larsson, Decision Style Inventory (DSI) (A. Rowe, 1990), I. Adizes typology, and 4-temperament model of D. Kiersey and M. Bates based on MBTI methodology (G. Huit, 1992). The reason for such selection was twofold. First, all these typologies are based on structurally similar four styles model and second, in case of the pair "I. Adizes typology – 4-temperament model of D. Kiersey, M. Bates" there is published evidence of strong link between these two (I. Adizes, 2004).

In terms, described earlier, typology suggested by K. Brousseau, M. Driver, G. Hourihan, R. Larsson, and DSI of A. Rowe are DM style typologies in proper sense, while I. Adizes framework is closer to management style typology (although it includes a rather detailed list of DM process features and the author himself calls it sometimes a DM style typology). 4-temperament model of D. Kiersey, M. Bates is personality type scheme and thus has much more fundamental nature.

Based on the descriptions of outlined types proposed by the authors we have compiled tables 1-4 including 16 characteristics for every type. Types are grouped in tables according to their presumptive similarity. In an attempt to implement a conservative approach we intentionally avoided making hypothetical statements and included in our tables only those features that have been explicitly described by the authors.

**Table 1. Comparison of INTEGRATIVE – ENTREPRENEUR – CONCEPTUAL – NT styles**

|  | K. R. BROUSSEAU,<br>M. J. DRIVER, G.<br>HOURIHAN, R.<br>LARSSON -<br><b>INTEGRATIVE</b>                                      | I. K. ADIZES -<br><b>ENTREPRENEUR</b>                                       | A. J. ROWE -<br><b>CONCEPTUAL</b>    | D. KIERSEY,<br>M. BATES -<br><b>NT</b> |
|--|--|---|--------------------------------------|--|
| <b>Input characteristics</b>                                     |  |   |                                      |  |
| 1. Amount of information, needed to make decision                | All available  |   | All available                        |  |
| 2. Preferred form of information                                 |  |   | Visual                               |  |
| <b>Process characteristics</b>                                   |  |   |                                      |  |
| 3. Perceived organizational goal                                 |  | Future effectiveness  |                                      | Future effectiveness                   |
| 4. Priority given to (result vs. process)                        |  | Result  |                                      |  |
| 5. Time reference  |  | Future  | Future                               | Future                                 |
| 6. Local/global focus  | Global   | Global  |                                      | Global                                 |
| 7. Basic needs   |  | Approval and support  | Praise, recognition and independence |  |
| 8. Dominant criterion  |  | Implementation of ideas. Creating something new                             |                                      |  |
| 9. Attitude towards risk   |  | Tolerant  |                                      |  |
| 10. Tolerance to ambiguity                                       |  |   | High                                 |  |
| 11. Decision-making process                                      |  | Unstructured  |                                      |  |
| 12. Focus in search for options                                  |  |   | Optimal solution                     |  |
| 13. Prefer to rely upon logical analysis or practical experience |  |   | Logical analysis                     | Logical analysis                       |
| 14. Speed of decision-making                                     | High   | High  |                                      |  |
| 15. Employees' involvement in DM process                         | When working with others, integrative decision makers like lots of input and are happy to explore a wide range of viewpoints |   | Highly participative style           |  |
| <b>Output characteristics</b>                                    |  |   |                                      |  |
| 16. Adaptability of approach                                     | Multiple courses of action that may evolve over time as circumstances change   | Key details of the implementation project will change until the last minute |                                      |  |

**Table 2. Comparison of HIERARCHIC – ADMINISTRATOR – ANALYTICAL – SJ styles**

|  | K. R. BROUSSEAU, M. J. DRIVER, G. HOURIHAN, R. LARSSON -<br><b>HIERARCHIC</b>  | I. K. ADIZES –<br><b>ADMINISTRATOR</b>         | A. J. ROWE -<br><b>ANALYTICAL</b> | D. KIERSEY, M. BATES -<br><b>SJ</b>  |
|--|--|--|-----------------------------------|--------------------------------------|
| Input characteristics  |  |  |                                   |                                      |
| 1. Amount of information, needed to make decision                | All available  | All available                                  | All available                     | All available                        |
| 2. Preferred form of information                                 |  | Written  | Written                           | Written                              |
| Process characteristics  |  |  |                                   |                                      |
| 3. Perceived organizational goal                                 |  | Efficiency in short-term perspective           |                                   |                                      |
| 4. Priority is given to (result vs. process)                     |  | Process  |                                   |                                      |
| 5. Time reference  |  | Short-term                                     |                                   | Past, present                        |
| 6. Local/global focus  |  | Local  |                                   | Local                                |
| 7. Basic needs   |  | Control over the situation                     | Control over the situation        |                                      |
| 8. Dominant criterion  |  | Adherence to rules                             |                                   | Adherence to tradition and authority |
| 9. Attitude towards risk   |  | Negative                                       |                                   |                                      |
| 10. Tolerance to ambiguity                                       |  |  | High                              |                                      |
| 11. Decision-making process                                      |  | Structured                                     |                                   | Structured                           |
| 12. Focus in search for options                                  | Finding the single right answer  | Optimal solution                               | Optimal solution                  |                                      |
| 13. Prefer to rely upon logical analysis or practical experience | Intellectual style   |  | Logical analysis                  |                                      |
| 14. Speed of decision-making                                     | Low  | Low  |                                   |                                      |
| 15. Employees' involvement in DM process                         | Expect others to contribute – and will readily challenge others' views, analyses, and decisions                                      | Favor, but in a highly formal way              | Low, have autocratic bent         | Support hierarchical relations       |
| Output characteristics   |  |  |                                   |                                      |
| 16. Adaptability of approach                                     | People using this highly analytical and focused style expect their decisions, once taken, to be final and to stand the test of time. | Low, not inclined to change plans once adopted |                                   |                                      |

**Table 3. Comparison of DECISIVE – PRODUCER – DIRECTIVE – SP styles**

|  | K. R. BROUSSEAU,<br>M. J. DRIVER,<br>G. HOURIHAN,<br>R. LARSSON -<br><b>DECISIVE</b> | I. K. ADIZES -<br><b>PRODUCER</b>  | A. J. ROWE -<br><b>DIRECTIVE</b>                 | D. KIERSEY, M.<br>BATES - <b>SP</b>   |
|--|--|--|--|---|
| <b>Input characteristics</b>                                     |  |  |  |   |
| 1. Amount of information, needed to make decision                | Limited  |  | Limited  |   |
| 2. Preferred form of information                                 |  |  | Oral   |   |
| <b>Process characteristics</b>                                   |  |  |  |   |
| 3. Perceived organizational goal                                 |  | Functionality  |  |   |
| 4. Priority is given to (result vs. process)                     | Result   | Result   | Result   |   |
| 5. Time reference  |  | Short-term   | Short-term                                       | Short-term  |
| 6. Local/global focus  |  | Local  | Internal to organization                         |   |
| 7. Basic needs   |  | Achievement  | Security and status                              |   |
| 8. Dominant criterion  |  | Effectiveness  | Effectiveness                                    |   |
| 9. Attitude towards risk   |  |  |  | Positive (select high risk occupations)   |
| 10. Tolerance to ambiguity                                       |  | Low  | Low  |   |
| 11. Decision-making process                                      |  | Structured   | Structured                                       |   |
| 12. Focus in search for options                                  | “Satisficing” option   |  | Practical solution                               |   |
| 13. Prefer to rely upon logical analysis or practical experience |  |  | Practical experience                             | Practical experience  |
| 14. Speed of decision-making                                     | High   | High   | High   |   |
| 15. Employees’ involvement in DM process                         |  | “If you need a guarantee that the job is performed properly – do it yourself!” | Low, generally have the drive to dominate others |   |
| <b>Output characteristics</b>                                    |  |  |  |   |
| 16. Adaptability of approach                                     | Select single option. Stick to the plan and move on to the next decision             | Love improvisation   |  | Use iterative approach, definition of problem may change in the process of solving it |

**Table 4. Comparison of FLEXIBLE – INTEGRATOR – BEHAVIORAL – NF styles**

|  | K. R. BROUSSEAU,<br>M. J. DRIVER,<br>G. HOURIHAN,<br>R. LARSSON -<br><b>FLEXIBLE</b> | I. K. ADIZES -<br><b>INTEGRATOR</b> | A. J. ROWE -<br><b>BEHAVIORAL</b>          | D. KIERSEY,<br>M. BATES -<br><b>NF</b> |
|--|--|-------------------------------------|--|--|
| Input characteristics  |  |                                     |  |  |
| 1. Amount of information, needed to make decision                | Limited - just enough data to choose a line of attack                                |                                     | Limited                                    |  |
| 2. Preferred form of information                                 |  |                                     | Oral                                       |  |
| Process characteristics  |  |                                     |  |  |
| 3. Perceived organizational goal                                 |  | Effectiveness in the long term      |  |  |
| 4. Priority is given to (result vs. process)                     |  | Process                             |  |  |
| 5. Time reference  |  | Future                              | Short to medium range                      | Future                                 |
| 6. Local/global focus  |  | Global                              |  |  |
| 7. Basic needs   |  | Acceptance                          | Acceptance                                 | Becoming, self-discovery               |
| 8. Dominant criterion  |  | Consensus among subordinates        |  | Integrity of solutions                 |
| 9. Attitude towards risk   |  |                                     |  |  |
| 10. Tolerance to ambiguity                                       |  |                                     | Low  |  |
| 11. Decision-making process                                      |  | Unstructured                        |  |  |
| 12. Focus in search for options                                  |  | Acceptable option                   |  |  |
| 13. Prefer to rely upon logical analysis or practical experience |  |                                     |  |  |
| 14. Speed of decision-making                                     | High – “make decisions quickly”  | Low                                 |  |  |
| 15. Employees’ involvement in DM process                         | High involvement   |                                     | Receptive to suggestions, enjoy counseling |  |
| Output characteristics   |  |                                     |  |  |
| 16. Adaptability of approach                                     | Quickly change course if need be   |                                     |  |  |

Cells corresponding to features, not specified explicitly in respective methodologies have been left empty.

Given the substantial number of empty cells in tables 1-4 we realize that actually the task we are facing is similar to comparing two partially destroyed text fragments attempting to establish the identity of content. Looking for fit does not necessarily mean looking for same words in types’ descriptions but rather looking if one description of particular feature may be associated, or goes in line with another. For example, “approval and support” as a basic need we consider to be well associated with “praise, recognition and independence” and “consensus among subordinates” as a feature which goes in line with “integrity of solutions”.

Tables 1-4 demonstrate that as suggested by I. Adizes ENTREPRENEUR style appears to correspond to NT temperament of D. Kiersey, M. Bates. Besides this, other correspondences may be established: INTEGRATIVE-ENTREPRENEUR-CONCEPTUAL-NT, FLEXIBLE-INTEGRATOR-BEHAVIORAL-NF, HIERARCHIC-ADMINISTRATOR-ANALYTICAL-SJ, DECISIVE-PRODUCER-DIRECTIVE-SP.

Literature provides additional evidence for the proposed correspondence. K. Brousseau et al. suggest that C-level executives should demonstrate moderately high levels of INTEGRATIVE and HIERARCHIC styles, moderately low level of DECISIVE and moderately low-to-low level of FLEXIBLE. This perfectly corresponds to earlier finding of A. Rowe for 80 senior executives with moderately high (dominant) level of CONCEPTUAL style, slightly higher than average ANALYTIC style, considerably lower than average DIRECTIVE style and avoided BEHAVIORAL style. This is also in line with D. Kiersey results showing much higher proportion of NT-people among managers and entrepreneurs as compared with general US population. I. Adizes attributes PRODUCER and ADMINISTRATOR styles to left-brain thinking while INTEGRATOR and ENTREPRENEUR styles with right-brain thinking which perfectly coincides with the view of A. Rowe with respect to ANALYTICAL styles and CONCEPTUAL and BEHAVIORAL styles accordingly. A. Rowe also refers to an earlier work of A. Zaleznick associating ANALYTICAL style and behavior of a bureaucrat and I. Adizes regards bureaucrat as an extreme manifestation of ADMINISTRATOR style.

The fit between descriptions of style, although impressive in some pairs is nevertheless not perfect even within the considered framework of characteristics. We encounter contradictory statements concerning: speed of decision-making in pair “FLEXIBLE-INTEGRATOR” (“Make decisions quickly” vs. “Low”); employees’ involvement in DM process in pair “HIERARCHIC- ADMINISTRATOR” (“Expect others to contribute – and will readily challenge others’ views, analyses, and decisions” vs. “Favor, but in a highly formal way”); time reference in triad “FLEXIBLE-INTEGRATOR-NF” (“Future” vs. “Short to medium range” vs. “Future”)

Other researches also contribute certain doubt about the proposed fit. I. Adizes discussing ENTREPRENEUR and INTEGRATOR styles indicates that in Japan level of ENTREPRENEUR was historically low at the expense of INTEGRATOR style. Japanese had never been innovators-individualists. They have even to import corporate leaders from abroad! On the other hand, according to A. Rowe results, the score for CONCEPTUAL style for Japanese managers was higher than for their American colleagues.

Consequently, we can in no way state that INTEGRATIVE-ENTREPRENEUR-CONCEPTUAL-NT, FLEXIBLE-INTEGRATOR-BEHAVIORAL-NF, HIERARCHIC-ADMINISTRATOR-ANALYTICAL-SJ, DECISIVE-PRODUCER-DIRECTIVE-SP are fully identical styles. Rather, we can put forward a hypothesis that there is a strong association of the described kind and thus a person, exhibiting, for example, a domination of the INTEGRATIVE style in terms of K. Brousseau, M. Driver, G. Hourihan and R. Larsson should most probably fall into ENTREPRENEUR category in terms of I. Adizes methodology, and a person with NF temperament in terms of D. Kiersey and M. Bates should most probably exhibit domination of BEHAVIORAL style in terms of A. Rowe.

## **COMPARISON OF DM STYLE TYPOLOGIES – STATISTICAL ANALYSIS**

We attempted to apply the logic outlined above to a sample of 64 Russian executives, working on their EMBA. DSI and Decision style Survey Form by P. Nutt and D. Marcic (P. Nutt, 1989) as a proxy for MBTI have been used as measuring tools. It is obvious that the sample size is not sufficient to make ultimate conclusions on the proposed hypothesis – only some preliminary results are available for today. In our mind, it is still worth considering them as well as additional problems that have surfaced in the research process.

As far as only one D. Kiersey and M. Bates temperament is attributed to a person whereas several A. Rowe styles may be found dominant (or back up) we distinguish two situations: the situation in which A. Rowe style “corresponding” to D. Kiersey and M. Bates temperament is avoided (this is an argument against the proposed hypothesis) and the situation, in which this style is either dominant one, or a back-up (this is an argument in favor of the proposed hypothesis). Statistical table for the  $\chi^2$  test follows.

The results are encouraging for the CONCEPTUAL – NT pair, somewhat doubtful for pairs BEHAVIORAL – NF and DECISIVE – SP and fully discouraging (showing the pattern opposite to the suggested one) for the ANALYTICAL – SJ pair. However, most probable reason for this is low numbers of managers with respective temperaments (4 and 7) in the sample. At the same time domination of NT temperament is one of the predicted aspects of the situation. Additional testing on larger samples is required.

**Table 5. Statistics for  $\chi^2$  test**

| Statistics for CONCEPTUAL – NT pair |  |             |
|-------------------------------------|--|-------------|
| Avoid CONCEPTUAL                    | Have CONCEPTUAL as dominant or back up | Temperament |
| 8                                   | 30                                     | NT          |
| 10                                  | 16                                     | Other       |
| P-value=0,032912907                 |  |             |
| Statistics for BEHAVIORAL – NF pair |  |             |
| Avoid BEHAVIORAL                    | Have BEHAVIORAL as dominant or back up | Temperament |
| 8                                   | 8                                      | NF          |
| 32                                  | 16                                     | Other       |
| P-value=0,273321894                 |  |             |
| Statistics for DECISIVE – SP pair   |  |             |
| Avoid DECISIVE                      | Have DECISIVE as dominant or back up   | Temperament |
| 0                                   | 4                                      | SP          |
| 12                                  | 48                                     | Other       |
| P-value= 0,000224288                |  |             |
| Statistics for ANALYTICAL – SJ pair |  |             |
| Avoid ANALYTICAL                    | Have ANALYTICAL as dominant or back up | Temperament |
| 3                                   | 4                                      | SJ          |
| 17                                  | 40                                     | Other       |
| P-value= 0,002227574                |  |             |

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# STRATEGIC E-HR: MATCHING E-BUSINESS VALUE DRIVERS AND HR MANAGEMENT TASKS

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## ABSTRACT

*The scant e-HR literature has thus far focused on the shift from traditional HR Management to the adoption of e-HR. However, very little attention has been granted into understanding the strategic match between actual HR tasks and e-HR value creation. This paper embeds e-business logic into HR operations management. This is done by conceptualizing a framework for analyzing and evaluating e-HR activities in terms of the fit between e-business value drivers and key HR activities. This effort culminates in suggesting e-HR value creation analysis matrix, based on which five propositions are formulated predicting the relative impact each value driver may have on different HR activities.*

## INTRODUCTION

With more than 1.2 billion Internet users worldwide (Internet World Stats, 2007), and over a 100 Million active domains registered in 2007 (DomainTools, 2007), the Internet is entering people's lives and being incorporated into business' strategies in an unprecedented level. Recognizing the Internet's commercial potential for business, firms have continuously looked into ways of using Internet-based technologies for tailoring more efficient and effective strategies and practices, while attempting to tap into an ever expanding global pool of resources and market opportunities.

Thus far, most of the attention had been focused on changes to commercial conditions, shifts in relationships and roles of sales intermediaries, extending transactional capabilities, and upgrading customer relations and retention. At the same time, very little attention had been given to the use of electronic network-based solutions for human resources management (HRM). The few existing studies either provide initial insights into Internet-based HRM in general (Cairns, 2006; Ensher et al., 2002; Karakanian, 2000; Lengnick-Hall & Moritz, 2003; Panayotopoulou et al., 2007), or focus on specific applications for recruitment (Maurer & Liu, 2007; Singh & Finn, 2003), benefit management (Cambern, 2006), and training (Gascó et al., 2004; Long & Smith, 2004). Still, for the time being, most relevant data on the use of electronic HRM practices are scattered and unscientific (Lengnick-Hall & Moritz, 2003), and a systematic approach to analyze the influence of Internet technology on HRM is in dire need.

The introduction of a new phenomenon titled 'e-HR' has followed the emergence of e-commerce during the 90's, and is usually referring to conducting HRM-related transactions while using the Internet (Lengnick-Hall & Moritz, 2003). Furthermore, Karakanian (2000) views e-HR as the overall HR strategy which shifts from the HR department and is redistributed to other organizational units and trusted business partners, in a way which integrates HR activities with other corporate processes (e.g. finance, supply chain, and customer service).

Our investigation of e-HR contributes to the literature in developing a much needed framework for analyzing how exactly may e-HR affect performance, while conceptually applying e-business value creation frameworks to the main functions and activities of HRM. In this sense, we aspire to uniquely bridge e-business logic with HRM needs. The question of how to attract, motivate and develop workers with critical skills and aptitudes is one of the main concerns of our paper. And specifically we want to address the questions of whether and how can e-based solutions influence firm value creation activities through proper configurations of HRM practices.



In order to pursue these objectives, we first introduce the available literature on e-HR while identifying some gaps and challenges that need to be explored further. In the next section we then present e-business and the logic of value generation that underlies it. In the third section an analytical framework of e-HR adoption and its underlying forces impacting performance is being suggested, resulting in a refined list of three main propositions. And, finally, based on this conceptual development, venues for further research are suggested.

## **HR PRACTICES AND INTERNET TECHNOLOGIES: THE EMERGENCE OF E-HR**

The term 'e-HR' (or online HRM) refers to the use of a wide range of Internet-based applications for conducting HRM-related transactions (Lengnick-Hall & Moritz, 2003). What initially started as a way of making information available for employees and managers through the Internet, has developed into advanced total e-HR solutions, which may include enterprise resource planning (ERP) software, HR service centers, interactive voice response, web applications, voice recognition systems, and manager and employee portals (Lengnick-Hall & Moritz, 2003).

According to main contributions to e-HR literature (Cairns, 2006; Cambern, 2006; Ensher et al., 2002; Karakanian, 2000; Lengnick-Hall & Moritz, 2003), underlying the adoption of e-HR are the following shifts from traditional HR management: first, creating more cost-efficient and time-savvy HR activities. Second, delegating responsibilities to end users for various administrative tasks through employee self-service systems (ESS), such as updating their own profiles, filling evaluation forms, filling employee surveys, tailoring their own benefit schemes (within set borders), process travel expenses refund claims, etc. Third, making more information better available to all authorized parties (e.g. employees, managers, HR service providers, corporate customers, and the public). Fourth, strategically incorporating HR into the firm's operations systems in a way which integrates HR-related activities with other corporate processes (e.g. finance, supply chain, and customer service), and also aligning them with other external partners. Moreover, by doing so, distance between the HR department and its internal customers is reduced. Finally, it is turning the HR function from an administrative division to a strategic partner, moving beyond traditional tasks such as hiring, training, and compensation management into new value generating strategic areas such as knowledge management and the creation of social capital.

When focusing on the HR function within organizations, Lengnick-Hall & Moritz (2003) claim that e-HR has the potential to affect both efficiency and effectiveness. Efficiency emerges in abilities to cut cycle times and costs of processing paperwork, increasing data accuracy, and reducing human resource staff. And effectiveness emerges in the ability of managers and employees to make timely and better educated decisions, through the use of improved HR knowledge management systems and reporting tools, as well as through social capital creation efforts and relationship building.

However, although much praise has been bestowed upon e-HR systems, one should also acknowledge the most frequently mentioned shortcomings associated with the implementation of such systems. One major concern is that of privacy and information security, especially with respect to the sensitive private data (e.g. employee evaluation reports, opinion surveys, and compensation and benefit schemes) being collected and processed as part of HRM activities (Karakanian, 2000; Lengnick-Hall & Moritz, 2003). In addition, health and safety issues such as ergonomic considerations and technology related stressors (e.g. information overload), often associated with more extensive work with computers, should also be monitored and solved by management (Ensher et al., 2002). And other concerns include issues such as potential resistance to the blurring of borders between work-life and home-life, risks of transforming employees into 'information junkies', or refusal of employees to take on the extra-burden of updating HR data and forms on their own (Lengnick-Hall & Moritz, 2003).

Having those concerns in mind, it is increasingly evident that e-HR is being used to different degrees in various organizations. Lengnick-Hall & Moritz (2003) have conceptualized different levels of e-HR adoption by characterizing three forms, namely – information, automation, or transformation. The information form implies that information is published and made more available to employees and managers throughout the organization in a cost-efficient and timely manner, so that costs of printing and distribution of materials, as well as their updating, are significantly reduced through online publication. The automation form introduces two-ways communication solutions, where employees and managers have access to databases and forms, where they can

update information or tailor-make specific reports for decision making. Finally, at the transformation stage, HR functions are liberated from operational focus and are redirected towards a more strategic one, where they become more active in the stewardship of the organization's intellectual capital, developing the organization's social capital, and facilitate the flow of knowledge.

Ensher et al. (2002) identified five main areas in which Internet-technologies influence HR processes: in acquiring HR (recruitment and selection), rewarding HR (performance evaluation, compensation and benefits), developing HR (training and development, career management), protecting HR (health and safety, employee relation, and legal issues), and retaining HR (retention and work-family balance). Moreover, Panayotopoulou et al. (2007) have also suggested that influences are evident in HR planning activities, which may improve thanks to the availability and maintenance of extended and up-to-date employee databases.

Interestingly enough, findings from the Watson Wyatt survey (2002), covering 649 US-based firms of all sizes, challenge the assumption that the faster an organization moves its traditional HR services into an e-HR environment, the more efficient HRM would become and employees would be more satisfied. Their survey shows that better performance is associated with excellent strategic implementation of e-HR, rather than the speed or extent at which it is implemented by the organization.

What excellent strategic implementation of e-HR actually means remains a riddle, and in order to better capture the advantages embedded in e-HR systems' deployment one must understand value creation logic in e-business applications in general. This part of the HR strategic planning has often been neglected in earlier literature, and the following section will serve as the first step towards closing this gap. Following which a model of strategic e-HR implementation, based on various e-value drives may be suggested.

## THE EMERGENCE OF E-BUSINESS MODELS

Returning to basics, 'Internet' simply means a 'network of networks', and is defined as a network of interlinked computers throughout the world operating on a standard protocol which allows data to be transferred between otherwise incompatible machines (Hamill, 1997). Such networks link a wide range of participants (individuals, companies, organizations, governments, education and research institutions, etc.), and supports the transfer of a wide range of data (text, graphics, audio, video, software, etc.).

Weill & Vitale (2001) define e-business as doing business electronically by completing business processes over open networks, while substituting information for physical business process. Therefore, the concept of e-business also involves the supporting functions of commercial transactions, including business intelligence gathering and processing, customer and technical support, connection and relations with suppliers, as well as human resources management and training.

At the micro level, various authors have sought to understand the sources of value creation when employing e-business models at the firm's level of analysis (Amit & Zott, 2001; Barua et al., 2001; Christensen et al., 2002; Doern & Fey, 2006; Shneor, 2004, 2007). However, the most influential framework is Amit & Zott's (2001) value drivers' model, which highlights four interdependent sources of value creation, namely – efficiency, complementarities, lock-in, and novelty. *Efficiency* indicates that value may be created through reduction of information asymmetries between buyers and sellers, greater speed at which information is transferred, reductions of customer search and bargaining costs, availability of wider selection range at lower costs, reduction of various firm operational costs (e.g. distribution, inventory management, marketing, sales, communications, etc.), scale economies, simpler transactions, faster delivery, etc. *Complementarities* indicates that value may be created through the bundling of complimentary products and services (vertically or horizontally), the combination of online and offline assets, the offering of complimentary goods not directly connected to the core transactions, capitalizing on complementarities among activities (e.g. supply chain integration) and technologies, etc. *Lock-in* indicates that value may be created through increasing switching costs for customers and their encouragement to engage in repeated purchases (by means of loyalty programs, virtual communities, familiarity with interface, etc.), positive network externalities with growing customer value the larger the customer base gets, etc. And, finally, *Novelty* indicates that value may be created through innovation in new transaction structures, content, participants, etc. Moreover, Shneor (2004) identified a fifth value driver which may be

located between efficiency and lock-in titled – ‘*Availability*’, indicating that value may be created through greater firm exposure, higher accessibility across boundaries of time and geography, strengthening of brand awareness, expanding market share, etc. And as with previous drivers, this driver is interdependent with the rest.

In the following sections we wish to close the gap between HRM tasks and e-HR value creation by exploring micro-level influences on Internet-enabled HRM, by applying existing e-based frameworks and logics to the HRM context. In this sense, we are trying to analyze value creation through e-HR adoption in a systematic way, which may serve as valuable guideline for excellent strategic e-HR implementation.

## VALUE CREATION IN E-HR

Since implementing e-HR systems can represent a large investment, a persuading case must be made for convincing decision makers that benefits will outweigh the costs (Lengnick-Hall & Moritz, 2003). While it is easy to identify costs associated with e-HR implementation, it remains a great challenge to quantify the intangible benefits to be derived from an e-HR system. Most frequently used indicators include cost reductions, time savings, productivity improvements, return on investment, enhanced employee communications, etc (Lengnick-Hall & Moritz, 2003; Watson Wyatt, 2002).

In a study analyzing e-HR adoption in Greece, Panayotopoulou et al. (2007) defined three categories of benefits of e-HR use, related to strategy, process, and HRM. From a strategic point of view the resulting reduction in operating costs and enhancement of company image emerged as main benefits, while alignment of corporate and personal ranked relatively low. From a process perspective, time management emerged as the greatest benefit both within the category and in general, while minimizing errors and supporting management decision making were recognized as having only a moderate contribution. Finally, from an HRM perspective improved cooperation was identified as a major benefit, employee development as having moderate contribution, and employee satisfaction and qualified employee retention as the least prevalent of results.

Although interesting, such approach treats e-HR as a whole without differentiating between the various impacts on different HR tasks and responsibilities (e.g. recruiting, training, retaining, planning, etc), and still remains locked in a narrow interpretation of value as operational efficiency. Based on this we suggest an alternative more comprehensive approach which examines e-HR value creation in a way which views HR functional responsibilities through an e-prism. For this purpose we suggest a combined matrix analytical framework (see Table 1 below). First, the five value drivers embedded in e-business models, as identified in the literature presented above - efficiencies, complementarities, lock-in, novelty, and availability - are adopted. Second, each of these value drivers is assumed to affect specific HR activities, including the three main HR activities of – recruiting and selection, rewarding and evaluation, and training and development. And the matrix predicts the relative impact each of these value drivers may have on the differing HR activities.

**Table 1: e-HR Value Drivers Analysis Matrix**

|            | <b>Efficiency</b> | <b>Complementarities</b> | <b>Lock-In</b> | <b>Novelty</b> | <b>Availability</b> |
|------------|-------------------|--------------------------|----------------|----------------|---------------------|
| Recruiting | High              | Medium                   | Medium         | Low            | High                |
| Rewarding  | Medium            | Low                      | High           | Medium         | High                |
| Training   | Medium            | High                     | Low            | High           | Medium              |

This combined view of HR activities and e-business value drivers, provides a novel and richer approach easing the understanding of underlying powers that create better HR unit performance when adopting e-HR, and through that contributing to performance of the organization as a whole. Moreover, learning about the relative role of each driver within each HR activity, may serve as valuable guidelines for HR strategic decision making; especially when exploring investment options and mapping needs towards e-HR adoption and extension plans. After all, better planning and strategic deployment of e-HR was found to be the most influential factor predicting successful implementation of e-HR (Watson Wyatt, 2002).

For the time being, the matrix's ability to predict the relative impact each of the value drivers has on the different HR activities is based on a list of propositions, requiring further empirical confirmation. The propositions suggested in detail below, are formulated based on logical development and initial insights collected from the limited available literature on e-HR. This serves as an important first step in a currently ongoing study, through which the authors aspire to both further fine tune these assumptions, and empirically validate them.

## **Recruiting and Selection**

Recruitment is often regarded as the HR process which has been most influenced by the Internet (Ensher et al., 2002). Various market reports and surveys support this claim, and with indications such as 88% of global 500 companies using Internet-based recruiting already in 2001 (CMA Report quoted in: Ensher et al., 2002), and 98% of surveyed UK-based HR professionals doing the same by 2003 (Reed report quoted in: Wigham, 2004), one can conclude that the Internet has indeed revolutionized the recruitment function.

In interviews with HR professionals, Ensher et al. (2002) found three consistent themes concerning the use of Internet in recruiting: first, more companies are using the Internet for posting jobs and receiving resumes, either through the firms' own websites or through postings on Internet-based recruiters' websites. Second, the use of the new technology reduces cost and turnaround time needed for filling positions, also referred to as just-in-time recruitment (Singh & Finn, 2003). And, third, the quality of applicants has not suffered, and instead firms are better able to tap into global talent without being limited to local pools of candidates. Furthermore, when the actual selection process is concerned, these authors found that Internet technologies have profound impact on the capabilities to scan and filter candidates as well. Today, firms can use automatic scanning systems that go through bulks of CVs searching for certain keywords, and short-listing a selected few for further processing. Moreover, new online testing and assessment tools can replace physical solutions that where much more costly and time-consuming, and often required travelling from various locations. And finally, initial interviews may also be conducted online either in a written form, or in a face-to-face Internet-based telephone or video interview.

According to Singh & Finn (2003) this helps to transform the HR function from an owner of recruitment data to a critical knowledge sharing centre, now focused on internal customer service for various intra-organizational stakeholders. This further implies that hierarchies may be flattened and the line managers can contact candidates directly based on their access to recruitment databases, cutting bureaucratic processes, while collaborating with HR officials to avoid legal and other blunders. Moreover, recruitment staff can better coordinate with organizational units across different time and geography zones, through virtual teamwork arrangements, conferencing and social networks.

With all its promises, one must also recognize potential limitations associated with online recruitment. One concern is for discrimination of ethnic minorities who despite the fact that Internet is technically open to all users, still may not have the required access to computers or have the skills to use online recruiting (Hogler et al., 1998; Singh & Finn, 2003). Another concern are cases where HR managers experience an overload of qualified applications, and as a result having trouble keeping up with the speed of recruiting through Internet. Moreover, some concerns have been raised that Internet recruitment may be more suitable for certain jobs and not for others (Singh & Finn, 2003), for example Ensher et al. (2002) found that Internet is not an effective recruiting tool for senior executive positions. And finally, some recognize the challenge in developing effective e-recruiting websites, where recruiters should avoid job opportunity rejections by job-seekers simply because of poorly designed websites or the need to use online application systems, which are too complicated (Maurer & Liu, 2007).

Overall, employing e-HR solutions for recruitment and selection activities helps firms reduce both the costs and time similar processes require through offline platforms to a significant extent. Online job postings are immediately available for candidates to track down at all time, and such exposure is not limited to expensive one time printed media publications. Moreover, availability of information about new job openings, requirements and application procedures, reaches a larger crowd than traditional recruitment intermediaries would like and, therefore, generates more applications for each job opening posted. All of which meaning that

time period from advertisement to application is significantly cut. Selection is also processed faster thanks to smart search agents that scan digital profiles and CVs for keywords, and help filter the larger amount of applications received. Again, further cutting the time required to scan candidates as well. Overall, processes that previously took a few months can now potentially be concluded within days. Therefore, we propose that *efficiency* and *availability* drivers will have a large impact on performance of recruiting and selection activities.

Moreover, the ability to use both online and offline advertising outlets for new job openings, as well as receiving application material through different communications tools, again may help tap into larger pools of potential candidates, and enhance the firm's credibility. Short expensive print ads could serve as invitation for starting online application procedures, through which richer information can be provided to candidates. Once candidate databases exist, the firm can also initiate contact with candidates concerning new openings, as well as invite them to periodically update profiles for future reference. Still, while these benefits are obvious, they may serve as more support drivers rather than being the main performance enhancement tools. Therefore, we propose that *complementarities* and *lock-in* drivers will have a moderate impact on performance of recruiting and selection activities.

Finally, using Internet platforms may help promote job openings on diverse new electronic outlets, using new players such as online recruiters, and through the application of new database management technologies for screening CVs and application materials, collecting and processing candidate information. These effects of novelty will also play a supportive role, rather than revolutionize the process as a whole. Therefore, we propose that after refining *efficiency* and *availability* gains, as well as the other sporting effects, *novelty* in it-self will play a weaker role in recruitment and selection activities.

In summary, we propose that:

***P1:*** *Better performance with respect to recruiting and selection activities is attributed to:*

*(a) A large extent to efficiency and availability effects; (b) a moderate extent to complementarities and lock-in effects; and (c) a small extent to novelty effects.*

## **Rewarding and Evaluation**

According to Cambern (2006) online benefits management systems run from websites where employees access policy information and are able to process forms in integrated HR information system portals, which automatically connect and update billing, payroll, and benefits programs in a timely and cost efficient manner. This is done in a way which is both personalized and tailored to individual employee needs, and at the same time allows for systematical gathering and analysis of information that helps tailor more options and improved offerings, which in turn results in more satisfied and loyal employees. Employees value the ability to access benefits information at any time from different locations, receive personalized information while confidentiality is maintained, and being allowed to take an active role in tailoring their own plans, and not simply accepting whatever is given to them. In addition, beyond a greater ability to retain more satisfied employees, the employers themselves enjoy more up-to-date information about their employees, while reducing costly errors in sensitive data reporting, and facilitating consistent communications across the different locations in which the firm operates.

Ensher et al. (2002) claim that benefit administration has been radically changed with the Internet, in the sense that it became more of a self service operation via the company's Intranet. HR still sets the boundaries and provides explanations about available options, but it is the employees themselves that are going online to complete their profile details and select their preferred options. In this context, their survey also showed a certain preference for performance and skill-development based incentives, which automatically translates into enhanced training and learning needs that the HR department has to answer for. However, this may be biased by culture and institutions typical of the US business environment, which are mostly associated with more calculative HRM practices (As suggested in: Gooderham et al., 2006). Moreover, it appears that the Internet has aided employees in becoming better informed about compensation and benefits options, as well as industry bench marks and statistics that allow them to compare their own position versus other similar employees elsewhere, and as a result, come with specific demands to their managers and HR officials. On the other hand,

although not mentioned in this study, if employees are better informed thanks to the Internet, so is the firm's management, probably also doing a better job at avoiding excessive overpays, thanks the same information available online.

Employees' benefits and rewards are closely related to performance evaluations. Here, Internet technologies have contributed to cost efficient distribution of performance evaluation materials; however, it has contributed less to the actual analysis of the obtained data (Ensher et al., 2002). This is somewhat of a surprising finding, as in principal advanced capabilities of database analysis, manipulation and reporting exist, and the lag seems to remain on the user side rather than the technological one.

Overall, employing e-HR solutions for rewarding and evaluation have enhanced employee awareness, involvement, and responsibilities concerning their own benefit plans configurations, as well as monitoring and sense making from their performance evaluations. Having policy information, company and industry benchmark details, and decision making support tools available online at all times and from different locations for their own evaluation and benefit plan tailoring, all of which empower employees in making better informed decisions, while involving a greater circle of stakeholders (e.g. family). Therefore, we propose that the *lock-in* driver, putting premium on employee own involvement, and the *availability* driver, stressing easy access to information, will have a large impact on performance of rewarding and evaluation activities.

Furthermore, the ability to compare firm offerings to industry benchmarks helps in avoiding excessive payments to employees, as well as strategic positioning above or below industry standards. Also the ability to evaluate employees' needs and analyze their preferences can help firms seek best offers from external suppliers of the various benefit plan components (e.g. insurance firms, health services, leisure services, etc). All of which stressing the openness to new components in benefit offerings and their potential suppliers, as well as the efficiency at which they may be provided and strategically decided upon by the firms. Therefore, suggesting that *efficiency* and *novelty* may both provide a supporting effect on performance levels of rewarding and evaluation activities.

Finally, once a benefit plan had been selected and tailored to individual needs, the whole system's automatic and timely synchronization across various HR and organizational functions, both further supports operational efficiency and adds a complementarities effect across these functions. Hence, we propose that after refining *lock-in* gains, as well as the other supporting effects, *complementarities* in it-self will play a weaker role in rewarding and evaluation activities.

In summary, we propose that:

***P2:*** *Better performance with respect to rewarding and evaluation activities is attributed to:*

*(a) A large extent to lock-in and availability effects; (b) a moderate extent to novelty and efficiency effects; and (c) a small extent to complementarities effects.*

## **Training and HR Development**

The Internet enables the delivery of computer-based training across time and distance, in a manner that allows firms to diversify the learning portfolio, accelerate the pace of learning, and create new opportunities for employees learning (Long & Smith, 2004). Web-based distance learning is one main form of online training which is fairly easy to develop and adapt to changing organizational needs. However, in order for it to be effective, its design must be tailored to answer the organization's strategic needs by being tied to specific business objectives, as well as to strike a balance between collaborative learning and independent learner control (Long & Smith, 2004).

Adopting online training tools leads to cost reductions in a number of expenditure categories, including: direct and indirect costs associated with traveling and being away from work, costs of producing training materials, as well as costs of updating training materials (Ensher et al., 2002). In addition, other cost reductions may also be envisaged, including: costs of training facility rentals, costs associated with course feedbacks' collection and analysis, and costs of evaluating participant's learning.

Keeping all these potential advantages in mind, some concerns about online training exist as well. First, surveys show that online training is characterized by relatively low retention and completion rates, either due to missing social interaction surrounding the learning experience, or because of distractions at home or in a work environment (Ensher et al., 2002). However, some studies, such as Schmeeckle's (2003) analysis of online versus classroom based training showed that online training is as effective an instructional method as classroom training, and more efficient than classroom training. Still, more evidence supporting these findings are necessary, especially when applied to more liberal and business-oriented organizations. For the time being, Long & Smith (2004), suggest that a solution may be found in creating more collaborative learning opportunities, either electronically or in physical classroom sessions which take place parallel or complementary to online sessions.

Finally, some insights into success factors behind the adoption of e-learning solutions in international business organizations are provided in Gascó et al.'s (2004) study on the influence of information technology on training policy in Telefonica, the Spanish telecommunications giant. These factors include flexibility in time management for training, active participation by trainers, establishing control mechanisms to ensure that training occurs, the creation of quality content, the promotion of interactive elements among users (trainers, students, and with each other), the use of standardised and developed technologies, and a gradual implementation process.

Overall, employing e-HR solutions for training and employee development provides innovative ways for setting educational standards across the organization, delivering training sessions across locations and time zones, adapting content to functional, professional and local needs, as well as monitoring individual employee performance and training results in real-time. Moreover, for certain trainings learning interactions in complementary offline and online group study sessions are necessary. And e-learning systems also allow the provision of new and complementary set of study materials using text, graphics, voice, and video tools; which again may be technically adapted to various target audiences. Moreover, the electronic embedding of training solutions in an overall HR system, serves as a complementary tool for employee career development in the sense that employees can monitor their training requirements for moving up the positions' or salary ladder, and take up the necessary training online. Therefore, we propose that *novelty* and *complementarities* effects will have a large impact on performance of training and HR development in an e-HR adopting organization.

Efficiencies may also be gained through cost reductions in traveling across locations, time saved, and benefits paid to employees going on distant location training sessions. However, these cost reductions are to a certain extent offset by needs to hold some training sessions in seminar classes or on-site in certain locations, or increased costs associated with adjusting content (to different languages, different target groups, etc), as well as in needs for costly in-house development of highly specialized trainings that would have otherwise be provided by external suppliers. Still, the flexibility inherent in remote access to online training tools at the time and place of convenience for each employee provides a great benefit valued by employees. Again, this appreciation is also limited, as employees find it hard to detach from work obligations in their normal working site, and as they sense losing an opportunity to acquire certain tacit knowledge, normally developed through human interaction and learning experiences. Therefore, we propose that both *efficiency* and *availability* have positive but only supportive moderate influences on performance related to training activities.

Finally, on the one hand Internet-based training has exhibited low retention and completion rates, and on the other hand has extended the flexibility of completing obligatory training, answered employees needs to further develop their education and skills, while also sometimes allowed them to compare test results with general firm statistics, as part of their career development ambitions and plans; and, off course, doing all of this at the time and speed of their choice. Therefore, we propose that *lock-in* effects will have minor impact on performance of training and development activities.

In summary, we propose that:

***P3: Better performance with respect to training and development activities is attributed to:***

*(a) A large extent to complementarities and novelty effects; (b) a moderate extent to efficiency and availability effects; and (c) a small extent to lock-in effects.*

## CHALLENGES AHEAD

In the previous section a list of propositions concerning the impacts different e-business value drivers might have on e-HR functional performance have been outlined. However, the challenge here remains in actually capturing what we seek to analyze. Hence, for measurement purposes, a list of unique statements representing e-HR manifestations for each of these value drivers is presented in the appendix. Each of these statements can be evaluated perceptually by practitioners, indicating to what extent has the suggested impacts actually occurred in their organization since implementing e-HR. Although the current paper does not attempt to empirically verify these statements as such, it suggests them as possible instruments for capturing these impacts in the authors' ongoing study.

## CONCLUSION

While e-HR is being implemented to vast extents in various organizations around the world, it has still been little explored, providing very few predictions about its influence on organizations, and what actually constitutes its successful deployment within them. In the current paper, existing vague recommendations suggesting excellent strategic e-HR implementation as a key source for its success were refined into a clear set of propositions. The challenge of identifying powers underlying e-HR implementation and influence on the organization has been undertaken; and for this purpose, we have created a unique matrix which evaluates the relative contribution of value drivers associated with e-business modeling logics, and HR functional activities.

In this sense, our main contribution is in enhancing the understanding of e-HR's impact on the HR unit activities and organizational performance, by being the first to suggest a conceptual bridge between HR concerns and e-business logics. However, at this early stage, while our matrix presents an interesting theoretical conceptualization, it still requires empirical validation. Therefore, the current paper is the first in a series of studies undertaken by the authors, which both conceptually develop a strategic e-HR value drivers' analysis framework, and empirically test it in different industries and national settings.

Naturally, such pioneering work paves the way for numerous future research venues. First, scholars are invited to challenge the propositions presented above and contribute to their validation or disproof through empirical analysis. In addition, one may challenge the use of the five value drivers adopted from the e-business literature and replace them with other elements that may underlie value generation and enhancement through e-HR system deployment. Moreover, one may also envisage a study into how e-HR may inhibit value generation and enhancement, as suggested in some of the reverse effects described in earlier sections. And finally, cross-industry and cross-national studies comparing e-HR adoption levels and implementation patterns are in dire need and may prove extremely valuable.

In conclusion, as HR professionals take on the challenge of integrating information technology, network communications, and the human touch, while implementing e-HR systems throughout organizations; the next challenge is in better understanding how to do it right, and how to capture as much value as possible from proper implementation of these tools. The current paper serves as an initial step in this direction.

## APPENDIX

### Value Drivers' Manifestations in e-HR Practices

| HR Function | Value Drivers | HR Dept. Performance                                     |
|-------------|---------------|--|
| Recruitment | Efficiencies  | Decreasing costs of applicant search related advertising |
|             |               | Decreasing costs of intermediary recruitment services    |
|             |               | Decreasing time from application to posting              |



|                  |                   |   |
|------------------|-------------------|---|
|                  |                   | Increasing ability to tap into higher quality candidates  |
|                  |                   | Faster delivery of job application documents  |
|                  |                   | Faster absorption of new employees once chosen  |
|                  | Lock-In           | Proactive invitation of candidates in database to apply for relevant positions  |
|                  |                   | Proactive encouragement of candidates to update their details on their online candidate profiles periodically   |
|                  | Novelty           | New ways for screening CVs and application documents  |
|                  |                   | New outlets for publicizing vacancies (professional social networks, industry databases, online magazines, online recruiters, etc)                                |
|                  |                   | New ways of facilitating new employee absorption  |
|                  | Complementarities | Usage of a combination of online and offline selection procedures (e.g. online CV screening + offline interview)  |
|                  |                   | Usage of applicants' database for recruiting for other positions  |
|                  |                   | Improves absorption process of new employees, logistics, welfare, and IT are notified in advance.   |
|                  | Availability      | Access to a larger pool of candidates   |
|                  |                   | Access to different sources of candidates (countries, organizations, social networks, etc.)   |
| <b>Rewarding</b> | Efficiencies      | Decreasing costs of printing and copying of evaluation materials  |
|                  |                   | Faster distribution and collection of performance evaluation materials to and from managers   |
|                  |                   | Decreasing number of errors in filling evaluation documents   |
|                  |                   | Higher response rate for performance evaluation tasks   |
|                  |                   | Decreasing time necessary for fixing employee benefit plans and their approval by superiors   |
|                  |                   | Timely update of personal updates influencing employee income (marital status, number of dependents, etc.)  |
|                  | Lock-In           | Provide employees with private online reports about own performance, development and standing versus others   |
|                  |                   | Better ability to personalize and tailor benefit plans to individual preferences within set boundaries  |
|                  |                   | Updating employee compensation schemes and benefit plans based on industry standards  |
|                  | Novelty           | Using new ways for distributing evaluation materials  |
|                  |                   | Using new ways for analyzing performance evaluation data  |
|                  |                   | Using new ways to configure employee benefit plans components   |
|                  | Complementarities | Performance evaluation can be conducted based on a combination of online and offline tasks and meetings   |
|                  |                   | Evaluation integrated into overall HR components (benefits and awards update, eligibility to apply to higher positions, etc.)                                     |
|                  |                   | Based on online benefit plan employee self configurations and form processing, related functions are updated automatically (e.g. billing, payments, welfare, etc) |
|                  | Availability      | Greater access to evaluation materials across time and geographical locations   |
|                  |                   | Greater access to information on benefits plans and their boundaries across time and geographical locations   |

|                                 |                   |   |
|---------------------------------|-------------------|---|
|                                 |                   | Increased transparency about benefits plan options and comparison with industry trends  |
| <b>Training/<br/>Developing</b> | Efficiencies      | Decreasing costs of employee travel associated with trainings   |
|                                 |                   | Decreasing costs of renting training facilities   |
|                                 |                   | Decreasing costs of printing, updating and distributing training materials by making them available online                    |
|                                 |                   | Increasing the number of employees being trained in each coordinated session  |
|                                 |                   | Increasing the number of employees being trained in general   |
|                                 | Lock-In           | Increasing ability to personalize timing of training to individual employee schedules   |
|                                 |                   | Increasing ability to personalize paste of training to individual employee preferences  |
|                                 |                   | Increasing ability to personalize content of training to individual employee needs  |
|                                 |                   | Increasing ability to involve training participants in timely feedback concerning training quality, content, and contribution |
|                                 | Novelty           | Using more new ways of conducting training sessions   |
|                                 |                   | Using more new ways of tailoring training sessions to individual employee's needs, schedules, and preferences                 |
|                                 |                   | Using new ways for measuring and evaluating training outcomes   |
|                                 | Complementarities | Training can be conducted based on a combination of online and offline sessions and tasks                                     |
|                                 |                   | Training integrated into overall HR components (benefits and awards update, eligibility to apply to higher positions, etc.)   |
|                                 | Availability      | Increasing ability to conduct training seminars for employees across distant locations  |
|                                 |                   | Increasing flexibility in timing of training across locations and individual preferences and schedules                        |

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# **CORPORATE CLIMATE STRATEGY: PROPOSAL FOR A FORMULATION AND ASSESSMENT MODEL BASED ON INTERNATIONAL BENCHMARKS**

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## **ABSTRACT**

*A social and economic environment with restrictions on carbon emissions is a reality that has come to stay. In this context, it has become evident that firms should reduce Green House Gas – GHG emissions, not only due to environmental issues or restrictive regulation, but also to gain sustainable competitive advantage. The objective of this article is to propose the outline of a model, based on international benchmarks, for the formulation and assessment of adequate business climate strategies. The development of this model is part of a wider research that seeks to contribute to the strategic management of firms concerned with the growing impact of climate changes. Its importance lies in the urgent need to manage the strategic implications of these changes with a view to assuring firms' competitiveness while attending to all stakeholders.*

## **INTRODUCTION**

The current production paradigm, based mainly on the consumption of fossil fuels, causes significant increases in anthropic emissions of greenhouse gases – GHG - whose high atmospheric concentrations are upsetting the global climate equilibrium.

The concentration of CO<sub>2</sub> in the atmosphere, which remained stable for thousands of years, increased substantially as of the 19th century. There is strong scientific evidence suggesting that the increase in CO<sub>2</sub> in the atmosphere is not due to natural factors, but is caused by human activities. According to various scientific studies, the concentration of CO<sub>2</sub> in the atmosphere will double by the year 2065 in relation to pre-industrial levels. Humanity's impact on the environment, known as the ecological footprint, quantified by multiplying the world's population by the per capita consumption of natural resources, has left a deep mark on the planet.

Climate change is having a drastic effect on business's competitive environment. According to Hoffman (2006), as in all situations of change, there are winners and losers. Three key factors are influencing and accelerating the transformation of the macro-environment: a) regulations that restrict GHG emissions; b) the increase in energy prices; c) the financial community's interest in the matter.

In this context, the pressure on companies to act in harmony with the environment is increasing significantly day-by-day. This pressure is being exercised by various actors such as consumers, suppliers, communities, non-governmental organizations - NGOs, governments and company employees. The great novelty is the appearance of a new group of stakeholders, notably banks and insurance companies. This movement is symptomatic for when "...the financial services industry - which focuses like a laser on return on

investments - starts worrying about the environment, you know something big is happening” (ESTY, WINSTON, 2006, pp.9).

The aim of this article is to propose the outline of a model, based on international benchmarks, for the formulation and assessment of adequate business climate strategies. The development of this model is part of a wider research that seeks to contribute to the strategic management of firms concerned with the growing impact of climate changes. Its importance lies in the urgent need to manage the strategic implications of these changes with a view to assuring firms’ competitiveness while attending to all stakeholders.

## THEORETICAL REFERENCES

### Review of the Literature

Given the recent nature of the theme, the literature on the subject is scarce. This fact, while evidencing the need for a wide-ranging bibliographical review, also presents an opportunity for developing new investigations. Our literature review sought to identify the authors of the most recent studies of climate strategies in environments with carbon restrictions, as well as the methods proposed to address the problems involved. The following authors were found to be particularly relevant: Hoffman (2000, 2006), Esty and Winston (2006), Kolk and Pinkse (2004) and Lash and Wellington (2007).

### Main Definitions

The central concepts of the research at issue in this article are strategy, environmental strategy and climate strategy. Below, we present the definitions adopted for each of these concepts.

For the **concept of strategy** we used Macedo-Soares’ (2000, p. 460) definition inspired in Grant (1998):

“Strategy is a unifying proposition that gives coherence and direction to the actions and decisions of an organization, especially for leveraging and allocating the necessary resources for improving or sustaining its performance, in keeping with its vision and considering the internal and external environmental conditions”.

For the **concept of environmental strategy** we drew on Hoffman’s (2000) definition for this type of strategy as a conduct that is able to make the protection of the environment compatible with the financial and economic growth of the organization, respecting the interests of all the stakeholders involved.

The **concept of climate strategy** is quite recent and has emerged in the context of the growing concern with climate change. Here too, we adopted the definition proposed by Hoffman (2006, p. 3), according to whom climate strategy is defined as “...the set of goals and implementation plans within a corporation that are intended to reduce GHG emissions, produce significant GHG-reduction co-benefits, or that otherwise respond to climate-related changes in markets, public policy, or the physical world.”

### Theoretical References

As mentioned above, few studies have been made of business climate strategy. For this reason it was necessary to undertake a wide-ranging exploratory review of the relevant literature in order to construct the proposed Climate Strategy Model – CSM. The research analyzed pertinent concepts and indicators developed by Hoffman (2000, 2006), Esty and Winston (2006), Kolk and Pinkse (2004) and Lash and Wellington (2007). Some authors, such as Hoffman (2000, 2006) and Esty and Winston (2006), used the same indicators. Kolk and Pinkse (2004) performed their studies with the indicators used in the first survey carried out by the Carbon Disclosure Project – CDP. Lash and Wellington (2007) focused more on the threats and opportunities presented by climate change and their effects on firms’ revenues and costs.

Also several indicators were identified as relevant for our study in the five editions of the field research performed by the Carbon Disclosure Project – CDP, and by the Investor Responsibility Research Center – IRRRC, commissioned by CERES.

Note that CERES ([www.ceres.org](http://www.ceres.org)) is an institution that congregates investors, environmental groups and political organizations interested in issues pertaining to business sustainability and climate change. It also leads the Investor Network on Climate Risk – INCR, a group composed of 50 institutional investors from the USA and Europe who manage assets worth around US\$ 3 trillion.

The Carbon Disclosure Project – CDP ([www.cdproject.net](http://www.cdproject.net)), based in London, is a global initiative involving more than 220 institutional investors with US\$32 trillion under management. Its main objective is to keep these investors informed about how the opportunities and risks associated with climate changes are being dealt with by firms all over the world. It is currently in its fifth edition and has collected information from more than 2100 companies.

## **RESEARCH METHODS**

### **Literature Review Method**

In order to review the literature pertinent to the theme, the research consulted master dissertations and doctoral theses from leading academic institutions, as well as articles published in well-ranked scientific journals and available at specialized international websites (see References).

The research sought to identify the authors of the most recent studies of climate strategies in environments with carbon restrictions and methods proposed to address the problems involved.

### **Method Used to Develop the Proposed Model**

Based on the studies of the authors identified in the literature review as significant for developing the model proposed in this article, we selected and analyzed the concepts and indicators most often used.

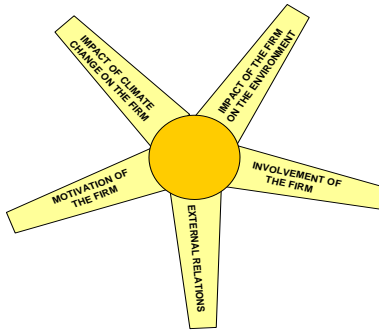
In accordance with Lazarsfeld and Boudon's (1973) methodology, five variables were selected encompassing the main aspects of climate strategy. These five variables were sub-divided into dimensions with their respective constructs and indicators. One should remember that a construct is a concept that, associated with an indicator, helps to measure a concept or variable that cannot be measured directly.

Thus, drawing heavily on the three stages described in Hoffman's model (climate strategy, internal focus and external focus) and their corresponding sub-divisions (emissions profile, risks and opportunities, actions, objectives and targets, financial mechanisms, organizational involvement, political strategy and external relations), we started outlining the model at issue, which is explained in detail in the next section.

## **THE CSM MODEL**

Figure 1 is a schematic representation of the Climate Strategy Model – CSM - proposed as a tool for both the development and assessment of business climate strategies, using international benchmarks as a reference. The sun shape was chosen due to its positive “environmental” image, with the model's five variables converging towards the center, as if they were rays of light. This convergence symbolizes the conjugation and fit of strategic efforts designed to achieve a common objective, just as the sun's rays converge towards the center from which energy emanates.

**Figure 1: Climate Strategy Model – CSM**



## Variables, Constructs and Indicators

As shown in Figure 1, the variables that compose the CSM are: impact of the firm on the environment; impact of climate change on the firm; involvement in the firm; motivation of the firm; external relations of the firm.

Table 1 presents these variables and their respective operational definitions. Note that according to Kerlinger (1980, p. 46), an operational definition is “like an instruction manual for the researcher”

**Table 1: Variables and their operational definitions**

| VARIABLE                                     | OPERATIONAL DEFINITION   |
|--|--|
| <b>IMPACT OF THE FIRM ON THE ENVIRONMENT</b> | Degree of impact of the organization on the environment caused by GHG emissions produced by its own operations or those of components of its value chain and other associated emissions.   |
| <b>IMPACT OF CLIMATE CHANGES ON THE FIRM</b> | Degree of impact on the organization of the opportunities and threats represented by climate change, driving the firm to develop and implement a climate strategy.   |
| <b>INVOLVEMENT OF THE FIRM</b>               | Degree of effective involvement of the firm in actions that mitigate and eliminate emissions produced by its own operations and those related to its value chain.  |
| <b>MOTIVATION IN THE FIRM</b>                | Degree of motivation in the firm resulting both from the proactive side of the mobilization of employees and publication of their actions and the relative strength of the obstacles that stand in the way of the implementation of a climate strategy.  |
| <b>EXTERNAL RELATIONS OF THE FIRM</b>        | Degree of influence of the firm and its ability to communicate with the public, governments and private business associations, in order to disclose its actions aimed at reducing emissions, as well as influence the formulation of carbon restricting legislation and regulations. Ability to obtain the support of other entities and the third sector. |

Below we describe CSM’s components: variables, dimensions, constructs, indicators, their values and respective authors’ references. A summary of this is presented in the form of a table.

### Variable 1 – impact of the firm on the environment

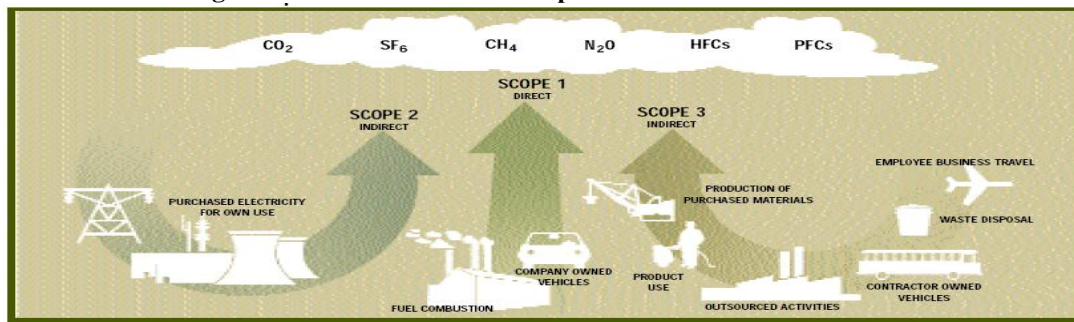
According to Lash and Wellington (2007), by quantifying its emissions, a firm is recognizing the importance of climate change as a source of risks and opportunities and is prepared to manage the reduction of

its emissions. These authors emphasize the importance to measure both the firm's direct and indirect emissions, as well as to determine and periodically adjust the reference level of the emissions that will be monitored over time.

The CSM adopts the emissions classification methodology developed by the GHG Protocol Corporate Standard ([www.ghgprotocol.org](http://www.ghgprotocol.org)) created by the World Resources Institute – WRI together with the World Business Council for Sustainable Development – WBCSD. The GHG Protocol classifies emissions according to the locations of their occurrences in the following way:

- a) **scope 1** – direct GHG emissions, understood as those that emanate from sources owned or controlled by the firm. For example: emissions resulting from combustion in boilers, furnaces, vehicles;
- b) **scope 2** – indirect emissions arising from the generation of electricity purchased by the firm from third parties. They occur in the plant where the electricity is generated;
- c) **scope 3** – other indirect emissions whose measurement is optional. These are emissions that result from the firm's activities, but effectively emanate from sources that are not owned by the firm. For example: emissions that arise from the extraction and production of raw materials and components, transportation of fuels or business trips. Figure 2 presents the 3 scopes of a firm's emissions, in accordance with the GHG Protocol.

**Figure 2: Overall view of the scopes of a firm's GHG emissions**



Source: <http://www.ghgprotocol.org>, GHG Protocol Standards, February 10, 2008

Firms use both absolute and relative yardsticks to measure their GHG emissions. The absolute yardsticks are used to assess the firm's total exposure to carbon restrictions; while relative forms of measurement are used to compare the level of emissions in different divisions of a firm or between firms (HOFFMAN, 2006).

After surveying its level of emissions, a firm can identify and prioritize the existing immediate and low-cost opportunities to reduce them, as well as plan actions aimed at improving the firm's energy efficiency along its value chain. Based on the main indicators obtained from the literature investigated, we developed Variable 1 – Impact of the Firm on the Environment, which was subdivided into direct and indirect dimensions. Its constructs refer to direct and indirect emissions. (see Table 2 for details on Variable1).

## Variable 2 – Impact of Climate Change on the Firms

Climate change's ability to drive the adoption of climate strategies by firms varies according to the industry in which they operate. Climate change poses threats and generates opportunities for organizations (HOFFMAN, 2006).

In the model proposed, the factors that drive the firm to establish a climate strategy were called drivers. According to Hoffman (2006) and Esty and Winston (2006), a firm's degree of exposure to carbon restrictions is not limited to its emissions. It should also take into account the potential impacts on its line of products and services, together with the increasing environmental pressure exercised by a wide variety of stakeholders and which modify the firm's competitiveness.

Amongst the main items to be assessed, the following should be highlighted: the profile of the firm's emissions relative to its competitors, its industry's position in relation to other industries, the present and future regulatory environment, and cost trends and changes in consumers' preferences. Thus the identification of the



risks and opportunities for firms imposed by climate change should take into account present and future conditions of both the firm's emissions profile and the impact of carbon restrictions on its economic and social context.

**Table 2: Variable 1 – Impact of the Firm on the Environment**

| Dimension      | Construct       | Indicator   | Value  | Author/Reference   |
|----------------|-----------------|---|--------|--|
| <b>Direc</b>   | <b>Direct</b>   | Inventory of direct emissions (scope 1)   | Yes/No | Hoffman (2000;2006); Esty and Winston (2006); Lash and Wellington (2007); Kolk and Pinkse (2004); CDP and CERE |
| <b>Indirec</b> | <b>Indirect</b> | Inventory of emissions generated by third parties in the production of electricity purchased by this firm (scope 2) | Yes/No | Hoffman (2000;2006); Esty and Winston (2006); Lash and Wellington (2007); Kolk and Pinkse (2004); CDP and CERE |
|                |                 | Inventory of emissions generated by third parties in the production of inputs and materials (scope 3)               | Yes/No | Hoffman (2000;2006); Esty and Winston (2006); Lash and Wellington (2007); Kolk and Pinkse (2004); CDP and CERE |
|                |                 | Inventory of emissions resulting from the use of the products of this firm by third parties (scope 3)               | Yes/No | Hoffman (2000;2006); Esty and Winston (2006); Lash and Wellington (2007); Kolk and Pinkse (2004); CDP and CERE |
|                |                 | Inventory of emissions resulting from business trips (scope 3)  | Yes/No | Hoffman (2000;2006); Esty and Winston (2006); Lash and Wellington (2007); Kolk and Pinkse (2004); CDP and CERE |
|                |                 | Inventory of emissions generated by third parties in activities outsourced by this firm (scope 3)                   | Yes/No | Hoffman (2000;2006); Esty and Winston (2006); Lash and Wellington (2007); Kolk and Pinkse (2004); CDP and CERE |
|                |                 | Inventory of emissions resulting from the discarding of the products of this firm (scope 3)                         | Yes/No | Hoffman (2000;2006); Esty and Winston (2006); Lash and Wellington (2007); Kolk and Pinkse (2004); CDP and CERE |

From the study undertaken by Hoffman and Pew Center, it is evident that the three main drivers of a climate strategy are cost reduction and social responsibility, as well as reputation. Indeed, a positive reputation increases a firm's power to influence emissions restricting legislation and regulation. In most cases, risk management is also a strong reason for managing the vulnerabilities of the firm generated by climate change. By adopting a risk management approach and gaining experience in this matter, firms begin to focus their strategies on exploiting the opportunities that arise from climate change to create competitive advantages. In an environment that is suffering the impact of climate change, a

“... company's ability to find opportunities in a carbon-constrained world will depend on its skill at hedging against physical climate risk, mitigating regulatory costs, avoiding expensive litigation and other threats to corporate reputation, managing climate risk in the supply chain, investing capital in low-carbon assets, and innovating around new technology and product opportunities” (LASH, WELLINGTON, p.100).

The climate risks imposed on firms can also be assessed through an analysis of their profit structure. To this end, firms calculate the carbon intensity of their profits, that is, the portion of profits derived from products with high GHG emissions. Other potentially affected areas are the cost of raw materials, capital expenditures on the acquisition of new less-polluting installations and, in the case of plants located in areas subject to climate extremes, a substantial increase in insurance costs (LASH, WELLINGTON, 2007).

On the other hand, there are also opportunities created in a carbon constrained environment, especially, a demand for low-emission products and services, carbon credits, resources from investment funds for firms and projects that aim to reduce GHG, acquisition of low-emission assets, besides intangible benefits such as an improvement in the organization's image and reputation. Consequently, a firm's climate risk profile affects its cost of capital and market value (LASH, WELLINGTON, 2007).

In the CSM the dimension of Variable 2 – Impact of Climate Changes on the Firm - refers to driving factors that are sub-divided into the following constructs: new markets, competitiveness, intangible factors, financial factors and exposure to risks (see Table 3 for details on Variable 2).

**Table 3: Variable 2 – Impact of Climate Change on the Firm**

| Dimensions | Constructs         | Indicators   | Value                           | Ref **           |
|------------|--------------------|--|---------------------------------|------------------|
| Drivers    | New markets        | Demand for products with low GHG emissions                 | Degree of importance Likert 1-5 | A, B,C,E,F       |
|            |                    | Demand for services with low GHG emissions                 | Degree of importance Likert 1-5 | A, B,C,E,F       |
|            |                    | Leap in the technological standard of the industry         | Degree of importance Likert 1-5 | A, B,D,E         |
|            | Competitiveness    | Increase in the operational efficiency of the firm         | Degree of importance Likert 1-5 | A, B             |
|            |                    | Increase in competitiveness in relation to the competition | Degree of importance Likert 1-5 | A, BC,D,E,F      |
|            |                    | Cost reduction   | Degree of importance Likert 1-5 | A, B, C,D,E      |
|            | Intangible Factors | Positive reputation of the firm and its brand              | Degree of importance Likert 1-5 | A, B,C,E,F       |
|            |                    | Socially Responsible Behavior                              | Degree of importance Likert 1-5 | A, B,C           |
|            |                    | Coherence with the culture and history of the firm         | Degree of importance Likert 1-5 | A, B, C          |
|            |                    | Improvement in the management of risks                     | Degree of importance Likert 1-5 | A, B,D           |
|            | Financial Factors  | Possibility of generating carbon credits                   | Degree of importance Likert 1-5 | A, B,C,D,E,F     |
|            |                    | New sources of financing (investment funds)                | Degree of importance Likert 1-5 | A, B,C,D,E       |
|            |                    | Tax incentives   | Degree of importance Likert 1-5 | A                |
|            | Exposure to risks  | Restrictive legislation regarding GHG emissions            | Degree of importance Likert 1-5 | A, B,C,D,E,F     |
|            |                    | Restrictive standards for GHG emissions of products        | Degree of importance Likert 1-5 | A, B, E          |
|            |                    | Restrictive standards for GHG emissions of processes       | Degree of importance Likert 1-5 | A, B, E          |
|            |                    | Physical vulnerability of assets                           | Degree of importance Likert 1-5 | A, B, C, D, E, F |
|            |                    | Increase in costs of the inputs of the firm                | Degree of importance Likert 1-5 | A, B, C,D, E     |
|            |                    | Increase in costs of energy consumed                       | Degree of importance Likert 1-5 | A, B, C, D       |
|            |                    | Sharp increase in insurance premiums                       | Degree of importance Likert 1-5 | A, B, D          |
|            |                    | Change in attitudes of consumers or customers              | Degree of importance Likert 1-5 | A, B, D, E       |
|            |                    | Pressure from NGOs   | Degree of importance Likert 1-5 | A, B             |
|            |                    | Occurrence of litigation                                   | Degree of importance Likert 1-5 | A, B, D, E       |

Ref\*\* The letters indicated in the column refer to the indicators' authors and references: Hoffman (2000, 2006), Esty and Winston (2006), Kolk and Pinkse (2004), Lash and Wellington (2007), F - CDP, F - CERES.

## Variable 3 – Involvement of the Firm

After discovering its emissions profile and also the way climate change impacts the firm, actions can be planned to implement a climate strategy aimed at reducing its emissions, mitigating the risks and exploiting the opportunities present in a carbon-constrained environment. This strategy, if well developed, will position the firm positively in relation to the government, non-governmental organizations and the general public.

Defining targets and monitoring the firm's level of emissions is considered to be the first step in a climate strategy. A reduction in emissions can be achieved within the firm, along its value chain as well as outside these environments. Various firms go beyond this and assess the possibilities of reducing GHG in all phases of their product life-cycle, from the manufacture of components by third parties to the moment the product is discarded at the end of its useful life. This is a survey of impacts during a product's life cycle – Life Cycle Assessment – LCA (ESTY, WINSTON, 2006).

According to Hoffman (2006), it is easy, in many cases, to identify low cost and low risk actions to reduce GHG emissions. These actions usually involve energy efficiency programs, behavioral changes and process improvements. In the long term firms can develop more sophisticated emissions reduction projects using technological innovations to achieve a sharp reduction in GHG emissions.

Opportunities also exist for emissions compensation and reduction outside the context of the firm's operations, such as in carbon sequestration forest projects, purchase of credits from Clean Development Mechanism CDM projects, the acquisition of low emission assets and the trading of carbon credits.

Many firms establish both energy efficiency and GHG reduction targets. Energy efficiency targets produce financial benefits for the firm in the short term and are thus usually considered to be strategic, whereas the financial benefits derived from GHG reduction targets are more difficult to quantify and accrue in the long term (HOFFMAN, 2006).

To increase motivation and encourage creativity in the firm, GHG reduction targets should be ambitious. Many firms surpass targets before their deadlines expire, mainly when they have never implemented measures to increase energy efficiency. Moreover, energy efficiency strategies are usually related to discrete energy intensive processes and the responsibility for their implementation lies with the operational units directly

involved with the process. However in the case of GHG reduction targets, the firm should be treated as a whole and durations are much greater. It is advisable to establish specific targets for each of the firm's plants or business units instead of an overall target, thus facilitating respect for the particularities that exist within the same organization as well as enabling more problematic areas to be isolated and dealt with separately (ESTY, WINSTON, 2006). Two other very important actions are to set up a high level executive committee to monitor the results of the measures implemented to reduce GHG and hire an external auditing firm.

Variable 3 – Involvement of the Firm is directly associated with the firm's degree of action with a view to mitigating, or if possible, eliminating its GHG emissions, including those produced outside it. It has a single dimension denominated Scope of Action with the four following constructs: reduction in the firm's emissions, reduction of emissions in the expanded value chain, emissions compensation and emissions monitoring (see Table 4 for details on Variable 3).

**Table 4: Variable 3 – Involvement of the Firm**

| Dimension    | Constructs                                      | Indicator   | Value | Ref*             |
|--------------|---|---|-------|------------------|
| Action Scope | Emissions reduction in the firm                 | GHG emission reduction targets  | yes/n | A, B, C, D, E, F |
|              |   | Development of products with low or non-existent GHG emissions                                | yes/n | A, B, C, D, E, F |
|              |   | Perfecting products to reduce GHG emissions   | yes/n | A, B, C, D, E, F |
|              |   | Energy efficiency programs  | yes/n | A, B, C, D, E, F |
|              |   | Transformation of production process residues into co-products                                | yes/n | A,               |
|              |   | Redesigning the production process to reduce GHG emissions                                    | yes/n | A, B, C, F       |
|              |   | Use of a low GHG emission production process  | yes/n | A, B, C, D, E, F |
|              |   | Replacement of production process equipment to reduce GHG emissions                           | yes/n | A,               |
|              |   | Retrofitting production process equipment to reduce GHG emissions                             | yes/n | A,               |
|              |   | Reutilization of effluents and gases in the production process itself to reduce GHG emissions | yes/n | A, B, C, E, F    |
|              |   | Use of recycled material as a reduction input   | yes/n | A, B,            |
|              |   | Use of renewable energy   | yes/n | A, B, C, E, F    |
|              |   | Energy co-generation  | yes/n | A,               |
|              |   | Fossil fuels replacement program  | yes/n | A, B, C, E, F    |
|              |   | Sale of shareholdings in assets with high levels of GHG emissions                             | yes/n | A,               |
|              |   | Acquisition of shareholdings in assets with low GHG emissions                                 | yes/n | A,               |
|              |   | Encourage telecommuting   | yes/n | A,               |
|              |   | Encourage teleconferencing instead of business trips  | yes/n | A,               |
|              |   | Environmental management systems (ISO 14000 or others)  | yes/n | A,               |
|              |   | Geological CO <sub>2</sub> sequestration (underground)  | yes/n | A, B,            |
|              |   | Terrestrial CO <sub>2</sub> sequestration (tree planting)                                     | yes/n | A, B,            |
|              |   | Ecological building installations (LEED Buildings)  | yes/n | A,               |
|              | Emissions reduction in the expanded value chain | GHG emission reduction targets in the firm's value chain                                      | yes/n | A, B, C, E       |
|              |   | Product life-cycle assessment   | yes/n | A, B, C, E, F    |
|              |   | Supply-chain emissions audit  | yes/n | A, B,            |
|              | Emissions compensation                          | Emissions reduction in product logistics and distribution                                     | yes/n | A, B, C, D, E    |
|              |   | Purchase/Sale of carbon credits   | yes/n | A, B, C, D, E, F |
|              |   | Voluntary actions aimed at compensating own emissions   | yes/n | A, B,            |
|              | Emissions monitoring                            | Partnerships with firms, NGOs or the government in GHG emission reduction projects            | yes/n | A, B, C, F       |
|              |   | Quantification of emissions by year to monitor GHG emissions reduction                        | yes/n | A, B, C, E, F    |
|              |   | Executive committee or equivalent responsible for issues pertaining to climate change         | yes/n | A, B, E,         |
|              |   | Third party emissions monitoring and measurement  | yes/n | A, B, C, E, F    |
|              |   | Equipment to monitor own GHG emissions  | yes/n | A, B, C, F       |
|              |   | Benchmark for GHG emission reduction  | yes/n | A,               |

Ref\*\* The letters indicated in the columns correspond to construct authors and references.

A – Hoffman (2000; 2006); B – Esty e Winston (2006); C – Kolk e Pinkse (2004); D – Lash e Wellington (2007); E – CDP; F – CERES

## Variable 4 – Motivation in the Firm

Due to the complex and long-term nature of climate change related issues, the support of the firm's employees is of fundamental importance. They develop creative forms of achieving targets when these are clearly defined and can perceive their coherence with the firm's vision and values (HOFFMAN, 2006).

The CEO's commitment is indispensable to position environmental issues as a priority; however, in order to effectively implement programs and actions aimed at reducing GHG emissions, the involvement of executives, especially middle management, is fundamental. This involvement can be encouraged by setting up high-level committees with authority to manage environmental targets, and creating financial incentives linked to the attainment of targets and rotating the functions of operational and environmental area executives (ESTY, WINSTON, 2006).

Furthermore, it is important to identify the departments that will initiate the process of change, those that will implement the programs and those that will resist change. In this respect it is also valuable to obtain the support of the more experienced group of professionals.

Some firms promote and encourage actions such as planting trees, purchasing vehicles with a low level of emissions and bicycles for employees, rewarding and publicly recognizing individual initiatives, providing

training programs, and encouraging telecommuting and teleconferencing. The main objective of this process is to transfer climate change related issues from the peripheral areas of the organization to its center (HOFFMAN, 2006).

The publication of reports outlining the firm 's climate targets and related achievements is fundamental to encourage employees, as it promotes the publicizing of actions and the firm 's commitment to climate issues. Moreover, internal reports help to create employee awareness of the firm 's priorities regarding climate change and the environment, and how much they are helping the firm to achieve its objectives.

With a view to reflecting these factors, the research conceived Variable 4 – Motivation in the Firm – associated directly with the degree of motivation in the business environment regarding the implementation of a climate strategy. The variable has two dimensions that are denominated respectively, Proactive and Reactive, and include three constructs: mobilization, publication and obstacles. (see Table 5 for details on Variable 4).

**Table 5: Variable 4 Motivation in the Firm**

| Dimensions       | Constructos         | Indicators  | Value   | Ref**   |
|------------------|---------------------|---|---|---|
| <b>Proactive</b> | <b>Mobilization</b> | Direct participation of top management<br>Direct participation of employees<br>Degree of autonomy of employees<br>Fiancial bonus linked to climate targets<br>Employee awareness program<br>Employee training program<br>Areas involved<br>Areas that initially lead the implementation of the strategy | Degree of participation Likert 1-5<br>Degree of participation Likert 1-5<br>Degree of autonomy Likert 1-5<br>Yes/No<br>Yes/No<br>Yes/No<br>Degree of involvement Likert 1-5<br>Degree of involvement Likert 1-5 | A, B, C, D, E, F<br>A,<br>A,<br>A, B, C, D, E, F<br>A,<br>A,<br>A,<br>A |
|                  | <b>Publication</b>  | CEO communique<br>Internal reports<br>Intranet  | Yes/No<br>Yes/No<br>Yes/No  | A, B, C, D, E, F<br>A, B, C, D, E, F<br>A,                              |
| <b>Reactive</b>  | <b>Obstacles</b>    | Sources of resistance<br>Lack of skills<br>Financial<br>Middle management   | Degree of resistance Likert 1-5<br>Degree of resistance Likert 1-5<br>Degree of importance Likert 1-5<br>Degree of resistance Likert 1-5  | A,<br>A,<br>A,<br>A,  |

Ref\*\* The letters in the column indicate refer to indicator authors and references :A - Hoffman (2000, 2006); B - Esty and Winston (2006); C - Kolk and Pinkse (2004); D - Lash and Wellington (2007); E - CDP; F - CERES.

## Variable 5 – External Relations of the Firm

According to Esty and Winston (2006), the firm's communication with its external audience is fundamental to promote transparency, publicize actions and engage in a constructive dialogue with its various stakeholders. Publicizing actions in favor of the environment, as well as actions to reduce greenhouse gas emissions, help to generate a favorable attitude to the firm on the part of the general public. The publication of information regarding the environmental (green) attributes of the firm's products and services also contributes to positioning the firm favorably in the market, as long as the data is really true. For this external communication to be successful it is very important to identify various target audiences such as NGOs, government, the community as a whole and investors.

External partnerships are also indispensable for the success of firms' climate strategies. According to Hoffman (2006), alliances with NGOs enhance the credibility of both parties. The best way of finding out the state of its public image is to form partnerships with other organizations (ESTY, WINTON, 2006). Thus, NGOs can help firms discover the public's perception of their brands.

A good relationship with the government is also essential, especially to provide credibility and enable it to influence the formulation of carbon-constraining measures, norms and regulations. The investor community is

also an important stakeholder given that firms' environmental risk and conduct is increasingly influencing investment decisions.

Variable 5 – External Relations is directly associated with the way the firm acts in the external environment to publicize its targets and to establish partnerships aimed at reducing or eliminating greenhouse gases – GHG. It is composed of the Scope dimension and includes the partnerships and publication constructs (See Table 6 for details on Variable 5.)

**Table 6: Variable 5 – External Relations**

| Dimension | Constructs   | Indicators   | Value   | Ref*  |
|-----------|--------------|--|---|---|
| Scop      | Partnerships | Partnerships with other firms<br>Partnerships with NGOs<br>Partnerships with governments<br>Partnerships with professional associations<br>Partnerships with investors | Degree of importance Likert 1-5<br>Degree of importance Likert 1-5<br>Degree of importance Likert 1-5<br>Degree of importance Likert 1-5<br>Degree of importance Likert 1-5 | -5 A, B, C, F<br>-5 A, B, C, F<br>-5 A, B, C, F<br>-5 A, B, C, F<br>-5 A, B, C, F |
|           | Publication  | Publication of reports on climate issues<br>Participation in the Carbon Disclosure Project - CDP<br>CEO communicate<br>Use of the media                                | Degree of importance Likert 1-5<br>Degree of importance Likert 1-5<br>Degree of importance Likert 1-5<br>Degree of importance Likert 1-5                                    | -5 A, B, C, E, F<br>-5 C, E,<br>-5 A, B, C, F<br>-5 A, B, C, F                    |

Ref\*\*The letters indicated in the column refer to indicator authors and references ; A - Hoffman (2000, 2006); B - Esty and Winston (2006); C - Kolk and Pinkse (2004); D - Lash and Wellington (2007); E - CDP; F - CERES.

## CONCLUSIONS AND RECOMMENDATIONS

The outline of a Climate Strategy Model – CSM presented in this article is based on recent studies of business climate strategies, most of which were undertaken jointly with surveys of how leading global firms manage and seek solutions to the serious problems and restrictions imposed by climate change. As mentioned several times in this article, this model is intended to be used both to develop and assess business climate strategies. Below, we list a few suggestions for applying the model.

In the case of business climate strategy assessment we recommend the following steps:

- collect data pertinent to the indicators of each construct of the CSM;
- verify for each indicator whether values and categories are in accordance with international benchmarks, respecting the characteristics of each type of industry;
- propose alterations in order to attain the benchmarks in cases where the values of the indicators collected are not congruent with those of the benchmarks.

In the case of business climate strategy formulation, we also recommend a few steps, as follows:

- identify international industry strategy benchmarks, in accordance with the constructs and indicators of each variable of the CSM;
- select among the benchmarks identified the ones that are most appropriate to both the firm, considering its resources/competencies and the macro-environmental and industry structure interacting factors, in keeping with the principle of strategic fit (HOFFER & SCHENDEL, 1978).

In the scope of the wider research of which the development of the CSM is an important stage, we intend to perform several case studies, focusing initially on firms in two industrial sectors: the auto and pulp and paper sectors. The main objective of these studies is to test, consolidate and refine the model at issue.

Indeed, it is believed that this model has the potential to contribute to corporate strategic management for which effective climate strategies will be increasingly indispensable in assuring firms' competitive advantages.

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# CHALLENGES OF ONLINE ADVERTISING AND MARKETING IN UKRAINE

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## ABSTRACT

*In this paper authors analyze current Internet advertising market in Ukraine. Ukrainian Internet market is characterized by few broad in content web sites. The number of internet users is still small. However, users' high "quality" levels suggest development of advertising strategies that could be aimed at "exclusive" internet audience. Authors find that such strategies are not yet prevalent. Instead, fueled by advertiser's desires to get the highest trafficked Internet advertising platform, web sites tend to remove content specific information and become large portals. This in turn leads to a loss of Internet user's base "exclusivity" and hurts advertisers. Managerial policy implications are considered. Future development strategies are identified.*

## INTRODUCTION

Emergence of online advertising as an alternative marketing media has been changing traditional marketing strategies for many firms throughout the world faster than many predicted. Recent years have seen dramatic shifts away from the traditional mass marketing media, TV, printed newspapers and magazines, etc., towards more interactive feedback-oriented online advertising. Online advertising has been proven strategically effective and economically efficient since it allows marketers to collect feedback from consumers once the latter click on the banners, or promotional messages marketers post online.

Internet is the fastest growing major medium according to a research firm [ZenithOptimedia](#). [ZenithOptimedia](#)'s outlook for global ad spending projects that internet advertising will overtake outdoor advertising in 2007 and pull alongside radio advertising in 2008. Internet advertising is expected to attract 6.5% of all advertising in 2008, up from 4.5% in 2005 (and up from the 6.0% predicted for 2008 back in December of 2007) ([ZenithOptimedia](#), 2008). Advertising accounted for 0.96% of world GDP in 2005, is expected to rise to 0.99% by 2008 ([ZenithOptimedia](#), 2008).

The biggest trend in advertising market is a gradual shift from more traditional and increasingly expensive media advertisement towards non-traditional online advertisement. According to TNS Media Intelligence reports (TNS Media Intelligence, March 2008), Internet advertising had seen growth of 15.9% within last year – largest among all other advertising media (see Table 1). Share of Internet advertising among all advertising media has been steadily increasing since 2004 (see Table 2), while shares of many traditional advertising media have been shrinking (see Table 2). Although television spending on advertising exceeded \$64 million in 2007 while Internet advertising spending were slightly over \$11million, the growth rate of Internet advertising far exceed that of television (which actually declined within last year (see Table 1)).

However, such a shift does not mean that the traditional media advertisement would fade away in the future. Many studies have indicated that the Online advertising works in conjunction with TV, printed, and other media to generate the greater increase in marketing effectiveness, such as brand awareness (Chao, 2006).

**Table 1: Measured Advertising Spending by Media: Jan-Dec 2007 vs. Jan-Dec 2006**

| MEDIA                 | Jan-Dec 2007 (Millions) | Jan-Dec 2006 (Millions) | % CHANGE    |
|-----------------------|-------------------------|-------------------------|-------------|
| TELEVISION MEDIA      | \$64,421.0              | \$65,552.3              | -1.7%       |
| MAGAZINE MEDIA        | \$30,327.5              | \$28,742.5              | 5.5%        |
| · CONSUMER MAGAZINES  | \$24,431.2              | \$22,830.0              | 7.0%        |
| · B-TO-B MAGAZINES    | \$3,355.3               | \$3,501.0               | -4.2%       |
| · SUNDAY MAGAZINES    | \$1,878.0               | \$1,751.9               | 7.20%       |
| · LOCAL MAGAZINES     | \$435.5                 | \$453.5                 | -4.0%       |
| NEWSPAPER MEDIA       | \$26,362.5              | \$27,918.7              | -5.6%       |
| · NEWSPAPERS (LOCAL)  | \$22,660.6              | \$24,014.4              | -5.6%       |
| · NATIONAL NEWSPAPERS | \$3,346.6               | \$3,540.0               | -5.5%       |
| INTERNET              | \$11,309.4              | \$9,754.6               | 15.9%       |
| RADIO MEDIA           | \$10,691.7              | \$11,084.6              | -3.5%       |
| · LOCAL RADIO         | \$7,187.0               | \$7,385.1               | -2.7%       |
| · NATIONAL SPOT RADIO | \$2,502.6               | \$2,695.0               | -7.1%       |
| · NETWORK RADIO       | \$1,002.2               | \$1,004.5               | -0.2%       |
| OUTDOOR               | \$4,020.4               | \$3,831.2               | 4.9%        |
| <b>TOTAL</b>          | <b>\$148,993.5</b>      | <b>\$148,712.4</b>      | <b>0.2%</b> |

Source: TNS Media Intelligence

**Table 2: Share of Measured Advertising Spending by Media: 2004 Through 2007**

| MEDIA TYPE   | 2007          | 2006          | 2005          | 2004          |
|--------------|---------------|---------------|---------------|---------------|
| NATIONAL TV  | 32.0%         | 31.5%         | 31.6%         | 31.0%         |
| MAGAZINES    | 20.4%         | 19.3%         | 19.8%         | 19.0%         |
| NEWSPAPERS   | 17.7%         | 18.8%         | 20.2%         | 20.4%         |
| LOCAL TV     | 11.3%         | 12.5%         | 11.5%         | 13.1%         |
| INTERNET     | 7.6%          | 6.6%          | 5.8%          | 5.3%          |
| RADIO        | 7.2%          | 7.5%          | 7.7%          | 7.8%          |
| ALL OTHER    | 3.9%          | 3.8%          | 3.5%          | 3.3%          |
| <b>TOTAL</b> | <b>100.0%</b> | <b>100.0%</b> | <b>100.0%</b> | <b>100.0%</b> |

Source: TNS Media Intelligence

Ukrainian Internet market, although not as crowded as in many other counties, is represented by over 200,000 web sites. Internet advertising is considered to be the most profitable of all the online activities. Besides internet advertising, the most money-generating online activities in Ukraine include online shopping, internet service providers, sale of traffic and other type of information. Although online advertising is the most profitable part of online business according to some sources ([www.meta.ua](http://www.meta.ua)), realistically, paid advertisement is placed on less than 200 web sites in Ukraine.

Online marketing is fairly new but a fast growing non-traditional advertising outlet in Ukraine. Overall advertising expenditures growth in Ukraine ranges around 70-100% annually (see table 3 for results of 2007).. Despite such an explosive growth, share of Internet advertising in the overall advertising spending is only 0.3% annually (see Table 4). It is likely that in near future advertising budgets in Ukraine are not going to see significant shifts in resource allocation towards non-traditional online advertising. Advertising money will continue to be confined to more conventional forms of advertising despite growing Internet market. According to some forecasts ([www.meta.ua](http://www.meta.ua)), a significant shift in allocation of advertising budgets towards online advertising, is not going to happen until the overall contribution of online advertisement reaches at least 1% of the total advertising market. Forecasts for 2008 project just such an increase. Profits from internet advertising are expected to reach \$20 million ([www.meta.ua](http://www.meta.ua)).

**Table 3. Ukrainian Advertising Market in 2007**



| MEDIA TYPE      | SPENDING, \$ MILLION | GROWTH PER YEAR, % |
|-----------------|----------------------|--------------------|
| TELEVISION      | 500                  | 28                 |
| OUTDOOR         | 819                  | 25                 |
| NEWSPAPER MEDIA | 225                  | 27                 |
| RADIO           | 38                   | 43                 |
| TRANSPORT       | 31                   | 24                 |
| MOVIES          | 9                    | 33                 |
| INTERNET        | 11                   | 83                 |

Source: Companion 2007

**Table 4. Internet Advertising Compared: Ukraine, Russia, USA**

| THREE MARKETS                                     |                |               |            |
|---|----------------|---------------|------------|
|   | <i>Ukraine</i> | <i>Russia</i> | <i>USA</i> |
| INTERNET PROLIFERATION, %                         | 7.2            | 16            | 68         |
| TOTAL VOLUME OF INTERNET ADVERTISING, \$ MILLIONS | 4              | 100           | 23000      |
| ANNUAL COST PER SINGLE USER, \$                   | 0.83           | 5             | 120        |
| ANNUAL GROWTH OF INTERNET ADVERTISING MARKET      | 67             | 71            | 13.3       |
| PERCENTAGE OF TOTAL ADVERTISING VOLUME            | 0.3            | 0.9           | 5.8        |

Source: "Ligabusinessinform", 2006

While Internet proliferation in Ukraine considerably lags behind Russia and United States (see Table 4), Internet as an emerging marketing platform will lead to development of new advertising strategies. The specifics of Ukrainian Internet users coupled with low Internet proliferations rates lead to development of advertising strategies that are unique for Ukrainian market: carefully targeting very well defined audience.

## UKRAINIAN INTERNET MARKET COMPOSITION

Internet users in Ukraine range between 3.5 to 5.2 million of people, which is 7-11% population. Generally, Internet advertising is not as expensive as other more traditional advertising media. However, due to a low Internet penetration in the country, the cost of Internet advertising per contact in Ukraine is actually comparable to that of traditional advertising media. While the cost of Internet advertisement is 7-10 times less per contact than the cost of a TV advertisement, the degree of impact each media type makes is not necessarily comparable. Contact for a TV advertisement is counted when a commercial is watched, while a contact on Internet is counted when a banner is looked at. These two activities result in a very different impact on individual.

Despite the low Internet proliferation (only 7-11% of population) in Ukraine those who have access to Internet are the most educated segment of the Ukrainian population, with the highest income. Thus, these Internet users represent the most attractive part of population for many advertisers. There are already companies who take advantage of this "exclusivity" of online users. Unitrademelon, which is part of A Ventures Group, allocates 2% of its advertising budget to online advertising. The "exclusivity" of online users appeals the company since it gives them direct access to their ideal customer – those who follow the latest technological innovations and become active consumers of latest technologies.

Among the biggest contributors to online advertising in Ukraine are technology selling companies such as mobile phone providers, makers and retailers of electronics, auto dealers, banks, and real estate companies. Majority of advertisers don't even allocate advertising budget for Internet media, but rather use budget overflow to feed this additional advertising platform.

Very few companies share an optimistic view of the future of Internet advertising. For the most part, those online advertisers who are already represented on Internet do it on experimental basis. There are number of other factors contributing towards a slow acceptance of Internet as a fundamentally new and potentially profitable advertising platform. The following sections address those factors.

## **LACK OF CONTEXT SPECIFIC INTERNET RESOURCES – IMPACT ON ADVERTISERS**

Internet advertisers, just as advertisers in other, more traditional media, need target audience. Online audience and its “quality” very much depend on the content of the internet resource. Thus, those internet resources that have specific mission and are content-specific have a good chance of becoming an attractive platform for online advertisers in the long run.

On the other hand, there are very few Internet projects in Ukraine that are sellable due to its content. The reason does not always lie in web sites’ unwillingness to promote development of their resource. Web sites often find themselves following potential advertisers who measure advertising attractiveness of online resource solely by its attendance ratings. Online advertisers in Ukraine tend to favor web sites with highest traffic volume since their primary objective is to maximize impact while minimizing costs. This in turn forces web sites to become more like big portals with concentration of many different resources and where many users spend considerable amount of time.

Web site content becomes a victim of traffic volume. Instead of strategically developing targeted audience and sustaining the content, web site are more concerned with traffic volume and finding ways to attract users, which sometimes include methods that have questionable legality. The so called “traffic generators” enjoy increased popularity on Ukrainian Internet market. Traffic generators web sites overpromise services in order to lure users to their web site (where often content does not correspond to the promise). As the result, such web sites have the most diverse and non-homogeneous user base and online advertisers end up missing their target audience when they advertise on these high-traffic sites ([www.itcg.net](http://www.itcg.net)).

For many advertisers the biggest problem on Ukrainian online market is lack of specialized resources where they would have found their targeted audience efficiently and effectively. For instance, German beer producer Becks, who is interested in younger audience with active life styles, focuses its advertising efforts on popular “younger” Internet web site [www.afisha.kiev.ua](http://www.afisha.kiev.ua). Stella Artois, another beer producer, targets younger Ukrainian audience on a similar entertainment web site [www.kino-teatr.kiev.ua](http://www.kino-teatr.kiev.ua). The Internet advertising budget of Stella Artois in Ukraine consist of 1% of their advertising budget and it is unlikely to change until there are more context specific Internet resources with sizable user base (Companion 2007).

## **LACK OF RELIABLE USER INFORMATION IN ONLINE MARKET**

Another issue that puts a break on faster development of online Internet advertising is lack of reliable information about web site users, including traffic volumes and socio-demographic information about users. Ukraine does not have an independent Internet research resource that would monitor and compile such information. Financial resources needed to fund such a project would have to come from online companies interested in having “someone” tailing them. However, there does not seem to be enough of online companies willing to pay for such research.

Very few web sites are interested in offering truthful information about their user’s profile and volume for risk of losing existing advertisers. Besides, under the existing conditions of shortage of quality specialized online resources, web sites do not find themselves pressured to prove their advertising attractiveness to potential advertisers. Demand for online advertising exceeds the offerings of available advertising platforms. This leads to situation when advertisers have to reserve in advance placement on popular Internet resources.

There are web site that attempt to study their users. However, such efforts usually do not extend beyond general counting of visitors. Demographics and social characteristics of users are not polled. The only information on online user demographics and their social characteristics is available for online shopping ([www.gemius.com.ua](http://www.gemius.com.ua)). Although there are some web sites that attempt to survey their users (on a purely voluntarily basis) to find out gender, age, and income level, for the most part such data could not be trusted.

The first company to undertake a major Internet user research project was Gemius Ukraine. Company has technologies for evaluating number of visitors, their movements within web site, and user's socio-demographic profile. Thus far, only about 50 web sites are included into the research study. Another company, LigabusinessInform, is attempting to consolidate Internet market in order to conduct independent research of Internet users.

## STRATEGIES FOR IMPROVING EFFECTIVENESS OF INTERNET ADVERTISING

Clearly online advertising market in Ukraine is in its early development stages. There is also a shortage of qualified creative marketing and design professionals in the field of online advertisement. Lack of competition in the field allows sellers to choose the cream of the crop among advertisers without giving much thought to their own reputation. Advertising agencies first sell anything that has potential of yielding maximum profit. Thus, it is much easier for an agency to place a banner on a web site for their client instead of developing potentially more effective content-specific advertisement. The former can cost tens of thousands of dollars, while the later is much more labor intensive in development but would cost only couple of hundreds of dollars.

Design and development of online advertising does not exists as an area of specialty in professional carrier. Frequently, online ads simply duplicate hardcopy posters. Popup and rising banners are the latest "designer's" trend, which is proven to yield better clicking response than other stationary styles of ads. However, an increased "clickability" of such ads can also be attributed to user's desire to close the banner, while accidentally opening advertiser's page. Such actions will not generate positive emotions toward advertiser's product from the user.

**Table 5.**

| TWO TYPES OF INTERNET ADVERTIZING |  |  |
|-----------------------------------|--|--|
|                                   | BANNER ADS   | CONTENT-SPECIFIC ADS   |
| DESCRIPTION                       | Animated and multimedia messages, occasionally accompanied by sound                      | Compact text ads tied to user's search inquiry.  |
| EFFECTIVENESS                     | 80-90% - brand information reaching users on emotional level; 10-20% click-through -rate | Effectiveness is measured by number of clicks (pay per click principal)                      |
| COST                              | \$5-14 per 1000 showings   | Starts at \$0.01 per click; depends on number of competing advertisers in a specific inquiry |
| MARKET PENETRATION                | 90%  | 10%  |
| TRENDS                            | Content-specific advertising is expected to grow to 30% of the market within 2-3 years   |  |

Advertisers in Ukraine typically utilize technical specialists mostly programmers to create online ads. While technical specialists are capable of successfully creating a banner or an entire web site, they do not have adequate knowledge in the area of marketing strategy. As the result, there are no qualified personnel to specifically focus on online advertising and on creative process of formulating and implementing Internet marketing strategy.

Effectiveness of online advertising is frequently measured in CTR, Click-Through-Rate (see Table 5). CTR counts number of clicks on advertising message relative to the total number of message showings. Some

evidence suggest that nearly 80% of users who remember banner ads and can verify them through exact description, never actually clicked on the banner (See Shulgina, 2007). Thus, creating content-specific innovative advertising strategies for online marketing should lead to a more efficient way of reaching target audience.

## CONCLUDING REMARKS

Among all segments of media advertizing on Ukrainian market Internet advertising, although representing the smallest segment of the market, demonstrates the biggest growth. Despite increasing attractiveness of this newer advertising platform in Ukraine, businesses are cautious to invest their resources in online advertising. Number of factors specific for Ukrainian online market hinders the process of faster acceptance of Internet media.

Ukrainian online market is characterized by dominance of broad portals. There are fewer content-specific web sites. Advertisers need content-rich web sites to be able to efficiently and effectively find their target audience. Web sites with broad audience attract those advertisers who are interested in traffic volume. The future success and growth in online advertising lies in its ability to offer interactive, instant feedback features advertising opportunities for businesses. Businesses thus are not going to increase their online advertising budgets until they are able to find their online target audience efficiently. Although Ukrainian Internet user base already represent an “exclusive” audience, lack of content specialized web sites deteriorates the natural process of market segmentation in Ukraine.

Lack of reliable Internet user information is another major factor hindering faster acceptance of online advertising. While cost of online advertising compares favorably against cost of other advertising platforms, online advertising is strategically effective when right audiences are exposed to the right type of online advertising. Without knowing Internet users’ socio-demographic characteristics it is nearly impossible for advertisers to develop effective strategies for their targeted audiences.

The general trend in online advertising today is to shift from volume-based performance characteristics of online advertising to quality-based ones. Businesses in Ukraine will start allocating more of their advertising budget toward online advertising when they are able to develop effective content-based advertising strategies. This in turn requires development of socio-demographic networks that are capable of systematically narrowing down Internet user’s interests in order to provide users with advertizing that best matches their interests and requirements.

Development of content-specific advertisements requires specialized marketing knowledge from those who create content advertisements. Ukrainian advertizing market does not have professional resources designated specifically for online advertising and mostly utilizes programmers to develop online advertisements. This also presents a challenge for the future since programmers don’t have a knowledge of marketing and advertising that could be creatively used for online advertising. In the future, as more money would be allocated toward online advertising, there should be more creative online marketing professionals specializing in Internet marketing.

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# THE VERIFICATION OF CUSTOMER PERCEPTIONS OF QUEUE MANAGEMENT TO ACHIEVE BUSINESS IMPERATIVES

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## ABSTRACT

*This paper highlights the concept of queue management as a fundamental aspect of the perception of service quality by customers frequenting the retail outlets of an international industrial gases and welding company. The perceptions of customers regarding inefficient queue management and service delivery were investigated in order to gain perspective on the overall value offered by the company. A hypothesis was made that customers were experiencing service inefficiencies due to system constraints. Based on the internal and external empirical findings, the hypothesis was rejected, but several other problem areas regarding service efficiency and customer relationship management in the retail environment were identified. A suggested model for mitigating these problem areas was subsequently outlined.*

## INTRODUCTION

An organisation may strive for competitive advantages, improved efficiency and effectiveness, performance management or various other strategic imperatives. However, many of these interventions may be voided if an organisation does not address their most important consideration, namely the customer. According to Nicholls *et al* (1998) the lifeblood of any organisation is undoubtedly their customer. It is the satisfaction of these customers that provides the organisation with the key for continual growth and survival. Service satisfaction is a function of the consumer's experiences and reactions to a provider's behaviour during the service encounter. It is also a function of the service setting. Customer satisfaction provides the necessary linkage between the level of service that an organisation provides, the customer's perception of that service and the customer's future behaviour towards the organisation. A highly satisfied customer will continue to provide repeat business and constant revenues through increased frequency of visits and positive word-of-mouth advertising. This will translate into increased profits for the company. A dissatisfied customer will have the opposite effect. (Grewal *et al*, 2003).

According to Bolton and Drew (1991), satisfaction is the customer's post-purchase evaluation of a product/service offering. A customer is satisfied when an offering performs better than expected and is dissatisfied when expectations exceed performance. Customer satisfaction/dissatisfaction is typically modelled as a function of disconfirmation, arising from discrepancies between prior expectations and actual performance. Grönroos (1983) suggested a paradigm that described service quality as being distinguishable between technical quality (what is done) and functional quality (how it is done). The model indicated the importance of the service provider matching the expected service and the perceived service to one another.

## BACKGROUND AND RATIONALE

When considering the concept of service quality in an organisation, there are several potential areas that could warrant attention. Fisk *et al* (1993) proposed that service satisfaction centres on the following four areas:

1. Customer expectations of service contrasted with their realisation.
2. Technical and functional approaches to service satisfaction.
3. Influence of time.
4. Service quality versus service satisfaction.

The abovementioned, with especial reference to the influence of time on the service satisfaction of customers, was utilised as the basis of the research. This further elicited the concept of queuing and queue management as Davis and Heineke (1994) also point out that the management of queues should be of particular importance to an organisation, as the speed of service delivered has been shown to provide a competitive advantage in the marketplace.

Whilst addressing the topic of customer's views of queuing, Taylor (1994) denotes that the customer's perception of whether or not the service provider is in control of the situation and the manner in which the delayed time is managed or filled will have an indirect impact on the customer's overall rating of value. It is vitally important for organisations then to exert a degree of control over their relationships with these customers and also the perceptions held by same customers as Davis and Heineke (1994) further elaborate that the customer's perception regarding the performance of the service is more critical than the actual performance itself, although there is frequently a high correlation between the two. This is supported by the work done by Maister (1985) whose fundamental premise was that the perception of the wait determines satisfaction rather than the actual waiting time. He further suggests that people's perception of waiting time is believed to be distorted uni-directionally, so that most customers think they have waited longer than they actually have. Larsons (1987) sums it up succinctly as follows: *"waiting is a form of imprisonment, one is doing time—but why? One is being punished not for an offence of one's own, but for the inefficiencies of those who impose the wait. Hence the peculiar rage that waiting engenders, the sense of injustice. Aside from the boredom and physical discomfort, the subtle misery of waiting is the knowledge that one's most precious resource, time, a fraction of one's life, is being stolen away, irrecoverably lost."*

Customer waiting can take place at any stage of the purchase process, some waits occur before, during or after the transaction experience. Waiting is considered to have a definite negative effect on the perception of service and service satisfaction. It is therefore one of the most critical service attributes for almost all retailers. A study by Chebat *et al* (1994) introduced the "halo effect", which concluded that a customer's evaluation of service quality was affected not only by the end service received, but also by the service delivery process itself, which includes waiting time. It is therefore critical, in situations where waiting is inevitable, that companies attempt to provide a high level of satisfaction regarding the waiting portion of the service experience (Davis & Heineke, 1998). Very often the actual wait duration can only be controlled and improved upon to a point, the next step would be to manage the customer's perception of the wait (Taylor, 1994).

Customers have also indicated that waits provide feelings of uncertainty, anxiety, frustration, annoyance, irritation, stress and anger. Several researchers have shown that when the situation that has caused the delay was avoidable or controllable, then the dominant emotion is that of anger. A higher degree of anger is realised when the customer's perception of the event was that the service provider could have circumvented or mitigated the barrier that prevented the service (Meyer & Mulherin, 1980; Reisenzein, 1986; Weiner, 1980). Similarly, Folkes (1984) found that the more common the delay the less likely that these customers would repurchase.

Research has indicated that the amount of empty queuing time that a person finds tolerable depends on a number of variables; especially the physical environment surrounding the queue, perceptions that a queue is being managed in a socially just manner (*i.e.* following strictly the first-in-first-out principle), and the presence of indicators of a delay's likely duration (Bennett, 1998). Ensuring that there are enough stimuli to keep or occupy the individual's attention can circumvent this. By personally filling the customer's time, a message is conveyed to customers that they have not been forgotten, reducing some of the waiting

uncertainty. The time filling could also convey the message that the customer is considered valuable, thereby possibly reducing anger (Taylor, 1994).

The research on which this paper is based focused primarily customer's perceptions of service quality and queue management within an industrial company. The organisation on which the research focused (hereafter referred to as Company X) is in the industrial gases and welding industry. This is a global company but the research focused on the South African subsidiary. The industrial retail outlets of Company X are the growth drivers for the organisation and thus seen as the largest opportunity for providing revenue growth. The in-store experience and customer perceptions of service quality are therefore critical areas for the delivery of the planned strategic growth.

The in-store purchasing decision consists of many phases and the one of the facets considered in the compilation of the research problem is the type of relationship that customers have with Company X. The customers could be in the straight re-buy stage or still be in the testing stage. The purchasing process is generally divided into the following areas: locating the product; acquiring technical/product/account information; Making the purchase decision; queuing and completing the purchase transaction. Customers purchasing these products could be in various stages of their decision making, which adds to the purchasing complexity. The organisation is thus required to plan for the differing expectations of customers.

The scope of the research was done on the flow of events from when the customer enters the retail outlet to when leaving with the product/s. Customers frequenting the store could be in various phases of the purchasing decision, depending on the product and relationship maturity, and they could be either the driver or the decision-maker. The following is an example of a possible scenario:

- A mature **customer 1** purchasing liquid petroleum gas (hereafter LPG), who is in the straight re-buy phase skips stage 1 – 3 of the purchasing process and moves into stage 4.
- A mature **customer 2** who is the decision maker of the business who is purchasing a welding consumable product will have fewer requirements in stage 2, as he will more than likely not request process or technical product information and will move into stage 4.
- A new **customer 3** walks into the Company X retail outlet and wishes to start a purchasing relationship with Company X. He would move to stage 4 as the person to assist him is behind the counter.
- A mature **customer 4** has completed stages 1 – 4, but is unable to transact due to account problems.
- A **driver 5** is sent to collect a list of predefined goods. He moves straight to stage 4.
- A mature **customer 6** wishes to purchase a new product and requires sufficient assistance during stage 2 of the purchasing process so that he can complete stage 3. However, he is in stage 4 as the person to assist him is behind the counter.

The above scenario merely requires six customers to be in the store at the same time for these events to occur, which places excess demands on the staffing component of the store and facilitates the possible reduction in service quality. Compounding this problem is that customers can enter at varying times. The customers are deprived of service efficiency due to the fact that they will pass through stages 1 – 3 quickly, but will be delayed in stage 4. The retail staff members are only able to engage with the customer in Stage 5, therefore forcing customers to be delayed in Stage 4, resulting in slower queue management.

From the scenario depicted, the problem in question which was researched is that the customers of Company X are experiencing service inefficiencies whilst collecting their products at the Company X retail outlets, which generated to a few possible research questions: What type of service inefficiencies are customers facing? What constitutes value for such a retail customer? What possible changes can be made to improve the overall levels of service satisfaction for the customer? What mechanisms could be instituted to mitigate potential problematic queue management in a retail store? And the hypothesis formulated in line with the research questions is that:

- H1:** The customers currently frequenting the industrial retail stores of Company X are not satisfied with the length of time it takes to complete the transaction and this is due primarily to system constraints.



## METHODOLOGY

The researchers initially made use of an open-ended questionnaire that allowed for a range of possible answers. This was distributed internally amongst employees of company X. The survey was focused mainly on receiving qualitative rather than quantitative data in order to better understand the proposed problem areas in proffering customer service. The researchers identified a list of employees from Company X, comprising representatives from the cross-functional areas (Services, Sales and Retail). A judgement sample of interviewees was drawn based on the following criteria: location to the metropole and direct or indirect regional influence. The researchers made use of structured interviews, which lasted approximately thirty minutes and were either completed by means of face-to-face or telephonic interviews. The data obtained from the internal survey was then used as a basis for developing the survey instrument for the external research.

The external research was primarily focused on customers who frequently collected their products from the Company X industrial retail outlets. A list of 1 500 (sample population) customers was drawn from the Company X database based on their purchasing behaviour. The customers interviewed were then randomly selected from these lists.

The sampling was conducted as follows: given the nature of the research project, a non-probability quota sampling technique was utilised. A total number of 298 customers were interviewed. Samples were determined by region, product category, product use in industry, gender, population group, age and business income. The researchers made use of an experienced, specialised Customer Value Management team to conduct face-to-face interviews with each respondent, based on a structured questionnaire. Each interview lasted approximately forty-five minutes. The Customer Value Management (CVM) methodology utilised by the external marketing research company, was based on service quality research conducted by Parasuraman, Zeithaml and Berry (1988). The constructs evaluated by the CVM process were, however, customised to reflect the South African environment by using inputs from the internal interviews conducted at Company X. The following constructs were measured:

1. Customers' overall value perceptions.
2. The components that make up customer value.
3. The processes that make up the specific components.
4. Specific activities relating to each component of value and service.
5. Loyalty and future intentions.

The research instrument utilised a 10-point scale. Interpretation of the scale for the overall value and for all performance statements was: 1 = 0% (poor value) - 10 = 100% (excellent). Based on industry norms, a rating of 8 on the scale (good) is considered the minimum performance standard. Organisations that are perceived to be providing superior value should be achieving results of more than eighty-nine percent (9 out of 10). The minimum acceptable industry norm is seventy-eight percent. Based on multiple regression analysis, *Derived Importance* or *Impact* scores were developed. These impact scores were used to identify drivers and dissatisfiers. For interpretation purposes, drivers and dissatisfiers are distinguished on the following basis:

- ☐ High impact – Beta Coefficient of 0.3 – 1 = Value driver
- ☐ Moderate impact – Beta Coefficient of 0.15 – 0.3 = Value driver
- ☐ Low impact – Beta Coefficient of less than 0.15 = Dissatisfier / fundamental

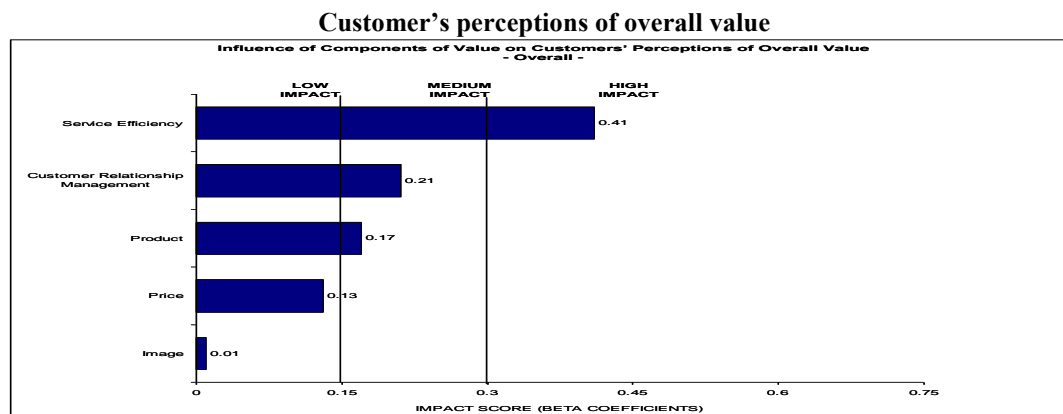
## RESULTS AND DISCUSSION

The initial findings resulting from the internal survey are as follows: The perceived time spent on the purchase process ranges from fifteen to thirty minutes during peak time and seven to ten minutes during off-peak periods. The most time spent on the purchase process ideally should be between three and five minutes. Three best-in-class competitors were identified and the attributes that made the best-in-class successful were

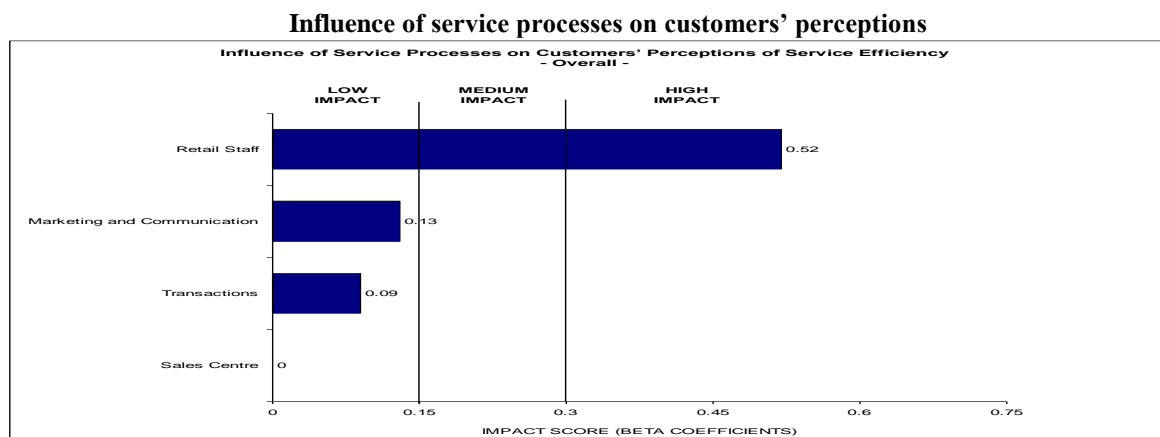
listed as the following: Shop floor assistants; Simple Cash Transaction System; Shelf pricing; Bar-coding; Store layout.

Further interpretation of the findings from the internal research survey identified the following as the perceived problem areas in the industrial retail outlets of Company X: debt issues; staff constraints, as most stores are one-man-driven; lack of product and technical knowledge; lack of pricing information on the shelves and items; incoming phone-calls distract employees; retail aptitude and attitude of the staff currently in the centres is poor; performance measurements are more operations-focused than people-focused and the system for cash sales is too complex requiring too many key strokes. It was hypothesized that all these factors could have a potential effect on the queue management system and customer's perceptions thereof. Further analysis of the data indicated that the root causes of these problems were *inter alia*: the Order-to-Cash process; the policies and procedures governing the process are not customer-centred; the wrong people are currently fulfilling the role of the order taker and retail outlets are cost-driven and not service-driven.

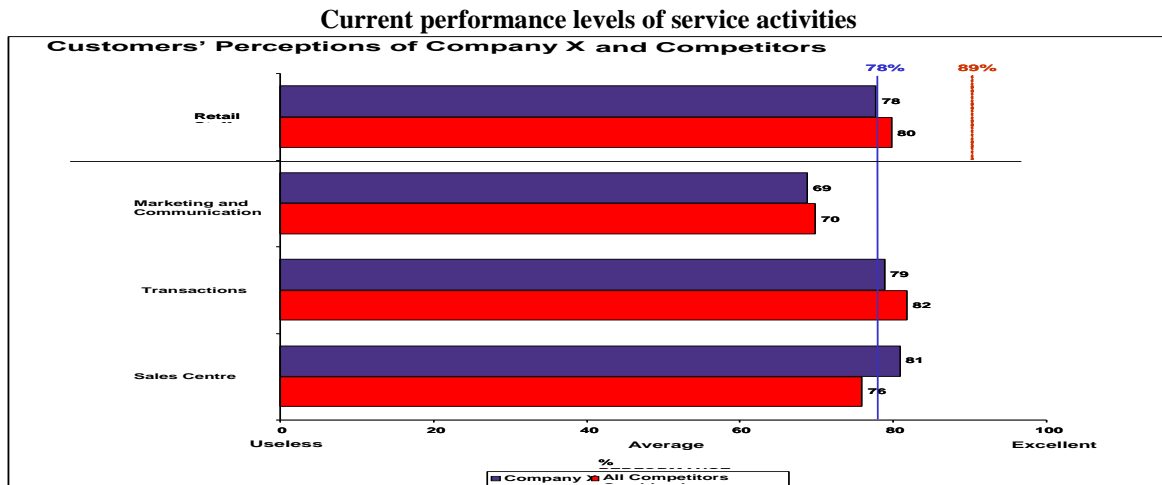
Based on the conceptualisation of these problem areas, the external research identified the value drivers of the customers frequenting the industrial retail outlets. The research further determined the customers' view of problem areas and opportunities within the retail environment, which could be managed to improve service quality within the stores. The following figure illustrates the influence of each component of value on the overall perception of value of the customer.



The following can be deduced from the results: *Service efficiency* currently has the highest impact on customers' perceptions of overall value and the goal, as a value driver, is a service level of eighty-nine percent. Both *customer relationship management* and *product* have been identified as drivers of value perceptions. *Price* is still important, but affects value perceptions to a lesser degree. *Image* plays almost no role.

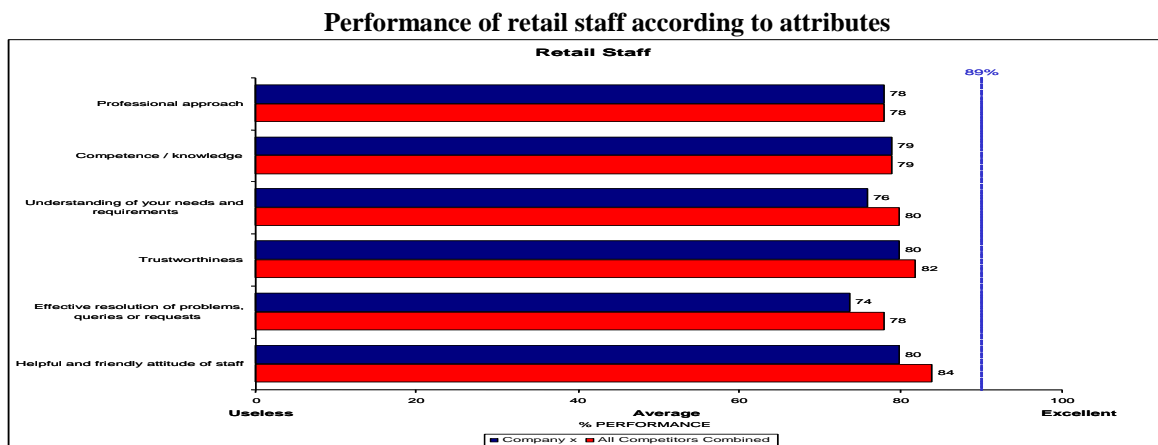


From the figure above it is evident that *retail staff* is the only value driver in the group of service activities. This means that this must be the specific area of focus required to improve customers' perception of overall value. Both marketing and communication and transactions have a minimal impact on service efficiency and they have to be performed at a minimum industry norm of seventy-eight percent.



The abovementioned figure depicts the current performance levels of the service activities. The performance on the only driver of service efficiency, namely *retail staff* (at seventy-eight percent) is considerably short of the required target to ensure customer satisfaction (eighty-nine percent). Another point of concern is that *marketing and communication* (sixty-nine percent) as a business fundamental is also lacking in performance (seventy-eight percent). The *transaction* (seventy-nine percent) activity is on par with the expected performance to deliver customer satisfaction.

To better understand the opportunity for improving overall customer perception of value, *retail staff's* performance was further split into specific attributes that needed to be measured. The following figure illustrates these attributes.



The figure above shows that none of the attributes are close to the desired level of eighty-nine percent. The worst-performing attribute being that of *effective resolution of problems, queries or requests* (seventy-four percent). When examining the *transactions* attribute, efficiency of cash transactions was rated as performing at eighty percent, well above the required seventy-eight percent.

## CONCLUSIONS AND MANAGERIAL IMPLICATIONS

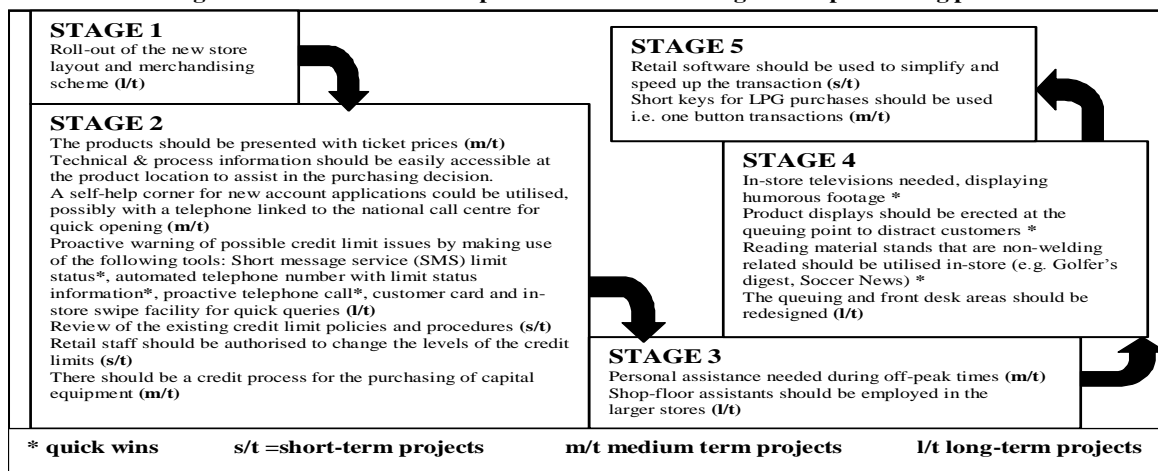
The initial hypothesis formulated from the research questions was that the customers currently frequenting the industrial retail stores of Company X are not satisfied with the length of time it takes to complete the transaction, due primarily to system constraints. However, a conclusion to be reached based on the results is that the transaction time was not causing dissatisfaction due to the fact that customers had given the cash transaction processing a rating of seventy-nine percent, which is sufficiently meets the required service level of seventy-eight percent. Other concerns are that transaction processing was a business fundamental and not a value driver, therefore even if Company X were to dramatically improve the time spent during the transaction process it would not improve the customers perception of overall value or satisfaction.

The hypothesis has thus been rejected, and the null-hypothesis in this case has been accepted. However, other potential problem areas were identified from the external research which have possible managerial implications. Utilising the findings of the external research it was shown that *service efficiency* is the largest component that drives value and that the service element within this group that drives the value, was found to be the *retail staff* which needed to be addressed primarily in order to retain the customers who would consider defecting.

The research showed that the weakest component attributed to *retail staff* was the effective *resolution of problems, queries or requests*. Utilising root cause analysis, the researchers decided to direct the focus onto this one specific problem that would provide the best return on investment, namely improving the problem-resolution process at retail outlets. The scope for further research should become far narrower and more focused on the activities that can influence this area of problem resolution. The area regarding *resolution of problems* required further delineation and the specific issues arising from this were that customers have a problem on their account, customers have a pricing query and customers request particular technical information.

The following model is proposed as a result of the above understanding of the retail environment and the empirical results. Each stage of the purchasing process has been scrutinized and the possible solutions are outlined. The solutions are categorised by ease of implementation, namely quick wins (easiest to implement), short-term projects, medium-term projects and long-term projects. The abovementioned solutions could be implemented in Company X to mitigate the problem areas determined by the research as well as providing insight to other retailers in similar industries regarding customer perceptions. Further research could be undertaken in other environments to verify these results, as the research was limited to the retail situation of one organisation. The model highlights practical solutions to the problem of poor service quality in a retail environment which other organisations should earnestly consider in order to remain competitive.

**Figure 7: Model of service improvements for each stage of the purchasing process**



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# **PRELIMINARY CRITERIA REDUCTION FOR THE APPLICATION OF ANALYTIC HIERARCHY PROCESS METHOD**

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## **ABSTRACT**

*The Analytic Hierarchy Process (AHP) is a method for multi – criteria decision making. It consists principally of three levels – Main Goal, Criteria and Alternatives. The Main Goal level can be extended into forces and actors influencing the decision making process, the Criteria level can be divided into criteria and sub – criteria, whereas the decision alternatives can be treated as action scenarios and prognostics of their effects. In turbulent environments of actual global economic reality the number of criteria that need to be taken into account when making strategic decisions can be broad. Theoretically the more determinants at the preparatory stage, the better decision making. In fact, multiplying the number of factors can obfuscate the main goal and result in inefficient final decision. For this reason some kind of rationalization of amount of criteria seems to be necessary. According to T. L. Saaty, the author of AHP method, the number of criteria and alternatives analyzed in decision making processes should not exceed 7 (+/- 2), which gives 9 criteria / alternatives maximum. The article attempts at finding a method for reducing the number of factors taken into account when performing data collection for future decision making. Geopolitical determinants of functioning of international corporations have been used as criteria. The author tries to emphasize the aspect of final decision quality, which should not be impoverished because of limitations of amount of analyzed criteria and strategic alternatives.*

## **INTRODUCTION**

Effective decision making at strategic levels requires a correct identification of factors that can influence business in future time periods. The business environment of international companies consists of a multitude of determinants having stronger or weaker impact on managerial decisions. The ideal situation would be to include all of them as variables decision making process, but such an inflow of information would obfuscate our perception and finally make the distinction between important and unimportant variables impossible. Also methods for multicriterial decision making such as Analytic Hierarchy Process (AHP) accept only a limited number of criteria and alternatives. For this reason the author perceives a need for elaboration of a method that could help dividing the factors into two groups: those that absolutely need to be taken into account and those that could be omitted. When using AHP it is very important to adapt the criteria set to the particularity of the enterprise, namely its goal, size and environment, as well as to the specificity of decision to be made.

In the present paper the author will make an attempt to create a method for limiting the number of criteria for the needs of decision making with use of Analytic Hierarchy Process.

## **GEOPOLITICAL CONDITIONS OF FUNCTIONING OF INTERNATIONAL ENTERPRISES**

According to the Open Systems Model the environment of international enterprises can be divided in three groups. These are the following:

- Determinants of Operating Environment.
- Determinants of Host – Country Environment.
- Determinants of Mega Environment (Deresky, 2006, p. 13 – 25).

The determinants of Operating Environment can be divided into:

- Legal Regulations – a set of legal acts determining the functioning of mother country companies. Three main types of legal systems can be actually found in the world - European Continental Law (codes and legal acts), Common Law (judicial precedents) and Religious Law (religious books).
- Culture in Organizational Aspect – mainly understood as the influence of local human factor on numerous aspects of organizational behaviors. From the organization's spectrum the cultural factors that bear the most important effect on the functioning of organizations are: the level of orientation towards the results, the ability of strategic planning and the orientation towards a human being.
- Skills – special predispositions and preparation of mother country population towards entrepreneurship, team work, problem solving and adaptation to variable environment. Another group of skills are those areas of industry and economy in which the mother country population shows competitive advantage due to some historical reasons or unique conditions of local natural environment.
- Social Responsibility – the level of awareness of mother country population about the questions from Corporate Social Responsibility area. In general this idea bases on an assumption that an enterprise's managerial board should take into account the needs of all shareholders, not only the major ones, i.e. workers, suppliers, local communities, Non – Governmental Organizations, business partners, investors, individual shareholders or single proprietors.
- Ethics – directly linked with social responsibility. It determines the strength of moral rules enrooting in mother country society and shows the level of compliance to these ideals in economic praxis. Ethics can be also understood as a general ability of the society to solve the entity of problems that arise with economic development of a country in an ethical way.

The Host – Country Environment Determinants form the following group:

- Economic Factors – general economic system (free market economy, a centrally planned one or a totalitarian system with elements of free market); investment risk in host – country; stability of host – country economy as an indicator of investment attractiveness; stage of economic development (rich developed countries, developing countries or Third World countries); GNP structure; adopted economic and fiscal policies; disproportions in welfare distribution; model applied for redistribution of fruits of society's work. Although Deresky sees the local competition as a separate determinant the author decided to include it into the group of Economic Factors as well.
- Political Factors – every enterprise's investment decision has to be preceded by an analysis of host – country political risk. T.W. Shreeve divides this risk in two types: the macro – political and the micro – political risk and proposes a list of seven possible events from the political risk area: expropriation of enterprise's assets without

due and adequate recompense; forced sale of actions to host – country citizens, usually below their real value; discriminative treatment of foreign companies when applying the rules of law; creation of abroad fund transfer barriers (profits or actions); deprivation of technology or other intellectual property (patents, trademarks, brands); interference in decision making processes; fraud of state authorities and their representatives, including the recalling or changing of former agreements, bribe extortion, etc (Shreeve, 1984, p. 111 – 118).

- Technological Factors play a crucial role in modern economy and can be perceived dually – as a general level of host – country technological and scientific advancement (number of host – country international industrial patents) or as the level of host – country's preparation for the reception of modern innovative businesses. This factor's indicators are the number of public and private independent research institutions and think – tanks focused on technological development, the percentage of GNP invested into scientific research and education, existence of national innovation strategy, level of intellectual property protection, incentive programs for creation of research nets, number of international R&D projects, level of compliance of technical and informatics solutions elaborated and applied in host – country with those available in the rest of the World (Ostry, 1998, p. 85 – 99).
- Culture in Individual Aspect – mainly understood as its influence on communication between individuals. It can be observed in the following areas: varying society organizations (hierarchical, democratic); adopted system of values; individual ways of thinking (depending on the obtained education); varying social roles of citizens; attitudes towards entrepreneurship and other forms of activity; perception of time (circular or linear); role of language and non – verbal communication (including the body language); proxemics – the extent of personal space in both private and professional life; role of touch and cultural context in multicultural communication.
- Subsidiary & Host – Country Interdependence – level of interdependencies between companies investing and operating outside their country of origin and the host – country. Some countries will be encouraging the inflow of Foreign Direct Investment by providing numerous incentives for foreign enterprises interested in entering their internal markets (tax deductions, cheap ground, infrastructure, technology, trained staff), whereas others will be protecting their local businesses by rising market entry barriers for foreign companies (excessive licensing, high customs levels, direct and indirect aid available to competitive local companies, strengthening of national monopolies).

The Mega Environment determinants are:

- Global Trends and Forces – the entity of economical and political phenomena that together with international and global institutions and Intergovernmental Organizations are bearing an indirect, but important influence on strategic decisions of managerial boards of enterprises. The manager's role is to identify and rank a big number of events from this area. The ability of selecting the important ones, a consequent and skilful building of enterprise's international position and lobbying groups becomes today a crucial skill in the field of international management. PR agencies, lobbying groups and some of the NGOs can be very helpful in this field.



- **Global Competition** – the functioning of international enterprises in global competition does not essentially differ from its substance on a local or regional market. Still two main pillars of the system – consumers and producers do exist. The difference comes with a higher number and scale of competing subjects, new marketing forms and distribution channels, size of logistics operations, diversified access to raw materials and others. All of the above causes automatically a much higher complexity of issues to deal with.
- **Multi – National Companies & Host – Country Interdependence** – the main difference between this determinant and the **Subsidiary & Host – Country Interdependence** is the direction of the relation. When at a regional level it was rather the foreign or mother country company that was the beneficiary of potential help from the state, in the actual case it is the host – country that can be strongly dependent on international businesses operating and paying taxes on its territory. Difficulties encountered by global businesses can have strong effects on host – country's economy, in particular on its tax revenues, unemployment rates or accessibility to modern technologies and level of innovation inflow.
- **International Law** – the multilateral international agreements, the United Nations Universal Declaration of Human Rights, International Court of Justice rulings and laws issued by other international organizations (i.e. EU, WHO, WTO, WIPO, ITU, UNESCO) are forming the body of public and private international law and do strongly influence the global environment of International Companies.
- **Level of Global Technological Advancement** – available technologies in World's scale. When taking a decision about entering the market and investing in a particular host – country the leaders have to take into account the relation of host – country's technological advancement and its ability of new innovations creation in comparison to the level of technology available around the World in general.

The entire set of determinants presented above form the geopolitical environment of a given international company. When building strategic plans and making managerial decisions all of them need to be taken into account – both as a group and individually. The question arises which of the determinants bear a stronger influence on effectiveness of decision making? A useful tool for answering this question could be the Analytic Hierarchy Process presented in Chapter 2. The criteria level would consist of determinants presented in Chapter 1.

## **ANALYTIC HIERARCHY PROCESS – METHOD PRESENTATION**

The Analytic Hierarchy Process (AHP) as well as its evolution – the Analytic Network Process (ANP), both developed by T. L. Saaty, are tools for decision making. Their application seems to be the most reasonable in situations when the decision problem is characterized by high level of complexity. The AHP method can be applied only in cases when the problem structure can be presented as hierarchical and upper hierarchy elements do not interact nor influence the elements placed lower on the hierarchical ladder. Whereas the application of AHP method should be proposed in first instance as an easier solution (when possible), the ANP method does not fall under the same limitations and should be treated as a development of AHP method for fuzzy and more complicated decision making problems. The main difference between both methods is that ANP allows analyzing how elements of different factors interact between each other, not only in pairs (Saaty, 2001).

In situations when the optimal solution has to be chosen from a set of alternatives on a subjective basis (i.e. a managerial decision) the Analytic Hierarchy Process should be taken into consideration. The case of International Corporations acting in a turbulent and uncertain geopolitical environment seems to fall very well under this scope (Saaty, 1999). For this reason the AHP method has been chosen by the author for analyses presented in further parts of the present paper.

According to Saaty, the decision making process involves multiple stages, such as "...planning, generating a set of alternatives, setting priorities, choosing a best policy after finding a set of alternatives, allocating resources, determining requirements, predicting outcomes, designing systems, measuring performance, insuring the stability of a system, optimizing and resolving conflict" (Saaty, 1996, p. 5). The AHP method is composed of three main levels, which are taking into account all of the concerns listed above:

- Main goal level – the goal to be achieved by the analyzed decision making process.
- Level of criteria and sub – criteria and their indicators – used for evaluation of dominance of factors.
- Alternatives – subject to expert opinions with respect to criteria above; also the researched optimal solution arises from this level (Saaty, 1996, p. 5 - 7).

The core of AHP method consists of pairwise comparisons of different alternatives, criteria indicators and entire criteria between each other. For this purpose a hierarchy composed of factors of lowering importance is being formed. Their gradation constitutes the first step of AHP method. In next step these factors are being analyzed in pairs on each hierarchical level. As a result, the dominant factor from the pair below is being linked with the dominant factor from the pair straight above, which gives us a ranking of importance of different criteria. It is important to realize that the gradation allows to include the non – measurable criteria into the decision making process. The transition of non – measurable expert evaluations into numerical data that can be subject for comparisons with existing results of research and available statistical data constitutes the main advantage of AHP method. Last, but not least – obtained numbers are a clear proof for the superiority of alternative A over alternative B (accordingly to the pre – selected criteria) because of their mathematical notation. The cited transition can be effectuated by applying the following instruments:

- Fundamental Comparison Scale.
- Pair – Wise Comparison Matrix.
- Consistency Check.

The Fundamental Comparison Scale is performed at pairwise comparison level. It allows the experts to express their preferences in terms of showing how strong is the dominance of one factor above the other (from the same pair). The expert chooses the most suitable descriptive term to state one factor's dominance over the other from the following set: equal, weak, strong, very strong or absolute. Respectively numbers 1, 3, 5, 7, 9 are attributed. Numbers 2, 4, 6, 8 describe intermediary situations, when a strict choice cannot be made. The Pair – Wise Comparison Matrix is a rectangular array of numbers issuing of expert ratings. Its mathematical notation has been presented on Equation 1 below:

[Equation 1:] 
$$[a_{ij}] = (n \times n)A, \text{ where}$$

[Equation 2:] 
$$a_{ij} = \frac{1}{a_{ji}} \text{ and}$$

[Equation 3:] 
$$a_{ij} = 1, \quad i = \{1, 2, \dots, n\} \text{ and}$$

[Equation 4:] 
$$j = \{1, 2, \dots, n\}.$$

An example of Pair – Wise Comparison Matrix has been presented below:

$$A = \begin{bmatrix} 1 & a_{12} & \dots & a_{1n} \\ \frac{1}{a_{12}} & 1 & & a_{2n} \\ a_{12} & \vdots & \vdots & \vdots \\ \frac{1}{a_{1n}} & \frac{1}{a_{2n}} & & 1 \end{bmatrix}$$

[Equation 5:]

Such a matrix must be normalized in the following way:

$$\bar{a}_{ij} = \frac{a_{ij}}{\sum_{j=1}^n a_{ij}}, \text{ where}$$

[Equation 6:]

$$i = \{1, 2, \dots, n\}.$$

[Equation 7:]

The sum of normalized verses of the matrix allows the calculation of matrix eigenvector.

The goal of Consistency Check is to exclude non – consistent expert opinions. The Consistency Ratio (CR) formula is presented below:

$$CR = \frac{CI}{RI}, \text{ where}$$

[Equation 8:]

CR – Consistency Ratio; CI – Consequence Index; RI – Random Index.

The Consequence Index can be calculated from the following equation:

$$CI = \frac{\lambda_{\max} - n}{n - 1}, \text{ where}$$

[Equation 9:]

CI – Consequence Index;  $\lambda_{\max}$  – matrix eigenvalue; n – dimension of the matrix (Saaty, 1996, p. 17 – 25).

The Random Index (RI) values depend from the dimension of the matrix and can be found in Table 1 below:

Table 2: Random Index values

| N  | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   |
|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| RI | 0,00 | 0,00 | 0,58 | 0,90 | 1,12 | 1,24 | 1,32 | 1,41 | 1,45 | 1,49 | 1,51 | 1,48 | 1,56 | 1,57 | 1,59 |

Source: (Saaty, 1996, p. 21)

Expert opinions are inconsistent when the Consistency Ratio (CR) value exceeds 0,1.

In the following Chapter the author provides two proposals of methods for limitation of number of AHP criteria and alternatives.

## PRELIMINARY CRITERIA REDUCTION

Between many statistical methods conceived for grouping and arranging of various analytic criteria the author did not find any strictly applicable for the reduction of criteria number in multicriterial decision making processes. Although Saaty says that his model accepts an unlimited number of entries at the Criteria and Sub – criteria levels, he states clearly that only a limited number of analyzed criteria and alternatives can assure an

appropriate precision of obtained results. Saaty defines this number as  $7 \pm 2$  (which means 9 maximum – Saaty, 2003). At the same time he does not propose any methods of reduction of criteria amount. The author assumes that the reason of this moderation is the particularity of every decision making process. A separate list of criteria should be created for each decision making problem.

Taking all of the above into consideration, the author proposes two separate possibilities of criteria amount reduction:

- Analytical Method – elimination of less important criteria or less likely to happen alternatives based on expert evaluations.
- Deductive Method – elimination of less important criteria accordingly to the particularity of analyzed subject and the evaluation of criteria variability in time (constant and variable in short-, medium- and long time period).

Both proposed methods are author's own concepts and have their positive and negative sides. The main advantage of Analytical Method is that feedback is provided from various sources (more than one expert engaged in criteria evaluation process) which causes a higher certainty of obtained results. The disadvantage could be higher method complexity. The author also doubts seriously whether same experts as for AHP ranking can be used – the risk of self – suggestion seems to be extremely high, which could result in a situation where non eliminated criteria could be perceived as more relevant than in reality. The elimination of this inconvenience would require an extra amount of experts to be hired, which would cause higher financial costs and a larger time span for elaboration of a correct set of AHP criteria.

Between the advantages of Deductive Method (DM) the author would like to underline lower complexity of the method and the fact that it can be applied by the same person that is elaborating the set of AHP criteria. Additionally, if used correctly, DM application can be based on real economic data and as such – become subject to verification and comparisons with available databases. Another positive of DM is that constant and variable determinants in short-, medium- and long period of time are easy to define. On the negative side should be cited the higher uncertainty of results – because of evaluation performed by one person only. For the same reason the Deductive Method leaves more space for mistakes than the Analytical Method.

Despite the existence of important disadvantages, the author bows towards the application of Deductive Method. This decision can be justified by the fact that the cited disadvantages can be easily diminished by several means, i.e. consulting the elaborated list of AHP criteria with other members of enterprise's managerial board or specialists within the company, without hiring external experts. The following Chapter is a proposal of application of Deductive Method. The goal is the limiting of amount of geopolitical determinants of functioning of international companies (presented in Chapter 1) in order to elaborate a list of maximum 9 AHP criteria. The application of Analytical Method has been omitted on purpose – the application of expert evaluations for Analytic Hierarchy Process ranking has been presented in another author's works (Gawlik 2007, CUE & Gawlik 2007, IAE Press).

## **SOLUTION PROPOSAL**

The purpose of the current Chapter is to limit the number of environmental determinants of functioning of international companies (described in Chapter 1) to the number of 9 maximum. The author decided to apply the Deductive Method presented in Chapter 3 above. Recapitulating, the Deductive Method has three main features forming the Deductive Method Features List below:

1. It takes into account the particularity of the decision making process.
2. The features of analyzed subject remain in sight.
3. The evaluation is based on the variability in time of each determinant.

When describing the Deductive Method some more space should be devoted to the issue of criteria variability in time. Usually the first step of strategic decision making consists of determination of time horizon of

planning. Most common intervals are short-, medium- and long time periods. Short time period equals up to one year, medium time period up to 3 years, long time period means a time span no longer than 5 years (Détie, 2000). Planning over the mentioned 5 years is threatened by a high level of risk coming from instability of enterprise's Operating, Host – country and Mega – environment. In other words it is economically unreasonable to plan any enterprise strategy for time periods longer than 5 years because of high unpredictability of geopolitical environment of the enterprise. Hence we can assume that some of these geopolitical determinants in long time periods can be treated as stable, unchangeable – *constans*. The question which determinants can be treated this way without harm to the quality of strategic decision making remains crucial. The author will try to distinguish them from a list of determinants describing the environment of international companies in order to obtain a correct list of AHP criteria. It is important to add that the main goal of the decision making is to assure a constant growth of examined international company.

Two determinants from the Operating Environment seem to be possible subject for reduction. These are the enterprise's Social Responsibility and Ethics. The basis for the elimination of those two determinants is point 1 of Deductive Method Features List described above – the particularity of decision making process. Although the importance of Corporate Social Responsibility, as well as the need of implementing ethical standards in any enterprise seems to be undisputable, it will not assure company's growth. Under these assumptions the inclusion of these factors into the set of analyzed criteria seems to be irrelevant. Both of these issues cannot be treated separately from economic indicators describing the condition of analyzed company. For this reason they will not be taken into account in further AHP analysis. At the same time the first three determinants – Legal Regulations, Organizational Culture, personnel Skills and managerial Know - How bear a strong influence on strategic decision making in enterprises.

In the group of Host – country environment determinants Economic, Political and Technological factors cannot be omitted due to their high significance at numerous fields of enterprise functioning. Referring to point 2 of Deductive Method Features List, Culture in Individual Aspect and the Interdependence between subsidiary enterprise and Host – country can be seen as independent from company's authorities. When trying to reformulate this idea, we could say that in opposition to Legal Regulations, Organizational Culture, Skills (from the Operating Environment determinants) or Economic, Political and Technological factors, these determinants cannot be changed or even influenced by any moves made by company's management, including lobbying. Under this assumption they can be deducted from the AHP criteria set as well. This does not necessary mean that their influence on enterprise's decision making effectiveness is unimportant. They simply belong to the group of factors excluded from management's decisiveness.

Mega Environment determinants are a good example for reduction of number of AHP criteria based on point 3 of Deductive Method Features List, namely the variability of factors in time. Whereas Global Trends and Forces, Global Competition and the Interdependence of Global Companies and Host – Countries can change quickly, accordingly to political climate, economic stability and World's situation in general (at least in a medium time span), the prescriptions of International Law, as well as the Level of Global Technological Advancement show variability only in longer time periods. Under the assumption that any planning over 5 years seems to be unreasonable (already explained before), both of these factors can be treated as *constans* in short- and medium time periods. In other words they can be omitted on the AHP criteria list because of their invariability in time periods relevant for strategic planning.

At this point it is important to underline that the elimination of factors from the list of AHP criteria does not mean that they become unimportant. For the needs of analyzed decision making process they will be simply treated as the statistical group of “*other environmental factors*”, the influence of which can be omitted, but only when making decisions with a short or medium planning horizon.

## CONCLUDING REMARKS

The author believes that the Analytical and Deductive methods of preliminary criteria reduction presented above can become useful tools for elaborating a correct list of criteria for Analytic Hierarchy Process application. Although their simplicity, they can prove themselves as useful in multicriterial decision making

processes, where the number of criteria exceeds the amount allowed by the method or could obfuscate the correct perception of enterprise's environment, which could result in ineffective final decision.

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# **MEASURING SERVICE QUALITY IN SOUTH AFRICA HIGHER EDUCATION: DEVELOPING A MULTIDIMENSIONAL SCALE**

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## **ABSTRACT**

Increased competition in the educational environment has contributed to the growing importance of service quality measurement at higher education institutions. This paper investigates aspects of service quality in higher education as a step towards developing a standardised scale for its measurement. Using structured questionnaires, survey data was collected from students ( $n = 391$ ) from two South African universities. Findings indicate that the service quality in higher education scale is a multidimensional construct loading on 13 factors with reasonable reliability coefficient and some construct validity. Significant relationships were found among a number of study variables. Some further research directions were suggested and policy implications discussed.

## **INTRODUCTION**

In response to the dynamic national, regional and global developments, Higher Education institutions have been changing rapidly. In South Africa, examinations systems, structures and other related processes have changed drastically impacting on the pass rate at the highest school levels and affecting intake at tertiary level. Consequently, a large number of students relative to available spaces and available government loans/scholarships apply with limited success. Prospective higher education students and the tertiary institutions' administrators normally undertake extended decision making during their processing of applications for courses of study. De Jager and Du Plooy (2006) noted how the decision-making process with regard to a course or a specific institution can be very complex. An increased understanding of the potential higher education student decision-making process would enable Higher Education institutions to market their courses in a more timely and effective way (Moogan, Baron & Bainbridge, 2001). Consequently institutions of higher education should be well aware of what aspects students value most in order to make a final decision with regard to a specific institution (De Jager & Du Plooy, 2006). Institutions of Higher Education should determine the most important variables that are under their control in order satisfy the changing needs of the students.

### **Service Quality in Higher Education**

According to Berry and Parasuraman (1991) practitioners in quality management have developed methods of improving service quality. Sohail, Rajadurai and Rahman (2003) points out that in the context of higher education many college administrators see implementation of quality practices, such as TQM as a way to reassure that institutions of higher education perform well and that the customers of higher education are being served well.

Oldfield and Baron (2000) suggest that there are three underlying factors of higher education service quality namely, requisite elements (encounters which are essential to enable students to fulfil their study obligations), acceptable elements (which are desirable but not essential to students) and functional elements (which are of a

practical or utilitarian nature). Cheng and Tam (1997) came to the conclusion that based on different conceptions of education quality and the different concerns about achievement of education quality, various people may use diverse indicators to assess education quality and miscellaneous strategies to achieve education quality. It may result in not including all aspects of the input, process and outcome of an education institution. Consequently, our discussion in this paper will focus on the factors emerging from the data.

## **Entering Tertiary Education**

Service delivery and customer satisfaction in an education environment is dependent on personal interaction between students and staff. The personal interaction and labour intensive nature of this service translates in a potentially highly heterogeneous quality service experience (Hill, 1995). In respect of service delivery students are generally not interested in organisational hierarchies and expect all staff (academic or administrative) to work together to represent the institution in their service delivery (Oldfield & Baron, 2000). Students therefore are expected to view any dealing with staff, irrespective of the nature of the dealing, to impact on their experience of service delivery. All learners entering tertiary education have expectations with regard to the learning exercise and individual preferences. Various authors have attempted to identify issues more directly related to higher education institutions in order to determine factors that influence a student's decision making process. More often than not these include support facilities and infrastructure, image and marketing, academic issues, administrative issues, location and access (Peterson & Augustine, 2000; Sporn, 1999; Strydom, Lategan & Muller, 1997; Woodhouse, 1996).

It can be argued that the decision making process of students is based on five factors (Cubillo, Sanchez & Cervino, 2006). Three of these, external to the institution, are personal reasons, previous experiences by acquaintances and the location of the programme. The importance of experiences by acquaintances implies that experience by alumni translates into an important marketing tool and serves as an image builder outside the realm of the institution. The other two, directly related to and managed by the institution, are the image of the university and the perceived quality of the programme of study. Although the relative importance of these factors is not ascertained it is clear that universities have to build and protect both institution and programme images to maintain its competitive position in the industry.

Increasingly, quality as component of service delivery dominates as one of the prime aspects impacting student decision making for education (McBurnie & Ziguras, 2007). The quality of the overall experience for students is crucial to the success of programmes. Ensuring quality content delivery is important as the educational value in education is embedded in the rigour and image of programmes (Desoff, 2006).

## **Higher Education in the Marketplace**

According to De Shields, Kara and Kaynak (2005) marketplace dynamics are forcing business schools around the world to re examine their structures and business strategies and the processes employed to deliver value adding quality education. This follows intense competition around the globe that forces companies to adopt a marketing orientation in order to differentiate their offerings from those of competitors. According to Ford, Joseph and Joseph (1999:171) services industries have been reluctant to adopt this kind of focus and nowhere has it been truer than in the case of higher education. According to these authors many institutions of higher education were in the luxurious position of seeing ever increasing enrolments and resultant budgets. However the boom of the 1970s and 1980s has been replaced by the bust of the 1990s and 2000s. In addition tertiary education has experienced a dramatic decline in government subsidies and an increase in student fees in various countries (Mok, 2003; Palihawadana, 1999; Soutar & Turner, 2002) especially many countries with similar educational systems to South Africa. Kotler (2003) indicates that the numbers of students enrolling in US business schools nationwide has levelled off or declined and new competitors are entering the market continuously. This is due to various changes in the respective environments. It appears as if tertiary institutions face increasing market and financial pressures in developing as well as in developed countries. The result has been a more competitive educational environment. Consequently institutions of higher education are competing for the most promising students, their customers, by applying scientific business principles in order to recruit and retain the student (De Jager & du Plooy, 2006).

According to Abouchedid and Nasser (2002: 198) the service quality concept in higher education is inextricably linked to the competitive service and success of an institution. Service quality serves to meet the basic objective



of retention and enrolment of students in universities. The authors confirm the value of providing acceptable services to students in order to maintain the stature and academic reputation of an institution. Furthering on this Abdullah (2006: 31) states that service quality has emerged as a pervasive strategic force and a key strategic issue on management's agenda. In recent times higher education is being driven towards commercial competition imposed by economic forces resulting from the development of global education markets and the reduction of government funds that forces tertiary institutions to seek funds from other sources. The emerging scenario pushes conclusions along the lines that higher education should not only be concerned about the society's perception about the skills and the abilities of their graduates but also about the perception of students about their educational experience. This also calls attention to some specific management process suggesting that apart from the traditional areas like accreditation and performance indicators of teaching and research, emphasis should perhaps now include focusing on students as customers.

## **Access, Location, Facilities and Infrastructure of Higher Education**

Some demographic groups (including gender, age, ethnicity and social class criteria) often do not enjoy the same degree of access to higher education and it is therefore essential to investigate the access to higher education and the composition of the student body (Halsey, 1992). Variation in access by institution or institution type could also be a result of segmentation and positioning policies adopted by providers (Tonks & Farr, 1995), including government policies. Social class has also been used for describing the social origins of the actual or potential student body and to identify and assess differences between universities and polytechnics in terms of segmentation outcomes (Halsey, 1992). The geographic location of people (closely linked to social class) can be an important determinant of opportunities and capacity to act on them. This is also true for students from poorer areas or countries in Africa with limited financial resources, accesses to transport, library, computer and internet facilities. Factors such as gender, ethnicity, social class and geographic location have a significant influence on the access of African students to educational institutions.

The location of a university and the geographic surroundings are often perceived as aspects which will influence the choice of a particular institution. In South Africa this can be seen as a decisive factor in the decision making process. Because of high unemployment rates and lack of sufficient funds, parents will be more likely to send their children to more accessible locations. Campus atmosphere, access to public transport and parking availability is also pointed out as indicative of a desirable institution of higher education (Moogan, Baron & Bainbridge, 2001, Souter & Turner, 2002). Russell (2005) points out that the effective arrangement of physical evidence is important as prospective students often look at the physical evidence that surrounds the service in forming their evaluation of the service.

Students choosing between higher education institutions will eliminate choice alternatives on the basis of geographic, economic and academic factors (Jackson, 1982). Various research results verify the importance of location when students make decisions regarding higher education (Moogan & Baron, 2001; Moogan, Baron & Harris, 1999; Roberts & Allen, 1997; Welki & Navratil, 1987). Moogan et al. (1999) identify course specifics, location and reputation of the institution as important attributes for UK students. For this study location include aspects such as distance from home, rural/urban place, atmosphere of the campus and facilities of the city/town of the university. The facilities of higher educational institutions can also influence their ability to attract quality research personnel, to create suitable learning environments and student perceptions of their learning experience (Price, Fides, Smith & Agahi, 2003). The infrastructure of the institution such as computer and library facilities, campus security and accommodation is also seen as a major consideration when choosing an institution of higher education (Veloutsou, Lewis & Paton, 2004). Price et al. (2003) in examining the influence of facilities and location factors on the decision making process of undergraduates when choosing where to study found that all aspects relating to learning and teaching facilities, especially library facilities and the availability of computers were regarded as relatively important.

## **South African Universities**

Universities in South Africa have experienced stagnating and declining budgets and simultaneous pressures to increase enrolments (Samoff, 2001). Since the late nineties South African universities have experienced a gradual decline in student numbers translating in more choice and increased pressures on service delivery by students. Pressures also build up in respect of technological advances and skills with some institutions and staff

delivering and using sub-standard computer technology (Miji, 2002; Zaaïman, Van der Flier & Thijs, 1998). An assessment of the South African education system indicates that individual universities display unique sets of characteristics with regard to historical origins, faculty and departmental organisation, human resources and student numbers (Cloete & Bunting, 2000). Each of these in turn contributes to the image and reputation of the university. At the same time all universities are governed by common national regulations which imply a level of homogeneity across all players. South African Universities like other universities in countries such as the United Kingdom and Australia (that have similar educational systems to South Africa) has experienced a dramatic decline in government subsidies and an increase in student fees (Palihawadana, 1999; Soutar & Turner, 2002). In South Africa the decline in funding from subsidies is a direct consequence of the trend of falling pass rates (Naidoo, 2003) and subsequently earns less government subsidy.

Given the above background, the effects of competition on institutions of higher education, especially in the South African context, can be seen as having far-reaching implications for these institutions. Traditionally, Technikons and Universities have competed indirectly, whereas they now compete directly, ostensibly for the same market. The impact of technology and the demand for a technologically literate workforce has also created a third stream of private educational institutions that not only compete for school-leavers, but also on post-graduate level. Private providers meeting a specialised demand are often highly responsive and provide credentials in areas that the public sector does not (Kruss, 2002). This increased level of competition in the education environment has led to institutions of higher education employing managerial techniques to improve the efficiency and quality of services (Palihawadana, 1999) and switching from a passive to a more active market approach (Naudé & Ivy, 1999). If universities are to satisfy student requirements they must be aware of their own offerings and how these are perceived in the market place. Being aware of the influential factors and the associated impact on potential students is important for institutional policy makers (Moogan et al., 2001).

## **Objective of the Study**

The primary objective of the study is to examine some of the criteria used by South-African students, when choosing or evaluating a tertiary institution. The study specifically initiates a process of developing a standardised measure of service quality in higher education and explores the various factors and components within service quality measurement in higher education service delivery in South Africa. In addition, the study examines the relationship between the service quality measures on the one hand and some other related variables such as intention to leave the university, trust in management of the university and the overall satisfaction with the university.

### **Specific Hypotheses Tested:**

1. The service quality in higher education scale is a multidimensional measure
2. There is a significant relationship among service quality measures, intention to leave university, trust in management of the university and overall satisfaction with the university

## **RESEARCH METHODOLOGY**

### **The sample framework**

A random sample of 391 South-African students in the Faculty of Management of two universities was selected (Tshwane University of Technology – TUT and Cape Peninsula University of Technology – CPUT). These Universities were selected because collectively they represents 40 per cent of students enrolment of the Universities of Technology in South Africa. Sample elements were selected from a list of all courses (including numbers of students per course). The sample comprises 41% males and 59% females. The attitudes of the student samples were tested regarding the importance of pre identified service quality variables related to academic and non academic issues when assessing a specific tertiary institution.

### **Measuring instrument and reliability**

The list of items developed to measure service quality in HE was based on an extensive literature research and the findings of preliminary focus groups consisting of students and lecturers. The resulting instrument, a

structured questionnaire, included several variables related to service quality at higher educational institution. The questionnaires were distributed to randomly selected students in pre-determined classes. Some demographic information was sought.

*Service Quality Scale:* service quality in higher education was measured by 52-items on a 5-point scale from “very important” to “not important at all”. Examples of items include: (1) Location of the Institution, (2) Well equipped Computer facilities, (3) Offer wide range of degrees/majors. Cronbach’s alpha of 0.92 was obtained for all items for the sample. *Intention to leave:* was measured on by four items on a 5-point Likert-type scale from “strongly agree” to “strongly disagree”. Example item include: (1) I often think of quitting my present educational institution (reserved score) and (2) I plan to stay in my present educational institution to develop my skills and complete my education. Cronbach’s alpha was 0.70 for the sample. *Trust in Management and Support:* was measured by five items on a 5-point Likert-type scale from “strongly agree” to “strongly disagree”. Example item include: (1) I am convinced my educational institution treat me with respect (2) The management of my educational institution encourages ideas and suggestions about ways to make the institution better. Cronbach’s alpha was 0.86 for the sample. *Overall satisfaction with the university was also measured by a single item:* What is your overall level of satisfaction with the university where you are currently enrolled? Response was anchored on a 5-point scale from “very satisfied” to “not satisfied at all”. The following variables were also measured with a single item fixed choice scale measure. They include academic performance, the main reason for study, living arrangement during school time, and satisfaction with transportation to the university.

## DATA ANALYSIS AND FINDINGS

Our analysis of the respondent profile produced the following results. Respondents were 59% female, about 43% were in their first year, 25% were within the 18-19 years age bracket, 31% were between 20-21 years; while about 18% were over 22 years. TUT had about 59% students participating. On academic performance, nearly 40% indicated a B grade average (60-69%) and 37% a C grade (50-59%). Only 2% reported lower than 40% score while 12 were in the A category (70-100%). Majority of the respondents indicated that they became aware of the University through friends (40%), family member (34%), Media (20%), the institution itself (27%) and teachers (17%). The major reason for study was for better job opportunities (48%), personal development (32%) and higher income (15%). Results obtained on the living arrangement revealed that majority were still living with their parents (41%), University residence (25%), and rented flats (12%). It is also interesting to note that over 60% of respondents were satisfied with their university.

**Table 1: Factor Analysis of Service Quality Scale, Mean, Standard Deviation & Cronbach’s Alpha**

| S/N | Factors (Service Quality Scale)         | No. of items | Mean  | Stan. Dev. | Alpha |
|-----|---|--------------|-------|------------|-------|
| 1   | Internationalisation                    | 6            | 11.76 | 4.21       | 0.82  |
| 2   | Marketing and support                   | 6            | 12.17 | 4.31       | 0.78  |
| 3   | Access and approachableness of services | 7            | 11.35 | 3.81       | 0.81  |
| 4   | International Students and Staff        | 4            | 8.52  | 3.38       | 0.79  |
| 5   | Academic reputation                     | 5            | 7.43  | 2.62       | 0.71  |
| 6   | Student focused                         | 3            | 5.55  | 2.16       | 0.65  |
| 7   | Academic quality                        | 3            | 5.04  | 2.07       | 0.67  |
| 8   | Variety and reach                       | 3            | 5.25  | 2.21       | 0.69  |
| 9   | Location and Logistics                  | 4            | 7.45  | 2.86       | 0.63  |
| 10  | Accommodation and Scholarship           | 3            | 6.17  | 2.63       | 0.57  |
| 11  | Sports reputation and facilities        | 2            | 4.11  | 1.96       | 0.79  |
| 12  | Safety and Security                     | 1            | 1.36  | 0.79       | -     |
| 13  | Parking                                 | 1            | 2.09  | 1.23       | -     |

Factor analysis was used as a data reduction tool and as a technique to establish some construct validity for the measure of service quality in higher education. The principal components analysis methods was used for initial factor extraction and Varimax rotation was applied. Four items were redundant and thus eliminated from further analysis. Thirteen factors were identified as key dimensions of service quality in higher education. These factors were named as indicated in Table 1. Each factor has factor scores higher than  $\pm 0.50$ , which demonstrates

significant evidence about correlations between the items and each factor. Dancey and Reidy (2002) noted that when performing factor analysis, at least 100 participants should be used and the study should have five times as many participants as variables. Both of these criteria were met by the present study, with a 52-item measure and 391 respondents. The percentage of total variance of all 52 items explained by the 13 factors is about 60 per cent. This finding confirms hypothesis 1 that service quality in higher education scale is a multidimensional measure.

The factor analysis also shows evidence of construct validity for the scale and an overall reliability coefficient (Cronbach's  $\alpha$ ) of 0.92. Moreover, the significant correlation with other study variables including intention to leave and trust in management of the university (see Table 2) is an indication of some convergent validity and, to a limited extent, discriminant validity (Churchill, 1995; Cooligan, 1999). Specifically, result shows that intention to leave the university correlates significantly with internationalisation, access and approachableness of services and being student focused. Secondly, trust in management and support correlates significantly with marketing and support; international students and staff; academic quality; and sports reputation and facilities. Finally, significant intercorrelations exist among all the factors emerging from the service quality scale further confirming internal consistency, reliability and some construct validity for the scale. There is obviously need for a more rigorous investigation to confirm these tentative findings.

The intercorrelation matrix among selected study variables is reported in table 2. The higher the academic performance reported the more satisfied students were with the university ( $r = 0.11$ ,  $p < 0.05$ ). Living arrangement, was inversely but significantly correlated with satisfaction with transport ( $r = -0.21$ ,  $p < 0.01$ ), but directly and significantly correlated with overall satisfaction with the university ( $r = 0.19$ ,  $p < 0.01$ ). Students who live farther from the University tended to be more concerned with a convenient transport arrangement. It is equally interesting that the more acceptable the living arrangement is for the student the more positive they generally feel about the university. The higher the satisfaction with transport the higher the trust in management ( $r = 0.20$ ,  $p < 0.01$ ). The significant positive link among trust in management, satisfaction with transport and overall satisfaction with the university is an important signal of the interwoven nature of the study variables. Satisfaction with transportation is a strong indicator of how positively the university administration is perceived by the students.

**Table 2: Intercorrelations among Selected Study Variables**

| Study Variables                     | 2                 | 3                 | 4                | 5                | 6                | 7                | 8                | 9                | 10               | 11               | 12               |
|-------------------------------------|-------------------|-------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 1 Overall Satisfaction (university) | -.28 <sup>b</sup> | .42 <sup>b</sup>  | .03              | -.00             | -.06             | .01              | .05              | -.04             | .01              | -.09             | -.05             |
| 2 Intention to leave university     | 1                 | -.15 <sup>b</sup> | .11 <sup>a</sup> | .06              | .12 <sup>a</sup> | .09              | .00              | .10 <sup>a</sup> | .04              | .04              | .00              |
| 3 Trust in Management & Support     |                   | 1                 | .09              | .12 <sup>a</sup> | .06              | .11 <sup>a</sup> | .08              | .06              | .12 <sup>a</sup> | .05              | .10 <sup>a</sup> |
| 4 Internationalisation              |                   |                   | 1                | .49 <sup>b</sup> | .54 <sup>b</sup> | .49 <sup>b</sup> | .46 <sup>b</sup> | .46 <sup>b</sup> | .52 <sup>b</sup> | .52 <sup>b</sup> | .26 <sup>b</sup> |
| 5 Marketing & support               |                   |                   |                  | 1                | .44 <sup>b</sup> | .53 <sup>b</sup> | .38 <sup>b</sup> | .41 <sup>b</sup> | .46 <sup>b</sup> | .43 <sup>b</sup> | .45 <sup>b</sup> |
| 6 Access & approachableness         |                   |                   |                  |                  | 1                | .38 <sup>b</sup> | .58 <sup>b</sup> | .53 <sup>b</sup> | .52 <sup>b</sup> | .57 <sup>b</sup> | .21 <sup>b</sup> |
| 7 International Students & Staff    |                   |                   |                  |                  |                  | 1                | .33 <sup>b</sup> | .42 <sup>b</sup> | .45 <sup>b</sup> | .43 <sup>b</sup> | .38 <sup>b</sup> |
| 8 Academic reputation               |                   |                   |                  |                  |                  |                  | 1                | .49 <sup>b</sup> | .43 <sup>b</sup> | .47 <sup>b</sup> | .25 <sup>b</sup> |
| 9 Student focused                   |                   |                   |                  |                  |                  |                  |                  | 1                | .55 <sup>b</sup> | .53 <sup>b</sup> | .23 <sup>b</sup> |
| 10 Academic quality                 |                   |                   |                  |                  |                  |                  |                  |                  | 1                | .53 <sup>b</sup> | .29 <sup>b</sup> |
| 11 Variety and reach                |                   |                   |                  |                  |                  |                  |                  |                  |                  | 1                | .19 <sup>b</sup> |
| 12 Sports reputation & facilities   |                   |                   |                  |                  |                  |                  |                  |                  |                  |                  | 1                |

Notes: (2-tailed); <sup>a</sup> $p < 0.05$ ; <sup>b</sup> $p < 0.01$ ;  $n = 391$

Another interesting finding is that the lower the intention to leave the university the higher the trust in management ( $r = -0.15$ ,  $p < 0.01$ ) and the higher the overall satisfaction with the university ( $r = -0.28$ ,  $p < 0.01$ ). It is clear that students will want to stay in a University where they are generally happy and satisfied, believes that management of the University will continue to work in their interest hence the trust in management.

## DISCUSSION AND IMPLICATIONS

The study set out to accomplish two main objectives. First, to what extent is the service quality scale in higher education a multidimensional variable and what are the components? Secondly, what is the relationship between the factors that may emerge from the scale and other study variables like intention to leave, trust in management of the university and overall satisfaction with the university. The result reveals that the developing service quality in HE scale is indeed a multidimensional scale loading on 13 factors and showing a very strong internal consistency among the factors. Some of the factors emerging from the scale were also strongly correlated with intention to leave and trust in management, especially notable and important are internationalisation, access and approachableness of services, being student focused, marketing and support; international students and staff; academic quality; and sports reputation and facilities.

Internationalisation also came up as a very important factor in our measure of service quality loading as two interrelated items internationalisation (6-items) and international students and staff (4-items). The importance of internationalisation in the emerging competitive Higher Education sector has been well discussed in many studies (e.g. Meares, 2003; Miji, 2002; Mok 2003; Stephenson, 2006). Similarly, other factors from the service quality scale identified as important in our result and also supported by earlier studies include academic reputation; access and approachableness of services (e.g. Abouchedid & Nasser 2002). Convenient and comfortable living arrangement during school time, and satisfaction with transportation to the university emerged as critical factors in students' satisfaction as well as trust in the management of the university. Similarly the students' overall satisfaction with the university was an important correlate of academic performance, although since the causal direction of the relationship was not established in this investigation the question which precede the other is not answered. Suffice to add also that the lower the trust in management and satisfaction of the student with the university the higher the intention to leave the university.

The findings of this study, tentative as they may be are however encouraging as it opens a number of areas for further research. The management of HE in South Africa continues to be challenging in many respects and especially so with the socio-political pressures given the historical antecedents of segregation and the need to stretch HE to reach all hitherto underprivileged groups while not necessarily depriving all other citizens a fair access. While the present data is not without limitations a more extensive exploration is possible and could yet reveal more meaningful information about the nature of the relationship among the study variables. This could be accomplished with partial and multiple regression analysis to show the partial and full impact of the variables between and among themselves. Follow-up interviews and focus groups discussion with carefully selected students and student groups may generate a wide range of rich additional information to what is obtainable with survey instruments which is not without its attendant limitations.

## CONCLUSION

To conclude, these results emphasise the importance of the interwoven relationship among some of the study variables including the need for effective management in the HE sector in South Africa. Education has always been evaluated in terms of its practical value and in many parts of the world University education is highly revered and treasured because it has always been and may for a long time be available to very few people (De Jager & Gbadamosi, 2008). The importance of demographic differences and other respondent's profile unexplored in the present investigation are worthy of future investigation, just as a more systematic and longitudinal research approach – though time consuming and expensive – may be of significant value in advancing this all important research area in HE in South Africa. There is no doubt that the transformation of HE in South Africa is an imperative that demands innovation both at the HE management – student interface level and in the wider social and policy context.

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# STUDIES OF CULTURES AND SUBCULTURES

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## ABSTRACT

*This work presents detailed analysis of the literature concerning the concept of organizational culture. The purpose of this work is to define the results of numerous studies of different levels of cultures. At first, examination of the concept of organizational culture is presented. After that, the emphasis on empirical research of subcultures is argued with several conclusions about the possible basis of differentiating the subcultures. At last, the analysis of several subcultures in one Russian company is offered in order to define possible ways of considering the differences between subgroups.*

## INTRODUCTION

Application of the concept of organizational culture started approximately in 1980s (Gordon, 1991; Sinclair, 1993; Sorensen, 2002) though some authors used this concept much earlier (Pettigrew, 1979). And now world experience of studying this phenomenon is rather extensive. This theme became one of the most popular and important issue in organizational studies since the time, when the organizational researchers rose question why Japanese manufacturers competed successfully with American companies (Ouchi and Wilkins, 1985). Studies within the structure perspective have not given any results, so then national features became under investigation. The theoretical and empirical studies showed that even within one national culture there were distinctions in organizational cultures. So the topic of organizational culture became one of the most interesting themes for practicing managers and consultants, and one of the most complicated subjects for scientific researchers.

Concerning the question of organizational development and innovation processes the problem of organizational culture is rather interesting. As it will be shown later, cultures do change but according to their own logic, not according to anyone's plans. This forces management to consider the actual cultural situation in a company: values and assumptions of its employees. This question is well known among managers and consultants, even several tools are elaborated to decrease the level of culture risks. But there is relatively new aspect in studies of organizational culture. It is existence of subcultures. And there are no exact knowledge about mechanism of their creation and being. For practical needs it is rather important to understand the possible ways of managing multicultural organizational environment. Different groups of employees demand different styles of management, while the company applies one strategy. Therefore there is a challenge to the whole company to consider all the differences among employees and to be effective, successful and competitive. There are more questions than answers and this is only a part of them: Whether all subcultures should be considered in a effective company? Is it possible to implement a unified personnel strategy for all employees? How the groups of employees should be distinguished? And finally, are there some extra benefits for the company by managing groups of employees or this is just a new theoretical approach?

This paper presents an attempt to integrate results achieved from studies on organizational cultures and this idea of multiple subcultures. A demonstrative example of one Russian production company and its analysis from 'subcultural' framework will be given. As a result some suppositions about the answers on the questions mentioned above will be made.

## REVIEW OF STUDIES ON ORGANIZATIONAL CULTURE

This problem of studying organizational culture became very popular also because there was feeling, that this direction of studies could give the results which would help to explain failures of implementing management

programs of changes and development in the companies. The literature is abundant with studies about organizational culture as one additional tool in the managerial arsenal of running an organization, thus it seemed that the only question rested without answer is how to achieve efficiency by manipulation of organizational culture (Denison, 1996). So, the researchers were interested in issues about the relationship between organizational culture and effectiveness (Denison and Mishra, 1995; Sorensen, 2002; McKee, 2004), about dependence of new product development process on the characteristics of the organizational culture (Belassi, 1999), about influence of culture on training and appraisal systems of the employees (Huzzard, 2000; Henri, 2006), etc.

Besides, as argued by several authors, the foundations of contemporary approaches to organizational culture are in anthropology, sociology and psychology. And these main directions of studies were separated out, so the gap in development of concepts of organizational culture emerged. This impeded the development of unified understanding of the phenomenon and has brought confusion of concepts (Ouchi and Wilkins, 1985, Denison, 1996, Schein, 1996). Although most authors recognize the multidisciplinary character of this phenomenon the overwhelming majority of organizational studies present a pragmatic view on organizational culture based on psychological framework. For example, Schein (1996) considers that the sociological and anthropological approaches are recommended to be integrated in further investigations because within these approaches there is great experience of revealing culture and studying its internal mechanisms. But on the other hand, sociologists underestimate the influence of individual distinctions on social phenomena which they study. So the further inquiry of organizational culture is a synthesis of these three disciplines and should be based on their achievements.

In spite of the fact that the theme is developed during so many years, there is a set of substantial and methodological questions (Denison and Mishra, 1995; Sorensen, 2002). They led some researchers to conclude that qualitative research would be the only appropriate methodology for the study, while others believe that organizational culture is measurable phenomenon, as well as the others, and they try to investigate it applying quantitative research methods (Hofstede et al., 1990).

Another substantial problem is absence of a precise definition of this phenomenon. The authors, who try to examine their assumptions about the influence of organizational culture, are compelled to combine several models, proceeding from their needs and opportunities. Thus the conceptual integrity and internal consistency of the models are doubtful and beyond their researches. Some authors offer 'working definition' of organizational culture which does not demand clearness of formulations. For example, Sinclair gives the following one: the culture "consists of what people believe about how things work in their organisations and the behavioural and physical outcomes of these beliefs" (Sinclair, 1993, p. 64). Hofstede considers the culture as the collective mental programming – "it is that part of our conditioning that we share with other members of our nation, region or group but not with members of other nations, regions or groups" (Hofstede, 1983, p. 76). Weick characterized organizational culture as a product of attempts by which organization imposes coherence, order and sense in its experience. But the majority of authors prefer to use partially, or with additions, the classical definition of Schein (Denison, 1996; Sorensen, 2002), namely: "the organizational culture is a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members, as the correct way to perceive, think, and feel in relation to those problems" (Schein, 1983).

The complexity of the phenomenon remains the basic obstacle for detailed and deep studies about the nature of interrelation of culture and organizational activities. One of the general results of the studies and methodological researches is the conclusion that it is very difficult to present uniform culture in an organization.

## **STUDIES OF SUBCULTURES**

A new type of literature appeared which affirmed that the organizational culture should be considered as a set of professional cultures which define the nature of individual senses and practice on work (Denison, 1996). Hofstede (1998) argues, that actual existence of organizational culture demands more, than shared categories of schemes, it demands, that schemes and relative blanks in schemes were identical for all members of the organization. This is difficult to imagine and Van Maanen and Barley (1984) assume, that multiple subcultures is the rule, while the uniform culture is an exception.

Kossek (2003) believe that the unitary approach to organizational culture oversimplifies the nature of organizational functioning. He suggests that the organizations will win from development of HR strategy if it distinguishes and considers various subcultures within a company. This new approach of subcultures began to

criticize the previous works, giving the reason that members of one culture do not know about their own culture while they do not collide with the other one (Schein, 1996), and it is better to study norms and values at a level of subcultures because they can be considered as unified and homogeneous (Huzzard, 2000).

This approach assumes that behavioral norms and practices differ in organizational units, and they are not necessarily shared by everybody in organization (Kossek, 2003). Researchers began to cast doubt on the analysis of culture which ignores both professional subcultures and empirical studies of multicultural relations (Thorne, 2000).

Van Maanen and Barley define subculture as a subset of members of the organization which regularly interact with one another and identify themselves with the distinct group, share a set of problems, and take action on the basis of collective understanding (Kossek, 2003). The basic difference between culture and subculture is that the culture is uniform, and subcultures make the multiple small cultures coexisting in same organizations (Hatch, 1997). Moreover, subcultures and countercultures can counteract organizational values of dominating culture (Martin and Siehl, 1983).

At least three types of subcultures can potentially exist: enhancing, orthogonal and countercultural (Martin and Siehl, 1983). The enhancing subculture will exist in an organizational enclave in which the commitment to basic values of dominating culture is stronger than in the rest of the organization. In orthogonal subculture members will simultaneously accept the basic values of dominating culture and to separate reconcilable set of their particular values. The third type of subculture is a counterculture. It refers to the case when some basic values of a counterculture will challenge the basic values of dominating culture. Likewise, Smircich (1983) assumed the existence of competing subcultures.

Numerous researchers have proved the existence of subcultures in the companies. Here only a few examples. Schein (1996) has indicated three groups in the organization with their own culture. The 'engineers' design and monitor core technological processes, the 'operators' are the linear employees providing activity and mission realization, and the 'executives' look at the organization as a whole and cope with the other two groups. Hofstede (1998) has successfully applied cluster analysis to reveal subcultures in the insurance company. He managed to reveal three clusters and three subcultures accordingly: the professional, consumer and administrative.

Hofstede (1998) emphasize that, operating the complex organization, it is necessary to understand cultural variety within the organization. Decisions of managers are the result of their own culture and are limited against the rest organization. Ouchi and Wilkins (1985) have presented two various approaches to management. The first approach is based on the idea that management can create uniform joining culture around the ethical values. Compensation, selection and appraisal systems, structure, physical space, rituals and ceremonies - this all should be thought over for strengthening organizational norms and values. The second approach proceeds from the assumption that it is necessary to manage subcultures within the organization, and it considers that culture is an opposition and interaction of different forces.

Kossek (2003) also affirms that organization includes a set of subcultures which are connected with behavioral norms, routines and habits, and also play a significant role, influencing the success of a strategy. Martin and Siehl (1983) have found out through empirical research that the counterculture can carry out useful function, articulating borders between appropriate and unacceptable behavior, and providing safety for development and innovative ideas.

The analysis of the studies on subcultures led us to conclusion that this new framework complicates organizational analysis. According to authors, managers need to take into consideration existent subcultures and their position concerning unified organizational culture. So the internal environment should be monitored to indicate the groups with conflicting values and orthogonal subcultures. This can prevent the company from unnecessary cultural risks in situations of organizational development. The understanding of enhancing groups could help leaders to find support to their actions or helpful feedback.

## **SUBCULTURAL ANALYSIS**

From all told above it is possible to draw a conclusion, that this development of theoretical and empirical researches is natural process based on the understanding of different levels of culture. And the research path goes through all these levels: national culture, organizational culture, group culture and individual culture. While the issues of national and organizational cultures are well researched, the group level of culture is less clear. But we should remember that the notion of culture is sociological, so individual culture should be separated from collective culture.

The core question without answers is about practices and methods of managing organization considering subcultural differences. The internal environment becomes more complex so the study is necessary for making decisions. Apart from monitoring enhancing, orthogonal and counter- cultures, another issue needs to be cleared up. How group of employees can create its own subculture in one organizational environment? The basis for differentiation of employees is very important. The reason is evident. The conflicting values of core employees can damage all plans while in subsidiary unit it is possible. The literature presents several examples of differentiating basis of subcultures.

Three possible distinctions could be noted. The first one concerns the occupational subcultures. The empirical study of Thorne (2000) demonstrated clearly different norms, values and assumptions in managerial culture and in medical and their combination in separate position. The results of Hofstede (1998) and Schein (1996) agree with this distinction. The second distinction concerns the mode of employment. Kossek (2003) raised this question in theoretical work; the main idea was that the uncertainty of employment and the relationship between personnel and the company affect the process of strategy implementation. The third distinction concerns the level in the hierarchy. Detert argues that there are a lot of cases when the organization does not render sufficient attention to norms and values to workers of the bottom level (in Kossek, 2003). Though the managers operate as they are in case, when their managerial subculture presents a common organizational culture.

The case of one Russian company producing ice-cream can help us to illustrate the existence of these distinctions. The qualitative data gave empirical test of theoretical elaborations presented above. In this case 17 deep interviews with employees of different categories and levels were conducted. It was preliminary research with the aim to indicate possible interrelations between organizational culture and different managerial activities. The situation in the company was interesting because the managerial team had been changed, so they started to modify major practices. The result showed that all three distinctions can be presented in one company. Organizational changes revealed these groups of employees as stable groups so these results might be useful for development managers.

The first distinction is occupational. The culture of factory workers differs very much from culture of administration employees even if they are in immediate proximity. Firstly, this distinction can be traced in language – there are different styles of communication with colleagues and supervisors, the themes of talks vary. Then, work attitudes and values are quite different. This is the result of different work conditions, compensation policy, and career perspectives. Additionally, an interesting finding was made: even in the situation of organizational changes, the level of uncertainty among factory workers was higher than among office employees. Factory workers receive only plan for every day, so they are not involved in planning. The main factor of this distinction is the character of the job and supervisors style.

The second distinction is a kind of employment. As the production is seasonal a temporary personnel is engaged. So at least two groups in a factory work together, and the group of temporary employees is seven times as much as group of core workers. The distinction can be traced not only in quantity but also in quality of work force; the average level of qualification among core workers is higher than among temporary workers. Accordingly the contract conditions are different, but main work conditions are similar. The main difference is the level of cohesion. It is predictable, that the core workers are more united contrary to temporary employees. This creates a particular environment in the factory when there are frequent conflicts between employees from different groups. The main factor of this distinction is job security and time perspective.

The third distinction is a level in hierarchy. This distinction was observed both at a factory, and at office. The distance between employees and middle management is rather high. It can be traced through low accessibility of management for employees; most of respondents from bottom level mentioned the lack of meetings, parties are celebrated separately – employees celebrate all holidays without middle and top management. Different traditions and rituals of these groups also indicate the difference, besides, low awareness of employees about future plans and actual situation in the company defines the difference in time perspectives.

The limitations of this research are evident. First of all, it is small number of respondents, so only suppositions could be made. All three possible bases for differentiation are independent, so statistical methods are necessary to prove determinants and organizational conditions. Second, it was difficult to describe common organizational culture because of situation of organizational changes in the company. So the conclusion can be made that new researches are needed.

## CONCLUSION

The paper presents analysis of conceptual development of organizational culture. The first consideration is that the appearing of the notion of subculture in organizational studies is in the framework of level analysis of the phenomenon. It is also argued that this group level should be the last one because individual culture can't be sociological notion.

Examining of Russian organizational science and practices, there is a gap in Russian academic papers and discussions of experts and the world experience. Both theorist and practitioner alike apply only two levels in organizational culture construct. The studies of national culture are rather popular in sociological studies in Russia and there are some examples of organizational researches. But there are no issues of subcultures neither in organizational studies no in managerial practices. This lack of concepts should be overcome by integration in international discussions. Although even in worldwide experience there are no methods elaborated to manage the subcultures in a company.

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# ACQUISITION PITFALLS IN DEVELOPING COUNTRIES: A CASE STUDY OF THE ACQUISITION OF CONGOLESE WIRELESS NETWORKS (CWN) BY VODACOM GROUP

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## ABSTRACT

*This paper focuses on the analysis of critical success factors related to international acquisition activity in the telecommunications industry in a developing country. It examines the acquisition process of the Congolese Wireless Networks S.P.R.L. (CWN) by the South African based Vodacom Group (Pty) Ltd. Against this background, it examines the quality and approach undertaken by Vodacom's management in implementing an acquisition in a foreign country with different culture, customs, language, laws and history. The results obtained in this study are consistent with other research studies on the subject indicating that, despite the best strategic fit, success requires equal attention to organisational fit and a good management of the implementation phase, especially in terms of leadership style and cross-cultural integration.*

## INTRODUCTION

Privatization and deregulation of the Telecommunications industry in Africa paved the way for increasing international competition. As a result, companies have resorted to mergers, acquisitions and various types of strategic alliances to increase their market power, access new markets, distribution channels and technologies, to acquire new brands, gain economies of scale and synergies (Jemison and Sitkin, 1986; Capron, Dussauge and Mitchell, 1998; Capron, 1999; Ahuja and Katila, 2001; Bower, 2001; Vermeulen and Barkema, 2001; Hayward, 2002; Zollo and Singh, 2004).

However, despite the popularity of these external methods of development, and regardless of the vast amount of research carried out on the relative reasons for success, most fail (Kitching, 1967; Jemison and Sitkin, 1986; Pritchett, Robinson and Clarkson, 1997; Testa and Morosini, 2001; Schoenberg, 2006). The literature on the topic seems to indicate that managers often fail to address the critical success factors related to the pre- and post-agreement phases. Research findings have shown that frequently companies fail to appreciate the difficulties involved at the pre-merger stage by not fully understanding the real strengths and weaknesses of the product, brand or market position of the targeted company, underestimating future investment requirements and paying too high a price (Pritchett, Robinson and Clarkson, 1997; Heifetz and Laurie, 2001; Graebner and Eisenhardt, 2004). The main reasons for failure associated with the post-agreement phase seem to be related to organizational, human resources and process issues such as: poor communication between the parties, lack of decisive action from top management in defining the new direction, different leadership styles, cultural attitudes, behaviour patterns and their capabilities (Kitching, 1967; Lodorfo and Boateng, 2006; Riad, 2007).

This paper will analyse the acquisition process of the Congolese Wireless Networks (CWN) by Vodacom Group (Pty) Ltd, focusing its particular attention on leadership and cultural issues. Vodacom Group (Pty) Ltd (hereafter Vodacom) is the main service provider of communications in South Africa followed by Mobile Telephone Networks (MTN). One of the interesting aspects of this paper is that it analyses an acquisition taking place in a developing country in Africa, the Democratic Republic of Congo (DRC), and the companies involved are both African; CWN, a local Congolese company, and Vodacom, a South African based company. This becomes particularly relevant because of 'cultural specificity' of Central African countries characterised by customary law and tradition where there is neither absolute collectivism, nor total equality, and where the

manifestation of power is personalised in the head of the group. It is important to mention that the South African company was moving into a country with a different official language, French, and a political system linked to a disorganised national economy mainly run by untrained public civil servants.

## METHODOLOGY

The overall approach adopted for this research is the case study with one of the authors having insider status as a former Chief Governance Officer of Vodacom Congo. The case study methodology seems appropriate because it builds from rich qualitative evidence (Eisenhardt and Graebner, 2007), which in this case was captured through direct involvement, and experience of one of the authors in the in real-life activities of the company. According to Yin (1993: 59) the case study method can be defined as “an empirical inquiry that investigates a contemporary phenomenon within its real-life context, addresses a situation in which the boundaries between phenomenon and context are not clearly evident, and uses multiple sources of evidence.” This approach enabled the examination of the intricacies of the acquisition process, including insights into implementation management, leadership and culture.

A combination of both secondary and primary data has been used in this research. A series of interviews with senior and middle managers of Vodacom Congo were also undertaken. All interviews were semi-structured and face-to-face, and were conducted by the authors. However, due to the sensitivity of the topic discussed, most interviewees preferred to remain anonymous. Consequently, this raises fair questions in terms of the validity of this study. This limitation is acknowledged and researchers intend to expand this study in the future by undertaking an anonymous survey to be administered among employees and management of several African telecom companies involved in any type of collaborative arrangement with South African based telecom firms. Hopefully this will help to improve the validity, and especially the reliability of the research. Secondary data such as, websites, organisation’s communication notes, letters, newspaper articles and company documents were used to supplement the interview primary data. This provided a check on the potential bias in interview data.

## LITERATURE REVIEW

Within the context of such factors as globalisation, deregulation, privatisation, reduction of world tariff barriers and growth of national and international markets; mergers, acquisitions and strategic alliances have become the preferred means for achieving growth (Schweiger, Csiszar and Napier, 1993; Capron, 1999; Vermeulen and Barkema, 2001). One of the most important changes in the telecommunications industry’s structure during the last two decades has been the growth of large-scale international companies achieved by these external methods of development rather than by internal growth. These horizontal acquisitions involving firms combining at the same stage of production, and involving similar products or services, leads to the elimination of a competitor, to an increase in the market share of the acquiring firm, and to an increase in the degree of concentration of the industry (Green, 1990). It is important to remember that mergers, acquisitions and alliances offer a quicker way for companies to grow than the establishment of ‘greenfield’ developments and have the additional advantage of broadening the firm’s knowledge and resource base (Vermeulen and Barkema, 2001).

However, the process is complex and most acquisitions fail. Leighton (1993) asserts that whereas strategic and financial aspects are more visible and clearer to assess, those related to cultural differences between the companies involved become much more subtle and difficult to realise. He argues that “in many cases, culture clashes may be the most pernicious enemies of getting a deal done” (Leighton, 1993: 26). A critical mistake that organisations tend to make is overestimating the quality of the management team, their strategic capabilities, cultural attitudes and behaviour patterns (Kitching, 1967; Barret, 1973; Pritchett, Robinson and Clarkson, 1997). Kitching concluded that this was the main reason for failure for the companies analysed in his research, asserting that, “if managerial competence and the requirements of the to-be-purchased organization are not evaluated before the merger, the chance of failure increases markedly” (Kitching, 1967: 96). Leighton and Tod (1969) add that, not just management skills and competences should be evaluated, but also their emotional and personal needs, fears and expectations.

Several researchers suggest that there has been a tendency to underestimate the effect of differences in culture and management style between organizations (Pritchett, Robinson and Clarkson, 1997; Van de Vliet, 1997; Light, 2001; Testa and Morosini, 2001). When this happens, the integration process gets much more difficult and problematic, since the differences between the firms involved are not properly recognised and



handled (Vermeulen and Barkema, 2001). In contrast, more recent research by McDonald, Coulthard and Lange (2005: 8) found that managers “did not see due diligence as simply a financial assessment but a detailed investigation” that should not only evaluate the viability of the proposed merger or acquisition on the basis of its strategic fit, but also its cultural alignment by assessing people skills and attributes. Schweiger, Csiszar and Napier (1993) strengthen this perspective suggesting that managing the differences is a critical aspect, because the success of the merger is ultimately determined to the extent in which the differences between the companies involved are handled. They add that it is of major importance for companies to be open to learn about their counterparts in order to understand their values, norms, routines and procedures; creating a basis by which wrong stereotypes and other potential sources of conflict can be diminished. Therefore, it is of major importance for the new organisation to clarify, as soon as possible, the new ‘way of doing business’, and which kinds of behaviours are now rewarded. Otherwise, culture shocks may emerge and people become confused, frustrated and resistant to change (Pritchett, Robinson and Clarkson, 1997; Bower, 2001). Very et al (1997) assert that mergers between firms, whose organisational cultures are nested in different national cultures, represent a special challenge. They suggest that top management, committed to their way of doing things, will have difficulties in adapting to new management teams, especially when cultural differences between the teams are too large. Therefore, the authors conclude that differences in top management culture need to be handled with special care; otherwise, they may become a reason for major problems in mergers.

Pritchett, Robinson and Clarkson (1997) suggest that a high percentage of merger failures derive, not from lack of strategic planning or choice, but because of faulty management during implementation. This may be associated with the fact that in many mergers, some of the key management talent leave the firm after the deal. However, David Kidd, a partner at Egon Zehnder International, asserts that “it is irresponsible to allow talented individuals to leave, and it is time consuming, risky, and expensive to replace them” (Light, 2001: 38). Capron (1999) suggests that another aspect which tends to create a feeling of diminished relative status within the management of the acquired firm, leading to management turnover, is the fact that often, managers of the acquiring firm tend to ‘colonize’ the target by imposing their own management styles and tools. Kiefer (2002) explains these occurrences suggesting that mergers (with all the organisational change that is implicit) are very emotional events. Therefore, he suggests that firms should pay much more attention to how to address all the emotional and psychological aspects that are part of the merger process, instead of just focusing on rational and cognitive aspects. Anslinger and Copeland (1996) and Inkpen, Sundaram and Rockwood (2000) corroborate this position, arguing that managers tend to focus their attention on strategic, economic and financial aspects and disregard organisational fit and governance. They suggest that it is equally important to define the new shareholder structure and control of the firm, and clear organisational responsibilities and reporting relationships, reflecting the distribution of the decision making power (Inkpen, Sundaram and Rockwood, 2000).

## **PRE-ACQUISITION PHASE: THE ACQUISITION RATIONALE**

The acquisition of 51 percent of the shares of the Congolese company CWN by Vodacom Group took place in December 2001, resulting in the establishment of Vodacom Congo S.P.R.L. This majority shareholding enabled the South African buyer taking control of the Congolese firm. However, this took place within a friendly collaborative climate as both organisations, Vodacom and CWN, signed a gentleman’s agreement aiming to maintain equilibrium between the two groups in terms of top management positions. As a result, a new company was formed under the Congolese Company Act - ‘Vodacom Congo SPRL’.

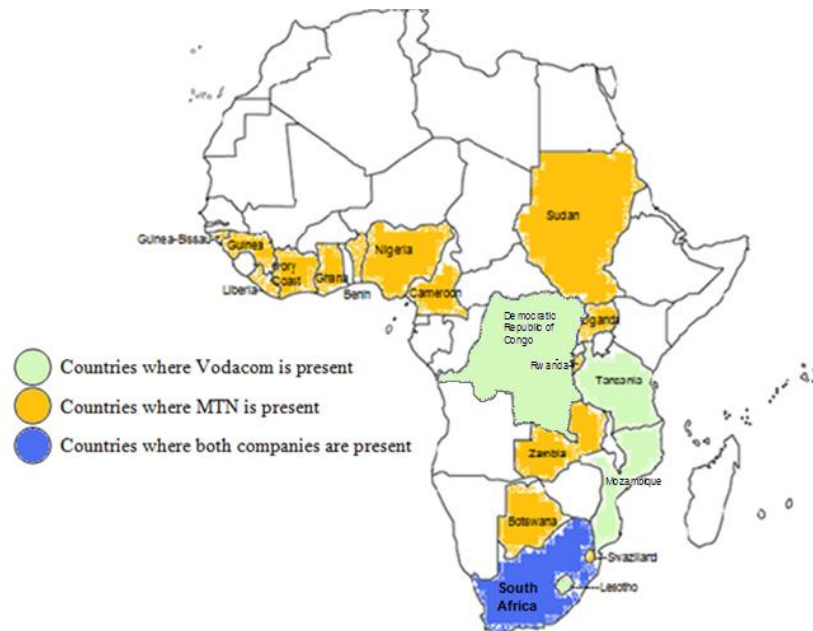
The main rationale behind this acquisition was international market development. Despite being the largest service provider in South Africa, its international geographical scope was limited to only three African countries, Lesotho, Mozambique, Tanzania. In contrast, its biggest competitor, MTN, is involved in 15 African countries and some parts of the Middle East (see Figure 1).

This relatively low degree of international expansion was partly due to an agreement with its shareholders, Telkom (Pty) Ltd and Vodafone Plc, in which Vodacom had been restrained to acquire telecommunications licenses in the Northern Sub-Sahara region. The reason for this restriction was justified by the fact that the shareholders (Vodafone Plc and Telkom RSA) were already operating in that region and would, therefore, want to avoid internal competition from one of their subsidiaries. As a result, Vodacom’s geographical scope of action was restricted to the central and southern regions of Africa.

Moving into the Democratic Republic of Congo (DRC) represented an extra challenge to Vodacom. Political turmoil, economic uncertainty, different culture and official language, and an existing strong

competitive rivalry between a few dominant incumbent firms, CWN, Celtel and Congo Chine and probably in the near future MTN, justified the choice of an acquisition instead of internal ‘greenfield’ development. The acquisition provided Vodacom access into a country with an approximately 58 millions population but where GSM penetration is less than 7% (Vodacom Interim Results, 2006). This low penetration represented a huge potential for growth.

**Figure 1. International Market Development of South African Telecom Companies in Africa**



*Source: author analysis*

## CHOICE AND EVALUATION OF THE PARTNER

However, the choice of a strategic partner in a developing country by a foreign company has to be taken very cautiously. The analysis of macro economic, political and socio-cultural aspects have to become particularly addressed when evaluating the financial risks of entering into an unstable market. Financial criteria must be complemented by country governance analysis in order to assess the suitability of the target company. In this particular acquisition Vodacom Group did not disregard any of these aspects. It managed to obtain all essential information of its future partner, CWN. Presentation of the accounts (balance sheet, Cash flow statement and L&P statement) were made available to Vodacom and a legal due diligence process took place before Vodacom decided to buy 51% of CWN shares.

As a result, the new combined firm, Vodacom Congo, benefited from synergy effects derived from the parent companies. The South African Company, Vodacom, brought its high end technology and financial resources, while the Congolese company, CWN, contributed with its well trained local workforce and good knowledge of the market, and with a well established distribution network. Marcel Cohen, former Chief Governance Officer of Vodacom Congo, argued that the acquisition seemed to have the right strategic fit, “we have the feeling that the rationale of this alliance was well thought through and both firms contributed to the enforcement of the new company strength. The existing local human resources were complemented by competent foreign experts in Information Technology, and this certainly created a competitive advantage” (Cohen, 2008).

## POST-ACQUISITION SYNERGIES

Vodacom had invested very cautiously in the country in which they had had no previous experience at all. However, despite several external environmental threats that would deter most other foreign companies willing to invest in a developing country, such as the DRC, the acquisition has been successful. In a personal interview, Alieu Conteh, Shareholder and Chairman of Vodacom Congo, asserted that “this partnership with a well established Congolese Company, CWN, has considerably facilitated the creation of the new entity Vodacom Congo (SPRL) which is today the most successful telecommunications company in the country facing four powerful competitors established in the DRC years before the Vodacom alliance with CWN” (Conteh, 2008).

CWN and Vodacom have coordinated their actions and joined their forces effectively. CWN has brought its license and political connections to facilitate the running of the business in the whole country, and particularly in remote areas. It has improved the distribution coverage through well-established dealers and sub-dealers involved in the sales of the products throughout the whole country. Vodacom was more involved in implementing new technology and building new towers to increase the network coverage and quality. There was also good knowledge transfer between the partners taking place through informal and formal modes of diffusion. Vodacom established the objective of transferring their knowledge to the local staff within a two year period. Another important objective in line with the labour law and policy of the country is to appoint more local managers to key positions (Cohen, 2008). To this end, training and coaching programmes were organised for most of the Congolese technicians in Vodacom’s IT Education Centre in South Africa. This proved to be a good long-term investment because operational costs decreased as well trained Congolese staff started taking positions previously occupied by South African expatriates (Cohen, 2008). The realisation of all synergies mentioned above seem to add supporting evidence to previous research arguing that acquisitions tend to be more successful when companies move into areas where they are familiar with the market and the technology (Pettus, 2001). This is precisely the case with this acquisition, which success is due to a synergetic relationship in which each partner contributes with their specific capabilities.

Financial results two years after the acquisition were very positive and the Return On Investment (ROI) was much higher than the one projected during the pre-acquisition evaluation process. As stated by Conteh (2008), “despite political turmoil the business success of this alliance has exceeded our expectations.” The network quality was vastly improved, and new products such as 3G, Data and other value added services have complemented the existing range of products offered by CWN before the acquisition. As a result, the customer base increased from 22,000 in 2002 to 1.6 million in 2006 and to 2.6 million at the end of the 2007 financial year (Mare c. 2008). This has enabled the company to achieve today a 51% share of the market, representing a move from being number four GSM operator to number one (Conteh, 2008). Overall, it has brought not only economic but also socio-cultural and political benefits to the country as more than 620 permanent jobs have been created to date (Mare c. 2008).

## **ORGANISATIONAL AND CULTURAL FIT**

Although the strategic fit between the two companies was categorically proven by very positive financial and strategic results, organisational and human resource issues started emerging after the ‘honeymoon’ period (Cohen, 2008). According to an Anonymous source, the main cause for the rising problems was due to an inadequate draft of the first shareholders agreement in which Vodacom managers were solely responsible for the financial and operational management of the new entity. As a result, Vodacom managers were directly involved in all operational processes, taking responsibility for the whole management of this new subsidiary, Vodacom Congo SPRL. Most key management positions such as, Managing Director, Chief Financial Officer, Chief Information Technology Officer, Procurement Manager, and IS Manager had been exclusively assigned to Vodacom staff, who neither spoke French nor had had any previous working experience in the country.

Although this potential cause of a cultural sensitivity had been highlighted by Congolese staff during the pre-agreement evaluation and negotiation process, all attention and analyses had been focused purely on strategic and financial aspects. This evidence seems to corroborate previous research findings indicating that a common mistake that organisations tend to make is not to dedicate enough attention to the evaluation and choice of the implementation management team, their cultural attitudes and behaviour patterns, emotional and personal needs, fears and expectations (Kitching, 1967; Leighton and Tod, 1969; Barret, 1973; Pritchett, Robinson and Clarkson, 1997; Light, 2001; Testa and Morosini, 2001; Vermeulen and Barkema, 2001).

Since socio-cultural issues and the differences in sensitivity between staff of the two firms had not been properly recognised and handled, the integration process started becoming more difficult and problematic

(Anonymous source, 2007). In a personal interview conducted by one of the authors, an anonymous senior manager of Vodacom Congo S.P.R.L. argued that “top management had joined their strength in a very friendly manner but the employees of both sides were more reluctant to work together because the corporate culture was not compatible” (Anonymous source, 2007). This view was corroborated by several anonymous Congolese employees interviewed by one of the authors of this study. There seemed to be a general consensus between Congolese staff that “there was a serious degree of cultural incompatibility” and on several occasions South African staff were criticised by local staff for their arrogance and disrespect. Congolese staff perceived South African (hereafter SA) managers as lacking good manners because they did not respect the dress code, nor addressed the local staff politely. They would work in their offices and meetings in T-shirt or short sleeved shirt. This was seen as a sign of disrespect towards their Congolese colleagues, which have a high standard of *savoir-vivre* and respect the business suit-and-tie dress code, which is the normal way of showing respect in the business world towards their superiors, fellows and Official authorities.

According to Congolese staff, this disrespect is not only implicit in the way South African staff dress and in their body language, but also in their behaviour. The fact that they don’t make any effort to learn the official language of the country (French) nor do they sit together with their Congolese colleagues in social functions, unless forced to do so, adds to the evidence. However, a more explicit form of disrespect is evident in their talking, greeting, and constant swearing.

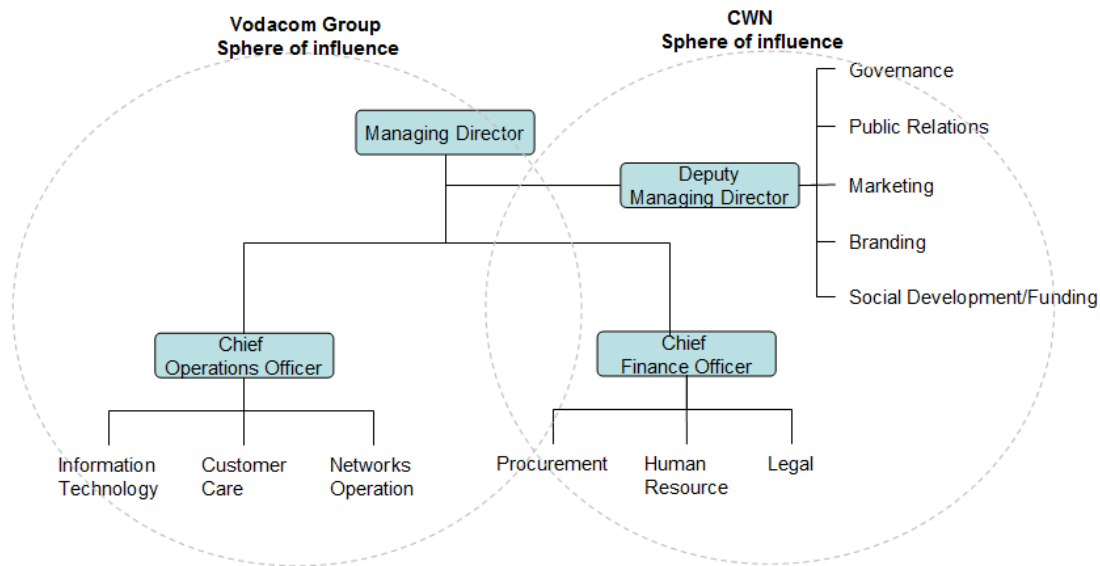
Another important aspect that created unsettled feelings amongst local Congolese staff was the fact that several South African managers, who occupied higher positions in the hierarchy of the new firm, had lower levels of education and competences than their local subordinates. According to an anonymous source, this was the reason why on several occasions some Congolese engineers refused to obey wrong instructions from their SA superiors. This led, occasionally, to disciplinary hearing and dismissal on the basis of insubordination.

According to an anonymous source, the ignorance of the local culture illustrated above started weakening good will and understanding between the local and foreign partners. After five years this situation reached such a degree of gravity that shareholders finally acknowledged the problems and decided to act in order to minimise the ongoing internal clashes, and preserve the success of the acquisition. After some discussion, both parties decided to readjust the company’s operations and organisational structure with a gentleman’s agreement. According to the literature on acquisitions, five years is far too long as readjustment between the partners should take place as quickly as possible (Inkpen, Sundaram and Rockwood, 2000; Light, 2001). A major aspect that was rectified was the existent imbalanced distribution of key management positions as SA managers had previously occupied the most relevant positions. As a result, a new agreement contemplated a new leadership structure in which some key positions were allocated to local Congolese staff. This was done with the objective to address the existing frustration and lack of trust generated by the previous management structure. This seems to corroborate previous research findings arguing that the post-acquisition integration stage is the most difficult to manage and carries a high degree of risk of failure (Habeck, Kroger and Trum, 2000). This is especially due to poor integration planning and execution, mismatch of cultures and difficulties in communicating and leading the organization (Gadiesh and Ormiston 2002). In the case of Vodacom Congo SPRL, mismatch of cultures and leadership structure were the main issues during the post-acquisition phase.

Due to these human relationships issues between local staff and foreign managers, a new agreement has been signed by both firms (Anonymous, 2007). This agreement provided a more impartial division of responsibility at top management level, where foreign managers and local staff managers had a more balanced share of management responsibilities (see Figure 2).

The Figure above shows the new distribution of top management responsibility. Under this new structure the South African shareholders, Vodacom Group (Pty) Ltd, keep the right to appoint the MD and COO positions, while the Congolese shareholders, CWN, hold the Deputy MD and CFO positions. A new more balanced distribution of power helped to re-establish trust and confidence between the parties (Anonymous source, 2007). This was consistent with general advice on acquisition management suggesting that both parties have to find solutions to collaborate fairly in order to compromise on sensitive issues such as management responsibilities to be shared between both parties (Child and Falkner, 1998). The new agreement signed at Vodacom Congo SPRL helped to attenuate conflict of interest, and provided room for mutual cultural understanding between both firms. This was particularly helpful because to date, the main difficulties of this collaborative arrangement were only related to human relationships and power sharing in the new subsidiary. This decisive action took place just in time because the new company, Vodacom Congo SPRL, was, in the opinion of an Anonymous source, on the verge of being liquidated.

**Figure 2. The New Distribution of Power**



*Source: Author analysis based on the new agreement.*

This reorganisation should definitely help to settle disagreements between the parties and help to create a better organisational fit in order to support further growth of the company. Feedback from Congolese staff has been very positive since they see more local staff involved in the decision making of strategic and operational day-to-day activities. According to the new agreement CWN can appoint two senior managers of its choice for the roles of Deputy MD and the CFO. Consequently, this should result in a gradual replacement of most SA Heads of Department by Congolese staff. However, according to an Anonymous source, South African staff have been less enthusiastic about this new structure, and their attitude continues to create some problems, not only from a cultural perspective but also in terms of business practices. Despite being the South African partner who suggested most of the new policies and procedures, SA staff seem to find difficulty in following them. To this respect the Governance Department will certainly have to play a critical and very active role in enforcing and monitoring their adoption and implementation.

## CONCLUSIONS

This case shows that, as in most other parts of the world, cross-border acquisitions have been a preferred method for companies to gain rapid access to foreign markets. It also highlights the need for companies to be able to implement management policies adapted to the social system and specificities of the target region. A common pitfall that companies seem to fall into in Africa is importing and adapting techniques of management of the modern countries to African culture and traditions. South African telecommunication companies seem to be no exception. In this case, South African managers did not seem to be ready to work in a developing country such as DRC where culture, language, law, habits and customs are fundamentally different from their home country. Therefore, despite the financial and economic success of this acquisition, evidenced by a remarkable increase in revenues, market share, distribution channels, service quality and the development of new expertise and capacities, and achievement of economies of scale, its longer term success is far from guaranteed.

In support of previous research findings, this study shows that despite the best strategic and economic rationale and fit, mergers and acquisitions are very complex and difficult to manage. In this case the synergies and complementarities have been realised and the performance of the new company has been undoubtedly improved. However, the acquisition is still at risk of failure because companies failed to appreciate the difficulties involved at the pre-merger stage, by not fully understanding the cultural sensitiveness and need of adaptation in cross-border situations. This is in line with previous studies suggesting that companies need to use the due diligence period to evaluate, not only the financial and strategic aspects, but also the cultural alignment,

management style and expectations between both organizations (Light, 2001; Vermeulen and Barkema, 2001; McDonald, Coulthard and Lange, 2005). Consequently, since the differences between the firms involved were not properly recognised and handled, the integration process became much more difficult and problematic as leadership, cultural attitudes and behaviour issues started emerging. Despite being continuously stressed in the literature for more than forty years (see Kitching in 1967; Pritchett, Robinson and Clarkson, 1997; Riad in 2007), a high percentage of acquisition failures derive, not from lack of strategic fit, but because of faulty management during implementation.

The risk of failure is a major threat, especially to Vodacom Group (Pty), because it is sharing its core competences and unique resources by training Congolese staff and bringing all its core technologies and know-how to its partner CWN. If the acquisition failed Vodacom could lose its investment in this unstable political environment where the rule of law is not entirely implemented. Despite Vodacom Group's majority shareholding, CWN has indeed a dominant position due to its political connections, which are very important in this volatile political environment. Nonetheless, after five years Vodacom and CWN managed to recognise the difficulties, and new management policies and structures have been subsequently adopted in order to save the acquisition. This demonstrates that where there is mutual respect between the parties, and a will to succeed, everything is possible. As Edward T. Hall asserted in his book 'Beyond Culture' "For too long, people have taken their own ways of life for granted, ignoring the vast, international cultural community that surrounds them...Our a-cultural prejudice inclines us to believe that the differences between the people are only superficial. For this reason, not only we deprive ourselves of the enrichment of the knowledge of the other cultures, but we take a long time to correct our errors when they give place to problems" (Hall, 1976).

Finally, we would like to highlight some of the limitations of this study and avenues for further research. We acknowledge that the fact that all interviews were conducted only with Congolese managers and employees, limits the validity of these findings. To overcome the potential for bias, it would be important to collect and evaluate data from South African Managers as well. Since similar issues have been reported in other countries where the two South African companies, Vodacom Group and MTN, are operating through various types of collaborative arrangements, it would be important to compare and contrast those situations. To this end, interviews would have to be complemented by a large scale survey. This is the case because anonymous questionnaires would help employees and managers to overcome the fear of retaliation, and express freely their concerns and issues. This would result in a much more robust study with higher standards of validity and reliability. It is the hope of the authors to be able to conduct this enhanced research in the not too distant future.

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# **RISKS THE POOR PERCEIVE WHEN SHOPPING FOR FOOD**

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## **ABSTRACT**

*Low-income families must confront situations often marked by restrictions and scarce resources in all aspects of life. The risk of erring when making food purchases makes such decisions highly complex. This investigative study approaches the issue from the perspective of perceived risk. In-depth interviews were held in which factors that generate insecurity in the food purchasing decisions of low-income consumers were identified as well as the mitigation strategies that these consumers employed. The discoveries suggest that understanding the food purchasing decision process of the lower classes, from the perspective of perceived risk, may offer new horizons for academics and professionals.*

## **INTRODUCTION**

Until the beginning of the 80s, the emphasis of studies on the politics of food was aimed at aspects of nutrition. The focus on the problem of the diet of the world's low-income population changed - mainly due to the work of Sen (1981) - from macro politics of production to access to food. Previous treatments focused on supply, while more recent studies have concerned themselves with demand (Maxwell and Slater, 2004). Beginning in the 90s, the attention of academic interest turned to food security and then later on, to poverty (Maxwell, 1998). This new vision also fostered an interest in exploring aspects of the demand for foods, from the point of view of consumer behaviour. Well-recognized is the dearth of research studies carried out after the early work on the consumer behaviour of low-income families (Caplovitz, 1963, Lambert, 1972, Andreasen, 1975, Kelley, 1981) but prior to the types of studies currently in favour – typified by the attention showered on the differences between social classes, which had all but stagnated by the end of the 70s but has recently been resurrected (Henry, 2005).

Consumers hesitate to buy products that involve the risk of incurring a loss (Roselius, 1971). This dilemma is greater still for low-income consumers due to circumstances that are particularly significant: (a) instead of abundance, the poor face situations constantly marked by restrictions and scarcity of resources (Hill, 2002); (b) having active limits for spending on education, health and leisure, the poor suffer from much pressure in trying to satisfy their food-related needs and desires; (c) with limited means to make their money last and to repeat the purchase of badly chosen items, or to correct negative buying experiences, the frustration arising from possible errors in their choices makes decisions related to food purchases some of the most complex they have to cope with (Caplovitz, 1963; Alwitt and Donley, 1996; Leibtag and Kaufman 2003). As such, the poor are keenly perceptive with respect to the risks inherent in food shopping – an activity which is rather less anxiety-inducing for wealthier consumers.

Taking as a given the effects and consequences of decisions that involve risk in consumer behaviour and with respect to low-income consumers, this investigative study seeks to shed light on understanding how the poor can manage limited budgets better: (a) to identify perceived risk factors associated with food shopping (b) to reveal the mitigation strategies employed by these consumers.

## **CONSUMPTION PATTERNS OF THE POOR**

Low-income consumers are rational when making decisions and choices. They favour shops close to their homes or places of work; they optimize the number of shopping trips; and they take into account what products are available and what the credit possibilities are (Parente *et al*, 2005; D'Andrea and Herrero, 2007). In the case of credit purchases, these are made in accordance with payments that fit the budget, the total purchase price not being relevant (Mattoso, 2002). A shop's price level and its physical proximity are important factors taken into consideration when making choices (Mitchell, 1998). Since many do their shopping on foot, they prefer supermarkets, groceries, butchers and markets, either close to the home or workplace, rather than going to hypermarkets (Parente *et al*, 2005), where more variety at lower prices could be found. Purchases are mostly confined to basic-needs goods; traditional brands are preferred to cheaper brands (D'Andrea and Herrero, 2007) due to perceived quality and the faith in the guarantee of good results (Parente *et al*, 2005; D'Andrea and Herrero, 2007). They are also reluctant to try out new brands, for fear of wasting money and of displeasing their families – even though new brands may be more attractively priced (Rangan *et al*, 2007). This preference for traditional brands might be a strategy to reduce the risks of buying something unfamiliar or of wasting money on an erroneous purchase (Rangan *et al*, 2007).

## UNCERTAINTY AND RISK

In a purchasing situation in which there are no guarantees of success, the consumer perceives the risk of suffering a loss (Cunningham, 1967; Hoover *et al*, 1978). This perception may be felt at any (or all) stages of the selection process - whether with respect to the product, the brand or the shop (Mitchell and McGoldrick, 1996). Bauer (1997) noted that the risk perceived involved a combination of uncertainty and the seriousness of the consequences of making the purchase. The consequences were a function of the objectives and the costs, whereas uncertainty appeared to be inversely related to consumer confidence (Cox and Rich, 1964). Peter and Ryan (1976) interpreted these two components as being the risk of potential loss and the probability that this loss should occur. The uncertainty appears during several stages of the process of assessing the risks related to the choices. The set of alternatives is not known prior to an intensive search for information and even after the search, the choices may not be clear to the consumer. Nonetheless, several authors ignore the probability component (Horton, 1976)

Due to cognitive limitations, consumers aren't capable of anticipating a subset of the total number of potential consequences for their choices. The totality of the consequences is unknown, so the individual will have difficulties in associating probabilities with negative consequences (Stone and Gronhaug, 1993). Because consumers may not always be able to calculate the probabilities of risk or of their expectations of the product, they're confined to perceived risks, subjectively construed, leading them to take into account, in their decision-making processes, social dimensions and other non-financial dimensions. Jacoby and Kaplan (1972) identified five dimensions to this construct. Roselius (1971) had already proposed an additional dimension, **convenience loss**, which would involve the time necessary to re-purchase the product (time lost) as the result of its failure. All of the dimensions contribute to the global risk, but such dimensions vary with respect to the specifics of each purchase and with the type of product. Studies related to the risks of retail food purchases (Mitchell, 1998; Mitchell and Kiral, 1999) consider the following dimensions: **a) performance loss** – risk that the product does not function as expected and does not offer the desired benefits. May also be considered as the result of a combination of other losses and be used as a substitute for other risk dimensions that may be present in the buying decision. **b) physical loss** Risks of threats to the consumer's health or appearance. Includes concerns with respect to food safety risk (expiration dates) and in-store hygiene; **c) financial loss** – Includes consumer concerns with respect to cost/benefit (house brands, available discounts, the frequency of promotional prices and store price levels) and the amount the consumer will lose if the product does not perform satisfactorily, as well as additional costs, such as transport or higher prices. It appears that the consumer's main concern with respect to food purchases involves financial aspects (Mitchell and Kiral, 1999). **d) psychological loss** – the risk of disappointment with oneself for not having made a good purchase. This seems to perform an important role, mediating and correlating with the other risks (Stone and Gronhaug, 1993) **e) social loss** – The risk that friends or family might consider that the consumer made a bad or inferior choice. This risk is also present when family or friends may be affected by some consequence of a bad choice. The judgment of others is what matters – regardless of how well the product performs. For low-value items and items of little symbolic value, consumers have difficulty in differentiating between the two concepts and, thus, the co-occurrence of the two dimensions takes on more significance (Mitchell and Grotorex, 1990). **f) loss of time** – Involves the costs of time related to

the purchase of products, such as travelling to the shop, the speed of service and existing facilities for the purchase, as well as the time lost due to product defects.

## **Perceived risk mitigation strategies**

Each product has a set of risks associated with its acquisition and each consumer has an individual tolerance for risk which, when exceeded, will lead him to employ, during the purchase process, strategies to reduce such risk to tolerable levels (Mitchell, 1998). The use of different risk reduction mechanisms depends on the nature of the purchase or on the product in question. Consumers usually favour the use of certain strategies in detriment to others and attitudes and preferences in relation to the reducers of risk vary with each consumer (Roselius, 1971). One strategy is to seek information, making use of personal (Cunningham, 1967; Cox, 1967) and/or market sources (Roselius, 1971), obtaining data from several personal, public, commercial and empirical (i.e. examining and using the product) sources. The more important the decision to be made is, the more alternatives the individual finds, the greater the volume of data obtained, and, therefore, the greater the possibility of receiving conflicting information (resulting in the consumer's confusion) (Mitchell and Boustani, 1994). The task of the individual will be to process the clues and decide which to use, which to discard and forget and which to keep in mind.

In evaluating alternatives, the primary source of uncertainty is the assessment criterion, i.e., the attributes to consider. Depending on their level of involvement, consumers differ significantly in the extent to which they seek information, in the number of attributes they consider and in their motivation to obtain maximum satisfaction (Laurent and Kapferer, 1985). The consumer may be totally ignorant with respect to certain attributes, until the search for information calls his or her attention to their existence (Mitchell and Boustani, 1994). The consumer may also be insecure in relation to the importance of each attribute in evaluating the product or service (Mitchell and Boustani, 1994). The search for information regarding performance will be prioritized when uncertainty about product performance is high. When the risk of poor performance is low, the information will use psychosocial information, if something is to be gained with this action (Cox, 1967).

The assessment of the alternatives leads consumers to develop brand preferences. The greatest preference is for the brand that has the smallest perceived risk (Mitchell and Boustani, 1994). If the lowest-risk brand is not available, the consumer must decide between not buying the product or buying another brand that represents a greater perceived risk (Mitchell and Boustani, 1994). Brand loyalty is usually employed to reduce the perceived risk (Bauer, 1967; Cunningham, 1967). The consumer reduces perceived risk by developing loyalty to particular brands that he/she has used before and which have been satisfactory (Roselius, 1971), this being the most favourable strategy to reduce time loss, physical loss, ego loss and financial loss (Roselius, 1971).

## **METHOD**

The method involved two stages. In the first, informal interviews were carried out with 11 low-income individuals, followed by observations in supermarkets belonging to two chains with strong popular appeal. In this stage, information was sought that would enable the design of an interview questionnaire. In the second stage, a list of open questions and a visual aid in the form of product sheets were developed. The open questions sought to stimulate the informant to talk more in depth about aspects discovered in the first stage, such as the frequency of shopping, the foods essential to the family diet, how shopping was done, the perceived quality of the brands and the perceived uncertainties in food-shopping decisions. The product sheets were made by pasting images of different brands, in 23 distinct product categories, (beans, rice, sandwich biscuits, coffee, etc.) onto A4-size sheets. These images were removed from the advertising inserts from 15 different retail chains, cheap or otherwise, gathered over one month. Care was taken to omit prices and to use photographs of approximately the same size, in order to avoid one brand standing out more than another. This visual resource was intended to help the informant to remember the food-basket products that he/she would normally buy and to be able to comment on his/her brand preferences. The product sheets were not intended to cover all brands in each category or, indeed, of all categories.

Using the designed questions and employing the product sheets as visual aids, 15 in-depth interviews were conducted. The informants, who were residents of the Rio de Janeiro metropolitan area, had family

incomes that were up to three "minimum salaries" (approximately US\$ 750) per month and were the individuals who did the food shopping in their respective households.

## RESULTS

Five factors stood out that led to the perception of risk: The expectations of family members, time restrictions, discrepancies in the perceived quality of products, difficulties caused by the indivisibility of the package and the importance of price. Mitigation strategies for the risks that were found also numbered five: the selection of the product evaluation set, the development of brand loyalties or the diversification of brands, the increase in purchasing frequency, the use of the senses to make better product choices and the search for information prior to making the purchase. First, the causal factors of the perception of risk will be described, and then the risk-mitigation strategies that were found.

### Causal factors of the perception of risk

Family expectations – Frustrating the desires and preferences of the family represents a psycho-social risk to consumers, even though satisfying family members may be a difficult task due to budget limits. The imposition of restrictions increases the difficulty of making choices, so that finding a middle ground between low income and the family's desires amplifies the importance of the negative consequences of making a bad choice: purchases also take on the purpose of demonstrating that consumers are good fathers (or mothers), good husbands (or wives) or good children. The pressure arising from this responsibility causes consumers to perceive that the room for error is nil. The purchase takes on a significance which is more profound than simply supplying the household; therefore, they must choose with care. Not infrequently, more expensive brands are selected in order to avoid displeasing a loved one.

Time restrictions – Those who work a long way from home, or who work long hours, feel that the time that could be spent studying prices, special offers and product varieties is spent on the daily commute to and from work. Compromised by the lack of time, purchases may be subject to incorrect choices, thereby increasing perceived risk (Mitchell, 1998). From the interviews, three limits which afflict consumers appeared: Reduced opportunities to carefully evaluate product attributes (increasing the perception of performance risk); difficulty in taking advantage of sales and special offers, that vary from one day to the next in many shops (creating the perception of financial risk); and, as a function of the reduced number of trips to the shops, two related restrictions -- the cost of the decision to try new products or brands, due to ignorance of important information available at the purchase sites; and, matters concerning how much of a new product to buy. If a large quantity of the product is purchased and it fails to satisfy, the consumer will have to consume it, nonetheless, because of the lack of time to buy the item again. Time restrictions, therefore, seem to significantly increase total perceived risk, in as much as it reduces the ability of the consumer to measure product quantity, quality and price on each visit to the supermarket.

There are other consequences resulting from having a limited amount of time. Low income consumers seem to have limited geographical scope, always doing their shopping close to home. In addition to other restrictions, they must consider distances, transportation time and cost, in order to decide where to shop (following Mitchell, 1998).

Discrepancy in perceived quality The evidence shows that the consumer establishes a minimum tolerable level for physical characteristics (i.e. flavour, aroma, consistency, etc.), that vary in accord with his/her preferences and experiences. The large variety of brands, in certain product categories, accentuates the possibility of quality discrepancies, and concomitantly, the perception of risk. In the collection of advertising inserts, the researchers found as many as 30 brands of rice with different prices. The range of options creates insecurity, since it increases the possibility of buying a product that does not live up to expectations. Recognizing the existence of different levels of quality, consumers must diligently monitor their experiences, especially negative ones and, as a function of their positive experiences, deemphasize the importance of price.

The informants' responses also suggest that special attention must be made with respect to product yield, including it under the heading of quality. In other words, choosing a product that doesn't last long is risky.

Still, financial limitations require that some consumers must consciously buy a short-lasting product, simply because of the low price. In seeking out good quality and value in products, consumers follow a series of clues in order to infer quality, such as brand-name and the product's price, and they use these clues to reduce the perceived risk and to guarantee that their purchase decisions will be intelligent ones. The assessments of quality normally occur in a comparative context and quality is assessed as high or low based on the relative superiority of the products that the consumer had considered as substitutes. The mention of Rice and beans is not surprising since they are part of the basic diet in Brazil. Contrary to products where the quality is assured from the experience of repeat-purchases of known, previously-tested brands, beans are essentially different due to crop variability. This variability, a risk inherent in the category of the product (Bettman, 1973) increases the degree of uncertainty at the time of choosing.

Indivisibility of the package Except when the product is sold by weight (sausages, meats), oftentimes the consumer is forced to acquire a greater or smaller quantity than he/she would like, leading the him/her to perceive risk that is exacerbated when the product or brand is unknown. In wanting to try out a new product or brand, the indivisibility of the package restricts the consumer, leading him/her to forgo trying it. This risk increases if the package contains a quantity that is larger than necessary to test it. If the consumer buys the product and the experience is a negative one, he/she will probably consume it instead of throwing it away, either from shame or from a lack of resources to correct the error.

Importance of price – The price-floor refers to the minimum price that, in the consumer's perception, the product can reach when on sale. The difference between full price and the price floor, as registered in the consumer's memory, influences his/her choice. There exists the possibility that a product, being sold at full price today, may, tomorrow or some other day, be available at a lower price. Insecurity at the time of selection is a consequence of paying too much than one perhaps should (or could). Paying full price causes discomfort and the sensation of having made a "bad buy", the bad feeling being proportionate to the known difference between the full price and the price floor. By analogy, when the consumer identifies items at the price floor, he/she perceives the risk of the price rising and of not being able to find the product on sale on the next trip to the market. Therefore, whenever he/she can, the consumer acquires more units of that product in order to take advantage of the opportunity. It appears that the consumer assumes that there is a minimum limit to which the price floor of a product can fall. If the price is below the price floor, mistrust arises in place of the sensation of having made a good buy. If the price is above the price floor, then there's the perception of financial risk, along with the uncertainty of predicting the price the next time it must be bought. According to the informants' reports, price appears to be a basic criterion for buying food, as Mitchell and Kiral (1999) suggested.

## **Risk factor mitigation strategies**

Consumers are often uncomfortable about trusting offers, such as low-priced merchandise which is being sold close to the expiration date because they perceive physical risk under such circumstances. They may reject offers that they believe are meant for higher income segments. These reasons and others too make shopping for food a constant exercise in juggling price, quality and quantity in order to meet the needs of themselves and their families; consequently, low income consumers develop strategies to reduce the risks they perceive in their buying decisions. In this study, five mitigation strategies were identified.

Formulating the evaluation set - Information provided by the respondents suggests that the consumer accumulates in his/her memory positive and negative experiences which he/she relies on in order to make choices. In this mental catalogue, the consumer records products considered to be bad, that are expected to provide poor quality, and of which the repeated purchase is automatically rejected; products considered to be good and that can be bought again; the minimum and full prices of each product category and of certain brands in particular. This evoked set, comprised of products present in their memories may be added to by others that are met with during shopping. This evoked set minimizes two risk factors: meeting family expectations and coping with limited time. Since this set contains already tested and previously approved products, they reduce the possibilities of frustrating their families' expectations. Without available time to do research the consumer resorts to the evoked set to quicken the time spent choosing rather than trying out other items that may predominate in the shopping environment. On the one hand, there is the problem of choosing among a set of products or brands; on the other, there lays the habitual solution in which the consumer rules out alternative

possibilities and buys the usual brand. What he/she considers, obviously, are brands that have been positively evaluated for buying and consuming. The interviews showed that, besides the evoked set, other subsets exist in the knowledge set: The inert set, and the inept set. The inert set, despite being a conscious one, comprises a set of alternatives about which the consumer doesn't have enough information in order to assess (new brands included): the consumer perceives no advantage whatsoever in buying such items. The brands that the consumer rejected due to prior bad experiences, or due to negative third-party references, comprise his/her inept set.

Brand fidelity or diversification of brands - The possibility of erring in the face of family expectations, his/her limited amount of time, the discrepancy in perceived quality -- all provide the consumer with a reason to develop brand loyalty. Nonetheless, based on the same reasons, the consumer could, eventually, diversify brands. Since the variety of brands is large, and since the consumer has already suffered many bad experiences, in certain categories, he/she develops brand loyalty. Related to loyalty, two additional, and distinct, behaviours were identified. In the first, the repeat-purchase of a brand occurs merely out of habit: a brand which was, perhaps, initially tried because of negative experiences with other brands. Under circumstances such as these, the consumer chooses a brand of adequate quality as his/her usual brand. The second behaviour is the loyalty to a brand because of explicit preference. Though the price may be high, the quality and the pleasure of indulging oneself or the family lead the consumer to associate his/her main-choice criterion with brand. It is possible that certain choices lie with brands that suggest prestige (Mitchell, 1998; Van Kempen, 2003) and the consumer may enjoy showing them off after purchase. The consumer may suspend such brand loyalty if his/her eye is caught by the low price of the new brand, and employ the tactic of buying a small quantity of the new brand, complementing the usual quantity he/she needs of the loyalty-brand, and thereby diluting the risk of buying a "bad" product.

Increase in buying frequency - The consumer minimizes the financial risk of price variations by the frequency of shopping trips. Those who have the flexibility of shopping more frequently can take advantage of the discounts offered with zeal by retailers. When they become familiar with the discount days for each category, increased shopping trip frequency decreases the probability of buying products at full price. This strategy reduces the sensation of spending more when shopping is done less frequently.

Use of senses in choosing products - Interviewees reported using sensory stimuli – appearance, aromas, tastes and textures – in order to differentiate among competing products. The senses help to diminish the discrepancy of perceived quality, the risk of product indivisibility and possible health threats. Examining, smelling, tasting and touching the product provides information which will be added to the "mental catalogue" of positive and negative experiences. Normally, it is the visual aspects which are examined first of all. Consumers make a point of looking carefully at the product: its aspect, integrity and expiration date. Then, they use their sense of smell, mainly to reduce possible health hazards: They often smell products, especially perishable ones, in order to reassure themselves of the minimum expected quality. They use tactile senses – the sense of touch provides information on texture, consistency, firmness or softness. Although tasting products is not allowed within the store, many consumers break basic rules in order to guarantee product acceptability. Several informants reported opening packages, including those of known brands, in order to directly touch the product; they did this because they perceived variations in quality, for example, due to the crop. In this case, brand is not sufficient for decision-making and touching reduces performance risk.

Pre-purchase information search - With a limited budget and many items on the shopping list, the low income consumer seems to try to get the most benefit possible from previous knowledge in order to reduce risks of various types. The most sought-after information is obtained from supermarket promotional advertising inserts and word-of-mouth communication with family members, neighbours or workmates. By gathering information from advertisements and advertising supplements, the consumer seems to feel better prepared to take advantage of price variations, thereby reducing financial risk.

## CONCLUSION

Using in-depth interviews with 15 consumers and the analysis of their responses, five perceived-risk causing factors were shown, all directly related to the dimensions described in the literature: 1) The need to meet family expectations and the desire to not disappoint a loved one, often lead the consumer to buy more expensive

brands; 2) Time restrictions impede the search for better prices and becoming familiar with new brands available on the market and, therefore, the ability to make safer decisions, principally with respect to product performance and price (always an important factor); 3) Discrepancies in perceived quality force consumers to carefully catalogue, in their minds, previous experiences with brands, both positive and negative, and to utilize more frequently their senses in order to assess the quality of the items they intend to buy; 4) Variation in product prices (as a function of the offers at different points of sale or on different days of the week) in conjunction with limited time (to gather information) generate a high degree of insecurity for the low-income consumer. Scarce resources for buying food lead the poor to feel insecure: they perceive that, perhaps, they aren't getting the "best" price; 5) The indivisibility of the package forces the consumer to buy quantities other than those desired and often inhibits him/her from trying a new brand or product (despite its being priced more cheaply) in order to avoid buying a lot of something he/she is unfamiliar with.

Note that each factor may be related to more than one dimension of perceived risk; it would be useful, therefore, to study them in greater depth. Likewise, for a given choice, several of these factors may present themselves simultaneously to the consumer, dramatically increasing his/her anxiety and demanding that he/she employ a combination of mitigation strategies to address the perceived risks. By virtue of the extreme heterogeneity among these consumers and based on the fact that a family income of two "minimum salaries" still leaves the Brazilian consumer squarely at the bottom of the pyramid, future studies should also take into consideration the size of the household, and differences in gender, income and age.

In order to better understand these mitigation strategies and their employment, future studies may choose: to investigate how such consumers construct their set of considerations, assessing the relative importance that they attribute to informational and normative (i.e. from family members) influences and the marketing information they receive; to understand the role of each family member in the decision-making process in question; to understand better the circumstances in which the consumer substitutes the strategy of brand loyalty with the strategy of brand diversification. For food-sector marketing professionals, knowledge of perceived-risk factors will be useful in the development of new products and in the study of the most adequate package sizes of the foods that he/she produces. Store managers can use discoveries related to risk mitigation strategies used by consumers at the point-of-sale in order to better define the product mix in his/her store; managers should also be mindful that oftentimes low-income consumers often seek out higher-priced prestige brands, possibly avoiding stores that only carry cheap products in their mix. Adequate communication strategies, especially with respect to promotions, can be implemented thereby bringing more consumers to the stores that – in addition to offering a good supply of appropriately priced brands – provide better quality information.

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# **THE EFFECT OF LEADER MEMBER EXCHANGE QUALITY ON EMPLOYEE'S PERCEPTION OF POLITICS AND ORGANIZATIONAL CITIZENSHIP BEHAVIOR: THE MODERATING ROLE OF ORGANIZATIONAL JUSTICE**

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## **ABSTRACT**

*Within this article the affect of leader member exchange quality (LMX) on the employees' perception of politics and organizational citizenship behaviors (OCBs) is investigated. The moderating affect of organizational justice composing of procedural, interactional and distributive justice is also tested. Employees with poor quality relationships can create harmful affects both for themselves and their organizations. Perception of political behavior(POPS) is one of them. On the other hand good quality relationships (high LMX) can increase extra role behaviors and contextual performance of the employees. Organizational citizenship behavior (OCB) is one of them. Within this context regression analysis supported that LMX has a low to moderate explanatory power on employee's POPS (a negative relationship) and this explanatory power further increases with higher procedural, interactional and distributive justice perceptions of the employees in other words organizational justice has a moderating affect. However, regression analysis further support that LMX has a very powerful explanatory power on organizational justice, and organizational justice has more explanatory power on POPS comparing LMX which means that justice can have an intervening affect between LMX and POPS. LMX has also a meaningful and significant explanatory power on OCB.*

## **INTRODUCTION**

Empirical studies show that 77 % of the employees in USA are dissatisfied with their jobs and they are unhappy. Studies about intention to turnover of employees states that the prior reason of their turnover is the poor and bad behaviors of their managers and supervisors. On the other hand, employees with poor and bad relationships even they stay in their companies, their level of job and life satisfaction and organizational commitment decreases and they are more open to psychological distress, burnout and depression, they have more conflict between their work and families. All of these recent analyses clearly remark the necessity to search more about the antecedents and consequences of the quality relationships between leaders and members (employees).

Leader-member exchange quality (LMX) is basically is a leadership theory which based on the dyadic relationship between the leader and the employee that is different from an average leadership model (Average Leadership Style, ALS)". (Schriesm, Castro & Cosliger, 1999; Dansereau, Graen & Haga, 1975). Within the last decade LMX may be one of the most searched, criticized and developed leadership approaches in the literature. LMX has influential affects on individual, group and organizational level. LMX is generally found to be associated with positive performance related employee behaviors and attitudes. LMX has either directly or with other OB variables an influence on high employee performance, (Liden, Wayne& Stidwell, 1993), job satisfaction and satisfaction with the supervision (Duchon, Green& Taber, 1986), organizational commitment (Nystrom, 1990), career development (Graen & Scandura, 1987), decrease in turnover and intention to turnover (Veccio, 1985; Schiriesheim, Castro, Coglisier, 1999).

Within this theoretical need, the subject of this article is to investigate the affect of LMX on two important organizational behavior variables namely “perception of politics (POPS)” and “organizational citizenship behaviors (OCBs)”. In the preceding parts, the operational definitions and the theoretical explanations indicating the possible relationships between variables will be discussed.

## **LEADER MEMBER EXCHANGE QUALITY (LMX)**

As it stated before leader-member exchange quality (LMX) theory explain the leadership process as a dyadic linkage between the leader and the member (employee, follower) (Gestner & Day, 1997). According to LMX theory, the quality of the relationship between supervisors and subordinates falls into 2 categories: in-group and out-group (Graen, 1976). Due to time pressures, supervisors develop close relationships with a few key subordinates. These subordinates are referred to in-group. In-groups are characterized by high levels of interaction, support, trust and formal / informal rewards. (High quality LMX) The other category, out-group is characterized by low levels of interaction, support, trust & rewards. In managing the out group, the supervisor relies primarily on formal rules, policies and authority. (Low quality LMX).

The in group and out group exchanges are similar to the concept of “economic exchange” and “social exchange” described by Blau (1988). Economic exchange is contractual in nature. The obligations of the members are clearly defined, thus the conditions of the exchange can be enforced and do not rest on interpersonal trust (Graen & Uhl- Bien, 1995). Out group exchange as one where the supervisor relies almost exclusively upon the formal employment contract in his or her exchanges with the employee, the supervisor can fulfill the employment contract without entering into any or minimal social exchanges. In contrast, social exchange is based on trust and implicit obligations (Dansereau, Graen & Haga, 1975). Thus one member of the exchange may perform a service for the other party without a specified outcome or reward. Leaders encourage their employees to take further responsibility and provide necessary support and resources to reach their goals. (Wang, Law, Wang & Chen, 2001). This social interaction and exchange between the leader and the member increases the quality of the relationship.

In recent studies LMX is measured as a multi dimensional construct (Liden & Maslyn, 1998; Dienesch & Liden, 1986, Wang, Law, Wang & Chen, 2001). Wang et al. (2001) states that LMX is composed of four constructs:

- (1) Affect: The interaction and affect between the supervisor and subordinate besides job related values.
- (2) Loyalty: Commitment to the achievement of shared goals between the supervisor and the subordinate.
- (3) Contribution: The amount, quality and the direction of the contribution of the parties to the achievement of shared goals.
- (4) Professional Respect: The reputation of the dyad to realize their tasks and jobs successfully.

An important component of social exchange theory that is useful in understanding the relationship between LMX and subordinate behavior is “the norm of reciprocity” (Gouldner, 1960). A high quality exchange may create a sense of obligation on the part of the subordinate to reciprocate in terms of the behaviors valued by the supervisor. High quality exchanges tend to be associated with employee behavior that benefits the supervisor and goes beyond the formal job duties (Linden & Graen, 1980). In other words if an employee’s perception of LMX is high he/she will reciprocate by increasing his support and performance toward his leader and his company. Therefore it isn’t wrong to think that high quality LMX may increase the extra role behaviors toward the leader and the organization. One of these extra role behaviors is “organizational citizenship behaviors (OCBs)” which is also in the scope of this article. In the preceding paragraphs OCB and its possible relationship with LMX will be discussed.

## **ORGANIZATIONAL CITIZENSHIP BEHAVIOR (OCB)**

Organizational citizenship behavior (OCB) is referred as set of discretionary workplace behaviors that exceed one’s basic job requirements (Bateman & Organ, 1983). They are often described as behaviors that go beyond the call of duty. Other examples of OCB are willingness to take steps to prevent problems with other employees, and obeying organization rules, regulations and procedures even when no one is watching. In the literature several dimensions of OCBs are stated such as, ‘helping’ behaviors by employees (e.g. supportive actions to assist others and

going beyond the requirements of the job); 'sportsmanship' (tolerating the work environment without excessive complaining); and 'civic duty' (constructive involvement in the processes of the organization beyond the requirement of the job). Smith, Organ & Near (1983) identified 2 dimensions of OCB: altruism & compliance. Altruism refers to behaviors aimed at helping another person such as assisting the supervisor with his/ her work, helping others who have been absent, orienting new people. Compliance refers to impersonal behaviors such as not taking undeserved breaks or time off, being punctual, giving advance notice if unable to come to work. Williams & Anderson (1991) summed these components of OCB under two major components: OCBO (citizenship behaviors benefiting the organization) and OCBI (Citizenship behaviors benefiting the individuals). OCBI component mostly match with altruism and helping behaviors and OCBO mostly match with conscientiousness and compliance (Organ & Konovsky, 1989; Smith, Organ & Near, 1983; Wayne & Green, 1993). In this paper, OCBs will be evaluated within the context of OCBI and OCBO. As Williams & Anderson (1991) stated it is important to search these two components differently since they may have different antecedents.

## **THE INTERACTION OF LMX AND OCB**

Following social exchange theory, OCB may be related to LMX: OCB is not required or part of the formal reward system that an employee who engages in OCB isn't formally rewarded. However OCB may be informally rewarded through LMX. It seems that an employee who engages in OCB would be contributing to the department's efficiency and effectiveness and thus helping the supervisor. Thus, **OCB may be used as a way of reciprocating for support from the supervisor** (Liden & Graen, 1980). Subordinates may engage in OCB and perform at a high level to reciprocate for rewards and support provided by the supervisor, thus maintaining a balanced or equitable social exchange with the supervisor. A number of field studies have found support for the relation between LMX and OCB (Setton, Bennett & Liden, 1996; Wayne & Green, 1993; Settoon, Bennett, & Liden, 1996; Wayne & Green, 1993; Wayne, Shore & Liden, 1997). So,

H1a: LMX has a significant explanatory power on OCBs.

H1b: LMX's explanatory power on OCB can be different for OCBI and OCBOs.

## **PERCEPTION OF POLITICS (POPS) AND ITS INTERACTION WITH LMX**

Organizational politics refers to the actions by individuals which are directed toward the goal of furthering their own self interests without regard for the well being of others or their organization (Kacmar & Baron, 1999; Drory & Romm, 1990; Ferris, Frink, Beehr and Gilmore, 1995; Ferris & Kacmar, 1992; Ferris & Judge, 1991, Pfeffer, 1992). Examples include, bypassing chain of command to gain approval, going through improper channels to obtain special equipment, lobbying high level managers just prior to promotion decisions.(Andrews& Kacmar, 2001).Contemporary research began addressing organizational politics as perceptual phenomenon with negative consequences for those who perceive it to occur (Gandz& Murray,1980; Ferris & Kachmar, 1992)Those who perceived politics occurring within their organization experience reduced job satisfaction, organizational commitment, increased job stress and more likely to leave the organization. (Kacmar, Bateman, Carlson, Anthony, 1999).

Ferris and Kacmar (1992) in their integrated study about POPS found that the quality of the relationship that is conducted with the supervisors is one of the important determinants of POPS. POPS increases in the uncertainty and low trust environments. LMX decreases the level of uncertainty and increase the level of trust. At the same time according to the social exchange theory and the norm of reciprocity, an employee who has high level of LMX perception decreases the level of his/ her harmful or deviant behaviors toward their supervisors. They have no need to use some political tactics to increase their self interests despite their supervisors or companies' aims and interests. In a high quality relationship the employee is already secure and knows that his supervisor protects and maintains his/her interests, gives the necessary information, support and resources to his /her employee and involves him to the decision making procedures. Therefore we can hyphotize that:

H2: When the quality of the relationship between supervisor and subordinate decreases the level of perception of politics increases.

# ORGANIZATIONAL JUSTICE AS A MODERATOR BETWEEN LMX AND POPS

Organizational justice is an important determinant of employee behaviors and attitudes (Masterson et al., 2000) like job and payment satisfaction (Folger & Konovsky, 1989; McFarlin & Sweeney, 1992), performance (Cowherd & Levine, 1992), intention to turnover and absenteeism (Hulin, 1991). Organizational justice is composed of three components: distributive justice, procedural justice and interactional justice (Pillai, Schriesheim & Williams, 1999). Procedural justice concerns the fairness of the ways used to determine the distribution of resources among employees (Greenberg, 1990). Cropanzano & Greenberg (1997) distinguished between structural and social aspects of procedural justice. Structural determinants involve formal rules & policies concerning decisions that affect employees, including adequate notice before decisions are implemented, receipts of accurate information and voice (i.e. employee input in the decision process) (Thibaut & Walker, 1975). Social aspects of procedural justice sometimes called interactional justice, involve the quality of interpersonal treatment in resource allocation. Social aspects include treating employees with dignity and respect and providing employees with information concerning how outcomes are determined (Cropanzano & Greenberg, 1997; Tyler & Bies, 1990). Distributive justice refers to the perceived fairness of the allocation of resources by the organization. Members make evaluations about whether the outcomes (e.g. performance ratings, pay promotions) offered by the organization are fair given to the amount of effort they have put forth (Folger & Konovsky, 1989; McFarlin & Sweeney, 1992).

Researches have shown that, in-group members perceived a higher level of fairness (organizational justice) than do out-group members (Sias & Jablin, 1995; Vecchio & Griffeth, 1986). Those members who are in the in-group (high quality LMX), are often involved in making decisions through their increased interactions with the supervisor (Wayne et al., 1994). This involvement in decision making (voice & choice) has been proposed as a means of control, decreases the level of uncertainty. So we can hypothesize that in justice environments the level of POPS decreases. So, except the direct relation between LMX and POPS as it is stated before, "organizational justice" can moderate the relationship between LMX and POPS. And even we can say that in organizational justice climates, the level of POPS can decrease even LMX is low. Or in other words justice components can compensate the effect of LMX on POPS since both of these variables decrease the level of uncertainty and create a trusting environment.

So we can hypothesize that;

*H3: Organizational justice is a moderator in the relationship between LMX and POPS.*

*H4: Organizational justice can compensate the effect of LMX on POPS.*

The studies in literature support that interactional justice mostly affects employee attitudes toward the supervisor or has a direct influence on satisfaction with the supervisor and OCBI (organizational citizenship behavior toward the supervisor) whereas procedural justice mostly affects employee attitudes toward the company like organizational commitment and intention to quit (Masterson and Taylor, 1996; Maletesta and Byrne, 1997; Moorman, 1991). Within this context the preceding hypothesis can be developed:

*H5: The level of moderating effect of organizational justice between LMX and POPS will be different for the different components of organizational justice.*

## METHOD

### Sampling and Procedure

120 employees that work in banking and transportation sector in Istanbul, Turkey are participated to the study. The questionnaires are distributed anonymously within the period of 1 month. Most of the participants work 5-10 years in their companies (60%). 40% of them are women and 60% are men and their age average is 35. Most of the participants are single (60%) and 73% are university graduates.

### Measures

*Leader-Member Exchange Quality (LMX)*: Liden & Maslyn (1998)'s 16 item multidimensional LMX questionnaire is used. *Organizational justice*: Moorman (1991)'s composed of 17 items is used. 6 of them measures distributive justice, 6 of them measures procedural justice and 5 of them measures interactional justice. *Perception of politics (POPS)*: Kipnis, Schmidt and Wilkinson (1980)'s political tactics scale is used by changing items to perceptions. The questionnaire is composed of 18 items including "coalitions", "self-promotion", "ingratiation", "upward appeal" and "exchange of favors". *Organizational Citizenship Behavior (OCB)*: Williams & Anderson (1991)'s 14 items scale is used.

## FINDINGS AND RESULTS

### Factor Analysis

All of the questionnaires were entered to the factor analysis. The factor structure of the 18 items LMX (MDN) questionnaire (Liden& Maslynb, 1998) are the same with the original component analysis with the Turkish sample. SPSS computed four factors: Professional respect, Affect, Loyalty and Contribution. The reliability analysis applied to the factors indicates that inter item reliability of Professional respect is .93; Affect .91; Loyalty .87 and Contribution is .83. The same analysis is made to the Moorman's 17 item "organizational justice" scale. The factor structure of the scale is again like the original one with the Turkish sample. 3 components are justified with the same items under the same components: procedural justice, interactional justice and distributive justice. The inter item reliability scores (Cronbach Alpha's) for the distributive justice is .94, procedural justice .91 and interactional justice .83. POPS questionnaire scales are entered to the factor analysis and four components are computed. Among 18 items the questions which decreases the inter item reliability and the low factor loadings are excluded from the analysis. The final factor structure analysis of the POPS scale (Kipnis, Schmidt ve Wilkonson, 1980) is stated in Table 1.

**Table 1. Factor Structure and Inter item Reliability of the Perception of Politics (POPS) Questionnaire**

| FACTOR NAME  | FACTOR LOADING | EXPLAINED VARIANCE % | CRONBACH $\alpha$ |
|--|----------------|----------------------|-------------------|
| <b>SELF PROMOTION</b>                                |                | <b>%23</b>           | <b>.91</b>        |
| Pretending to be successfull .                       | <b>.91</b>     |                      |                   |
| Exagerating the KSAs                                 | <b>.89</b>     |                      |                   |
| Pretending to be intellectual                        | <b>.85</b>     |                      |                   |
| <b>INGRATIATION</b>                                  |                | <b>%20</b>           | <b>.78</b>        |
| Waiting for the happiest time of the supervisor      | <b>.82</b>     |                      |                   |
| Being friendly when something is                     | <b>.80</b>     |                      |                   |
| wanted from the supervisor                           | <b>.80</b>     |                      |                   |
| Being humble when something is                       |                |                      |                   |
| wanted from the supervisor                           | <b>.79</b>     |                      |                   |
| <b>COALITION</b>                                     |                | <b>%17</b>           | <b>.81</b>        |
| Taking support of the subordinates                   |                |                      |                   |
| against the supervisor                               | <b>.92</b>     |                      |                   |
| Building coalition groups with coworkers             |                |                      |                   |
| against the supervisor                               | <b>.90</b>     |                      |                   |
| <b>EXCHANGE OF FAVORS</b>                            |                | <b>%15</b>           | <b>.74</b>        |
| Calling attention to the past favors while demanding |                |                      |                   |
| something from someone                               | <b>.80</b>     |                      |                   |
| Showing dedicated efforts to make the supervisor     |                |                      |                   |
| expect his demands                                   | <b>.80</b>     |                      |                   |
| While making a goodness reminding that this will be  | <b>.62</b>     |                      |                   |

|                             |                           |            |
|-----------------------------|---------------------------|------------|
| <b>CUMULATIVE VARIANCE</b>  |                           | <b>%77</b> |
| Kaiser-Meyer-Olkin          | : .785                    |            |
| Bartlett Test of Sphericity |                           |            |
|                             | App. Chi-Square: 538, 646 |            |
|                             | Df : .55                  |            |
|                             | Significance : .000       |            |

All of the 14 items of Organizational Citizenship Behavior Scale(OCB) by Williams & Anderson (1991) were entered to factor analysis. With the Turkish sample three components were computed. The items decreasing inter item reliability and the questions that aren't computed in one of the factors are excluded from the analysis. The final factor structure is exhibited in Table 2 : OCBI's (citizenship behaviors benefiting the organization) are indicated in "courtesy" and "altruism" factors composing of of total 7 items and the OCBOs are indicated in "conscientiousness" factor composing of total 2 items.

**Table 2: Factor structure and the inter item reliability of OCB questionnaire**

|  | FACTOR LOADING            | FACTOR NAME<br>EXPLAINED | CRONBACH $\alpha$<br>VARIANCE % |
|--|---------------------------|--------------------------|---------------------------------|
| <b>COURTESY</b>  |                           |                          |                                 |
| <b>%29</b>   | <b>.80</b>                |                          |                                 |
| Avoiding creating problems for the<br>colleagues and supervisors |                           | ,85                      |                                 |
| Taking the opinions of the peers<br>before deciding              |                           | ,77                      |                                 |
| To protect the company resources                                 |                           | ,69                      |                                 |
| Considering the affects of actions on<br>others                  |                           | ,67                      |                                 |
| Helping the new comers to the company                            |                           | ,55                      |                                 |
| <b>CONSCIENTIOUSNESS</b>   |                           |                          | <b>%22</b>                      |
| Giving advance notice if unable to<br>come to work               |                           | ,92                      | <b>.87</b>                      |
| Not taking undeserved breaks<br>or time off                      |                           | ,86                      |                                 |
| <b>ALTRUISM</b>  |                           |                          | <b>%21</b>                      |
| Helping others who have been absent                              |                           | ,91                      | <b>.88</b>                      |
| Helping others who has over workload                             |                           | ,90                      |                                 |
| <b>CUMULATIVE VARIANCE</b>                                       |                           |                          | <b>%73</b>                      |
| KMO : 72,878   |                           |                          |                                 |
| Bartlett Test of Sphericity                                      |                           |                          |                                 |
|  | App. Chi Square : 447,276 |                          |                                 |
|  | Df : 36                   |                          |                                 |
|  | Significance : ,000       |                          |                                 |

## Regression Analysis Explaining the Relationships between LMX and OCBs

To test the magnitude and the direction of the explanatory power of LMX on OCB dimensions, three regression models are analyzed since OCB dependents are courtesy, conscientiousness and altruism. None of the components of LMX has a meaningful explanatory power on OCB's courtesy factor. However LMX components significantly explain the "altruism (OCBI)" and "conscientiousness (OCBO)" components of OCB scale. H1 is approved. But there is no difference between the explanatory power of LMX on OCBI and OCBO components which means that LMX can both increase OCBO and OCBI levels. H1a is rejected. Table 3 and Table 4 exhibit the meaningful relations.

**Table 3: Explanatory power of LMX components on “conscientiousness” component of OCB**


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|   |               |                    |              |  |
|---|---------------|--------------------|--------------|--|
| Dependent variable: Conscientiousness component of OCB                              |               |                    |              |  |
| Independent variables: LMX (Contribution, Affect, Professional Respect and Loyalty) |               |                    |              |  |
| R Square: 13  | F test: 3,680 | Significance: .008 |              |  |
| Variables entered to the regression model:  | Beta          | T                  | Significance |  |
| Professional Respect  | , 27          | 2,398              | , 01         |  |
| Affect  | , 26          | 1,920              | , 05         |  |
| Contribution  | , 31          | 2,865              | , 00         |  |

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**Table 4: Explanatory power of LMX components on “altruism” component of OCB**


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|   |               |                    |              |  |
|---|---------------|--------------------|--------------|--|
| Dependent variable: Altruism component of OCB                                       |               |                    |              |  |
| Independent variables: LMX (Contribution, Affect, Professional Respect and Loyalty) |               |                    |              |  |
| R Square: 13  | F test: 4,607 | Significance: .005 |              |  |
| Variables entered to the regression model:  | Beta          | T                  | Significance |  |
| Affect  | , 322         | 2,584              | , 011        |  |
| Contribution  | , 242         | 2,265              | , 026        |  |
| Loyalty   | , 277         | 2,161              | , 033        |  |

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## Regression Analysis Explaining the Relationships between LMX, Organizational Justice and Perception of Politics

To be able to test the explanatory power of LMX on POPS, all of the components of LMX are regressed on each component of POPS namely: ingratiation, self- promotion, exchange of favors and coalition building. The results are exhibited in Table 5. As the R Square indicates models have a low explanatory power. The results approve the explanatory power of LMX on POPS with a low explanatory power so H2 is partially accepted.

**Table 5: Regression Analysis Explaining the effect of LMX on POPS**


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|   |                 |                   |              |  |
|---|-----------------|-------------------|--------------|--|
| Dependent variable: “Self promotion” component of POPS                              |                 |                   |              |  |
| Independent variables: LMX (Contribution, Affect, Professional Respect and Loyalty) |                 |                   |              |  |
| R Square: .08   | F Test: 9, 1809 | Significance: 003 |              |  |
| Variables entered to the regression model:  | Beta            | T                 | Significance |  |
| Professional Respect  | -, 29           | -3,030            | .003         |  |

|   |               |                    |              |  |
|---|---------------|--------------------|--------------|--|
| Dependent Variable: “Ingratiation” component of POPS                                |               |                    |              |  |
| Independent variables: LMX (Contribution, Affect, Professional Respect and Loyalty) |               |                    |              |  |
| R Square: .04   | F test: 4,142 | Significance: .004 |              |  |
| Variables entered to the regression model:  | Beta          | T                  | Significance |  |
| Professional Respect  | -, 20         | -2,035             | , 04         |  |

|  |               |                    |              |  |
|--|---------------|--------------------|--------------|--|
| Dependent variable: “Upward Appeal” component of POPS                              |               |                    |              |  |
| Independent variable: LMX (Contribution, Affect, Professional Respect and Loyalty) |               |                    |              |  |
| R Square: .08  | F test: 8,486 | Significance: .004 |              |  |
| Variables entered to the regression model:   | Beta          | T                  | Significance |  |
| Professional respect   | -, 28         | -2,913             | , 004        |  |

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In the second step of the regression analysis, the explanatory power of LMX components are regressed on organizational justice variables composed of procedural justice, distributive justice and interactional justice. As it is shown from the Table 6, LMX has a significant explanatory power on all of the justice variables with high Beta scores. The Adjusted R Square scores indicate a moderate to high explanatory power of LMX on organizational justice. The highest Beta score is computed between LMX and “interactional justice” variable.

**Table 6: Explanatory power of LMX on Procedural, Distributive and Interactional Justice**

| Independent variable: LMX   |      |        |              |                   |
|---|------|--------|--------------|-------------------|
| Dependent variables: Procedural, Distributive and Interactional Justice |      |        |              |                   |
|   | Beta | t      | Significance | Adjusted R Square |
| Distributive Justice  | ,46  | 5,219  | ,000         | .20               |
| Procedural Justice  | ,61  | 7,836  | ,000         | .37               |
| Interactional Justice   | ,73  | 10,873 | ,000         | ,23               |

In the third step of the regression analysis, to test the moderating affect of organizational justice between LMX and POPS all of the LMX and organizational justice components are entered as independents into the regression model. The meaningful results are exhibited in Table 7 and 8. Within the interaction model, procedural justice has the only variable that entered to the regression model explaining “ingratiation”; interactional justice is the only variable entered to the regression model explaining “upward appeal” and “ingratiation”. These results indicate that procedural justice and interactional justice has more explanatory power of POPS components comparing to LMX variables within the same interactional regression model which means that justice perceptions can compensate the affect of LMX on POPS and organizational justice is a powerful moderator (H3 and H4 is accepted). On the other hand as Table 8 indicates LMX has a powerful explanatory power on organizational justice which means that LMX explain justice and justice explain POPS. These relationships enforce the argument that LMX influences POPS via organizational justice. Procedural and interactional justice has more explanatory power comparing to distributive justice which means that the level of moderating affect of organizational justice between LMX and POPS will be different for the different components of organizational justice (H5 is accepted).

**Table 7: Explanatory power of LMX and Organizational Justice Components in interaction on “Self-Promotion”**

|  |      |        |              |
|--|------|--------|--------------|
| Dependent Variable: Self promotion component of POPS   |      |        |              |
| Independent Variables: LMX (Contribution, Affect, Professional Respect and Loyalty); Organizational Justice (Procedural, Interactional and Distributive Justice) |      |        |              |
| R: .322 R Square: .10 F test: 11.466 Significance: .001  |      |        |              |
| Variables entered to the regression model:   | Beta | T      | Significance |
| Procedural justice   | -,32 | -3,386 | ,001         |

**Table 8: Explanatory power of LMX and Organizational Justice Components in interaction on “Upward Appeal”**

|  |      |        |              |
|--|------|--------|--------------|
| Dependent variable: Upward Appeal component of POPS  |      |        |              |
| Independent variables: LMX (Contribution, Affect, Professional Respect and Loyalty); Organizational Justice (Procedural, Interactional and Distributive Justice) |      |        |              |
| R: .302 R Square: .09 F test: 9.858 Significance: .002   |      |        |              |
| Variables entered to the regression model:   | Beta | T      | Significance |
| Interactional justice  | -,30 | -3,140 | ,002         |

## DISCUSSION AND MANAGERIAL IMPLICATIONS

The important finding of this article is that the positive relationship between LMX and OCBs are approved. As Organ (1988) noted that OCB is held to be vital to the survival of an organization. Organ further elaborated that

organizational citizenship behavior can maximize the efficiency and productivity of both the subordinates and the organization that ultimately contribute to the effective functioning of an organization. OCB is desirable from the organizational point of view because such behavior is thought to increase the available resources and decrease the need for costly mechanism of control (Organ, 1988). As the results indicate, LMX not only increases the OCB behaviors toward the individuals namely the managers but it also has an equal affect on the OCBs toward the company. So to increase contextual performance and extra role behaviors of the employees, developing high quality relationships with the employees is crucially important. Managers have to give attention to build and maintain high quality relationships to increase the efficiency and productivity of the company.

The findings of this research also approve that LMX and organizational justice can compensate each other in the explanation of the employees' perception of political behavior. So managers have to give importance to increasing the level of procedural and justice perceptions of employees to detect the negative affects of POPS on the company. They have to behave in respect and dignity to their employees, at the same time they have to give a chance to "voice" and "choice" to their employees about the decisions related to employees. Even tough LMX has a low explanatory power on LMX comparing to justice perceptions, the results show that developing high quality relationships also prevent employees from harmful and destructive behaviors of the company. So developing a trustful and qualified relationship is in the hands on managers. The most important limitation of the research is to use convenience sampling due to time constraints, but the same model can be generalized by using a larger sample and with the different sectors and the companies.

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# THE IMPACT OF PATERNALIST LEADERSHIP ON RESISTANCE TO CHANGE: THE MODERATING AFFECT OF LMX AND POLITICAL SKILL

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## ABSTRACT

*Within this research model the impact of a culturally specific model of leadership namely “benevolent leadership” on resistance to change will be investigated. Two levels of moderators are also included into the model. One is about the context of the relationship namely: leader member exchange quality and the other is an individual level variable namely: political skill. The impact of these moderators on resistance to change seems to be a new research idea when we review the resistance to change literature.*

## LITERATURE REVIEW

### Resistance to Change and Leadership

Organizational change is an empirical observation in an organizational entity of variations in shape, quality or state over time (Van de Ven and Poole, 1995), after the deliberate introduction of new ways of thinking, acting, operating (Schalk et al., 1998). Organizations in today’s business environment have to implement numerous regulatory, economic, competitive and technological organizational changes to survive in order to improve in performance or compete better. Every change brings potential benefits and risks.

It has been argued that employee reactions to change e.g., resistance to change and support for change have critical implications for the outcomes of organizational change (Kotter, 1995). The reasons for the failure of many change initiative can be found in resistance to change. The term resistance to change is used on organizational change, usually as an explanation for why efforts to introduce large-scale changes in technology, production methods, management practices or, compensation systems fall short of expectations, or fail altogether (Oreg, 2006). Resistance to change introduces costs and delays into the change process (Ansoff, 1990) that are difficult to anticipate (Del Val, Fuentes, 2003).

The context-specific antecedents of resistance have been addressed in many researches. Whereas some antecedents have to do with the outcomes of change such as losing or gaining power. According to Dent and Goldberg (1999), organizational members resist negative consequences (e.g., losing one’s job) and not necessarily change in itself. Others focus on the way in which change is implemented such as the amount of information about the change is given to employees (Oreg, 2006). Therefore, the belief that people resist change hinders organizations’ changes of understanding and dealing with real organizational problems. *At this point we believe that leadership plays an important and critical role on managing resistance to change.* With the right strategies and tactics, leaders can minimize the resistance to change in their organizations. Nult (1987) has examined the tactics used by leaders to implement change. Research on overcoming resistance to change centers

on the effects of subordinate participation in decisions about the change. Thus, for Nult (1987) participation is an implantation tactic designed to reduce resistance. Lawler (1986) and Lawrence (1969) show that participation can lead to significant reductions in resistance.

Leaders can demonstrate organizational support by effecting and communicating efforts that go well beyond what is required. The higher level of mistrust in the organization's leaders, the lower the likelihood that changes will survive. These factors contribute to an environment that more readily accepts and promotes change (Krause, 2008). Leaders' behaviors that influence perceptions of trustworthiness include consistency, integrity, sharing control in decision making and through delegation, communication and benevolence, therefore, in this research, benevolent leadership on resistance to change will be investigated.

## **A culturally Specific Leadership Model: Paternalist Leadership**

Paternalist leadership consists of 3 elements: Authoritarian leadership, benevolent leadership and moral leadership.

Authoritarian leaders stress their unquestionable and absolute authority and they will take rigorous control over their subordinates and demand complete obedience from them. The concrete behaviors that characterize authoritarian leadership are control and domination underestimating the ability of subordinates, building a lofty image of the leader and instructing subordinates in a didactic style (Cheng, 1995). As distinct from the supervisory power coming from the position in the West, the power of authoritarian leadership reflects familism, paternalistic control and submission to the authority.

Benevolent leader is a leader who displays personal, overall and long term concern for the well being of subordinates. It differs from leader consideration (Stodgill, 1974) and supportive leadership. Benevolent leadership goes beyond the work domain and it is also applied to personal issues, is long term oriented, involves the granting of grace and protection to subordinates, and is exercised in the context of strong authority so that the subordinate don't forget who is the boss.

Moral leadership is characterized of a high degree of personal integrity, self-cultivation and selflessness. A moral leader should demonstrate behavior that their authority isn't only for personal benefit but also for the public good. The actual behavior includes unselfishness, being upright and responsible, leading by example, and not mixing with business interests with personal interests (Cheng, Chou, Fang, 2000).

In paternalistic cultures the employees voluntarily accept the authority of their managers and leaders. Managers are like "father figures". They give help, assistance and support to their employees in return for an unquestioned commitment and loyalty to the leader and his objectives. Paternalist leaders take decisions in the name of their employees because they have an assumption that "I know better than you" against their employees. Within that theoretical explanation we can assume that paternalistic leadership can reduce the employee's uncertainty perceptions, in such a relationship followers believe that the leader will protect him against the uncertainties that the change brings and he will take the right decisions in the name of themselves. A family culture can prevail in paternalistic leadership environments. So as a culturally specific model paternalistic leadership can facilitate change and reduce the negative reactions of the followers to change especially in a paternalist culture like Turkey.

## **Leader Member Exchange Quality (LMX) and Resistance to Change**

Leader-member exchange quality (LMX) theory explain the leadership process as a dyadic linkage between the leader and the member (employee, follower) (Gestner & Day, 1997). According to LMX theory, the quality of the relationship between supervisors and subordinates falls into 2 categories: in-group and out-group (Graen, 1976). Due to time pressures, supervisors develop close relationships with a few key subordinates. These subordinates are referred to in-group. In-groups are characterized by high levels of interaction, support, trust and formal / informal rewards. (High quality LMX) The other category, out-group is characterized by low levels of interaction, support, trust & rewards. In managing the out group, the supervisor relies primarily on formal rules, policies and authority. (Low quality LMX). When the LMX quality is high,

resistance to change will decrease since a high LMX context reduces the level of uncertainty. The employees in the in-group will have much more access to information channels, they will be more participated and included to the decision processes and they take more respect, consideration, help and support from their managers. In a changing environment with high level of uncertainty employees perceiving a high LMX level, by perceiving a trusting environment will be able to cope with this uncertain situation (Farr Watton & Brunetto, 2007). Therefore it can be assumed that resistance to change will decrease in a high quality leader-member exchange relationship. Paternalistic leadership decreases resistance to change and a high LMX context can further increases this affect so LMX can be considered a moderator between paternalistic leadership and resistance to change.

## Political Skill and Resistance to Change

Political skill of the employees can have a similar uncertainty reducing affect on resistance to change. Political skill is the ability to effectively understand others at work, and to use such knowledge to influence others to act in ways that enhance one's personal or organizational objectives (Douglas & Ammeter, 2004). Politically skilled individuals convey a sense of personal security and calm self-confidence that attracts others and gives them a feeling of comfort. People high in political skill not only know what to do in different social situations at work but how to do it in a manner that disguises any ulterior, self-serving motives and appears to be sincere.

There are 4 key dimensions under political skill construct (Ferris, Treadway, Kolodinsky, Hochwater, Kacmar, Douglas and Frink (2005): Social astuteness: People high in this dimension have an accurate understanding of social situations as well as the interpersonal interactions that take place in these settings. Interpersonal influence: Politically skilled individuals have a subtle and convincing personal style that exerts a powerful influence on those around them. Individuals high on this dimension are capable of adapting and calibrating their behavior to each situation in order to elicit particular responses from others. Indeed interpersonal influence dimension capture what Pfeffer (1992) referred to as "flexibility" which involves adopting one's behavior situational to different targets to influence different contextual conditions in order to achieve one's goal. Networking ability: Politically skilled individuals easily develop friendships and build strong, beneficial alliances and coalitions. Apparent sincerity: Politically skilled individuals appear to others as possessing high levels of integrity, sincerity and geniuses. Because their actions are not interpreted as manipulative and coercive, individuals high in apparent sincerity inspire trust and confidence in and from those around them.

So we can hyphotize that as an individual variable political skill can be a moderator between paternalistic leadership and resistance to change. Politically skilled individuals can successfully tolerate and cope with organizational changes. Paternalistic leadership decreases resistance to change and political skill further increases the magnitude of this relationship. At the same time we can say that LMX and political skill can compensate each other in such a model. Because those employees who experience low quality relationships with their supervisors are not likely to experience the same outcomes (e.g. network formation, promotions etc.) as those high quality relationships with their supervisors, they need some way of acquiring those desired outcomes their own. Political skill is the mechanism for which can be accomplished. So even tough a politically skilled employee has a poor quality relationship with his leader can cope with organizational change and his resistance level decreases comparing to a low politically skilled individual.

## METHOD

### Sampling and Procedure

*Participants*: The sample for the survey study consisted of 80 Executive MBA students at a large university working full time in an array of industries including, computer services, accounting and, customer relations.

*Procedures*: Questionnaires are distributed to those volunteered to participate in this study in classrooms and collected within 2 hours period of time. The surveys were also accompanied by a letter



explaining the focus of the study. It was reminded the participants that their responses were completely confidential.

## Measures

Paternalist Leadership scale: Paternalism was measured with 13 items based upon Ayman's initial item pool from the preliminary stages of her scale development (Ayman, 2005). LMX was measured with LMX7 developed by Graen & Scandura (1987). Political skill was measured by Ferris, Treadway, Kolodinsky, Hochwater, Kacmar, Douglas and Frink (2005)'s political skill inventory. Resistance to change (RCT) was measured by Shaul Oreg's 17 items Resistance to Change Scale (2006).

## FINDINGS AND RESULTS

To be able to test the relationships between model variables factors are computed and the reliability analysis were done to all of the factors. When we look at the factor structure of paternalist leadership scale SPSS 13.0 version computed two factors. From 13 items of the original scale, items decreasing reliabilities are excluded. One factor is about the father figure of the manager the other one is about the managerial concern of the managers. The Cronbach Alpha scores of the factors are .85 and .89. The sample items of the factors for being a father figure is like: "My manager behaves his/her employees as if a father", "My manager created a family climate in the workplace". Sample items of the managerial concern figures are: "My manager concerns with the every aspect of his employee's lives", "My manager participates the very special days of his/her employees (wedding, funeral etc...). The result of the factor analysis of two moderating variables namely LMX and political skill: LMX is a one factor variable and for the political skill again SPSS computed four reliable components namely: social astuteness, interpersonal influence, analyzing ability of the people and apparent sincerity. The reliability score of LMX7 is .85. And the inter item reliability scores of political skill factors are .83 for social astuteness, .71 for interpersonal influence, .83 for apparent sincerity and .72 for analyzing people. For the RCT scale with 17 items SPSS computed 2 main factors. One is "dislike change" the other one is "being stressed under change". 7 questions were excluded from the analysis since their scores decreases reliability coefficient.

To be able to test the explanatory power of independent variables on RCT, multiple regression analysis were made. In the first step the paternalist leadership style factors are entered to the model and regressed on RCT factors. However no meaningful explanatory power can be measured between being father like figure and managerial concern on "disliking change" and "being stressed under change" contrary to our theoretical framework explanations which means that benevolent or paternalist leadership has no a direct influence on the change perceptions and resistance to change reactions of the employees. In the second step first LMX and later political skill factors are entered to the analysis. However LMX doesn't change the explanatory power whereas the only meaningful variable that have an explanatory power on RCT factors are "analyzing skill" component of the political skill variable. The Beta and R Square scores are given in Table1.

**Table 1: Explanatory power of political skill on RCT (Stepwise Multiple Regression Analysis)**

Dependent variable: Resistance to change factors: "dislike change" and "being stressed under change".  
Independent variables: LMX, Paternalist leadership factors (being a father like figure and managerial concern), Political skill components (social astuteness, interpersonal influence, analyzing people and apparent sincerity)

The variable entered to the analysis: Analyzing ability component of the political skill

|                  |                     | Being stressed under change | Dislike change |
|------------------|---------------------|-----------------------------|----------------|
| Analyzing people | R                   | .29                         | .28            |
|                  | R Square            | .10                         | .10            |
|                  | F test              | 5.030                       | 4.459          |
|                  | F test significance | .02                         | .02            |

|                  |      |      |
|------------------|------|------|
| Beta coefficient | -.29 | -.28 |
| Significance     | .02  | .03  |

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All of these analyses indicate that when an individual has political skill he/she can more easily tolerate the change process. As it is explained in the literature review part, political skill decreases the level of uncertainty of the individual which in turn can decrease the level of fear from change or being stressed during change periods. Most of the previous studies in the RCT literature give importance to the context of the change and they state that change process has to be carefully managed. But the relationship between political skill of the employees and resistance to change provides an important cue for the change management which is even the leadership or LMX has no influence on RCT political skill can compensate their non effect. So if a manager has to cope with resistance to change he/she has to be aware that politically skilled individuals who have an analyzing power of the different people will less resist to change. He/she can use these people as catalyst in the change process. At the same time if a company is in the change process, in personnel selection, HRM department can give importance to this personality trait in the selection of new employees. As it is shown, personality of the employees can be an important determining factor of RCT. The up coming studies may concentrate on the affect of different personality traits and variables together with political skill on RCT of the employees.

The most important limitation of this study is the time limitation and the low number of participants to the questionnaires. These are an impediment to the generalization of the study result. So we can assume that this study a pilot and generalize the study results with the new factors and different samples.

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# ENTERING STRATEGIES FOR PRIVATE LABEL BRANDS IN EMERGING ASIAN MARKETS

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## ABSTRACT

*Several attempts to launch lines of private label groceries by hypermarket chains in Asia have been documented but very few have been commercially successful on a sustainable basis. Given the lower price of private label brands and the lower disposable income of consumers in emerging Asian markets one would expect that lower priced private label grocery brands would have done better than they have. The paper examines the reasons of “failure” of private label grocery brand in Asian markets and concludes with managerial implications of how private label brands opportunities can be better exploited.*

## INTRODUCTION

During the last decade the retail grocery structure in many of Asia's emerging economies has changed significantly from locally-owned supermarkets and small family stores to the more international hypermarket format. The average size of individual hypermarkets throughout Asia is between 100,000 to 200,000 square feet, with 60 per cent of sales accounted for by groceries. The majority of hypermarkets sell groceries on an everyday low price (EDLP) strategy, supplemented by broadly advertised sales promotions (Davies & Alexander, 2003). Given the lower price of private label brands and the lower disposable income of consumers in emerging Asian markets one would expect that that lower priced private label grocery brands would have done better than they have. However this is not the case. An AC Nielsen (2003) study in 36 countries throughout the developing and developed world, reported that private label grocery brands enjoy an aggregate global market share of 15 per cent (US\$ 26 billion). According to the study the United States was the most valuable private label grocery market from the viewpoint of overall sales value. The United Kingdom was reported to have a relatively higher private label grocery market share of 31 per cent (AC Nielsen 2003). Several attempts to launch lines of private label groceries by hypermarket chains in Asia have been documented but very few have been commercially successful on a sustainable basis. It is a widely shared belief among international marketers that Asian grocery purchasers have consistently demonstrated a stronger preference for national (international) brands over private label (Ahuvia & Wong, 1998; De Mooij & Hofstede, 2002). The gross national income per capita between the United Kingdom, United States and selected Asian countries differs quite significantly. This suggests that hypermarket grocery shoppers in emerging Asian markets are severely restricted in terms of their disposable incomes compared with Westerners. Several academic researchers (e.g. Batra & Sinha, 2000; Raju, Sethuraman & Dhar, 1995) found that low income seems to increase price consciousness, which in turn increases interest in private label brands. However, in Asian emerging markets low disposable income does not seem to boost private label growth. The next section reviews relevant literature in an attempt to explain this rather counterintuitive phenomenon. The paper concludes with managerial implications and some suggestions of how private label brand opportunities in Asian Markets can be exploited.

## LITERATURE REVIEW

One of the early attempts to examine why private label brands fail in Asia was undertaken by Mandhachitara, Shannon and Hadjicharalambous (2007). Due to the very small literature on private label grocery brands in

Asian, the authors reviewed a wide range of Western literature related to attitudes, perceptions and preferences toward shopping in general and private label grocery shopping in particular. The gross national Shopping behavior was found to involve social dimensions in several studies. Dholakia (1999) found that shopping in a group or with others leads to greater shopping enjoyment, with men attaching greater importance to shopping as a means of 'interacting with family'. Buttle (1992, p.363) stated 'shopping with others can be a pleasure or a pain', which highlights the potential importance of situational influence and may be manifested in cognitive, affective and behavioral responses (Ellis, Tuck, Martin & Brown, 1981). Tajfel and Turner (1979) suggested that people identify and assess themselves partly in terms of their social groups. Similarly, research has found that people identify and define themselves partially based on those they have direct and recurring contact with (Solomon, 1983). Thus, the greater the social commitment one has to a group, the more one perceives it as an important part of who, one is. This becomes important when considering Asian collectivist cultures, as the importance of the group is magnified in contrast to individualist cultures. Members of Eastern cultures have been characterized as exhibiting higher uncertainty avoidance than members of individualist cultures, and thus would be drawn to products offering lower risk (Moss & Vinten, 2001). Batra and Sinha (2000) study reported that respondents who prefer well-known brands, although with higher prices, believe that those brands offer higher quality and are less likely to find private label brands appealing. De Mooij and Hofstede (2002) suggested that collectivist cultures are more likely to prefer national or global brands to private labels, and commented that private labeling is more common in individualist cultures. They cited two reasons for collectivists preferring national brands: 1) face, status and power distance, and 2) the need for harmony leading to a desire or preference for long-term relationships and thus for known national/global brands. This directly links to risk aversion in that individualistic cultures face less interpersonal influence, and people in them would more likely use logic based on price, quality or their own interests rather than be concerned about what others think. Collectivist cultures tend to be more risk averse and place more importance on brand names and the perceived link between price and quality, all of which should reduce the appeal of private label brands in such cultures. In attempting to maintain face and group harmony, collectivist cultures tend to consume more luxury goods and prefer known, accepted brands (Ahuvia & Wong, 1998; Schutte & Ciarlante, 1998). Consequently, they are more likely to rely on extrinsic cues, such as the belief that higher price equals higher quality and that famous brand names offer higher quality, partly to reduce the risk of losing face. Consumers who believe in price-quality relationship are more likely to rely on brand names and engage in price seeking behavior (Tellis & Gaeth, 1990). Perception of quality is essential to the acceptance of private label brand usage. If all brands in a category are seen as having similar quality, then private label brand usage increases (Batra & Sinha, 2000; Richardson, Dick and Jain 1996). However, Hoch and Banerji (1993), Sethuraman (1992) and Ailawadi et al. (2001) found that quality is more important than price in usage of private label brands. Richardson et al. (1996) found that respondents who judge products by brand, price or packaging were less likely to buy private label brand groceries. With issues such as quality and price at stake, the question of risk becomes more prominent. Consumers will feel less interested in buying private label groceries if the level of perceived risk in that category is high. Batra and Sinha (2000) concluded that if the consequences of making a purchase mistake are high or quality variability is high, then interest in private label groceries goes down.

In a collectivist culture, shoppers face more interpersonal influence, resulting in lower levels of innovation to maintain group harmony. Shoppers in an individualistic culture are less likely to concern themselves about what others think, hence they could be more innovative and less risk averse. Further, they would be more attracted by products on sale (promotion prone) and would be less likely to perceive private label brands as risky. Roy (1994) looked at mall shopping motives as being functional, deal prone and recreational. Within the Western context of time pressure and more utilitarian or functional shopping, there are those who have investigated 'smart' shopping (Mano & Elliott, 1997). They agree that there may be utilitarian and hedonic aspects of shopping, but look at aspects that utilitarian shoppers would find hedonic – such as investing time to gain more knowledge, which would lead to saving money. Thus, smart shopper behavior may involve more information search, more pre-planning behavior, and more use of lists and budgeting, but at the same time have hedonic outcomes – such as a sense of accomplishment or feelings of happiness at getting a good deal through price savings or purchasing something that was on sale (Burton et al., 1998).

From a Western point of view then, shopping is work, but some consumers with hedonic tendencies may enjoy the fruits of their labor (Mano & Elliott, 1997). Shoppers with utilitarian values are likely to have more grocery market knowledge. Because saving money is important, they are more likely to exhibit sale proneness, which could extend to coupon use and private label brands – all of which lend themselves to the Western view of smart (utilitarian) shopping. Private label brands are said to appeal to time-pressured consumers by offering a heuristic of known value for money (Ailawadi et al., 2001). When compared with their western counterparts

Asian consumers have less market knowledge, therefore they rely more on price to assess quality. Differences also exist in the social aspects of shopping behavior. Their choices are influenced more by interpersonal factors than Americans, making them less prone to bargain hunting (Mandhachitara et al., 2007).

## MANAGERIAL IMPLICATIONS

Given the lower income that characterizes Asian consumers when compared with their American counterparts' one would expect that lower priced private label grocery brands would have done better than they have. The managerial question is that if private label grocery brand provides opportunities to retailers in the East Asian region how can these be better exploited? In doing so, retailers in the region may try to understand the reasons hindering the success of private label groceries. As the literature review shown, consumers in Asian emerging markets, generally have less market knowledge. The quality price relationship was identified as the second most important discriminating factor from their westerners' counterparts. Moreover, because the introduction of private label brands in the region is relatively new, market knowledge and awareness levels of private label brands is even lower. The possible interaction between overall market knowledge, the relatively recency of the availability of private label brands and price-quality comparisons put private labels brands at a disadvantage in relation to national brands. For example, in Thailand on average the price of private label grocery brands is 30% lower than the price of the corresponding national brands (AC Nielsen, 2003). A price differential of 30% is very considerable and could possibly reflect a product of lower quality. Since Thai and other Asian consumers consider price to signal quality when making purchase choices, a more effective strategy may be to offer private label products at higher prices closer to the national brand level, thus partially addressing the lower perception associated with deeply discounted prices.

Moreover, Sethuraman (2003) found that consumers have an overall preference for national brands and that they are willing to pay a premium for brands with strong reputation. His finding showed that most consumers are willing to pay a premium for national brands even if they perceived the quality of the private label brands to be equal. This non-quality equity associated with national brands is defined as the premium that consumers would pay for national brands even when they perceived no quality differential between national and private label store brands. The fact that Asian consumers have lower level of market knowledge when compared with their American counterparts creates an additional challenge for grocery retailers operating in such markets. Closing just the quality gap between private label and national grocery brands may not be enough. Retailers aiming to increase private label grocery brand share could try to close the non-quality equity by enhancing the image of private label brands through better packaging, sophisticated space and shelf allocation and local advertising (Corstjens & Lal, 2000). A starting point may be identified within the frequently purchased product categories. Within the frequently purchases product categories the uniqueness, and therefore the imagery and the non-quality equity associated with national brands, is diminished, creating opportunities for private label products. Retailers perhaps can use frequent visits to educate consumers concerning their store's private label brands. In the absence of knowledge consumers' rely on extrinsic cues in assessing quality. Extrinsic cue reliance amplifies perceptions of quality between national and private label store brands. In the absence of information with reference to intrinsic quality, extrinsic cues such as price, brand name, packaging and labeling serve as proxy indicators of quality as demonstrated Richardson et al. (1996). Asian retailers could learn from their European counterparts who successfully increased store brand acceptance with continuous improvements in package design, labeling, store space and shelve allocation and branding strategies (Hester, 1988).

Due to the inferior quality perceived among private label grocery brands, retailers could gain a better acceptance by strategically examining and managing product categories differently. Some product categories are more appropriate for private label products than others. National brands are found to be higher in quality in hedonistic products than in functional ones (Hirschman & Holbrook, 1982; Levy & Czepiel, 1974). Consumers usually attribute high performance risk to private label brands since they question their ability to deliver expected benefits because of the inherent difficulty of assessing the quality of intangible elements associated with the purchase of hedonistic products. Retailers could begin, after considering category dynamics, with product categories in which quality is easiest to assess like edible products and more frequently purchased functional products where performance and social risk is relatively low.

Given that the phenomenon of private label brands in Asia is relatively new the lack of market knowledge and low familiarity of Asian consumers' result in low evaluation of private label products because consumers view them as products of questionable quality and possibly consider them as risky choices. Based on conventional wisdom and economic rationale it is expected that Asian consumers with lower income will prefer private label

brands because of their lower price. However, it can be argued that consumers with lower incomes may be willing to pay a higher price premium for national brands as an insurance against possible product failure. If perceived performance risk is high, low income consumers value their limited income more and as a result may avoid a questionable choice such as a private label brand. Livesey and Lennon (1978) found that English consumers serve well known national branded tea to guests in social settings but they use less expensive private label tea in other occasions. If social risk affects the selection of private label products according to usage situation in countries like England, one expects that in collectivist cultures social risk will have an even bigger effect. Store brands should be marketed in such a way to define the store's own point of difference. Customers should be given reasons for visiting the store and these must be clearly communicated. Intangible factors such as an exceptional service, store cleanliness, interior design, customer friendly lay out and friendliness of store employees may prove effective. Once they have established their position and image in these dimensions, it will be easier private label categories retailers to use this equity to create inroads into other more difficult product categories by leveraging their own private labels. Finally in order to increase market share and penetration rates of private label products retailers operating in collectivist cultures could launch premium lines and improve branding and image of their offerings. Introducing private label grocery brands under programs such as selector premium may close the current price quality gap that exists between private label and national brands.

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# **THE EVOLUTION OF THE WHISTLE BLOWER INTO A PROTECTED DISCLOSURER- PUBLIC POLICY AND ETHICAL CONSIDERATIONS**

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## **ABSTRACT**

*South African whistle blowing legislation goes further than the British law and also covers both public and private sector employees. This paper will investigate relevant national and international legislation and policies in South Africa, Australia, the United Kingdom and the United States of America with the aim of providing managers and policy makers alike with suggestions on how to practically implement policies and to take into consideration the ethical issues involved. This paper will also elaborate on lessons learned from international cases, predominantly cases from the UK, USA as well as India.*

## **INTRODUCTION**

Whistle blowers are both citizens and managers, and are therefore exposed to dilemmas in both roles. As citizens, they want to see the termination of wrongdoing. As managers, they would prefer whistle blowing incidents to go through internal channels only. However, if whistle blowing is ineffective, it benefits no one. Public administration in South Africa has to overcome numerous difficulties caused largely by the burden of history, unethical and corruptive constraints and government secrecy. In the face of these difficulties, efficient administration that serves the needs of all citizens is one prerequisite for strengthening the rule of law and the credibility of the state, both internally and externally. Such administration must be transparent, responsible and accountable, and served by honest officials. In the current context of the globalisation of the world economy and the fluidity of cultural boundaries, administrations in all countries also face a variety of issues, including the ethical problems concerned with the protection of employees who expose malpractice or misconduct in the workplace, transparent administration and good governance. Several statutes and pieces of legislation were introduced over the a period of time aimed at the institutionalisation of formal structures for openness, the disclosure of malpractice and transparency to combat crime and corruption and the enforcement of constitutional rights over the past few years. There is an increasing focus on good (and bad) corporate governance in South Africa and internationally, and institutions that are transparent and open will benefit from more favourable investor perceptions. Improved relationships with the public show that a substantial effort has been made to endow public administration with a legal framework that encourages the players involved to assume a greater sense of responsibility and develop practices to promote transparency and to protect whistle blowers.

## **CONTEXTUALIZING WHISTLE BLOWING/WHISTLE BLOWER**

According to Calland (2004:2), "... whistle blowing is about basic issues which lie at the heart of human activity. It covers loyalty and the question of dubious practices. It concerns communication and silence. It is about practicing what one preaches and about leadership. It focuses on responsibility toward others and the accountability of those in charge. It is where public and private interests meet". Whistle blowing is when

organisational wrongdoing is brought to the attention of persons in positions of authorities (complaint recipients) who are able to do something about the situation. Hunt (1998:529) focuses on the contextual issues that represent an act of disclosure. This involves knowing what is disclosed, by whom, and to whom. Only when organisational wrongdoing is disclosed, moral, ethical and public interests are at stake. The focus on public interest should on the other hand not be restricted "to issues in which an overriding societal value is at stake" (Alford 2001:18), such as where people's lives are in danger. Any disclosure exposing something that is "not for the public good" can be seen as whistle blowing. Petersen and Farrell (1986:4) stress the special form of dispute that characterises whistle blowing: "Whistle blowing is a special form of dissent in which a member or former member of an organisation goes outside the organisation or outside normal organisational channels to reveal organisational wrongdoing, illegality, or accusations that threaten the public."

## **LEGISLATION: SOUTH AFRICA, UNITED STATES OF AMERICA, AUSTRALIA AND THE UNITED KINGDOM**

Attention will be restricted to the Protected Disclosures Act of South Africa, the Whistleblower Protection Act of the USA, Queensland (Australia) and the United Kingdom's Public Interest Disclosure Act.

### **The Protected Disclosures Act (PDA) 2000 (Act 26 of 2000) of South Africa**

Until the year 2000, neither the South African common law nor the South African statutory law made provision for ways to protect whistle blowing employees. The PDA was enacted with a view to creating a culture in which employees may disclose information on criminal and other irregular conduct in the workplace in a responsible manner, thus promoting the eradication of crime and misconduct in organs of state and private bodies. Each of the procedures designed to ensure that the discloser is protected has certain requirements to be complied with. If a disclosure is made to a legal representative, there are only a few requirements, but the requirements become more comprehensive as one moves up the ladder, with the most comprehensive requirements applying to making a general disclosure. Any concerns that the Act favours employees are unsupported. The Act is specifically structured in a way that best serves the interests of accountable organisations. Only when internal channels have been exhausted or fail are broader disclosures to external bodies protected, meaning that the disclosure must be made in accordance with the prescribed process. The Act can and will make a difference in the way organisations and the state receive complaints about wrongdoing and how conscientiously these are addressed. This Act makes provision for procedures in terms of which employees in both the private and the public sector may disclose information regarding unlawful or irregular conduct by their employers or other employees in the employ of their employers. It provides for the protection of employees who make a disclosure that is protected in terms of the Act and provides for relating matters. The objectives of the Act are threefold. It aims to provide for procedures in terms of which an employee can, in a responsible manner, disclose information regarding improprieties committed by his or her employer; it protects an employee, whether in the private or the public sector, from being subjected to occupational detriment on account of having made a protected disclosure; and it provides for certain remedies in connection with any occupational detriment suffered on account of having made a protected disclosure (Holtzhausen 2007).

### **The United States Whistleblower Protection Act (WPA) of 1989 – 1994**

The US's WPA of 1989 which was further strengthened in 1994 through the enacting of Public Law 103-424 was promulgated to enhance the protection of federal employees, government corporations and to those employees in the Veterans Administrations. The model of whistleblower protection applied in the US is based on the multilateral system where-in a whistleblower who believes that the retaliation is the result of the disclosure of illegal activities, have the right to petition to government Executive branch agencies for protection. (Caiden and Truelson 1994; Groeneweg 2001). This whistleblower protection model is an anti-retaliation statute prohibiting the federal government from taking reprisals against employees who blow the whistle on public sector misconduct and providing means of redress for employees. This aspect is the acknowledgement that good faith whistleblowers represent the highest ideals of public service and the American tradition for individuals to challenge the abuse of power (Devine 1999, Groeneweg 2001). The WPA was promulgated in response to the failure of the Civil Service reform Act of 1978 and was subsequently strengthened as indicated above. This

legislation and its consequent administrative/organizational structure implemented to support it, prioritizes the person from whom the information came more so than the information itself. The upholding and implementation of the WPA is entrusted to the Office of the Special Council (OSC) and the Merit Systems Protection Board (MSPB). These bodies have a relationship reminiscent of the prosecutor to the judge respectively. The WPA makes it mandatory for the OSC to provide appropriate feedback to whistleblowers pertaining to the information provided and the action taken, it is entrusted to seek corrective action to the agency concerned on behalf of the whistleblower and provides systems of appeals to the MSPB in case the OSC fails to seek corrective action (Devine 1999, Groeneweg 2001). The model recognizes that the system lack the element of acting proactively as a result, its integrity is measured on how much money is saved and how many people are willing to put their careers in a precarious position. This is evidenced by the scope of the eligible litigants under the WPA, to file complaints. They include; former employees, part-time and temporary employees, probationary workers, and Schedule C political appointees (Devine 1999: 4 *cf.* Devine 2004). In relation to the private sector, corporate whistleblower rights are generally characterized as witness protection. In 2002, as a result of the ENRON, MCI WorldCom and similar corporate scandals, the Sarbanes-Oxley corporate accountability law was enacted (Diale and Holtzhausen 2005:15).

## **Queensland's Whistleblower Protection Act (1994)**

The Queensland's legislation is the frontrunner in the efforts to formalize and legalize ethical measures for the exposure of wrong-doing in the whole of the Australian public service. This aspect is attributed to the rampant corruption throughout the late 1980's and 1990's. The Act provides special protection to public interest disclosures about unlawful, negligent or improper public sector conduct, danger to public health, safety or environment. The act creates a forum for which dealing with reported misconduct is actualized. The disclosure is defined in terms of the person who makes it, the type of the information disclosed and the entity to which the disclosure is made. Central to the validity of the disclosure is the ethical yardstick of the honest belief based on reasonable grounds. A reprisal on the basis of having made a disclosure is considered a serious offence punishable with a maximum penalty of imprisonment of up to two years (De Maria 1999 *cf.* 2002, Groeneweg 2001). In addition, a right to a civil action claim for damages as a result of reprisals is provided. The Act makes provision for parliamentary accountability through annual reports to parliament. This requirement may be used for a review exercise where necessary but, it is not compulsory. The act again does not impose a duty to investigate and does not have an independent authority with the disclosure reception, investigatory and educative powers. These responsibilities are part of the Minister's portfolio list. To actualize the disclosure agenda, a document titled *Exposing Corruption: A CJC Guide to Whistleblowing in Queensland* has been prepared and published to guide aspects of disclosure (Diale and Holtzhausen 2005:15).

## **United Kingdom's Public Interest Disclosure Act (PIDA) 1998**

The UK's legislation came to surface and was supported mainly due to the information gleaned from the inquiries into major disasters that workers were aware of and afraid to disclose for fear of victimization. The scope of coverage includes both private and public sectors employees. The thrust of this legislation is that of a compulsory disclosure pathway, where-in when one chooses to blow the whistle, they must first do so within their own agency or department (Vickers 2000, Groeneweg 2001). The PIDA place emphasis on procedural correctness of the disclosure overloaded with the ethical requirement of good faith, while at the same time does not impose the duty to investigate the disclosure, it neither provides for a compulsory review mandate nor parliamentary accountability through periodic reporting to parliament. Though the act provides for compensation for reprisals due to disclosure action, it does not provide for services in relation to whistleblower feedback, counseling and relocation. The UK's PIDA virtually gave birth to the South African Protected Disclosure, as the two pose striking resemblance. The two legislations interestingly, are applicable to both the private and public sectors, and to qualify for protection one has to pass through the institutional procedural pathway, secrecy laws prevent employees from disclosing certain types of information regarded as classified and most importantly, burden of proof and good faith requirements are entrenched. These aspects are, according to De Maria (2002), the additional ethical high jump deliberately imposed on whistleblowers by the State in return for protection (Diale and Holtzhausen 2005:16).

## SELECTED SOUTH AFRICAN AND INTERNATIONAL CASES

### South Africa: Mike Tshishonga

The first claim before the Labour Court for compensation arising from the PDA is the case of Mike Tshishonga vs. the then Minister and Director General of Justice. In October 2003 Mike Tshishonga (employed at the Department of Justice for 30 years and the managing director of the Master's Office Business Unit) levelled serious accusations at former Justice Minister Penuell Maduna. Tshishonga was responsible to eradicate corruption in the liquidation industry (Davids 2007: 1-4). The case concerned the appointment of a liquidator in the Retail Apparel Group (RAG) that was liquidated in May 2002. Tshishonga alleged that Maduna had a "questionable relationship" with Enver Motala, a private-sector liquidator. The allegedly nepotistic relationship had led to Maduna's alleged "abuse of the infrastructure and staff of the justice department for the purposes of advancing his personal interests," and of endangering South Africa's criminal justice system. Motala was dissatisfied with the manner in which he was sidelined in the appointment of liquidators.

Tshishonga was in the process of restructuring the Master's office and the appointment of liquidators. Motala attended a merger meeting of the insolvency practitioner's bodies at the request of the former Minister where other liquidators were excluded. The former Minister met with Tshishonga and expressed his dissatisfaction with the fact that Mr Motala was not appointed as a liquidator. Minister Maduna then instructed the master in the Pietermaritzburg office to appoint Motala. Mr Tshishonga, unhappy with the appointment, acquired a legal opinion as to the Minister's powers. The appointment of Mr Motala was successfully challenged in court and it was established that the Minister did not have the power to appoint liquidators. The Minister then appointed a subordinate of Mr Tshishonga, without discussing it with him, to oversee the appointment of liquidators in Pietermaritzburg in the RAG case. Mr Motala was then appointed as the fifth liquidator. Former Minister Maduna thereafter removed Mike Tshishonga as head of the unit and refused to meet with Tshishonga. Subsequently, Mr Tshishonga enquired from the previous Director General how a politician could instruct an administrator and how the instructions could be executed without following proper procedure, but no reasons were provided. The issue of poor performance was raised, but at a later disciplinary hearing the former Director General stated that poor performance was never an issue and that Tshishonga had in fact sent a clear message of good governance (Davids 2007: 1-4 *cf.* Holtzhausen 2007).

The former Director General commissioned a forensic investigation into Tshishonga's corruption allegations but did not react on the report received. Mike Tshishonga then called on the Office of the Public Protector and when nothing was done about the complaint, he went to the Auditor General. Again, as in the case of the Public Protector, nothing was done. At last, the Public Protector referred the matter of Tshishonga's poor treatment to the Public Service Commission while the Public Protector investigated the allegations of irregularities. As a final resort Mr Tshishonga discussed the matter with the Minister in the Presidency who stated that a meeting will be set up between the Minister and Director General of Justice and Mike Tshishonga. This meeting never took place. Mike Tshishonga then only set up a press conference and was suspended a week later for divulging sensitive information and two weeks after that he was charged with misconduct. He successfully challenged the suspension in the Labour Court and was reinstated in his previous position. The Department of Justice however did not comply with the court order and still continued with a disciplinary hearing where an independent chairperson found Tshishonga not guilty. The former Director General refused to reinstate Mr Tshishonga and instead offered a settlement and terminated his employment as agreed by both parties. The court found that the disclosure made by Tshishonga to the media was reasonable as the media disclosure was the fifth disclosure (firstly the disclosure was to the Director General, then to the Public Protector, Auditor-General, fourthly to the Minister in the Presidency and lastly to the media) and that the correct procedures were followed and that all the requirements of the Act was complied with. The Minister of Justice and the Justice Department was ordered to pay the legal costs. The Department of Justice received negative publicity and embarrassment. The court said of this case: "Thus a defence that the employee breached confidentiality has to be approached so cautiously that it does not strip the PDA of its content" (Davids 2007: 1-4 *cf.* Holtzhausen 2007).

## India

Twenty years ago, in 1984, Indian workers, together with a local journalist, raised concerns about a gas leak and safety measures to the local authority and Union Carbide India Limited, which chose to ignore them. This resulted in the deaths of 3 800 people and 2 680 people left with partial disabilities ([www.psir.org](http://www.psir.org)). This case reminds one of the South African Lenasia chemical factory workers case. In both cases the safety concerns were communicated to the employers as well as to the relevant authorities (the South African Department of Labour and the Indian local authority). In both cases lives were lost (Holtzhausen 2007).

## United States of America

According to Near, Regh, Van Scotter and Miceli, (2004:219) Time Magazine honoured Sherron Watkins, Colleen Rowley and Cynthia Cooper by selecting them as their “persons of the year” for 2002. Sherron Watkins, an internal accountant at Enron, set out her concerns on potential problems with accounting practices in a letter to the Chairman of Enron, Kenneth Lay, in 2001. While this letter has proved extremely useful to the subsequent investigation into the collapse of Enron, it did not initiate the investigation and Ms Watkins did not take action until the investigation was already under way. This may be explained by the fact that there is no comprehensive whistle blower protection for private sector employees in the United States of America. Colleen Rowley blew the whistle by sending a memorandum to Director Mueller of the Federal Bureau of Investigation in which she alleged mismanagement of the investigation of terrorists by senior managers. Cynthia Cooper reported falsified accounting records to the Audit Committee at WorldCom. The Audit Committee dismissed the Chief Financial Officer who was later found guilty of using illegal accounting practices. In all three the cases, the whistle blowers disclosed internally, but the correspondence was leaked to Congress or the media (Near *et al.* 2004:219).

According to Uys (2006:221) the Challenger launch disaster that happened on 28 January 1986 is another pertinent example. The initial culture of National Aeronautics and Space Administration (hereafter referred to as “NASA”) was one of a “get there safely” single goal/culture where internal whistle blowing was encouraged. In NASA there was a change in the culture when challenges led to a multiplicity of inconsistent goals, leading to a culture of “get there safely, cheaply and on time”. Severe problems were identified in the seals of the rocket booster during April 1985. Concern was expressed by engineers involved in the project who wrote a memorandum to senior management stating that losses might occur unless improvements were made. It was decided that there was insufficient proof to postpone or cancel the launch. Allan McDonald and Roger Boisjoly, engineers at Morton Thiokol Inc. in the United States, testified before the Rogers Commission investigating the 1986 Challenger shuttle disaster that there had been ongoing problems with the rocket’s P-rings and that they had urged their supervisors and NASA officials to postpone the fatal launch. Following their testimony, the engineers were demoted to menial jobs. Only the intervention of the Commission members saw them being reinstated (Ettore 1994:18 *cf.* Holtzhausen 2007).

## The United Kingdom

In the United Kingdom, the Bingham Enquiry into fraud and corruption at the Bank of Credit and Commerce International found in 1991 that, due to an autocratic environment and a climate of intimidation, neither employees nor firms were willing to voice their concerns. An internal auditor who raised concerns was dismissed. This led to new rules in the United Kingdom on the duties of auditors and other firms to report suspected irregularities (Camerer 2001:2). However, public officials may also be asked or instructed by their political masters to act in an unlawful way. In March 2004, it was claimed that the United Kingdom’s immigration service had secretly allowed thousands of ineligible migrants to enter the country. Claims were made that this was done “to massage figures so it did not appear there would be mass influx when eastern European states joined the EU on May 1” (Wintour in Auriacombe 2005:16). The public official who blew the whistle was dismissed. However, the responsible minister subsequently resigned when evidence against her started to mount up.

It is clear from the above that the position occupied by an individual in an organisation is not the driving factor behind the choice to blow the whistle on wrongdoing. Informants can also act as whistle blowers. Such informants may work, for example, for the police or a regulatory authority. They can either be placed in the organisation for the purpose of uncovering evidence of suspected wrongdoing or may be employees of organisations who have been recruited by the relevant authority. This may sound more like fictional crime and spy stories, but there is growing evidence of police forces using this tactic to root out corruption (Diale and Holtzhausen 2006:15).

## **PUBLIC POLICY AND ETHICAL CONSIDERATIONS**

Whistle blowers raise a number of specific ethical concerns. Ethical tension points can either be procedural or substantive. Loyalty lies at the heart of substantive ethical questions. The challenge is to try and establish a balance between multiple loyalties, the truth, obligations and values. A nurse might for example have difficulty blowing the whistle on inadequate practices as she or he has an obligation towards patients, the hospital administration, her or his peers, supervisors, the medical profession, her or his own self-worth, the general public and the truth (Jensen 1987:324-325). Choices must be made between values such as loyalty to the organisation and to co-workers. The choice might further be complicated if the potential whistle blower has incomplete information and uncertainty about the consequences of blowing the whistle. The culture and ethos can be communicated in part through value statements that express a commitment to shared values which includes ethical values. A positive moral atmosphere contains a healthy degree of diversity among the employees in terms of their ethical beliefs, values and moral reasoning characteristics. As a result of this positive atmosphere, individuals will feel free to express a variety of moral views that might be different from other views in the organisation. By sharing different ideas, a better understanding can be reached of the different value systems which in turn could lead to finding a common understanding on what is acceptable behaviour within the organisation and what would be classified as wrongdoing (Holtzhausen 2007).

Although legislative measures protect the whistle blower and an ethical code of conduct provides guidelines, it is important that the organisation set up a policy for whistle blowing. The disclosure of wrongdoing, thus whistle blowing should be perceived as positive in the organisation. A whistle blowing policy should focus on the following (Barker and Dawood 2004:129):

- A disclosure made by the whistle blower must be in the public interest and in good faith.
- The whistle blower should not be guided by personal gain.
- A manual should be available on the policy and the procedures pertaining to the process of whistle blowing.
- It should be clear that malpractice will not be tolerated.
- There must be examples of what counts as malpractice.
- The confidentiality of the employee raising the concern should be respected.
- Systems that can be responsive and supportive to the whistle blowing process need to be devised and implemented.
- Whistle blowing can be viewed as appropriate if it involves the disclosure of illegal or unethical actions in the organisation.
- In order to educate employees on their right to disclose alleged wrongdoing, regular workshops should be conducted.
- Employees need to know of all the possible whistle blowing avenues available to them.
- Alternative channels, separate from line management, should be made available.
- All internal avenues should be exhausted before the matter is taken up by the hierarchy of the organisation.
- Strict internal disciplinary procedures need to be implemented once there is evidence of wrongdoing.
- A dedicated senior public official should be appointed to deal with the concerns of employees and to provide protection to whistle blowers.
- Employees must know about the proper procedure in terms of external disclosures (in case they need them).
- Access to other external bodies, e.g. a professional body, should also be allowed.

- Employees of key subcontractors should also have access to the whistle blowing policy.
- The alleged unethical or illegal conduct must be perceived to be able to cause death, ill health or injury.
- The whistle blower needs to receive feedback.
- Abuse of the scheme must be avoided at all costs.

An internal whistle blowing strategy will help to prevent employees from blowing the whistle externally. External disclosures are better avoided, since they could raise ethical as well as legal issues in terms of confidentiality and might affect the relationships between the organisation, the media and the government. In addition, external disclosures could involve regulatory issues requiring intervention, and could lead to negative publicity, especially since anonymous disclosures are almost impossible to investigate (Dehn and Borrie 2001:6), especially if the anonymous disclosure was made through a hotline.

## CONCLUSION

Protected disclosures must become part of the organisational culture. For this to become a reality, employees need to know that they will be protected from occupational detriment and retaliation if they disclose wrongdoing through the appropriate channels. Managers should also know how to act when wrongdoing is disclosed. It is imperative that a whistle blowing policy be implemented. Whistle blowing might be perceived as a deficiency in the organisational system that should be provided for in an accountable manner. Organisations should have a communication strategy in place to deal with whistle blowing in an effective and proactive manner, informing all stakeholders about whistle blowing (options, procedures, possible consequences, and possible responses).

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# **CAPTURING VALUE BY CONTROLLING KEY RELATIONSHIPS: HOW SUCCESSFUL COMPANIES MAINTAIN PRIVILEGED POSITIONS IN CRUCIAL BUSINESS INTERACTIONS**

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## **ABSTRACT**

*The proliferation of information needs and communication modalities, the diffusion of digitalization, the globalization of financial markets and client investments, and the advent of the 24-hour marketplace have all enhanced the importance of dynamic intellectual capital and immaterial assets. These changes render the business world simultaneously more receptive and more threatening to corporate ambitions than in the past. In an economy of burgeoning intangible and symbolic resources, information reigns as both the strongest and subtlest form of power. We identify four vital relationship-driven ways in which companies can capture value in an increasingly information-denominated world: (1) globally networked distribution and information systems, (2) global alliances within an industry sector, (3) domestic or international partnerships across allied sectors, and (4) customer relationship management. Concentrating on these factors enables a company to achieve a privileged position within an industry. Privileged companies control an integrated set of business activities and interactions promoting both the equity basis (shareholder value) and end-user loyalty and satisfaction (customer value) in the firm. We focus on how successful companies come to dominate, directly or indirectly, essential value-related business relationships, as seen for instance in the airline industry and associated travel sector. Major companies influence an array of discernible value chains spanning geographic and industry borders—for example, in considering the requisite steps for venturing enjoyably from New York to Mumbai. In sum, we address capturing value by reframing businesses and controlling key relationships.*

## **INTRODUCTION TO VALUE: PROVIDING COHERENCE AND A STRATEGIC VISION**

Value creation, whether from the customer or shareholder perspective, represents a cornerstone concept in the modern business management literature and a critical managerial function in any global corporate strategy. An orientation toward dual-faceted (customer and shareholder) value reinforces established paradigms such as process and flows management, resources and competences analysis, and organizational skills development (Kay 1993; Hamel and Prahalad 1994; Anderson, Narus and van Rossum 2006) offering central business insights to managers. Concurrent with the persistent importance of value creation, new factors in the business environment—for example, the increased significance of services or expanded access to worldwide capital and consumer markets (Kaplan and Norton 2004b; Reinartz and Ulaga 2006)—make it harder to define evaluation criteria, set standards, protect innovation, and regiment quality control within firms. Yet evolution in the business environment also generates exceptional opportunities for heightened differentiation and competitiveness in the product and service offerings of multinational corporations.

Technologies fostering novel products or services impact not only the nature of companies but also the characteristics of markets and the definitions of success. For example, airlines such as RyanAir or JetBlue that are strong regional players with streamlined web-based (and hence borderless) customer management systems have triumphed in the global economy. The value perceived by customers and clients, as manifest in their dualistic revealed preferences (e.g., for service and simplicity, prestige and practicality, efficiency and equanimity), provides in effect signposts safeguarding managers against forays into unprofitable domains (Normann and Ramírez 1993; Leszinski and Marn 1997; Jallat and Wood 2005). The scope of management extends beyond issues of internal organizational arrangements and organization-environment fit to specifically encompass developing and sustaining processes for creating value on the client's behalf. This aspect of value creation can be termed "satisfaction streams management." Given an enlarged perspective on the managerial mandate, numerous strategic occurrences—alliances and partnerships, for example, or other varieties of synergy and convergence between firms or industries—can be posited to arise from thoughtfully-construed intentions as opposed to from short term opportunism or pure luck.

The paradox of information, which provides structure and meaning in organizations, lies in the fact that information can also engender disorder and confusion (Brown and Duguid 2000). For example, to paraphrase luminaries of contemporary film productions, their industry is currently like a sandwich: a digital filling between two slices of analog technology (cf. Perretti and Negro 2006). Digitalization at all phases of film making will soon end the need for mechanical projection and traditional photography in movie production (Seifert and Hadida 2006). Yet by provoking the demise of complex, heterogeneous, costly techniques and by integrating processes at various phases of production, digital technologies will also spawn new cinematic enterprises in a manner unparalleled since the birth of moving pictures. Such changes represent an excellent opportunity for some and a stringent threat for others. In an economy spurred by symbolic and intangible assets, where intellectual capital (the capability to innovate) more and more dominates the resource mix of the firm, the apparent technological disorder should be interpreted as a new form of organization, reframing competitive advantages, marketing channels, and industry borders (Jallat and Capek 2001).

The preeminence of the customer in the value chain, the potential payoff from customer-corporate co-production, and the promise of new modes of consumerism have fostered competitive conditions increasing the complexity of the historic production-distribution-consumption sequence (Prahalad and Ramaswamy 2000; Normann 2001; Solomon 2003). In the new, more complex scenario, the laws of supply and demand will no longer be defined in terms of an optimum but rather via enhanced interdependencies and improved cross-industry and intra-industry affiliations. Value creation will apply over an entire sequence of processes creating an updated global business model for the firm and a uniquely differentiated product or service experience for the customer (Kay 1993; Anderson and Narus 1995; Treacy and Wiersema 1995; Reinartz and Ulaga 2006).

In today's market, value seldom remains frozen for long. On the contrary, it derives its existence from circulation through financial, informational and experiential components (Rachline 1994; Rayport and Sviokla 1994; Pine and Gilmore 1999; Kaplan and Norton 2008). Regardless of a firm's nature and area of activity, it is essential that top management understand the intangible economic flows so as to strategically position the firm to influence the preferences of market arbiters (Wise and Baumgartner 1999; Jallat and Wood 2005).

Still not fully exploited sources of customer satisfaction and loyalty (e.g., personalized service, time saving measures, insurance, information access, and integrated solutions) have emphasized "high-touch" as well as "high-tech" strategic approaches: by listening to clients and by critically analyzing the traditional value chain (updating relationships and technologies as required), firms have converted their own dissatisfied clients, courted the dissatisfied clients of others, and captured entirely new client segments (Normann and Ramírez 1993; Fites 1996; Baldwin and Clark 1997; Evans and Wurster 1999; Jaworski, Kohli and Sahay 2000; Díez-Vial 2007; Hortaçu and Syverson 2007). Illustrating the rewards of these approaches, Amazon.com within five years of its 1995 founding already had a client base worth more than 80 years of the firm's sales. The trailblazing company had become (and remains) the required stop for internet shopping in numerous product categories and had emerged as the most desirable partner for the many operators paying an entry fee and toll to appear on the Amazon website as a means of accessing its educated and affluent clientele.

## **BEYOND VALUE: THE UNDERLYING FACTORS OF**

# ECONOMIC COMPETITION

Today 85% of corporate assets are intangible versus only 35% twenty years ago (Kaplan and Norton 2004a; Malone and Rose 2006). Given the rising importance of intangible assets and timely and effective information dissemination, four fundamental factors—openness, digitalization, speed, and convergence—define the competitive environment dictating the rules of new business models:

## Openness and Intangibility

A business is a constantly changing system affected by shifts in both the economic and social realms. As the advanced economies grow more reliant on intangible assets and less assured of sustained rapid growth (Romer 1990; Slywotzky and Wise 2003), the business environment becomes more complex and firms of necessity must be more open and evolving (Rachline 1994; Stewart 2002; Kaplan and Norton 2006; Malone and Rose 2006; Warsh 2006). As a changing social entity in an evolving environment hosting diverse boundary-spanning connections, the modern corporation exists as an open, networked system. If the openness to external forces guarantees vulnerability, it also ensures selective survival (whether of corporations or of corporate practices), since new talents and ideas or additional and complementary resources often lie beyond the previously-drawn perimeters (Jaworski et al. 2000; Prahalad and Ramaswamy 2000). The networked company represents a collection of porous yet advantageous competitive arrangements better adapted to environmental contingencies than the traditional, hierarchical, process-based and more administrative organization.

## Digitalization

An object's tangible and material nature disappears as that object metamorphoses into digital, readily modifiable form. Two examples in particular highlight this point.

First, modern telecommunications services have virtually replaced answering machines. The shift from a commonplace household object to a monthly bandwidth service represents the transition from physical marketplaces to conceptual “consumerspaces” (Rayport and Sviokla 1994; Solomon 2003). Telecommunications companies developed, bundled and sold the voice messaging services strengthening the relationships to their subscribers (although subscribers certainly retained the discretion to change service providers, albeit not always without charge). These relationships manifested a new multifaceted, revenue-enhancing form shifting power from the traditional equipment manufacturer to the innovative service provider. Customers become adherents of a cyber-electronics system and an advanced business model rather than of a concrete product or an historic brand.

Second, digitized music files in the latest MP3 format signaled a paradigm shift whereby the successors of Napster and iTunes (Gnutella, OpenNap, iMesh...) bypassed the majors (Universal, Sony, Bertelsmann, EMI, Warner), neutralizing the power and control of the majors’ previously privileged and unchallenged positions. In brief, the majors’ tacit agreements regarding the global music market no longer prevailed. Digitized recordings have instead become “fluid” products escaping the major record companies’ proprietary control. Within the new paradigm, sharing replaces traditional transactions: each person becomes a content provider and active player in a 24-7 borderless network of data exchanges. Using distance-spanning fiber-optic or satellite connections, we can download music and upload payment in any country at any hour of the day or night.

## Speed of Action

Business observers today speak in terms of virtual, imaginary, agile or dismantled groups and organizations (Goldman, Nagel and Preiss 1995; Rayport and Sviokla 1995; Hughes and Scott Morton 2006). This terminology highlights the essential dexterity and nonlinearity enhancing speed of execution at all levels of the firm—and in particular, from the managerial perspective, speed toward capturing value, increasing power, and maintaining control. Over the past 30 years, the quest for flexibility coupled with a client-centered business logic has become a strategic ideal translating into a global corporate project (Bruhn 2002; Peelen 2005). Interface management between marketing, human resources, ICT, supply chain and production has assumed an

increasingly sophisticated and tactical nature favoring multidisciplinary approaches and project management skills. These approaches underscore how much an organization's vitality depends on the quality and speed of shorter-term actions and reactions rather than on a contrived long-run strategic intent (D'Aveni 1994).

## **Convergence and Integration**

A networked company—open, digitized and rapid of execution—is itself an open system as well as one of many nodes in a larger open (or opening) economic system. Compared to a traditional relatively closed and rigidly hierarchical organization, the networked company possesses more flexible boundaries, more interconnections, and hence better convergence with consumer requirements for mass customization and personalized production. An open and integrated organization profits not from traditional economies of scale but rather from the capacity continuously to discover new links between solutions and needs (Hedberg, Baumard and Yakhlef 2002).

Recent competitive analyses help us to understand corporate behavior as aggregated, interactive and evolving and to comprehend strategy as a sequential game. Competition does not occur between pairs of companies in isolation but rather takes place between groups of firms efficiently organized into sectors focusing on business processes and models more than on products. This shift in the level of competitive aggregation concomitant with the change in focus from products to processes and models derives directly from an ongoing transition: we have been moving from an industrial to an experience, entertainment, attention and information-based economy (Pine and Gilmore 1999; LaSalle and Britton 2003; Schmitt 2003).

## **ATTRACTION AND RETENTION: DEFINING CUSTOMER RELATIONSHIPS THAT ENHANCE CORPORATE POWER**

Customer retention is not only pertinent but compulsory for sustained success in a competitive environment (Reichheld 1993, 2003; Peelen 2005). The need for companies to create database and customer relationship management systems, maintain customer infrastructures, and develop virtual communities emphasizes the change from a downstream to an upstream logic, leading to an “inverted value chain” initiating from the end market (Wise and Baumgartner 1999; Jaworski et al. 2000; Díez-Vial 2007; Hortaçsu and Syverson 2007).

## **Value versus Retention**

The key difficulty lies in defining value as perceived by the client as well as by multiple stakeholders of the corporation. It is difficult to understand how an organization can respond internally to a problem defined externally. The concept of value encompasses a variety of intertwined phenomena: customer value can be synonymous with quality or excellence, with meeting specifications or standards, with respecting user guidelines or customer expectations; shareholder value refers almost exclusively to stock price. Multiple definitions merge to underline the strategic and multifaceted nature of value. The logic of value creation, if well executed, enables the company to capture markets and increase market value while retaining customers, employees and partners (Reichheld and Teal 1996; Jallat and Wood 2005).

## **Industry Reconfigurations**

Narrowly defined, an industry encapsulates a set of production processes transforming raw materials into end products, resulting in profits distributed amongst the organizations involved at different phases of the transformation. From a strategic perspective, the top managers of a company should analyze its processual positioning in an industry toward identifying other economic actors and operations leading to the same downstream market of end users. They should also identify all required components of the end product and the key suppliers of those components. These identifications and analyses will assist managers in understanding the power structure of the industry sector and in positioning the company to become effective in the sphere of interrelated operational activities. Businesses can be re-invented and products re-differentiated to take advantage of profit-making opportunities in salient markets (Fites 1996; Zook 2004; Kim and Mauborgne 2005).

The surge in intangible assets and technological advances, coupled with the pervasive deregulation of the past two decades, has facilitated disintermediation throughout the business world. The widespread attrition of intermediate actors and operations compresses the value chain, encouraging new entrants who position themselves as “system aggregators” in the absence of middlemen. Lacking industrial infrastructure, the aggregators nonetheless have information and power networks easily substituting for ownership of physical assets (Jallat and Capek 2001). “Imaginary organizations”—capable like Smart, Zara, Nike or Dell of subcontracting large segments of their value chains—rely on extended business partnerships to connect their large variety of products and services to efficient information and supply chain management systems in other corporate contexts (Evans and Wurster 1999; Baumard 2002).

## **Alliances and Partnerships**

The strongest companies—whether defined by (consumer) market share, (stock) market capitalization or technological expertise—do not always win. Lobbying, alliances and networking play an important role in an increasingly complex and competitive environment. In a business climate characterized by increased outsourcing and the overall growing externalization of strategy implementation, the historic cooperation versus competition dilemma has been more and more resolved through new forms of “co-opetition” (Brandenburger and Nalebuff 1996). Alliances between competitors become a form of strategic leverage, shifting the business game from head-on contests to partnerships of complementary interests. In any case, even the most competitive economic exchanges would not be purely combative because such entirely destructive interaction would reduce value and profits—and even the most cooperative interactions could not be truly balanced because players could not altogether abdicate their egocentric interests (or statutory obligations to their shareholders).

## **LESSONS FROM THE AIRLINE INDUSTRY**

We focus on global alliances within sectors, with particular attention to the airline industry in the travel and transportation sector. These alliances or partnerships within sectors and within or across industry boundaries access a succession of value chains—for instance, the chains comprising the total travel experience might involve multiple transport modalities, accommodation sites, tours, dining and entertainment. A value chain contributes to the fulfillment of a product or service. Managerial cognizance must encompass the total product or service compilation requirements from start to finish. We address constructive dominance in key business relationships along a customer-oriented trajectory representing the concatenation of relevant value chains.

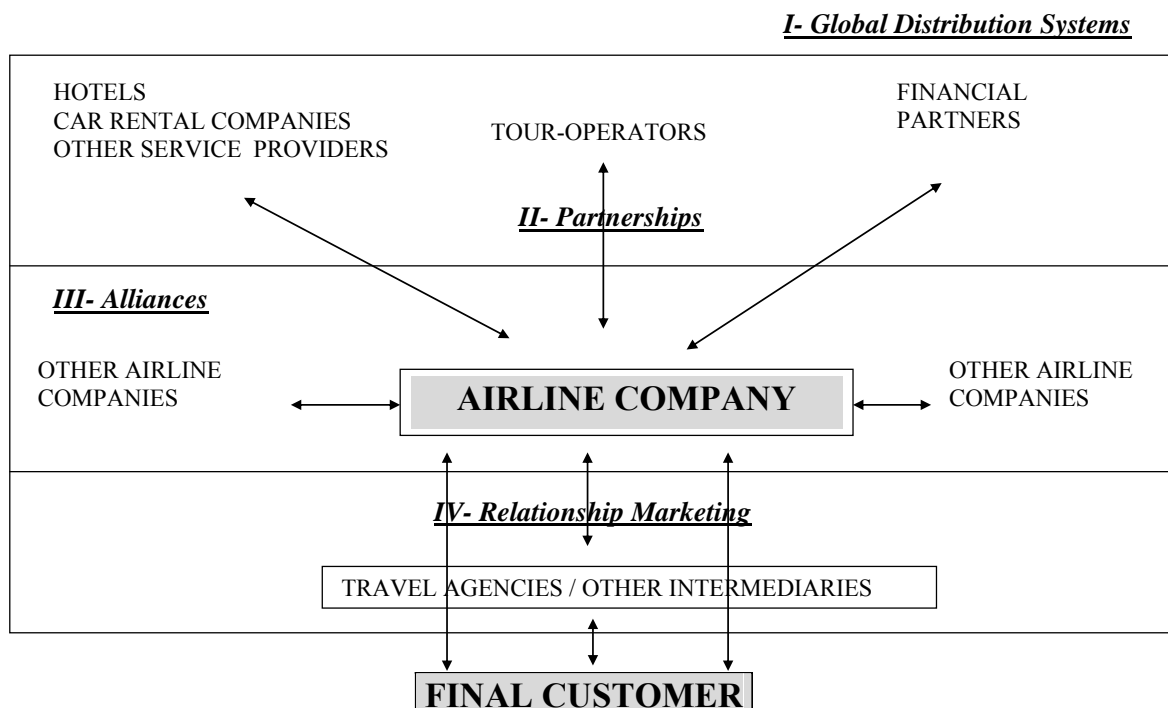
Consistent with the reasoning above, a company can be defined not only as a nexus of contracts but also as a portfolio of alliances (Gomes-Casseres 2006). Figure 1 illustrates the strategy of airline companies which have become pivotal players in their industry as well as worldwide leaders in the transportation sector. Capturing markets and creating customer and shareholder value here follows three main operating modes: (1) information systems integration, (2) partnerships and alliances formation, and (3) customer relationship management. The realization of these strategic and operational goals reinforces the competitive strength of the major airlines.

Starting in the 1950s and 1960s, major airline companies (for instance, American Airlines, Delta, and, before its demise, PanAm) partnered with IBM to develop and launch powerful, criteria-refined computerized reservations systems for booking airline tickets. Subsequently known as global distribution systems (GDS), the original computerized reservations systems expanded to allow the booking of reservations for air travel, hotel rooms or rental cars from multiple companies. The first-mover advantage belonged to American Airlines with its SABRE reservations system. From the full-scale launch of SABRE in 1964 until its spinoff as Sabre Holdings in March 2000, American Airlines reaped on average more than half its annual profits from this groundbreaking computerized travel reservations system. (Private equity firms Silver Lake Partners and Texas Pacific Group in early 2007 acquired Sabre, which by then included Travelocity, and profitably re-sold it to Electronic Data Systems later the same year.) The irony is that the GDS had provided greater financial rewards for the airlines company than the air travel itself, and the core GDS later handsomely enriched the private equity players within a very short period of time.

Using sophisticated database management methods, the airline companies that initially owned these systems controlled the flow of information on flight reservations (sometimes privileging their own flights over those of

competitors). Thanks to their dominant negotiating power, major airlines became obligatory partners for additional firms in the travel business. For instance, Hertz, Marriott and American Express all signed agreements early on to participate in SABRE and to access the American Airlines yield management system.

**Figure 1: Managing Relationships and Capturing Value in the Airline Industry**



Global distribution systems became a powerful means for managing (controlling) business partners and for building customer loyalty while generating profitable returns—an excellent example of simultaneous customer and shareholder value creation. The partnerships enabled leading airlines to offer customer-centered global solutions integrating extensive travel-related services (e.g., air or rail transport, car rental, directions, financing, insurance, hotel reservations, restaurant recommendations, sightseeing tours, concierge assistance). The airlines handily dominated travel agencies and other intermediaries while serving customers through widely marketed product bundles and loyalty programs. It comes as no surprise that the prevailing GDS today (Amadeus, Galiléo, Sabre and Worldspan) account for 82% of the total distribution of airline tickets and travel packages. The irony continues in the form of costly victories. By impelling relationships among competitors and between airlines and ancillary firms, GDS helped provoke the consolidation within the airline industry. Some of the formerly powerful players have been merged out of existence, while those that remain, shorn of direct ownership of their GDS, struggle harder for profitable existence. Still the overriding point remains concerning the efficacy of value chain clarification, firm positioning and partnerships.

The final analysis emphasizes the customer loyalty programs of the airlines—programs bypassing the online or brick-and-mortar travel agencies and directly courting travelers. The extant airline companies have fortified these programs by enlarging the number of travel firms participating in customer-affinity alliances (e.g., Star Alliance or SkyTeam). Through these alliances, airlines group their commercial efforts, including the number of available planes, ground services, destinations, open hubs, and business clubs. Unlike the proprietary GDS which had an overtly dominant partner/owner, the updated alliances more equitably (if not always perfectly harmoniously) conjoin former competitors, now each seeking to capture the highest possible market share and to appease ever-more demanding and time-pressured clients, who evidence increasingly vocal concern over punctuality, duration of stopovers, boarding facilitation, in-flight services, and the potential for upgrades to more prestigious cabin seating.

Combining the aforementioned collective elements (power of the global distribution systems, scope of the partnerships impacting the applicability of mileage rewards and loyalty cards, breadth of the alliances allowing for larger choice of flight destinations...) with direct involvement from individual companies (via bonus mileage plans, complementary services, promotional pricing, online check-in, and overall heightened attention to passenger comfort) puts major airlines in a position to orchestrate the travel sector logic for their benefit.

Technological innovation, complex optimization, and systemic strategic analysis maximize the contextual information and influence available to the major airlines. By obtaining and controlling substantial data on both customers and context, the airlines can reorient the consumer markets toward the airlines' specific strategic interests. Airline companies then set the stage to maintain privileged positions in their customer relationships over the long term, ultimately enhancing their global corporate power and profitability.

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# DEVELOPING AN EFFECTIVE SEXUAL HARASSMENT POLICY FOR HIGHER EDUCATION INSTITUTIONS IN SOUTH AFRICA

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## ABSTRACT

*The relatively high number of reports of sexual harassment in the South African media raises questions about the extent of this social phenomenon. These questions are investigated scientifically to distinguish between sensationalism and empirical evidence of the extent of sexual harassment. This paper reports on the research in progress to determine the perceived incidence of sexual harassment of staff at Higher Education Institutions in South Africa. It refers to the theoretical basis of the research by describing organizational models for the study of sexual harassment, the legal requirements to be met by employers and the need for effective policies.*

## INTRODUCTION

South Africa is currently experiencing a proliferation of sexual harassment cases. These cases are also high-profile and are well reported in the media. The case of *Grobler v Naspers Ltd* (2004) 25 ILJ 439 not only focused on the sexual harassment of an employee by a manager, but also on the vicarious liability of an employer. The findings of this case have far-reaching implications for employers who need to protect themselves against claims for damages suffered by the harassed party. In the *Grobler/Naspers* case, an amount of close to R1 million was awarded to Grobler for loss of earnings, loss of past income, loss of future earnings and for medical expenses. This finding by the Cape High Court was upheld by the Supreme Court of Appeal. (*Media 24 Ltd and Samuels V Grobler* (2005) 16 (4) SALLR (SCA)). A similar case was heard by the Labour Court in the matter of *Orr v Unisa and Motimele*. Apart from the amount of R500 000 that Unisa was ordered to invest in a bursary fund for needy, black female students; the University was also ordered to apologise unconditionally to Prof Orr for the professional and personal suffering that she had to endure. What is of even more importance for this researcher is the order of the court that Unisa must undertake to implement its policy on sexual harassment and that the University must commit itself to the application of a code of conduct for its council members and that it must maintain an approved grievance procedure for employees and for students. This amounts to a rapping over the knuckles for Unisa as well as an indication by the Labour Court that it views complaints of sexual harassment as very serious, especially when employers fail to act or do not act timeously.

Two very important issues for employment relations are raised by the courts. Firstly the mention of a sexual harassment policy and secondly the implementation of a grievance procedure by employers are seen as mechanisms for preventing and dealing with complaints of sexual harassment. By adhering to this policy and by implementing this procedure effectively, the employers mentioned in these two court cases could have prevented the matters from developing into litigation with the resultant high costs. It is assumed and even accepted that most organizations do have these policies and procedures in place. What can not be readily accepted is that these policies and procedures are effective and that they are applied in an effective manner. This study should shed some light on this question. The fact that this case occurred at a university adds to the need for this study that will be conducted at Higher Education Institutions (HEI's) to determine the perceived incidence of sexual harassment among colleagues at universities.

# LITERATURE REVIEW

A review of the relevant literature on sexual harassment leaves no doubt that it is described from the viewpoints of various disciplines. These disciplines range from psychology (understanding the behaviour of harassers and victims) to sociology (studying environmental factors which influence the prevalence of such in organizations) to legal studies (prosecution of transgressors and compensation for victims). (Timmerman & Bajema: 2000; Snyman–Van Deventer & De Bruin: 2002). These disciplines are involved in the study of sexual harassment as the origins of sexual harassment are formed in cultural, social, behavioural and other areas. (Grobler, Erasmus, K  lkenbeck–Ruh: 2003). The multi-faceted nature of sexual harassment forces any researcher of this phenomenon to be specific in its approach and not to confuse the causes, contributing factors, consequences, costs and management of sexual harassment. It is however imperative that a study will refer to these diverse areas; as part of a discipline-specific approach. In order to meet the research objectives of this study only the literature relating to sexual harassment policies and procedures will be reviewed.

## DEFINITION

It is suggested that the definition provided by the 2005 Amended Code of Good Practice on the Handling of Sexual Harassment Cases which was issued in terms of the Labour Relations Act No 66 of 1995 is used as a universally accepted definition of sexual harassment. This definition will in all probability be used by courts and councils when a case of sexual harassment is arbitrated and will aid employers in providing an objective and “legal” definition of sexual harassment. According to this code, sexual harassment is defined as follows:

“Sexual harassment is unwanted conduct of a sexual nature that violates the rights of an employee and constitutes a barrier to equity in the workplace, taking into account all of the following factors:

- whether the harassment is on the prohibited grounds of sex and/or gender and/or sexual orientation;
- whether the sexual conduct was unwelcome;
- the nature and extent of the sexual conduct; and
- the impact of the sexual conduct on the employee.”

This definition is in line with the underlying approach that harassment is essentially a discrimination issue (Basson, 2007) and for the purposes of this paper, this definition will apply.

## THE NEED FOR A SEXUAL HARASSMENT POLICY

Numerous studies have concluded by expressing the need for an effective policy on sexual harassment as the first step in the attempt by organizations to prevent and mitigate the effects of sexual harassment. Stimpson (1989) argues that while progress has been made in combating sexual harassment by accepting it as a problem, conducting workshops and creating grievance procedures; many other organizations are still begging in this respect. Hulin, Sitzgevalde and Drasgow (in Stockdale (1996) suggest that the prevention of sexual harassment by aggressive intervention programs appear to be the best defense organizations have to reduce their liability to victims. A number of authors stress the need for sexual harassment policies by indicating: the value of a well-drafted, carefully considered policy (Wilken & Badenhorst, 2003); the understanding of human sexual behaviour and its effect on improving appropriate behaviour in the workplace (Corr & Jackson, 2000); how organizations could benefit from increased understanding of how organizations culture affect their employees perceptions of unwanted sexual behaviours (Timmerman & Bajema, 2000). It can be deducted that consensus exist among authors on sexual harassment that an effective policy is critical for a harmonious, non-threatening working environment that will contribute to employee wellness.

### Legal Perspective

When viewing sexual harassment from a legal perspective, the literature is clear on the value of implementing a fair and reasonable policy dealing with workplace sexual harassment in avoiding liability (Aalberts & Seirduran,

1996, Snyman-Van Deventer & De Bruin, 2002). An employer is expected to take reasonable steps to prevent sexual harassment. This can be done by developing a sexual harassment policy that establishes a procedure for investigating complaints quickly, confidentially and impartially. It should ensure that action is taken against harassers and that victims are protected from reprisals. This means that prevention is the key to avoiding liability. Vicarious liability places responsibility on the employer for the conduct of its employees, even if the employer was not aware of their actions (not responding to complaints of sexual harassment).

## Effectiveness of policies

When considering all the emphasis that is placed on the need for the sexual harassment policy to prevent and deal with sexual harassment in the workplace, it becomes necessary to investigate the existence of these policies. The effectiveness of policies in preventing and managing sexual harassment should also be determined and the necessary corrections made should it be found that the policies are not effective. Timmerman & Bajenna (2000) found that at that stage little was known about the effectiveness of sexual harassment policies and procedures. Their study also showed that few organizations evaluate their sexual harassment policy and this causes them to form the impression that current policies and procedures have not solved the discrepancy between relatively high numbers of instances of sexual harassment and the low incidence of reporting. Another need for this research is the recommendation by Luther & Pastille (2000) that further research is needed to determine the effect sexual harassment policy and specifically training programs have on influencing the perception of social-sexual interaction. They also stress the need for these programs (as part of the policy) to be evaluated for effectiveness.

The first step of the model proposed by Grobler *et al* (2003) for the management of sexual harassment in South African companies, entails the execution of a company-specific audit. They motivate the need for this step by stating that “if the company fails to conduct such an audit, but merely develops a policy which defined the company’s views and the subject, various individuals may not agree with the company’s interpretation/definition of the phenomenon. This, in turn, will result in individuals rejecting the policy.” The objective of the audit is to determine what workplace behaviour constitutes sexual harassment and what should individual employees do when they regard themselves as victims of sexual harassment. The study by Wilken and Badenhorst (2003) found that not one of the eight universities that were part of their analysis, paid sufficient attention to the implementation of and training in sexual harassment policies. The universities were especially lacking in the evaluation of supervisors, periodic feedback to all stakeholders and surveys at all levels of the institution to determine stakeholder satisfaction, the effectiveness of the process and the success of disciplinary steps. It becomes clear that the implementation of sexual harassment policies at universities in South Africa is problematic and this leads to the following research questions:

- To what extent do employees at HEI’s regard themselves as victims of sexual harassment?
- How effective is the implementation of the sexual harassment policy at the participating institutions?
- What is the level of awareness of staff regarding the existence and content of the sexual harassment policy at their institution?
- Do staff know their rights and do they know who to approach with complaints of sexual harassment?

## Policy Development

Wilken *et al*, 2003 combined the views of numerous authors on policy development and categorized the comprehensive process of policy development into eight categories. A brief summary of these categories/steps is provided with reference to the work of other authors as well. The first step is termed the creation of open debates by Wilken *et al*, 2003, while Grobler *et al*, 2003 refers to a company-specific audit. Aalberts *et al*, 1996 regards knowing the workplace as the first step in policy development. This means that management must talk to employees to determine their concerns and specific conduct that need to be addressed. By talking openly about sexual harassment in the workplace, different perceptions, cultures and social backgrounds are considered in determining exactly what constitutes harassment. Since all employees are consulted, they will accept ownership of the policy which will contribute to the effectiveness of the policy.

The second step aims to create an all-inclusive definition on sexual harassment that will ensure that every employee know what sexual harassment is and knows how to express what type of conduct they perceive as offensive. The definition must be supported by examples to aid employees in identifying harassing behaviour in the workplace. Thirdly, policy development should involve all the different structures and levels of an organization. This will ensure the objectivity and political-correctness of the policy making it more acceptable to the community it is developed to serve. While the debate about formal versus informal complaint procedures does not seem to be settled, a compromise will be to provide for both. The fourth step must focus on the development of an effective grievance procedure that encourages the reporting of incidents of sexual harassment in a safe manner.

Step five involves the development of a well established training program that will educate employees about the prevention of sexual harassment. This knowledge as well as knowledge about how to deal with such situations will add value to the successful implementation of the policy. The appointment of a person responsible for implementing the policy is step six of the development process. This person should have the necessary skills and authority and be acceptable to the majority of employees. Whether a representative of only one gender meets this requirement, will be further investigated in the empirical study. The last step is to create an evaluation system that will review the effectiveness of the policy on a regular basis. Statistics should be compiled when reviewing the effectiveness of the policy to ensure that scientifically interpreted data is used to improve the overall efficiency of the policy.

By following these steps, a comprehensive, inclusive policy will be developed. Employers should not be naïve in assuming that the policy alone will eradicate sexual harassment from their workplaces and safeguard them from liability claims. Developing a sexual harassment policy is only part of the total strategy to manage sexual harassment and may be regarded as the easier part as numerous guidelines, codes and examples of effective policies exist. The implementation of this policy by means of an enforcement mechanism may prove to be more difficult.

## **Implementing a Sexual Harassment Policy**

A number of authors are in agreement that the mere presence of a policy does not ensure its effectiveness (Paludi, 1996; Laabs, 1998 and Orlov, 1999). A policy has to be effectively implemented in order to have value and to avoid becoming another well-formulated, impressive sounding document compiled by consultants and filed by the Human Resources Department. The following guidelines are suggested for the effective implementation of a sexual harassment policy:

- a) Create awareness by including the policy in as many programmes, such as orientation, education, training and diversity awareness, as possible. This will contribute to the creation of a culture where sexual harassment is not tolerated. Trade unions should be involved in every step of the implementation process.
- b) Communicate the policy to all employees at every level of the organization by providing each one with a copy of the policy and keep signatures on file that employees received the policy. This signature may prove vital in an organisation's defense against claims of vicarious liability.
- c) Conduct regular training sessions or workshops where the content of the policy and the complaints procedure is explained. "These training sessions should continuously reinforce the conditions that contribute to a harassment-free working environment, and should familiarize or acquaint each employee with their rights and responsibilities"
- d) Ensure that managers and supervisors are aware of their responsibility for implementing the policy and ensuring compliance.
- e) Provide specialized training for individuals who were assigned an official role in administering the organisation's complaint procedure.

( Finnemore *et al*, 2000; Laabs, 1998; Orlov *et al*,1999; Paludi,1996 and Retief, 2000).

## **THEORETICAL BASIS FOR THE STUDY**

The theoretical basis of this study is based on labour legislation, psychology, sociology and organizational theory. This statement is motivated as follows. Harassment is listed in the Employment Equity Act no 55 of 1998

as a form of unfair discrimination. The rationale of the Act focuses *inter alia* on the eradication of unfair discrimination of any kind (Tinarelli, 2000). It can therefore be argued that the Employment Equity Act places a legal and moral obligation on employers to ensure that their workplace policies and procedures are non-discriminatory meaning that an effective sexual harassment policy is non-negotiable in order to avoid being accused of discrimination. Apart from this Act, the National Economic Development and Labour Council (NEDLAC) has issued a Code of Good Practice on the Handling of Sexual Harassment Cases in terms of section 203(2) of the Labour Relations Act, 1995. This code encourages and promotes the development and implementation of policies and procedures that will lead to the creation of workplaces that are free of sexual harassment, where employers and employees respect one another's integrity and dignity, their privacy, and their right to equity in the workplace. This code will form the legal motivation for the conduct of this study.

## Organisational Theory

A detailed discussion of organizational theory will be regarded as obsolete under these circumstances as employers have no choice but to comply with legislation, whatever their approach to organizational change and organizational development.

A brief overview of some organizational theories is provided to ensure a balanced approach to this study and to shed some light on the behavioural dimensions of workplace policies and procedures.

**Table 1: Implications of Organizational Theory for People Management**

| Organizational Theory                   | Implications for people management  |
|---|---|
| Welfare Capitalism                      | Provide benefits and establish in-house committees and <i>grievance procedures</i> to facilitate problem solution                                     |
| Human Relations School                  | Nurture good interpersonal <i>relations</i><br>Extensive <i>counselling</i> of employees<br><i>Fair treatment</i> as incentive for worker performance |
| Theory of institutional leadership      | Positive leadership influence employees to advantage of organisation<br><i>Sensitivity training</i>   |
| Fox's Sophisticated Paternalistic Style | Positive motivation of employees<br>Gain employee commitment by good <i>human resource policies</i>   |
| Fox's Sophisticated Modern Style        | Establish <i>procedures</i> to regulate behaviours within the relationship  |

(Adapted from Bendix, 2005)

## RESEARCH DESIGN

A questionnaire was developed to meet the specific objectives of this study. It would have been possible to make use of the Sexual Experiences Questionnaire (SEQ) developed by Fitzgerald, Shullman, Bailey, Richards, Swecker, Gold, Ormerod and Weitzman (1988), which is a standardized measuring instrument designed to assess the prevalence of sexual harassment in a psychometrically sound manner. The SEQ is however limited in its application as it only measures the actual experiences of respondents. Respondents who are aware of or who have witnessed incidents of sexual harassment will not be able to contribute to the objective of determining the perceptions of staff of the incidence of sexual harassment in their institution. The SEQ was also not designed to measure the awareness of sexual harassment policies and procedures or to evaluate the effectiveness of these measures. For this reason the Sexual Harassment Questionnaire (SHQ) was developed based to some extent on the work of Retief (2000), Jardim (2004) and Kolkenbeck-Ruh (2003).

## The Sexual Harassment Questionnaire

The SHQ consists of a standard section to obtain biographical information from the respondents. Due to the sensitive nature of the topic the questionnaire is completed anonymously and institutions are not identified. Section B consists of 22 items describing sexual behaviour. The items are grouped into five dimensions namely sexual favouritism, non-verbal harassment, verbal harassment, physical conduct and *quid pro quo* harassment. This section also contains the direct question "Have you ever been sexually harassed on campus?" followed by

options to indicate the gender, job level and relationship of the alleged harasser. Section C is made up of 15 items designed to determine the level of awareness of respondents of the existence and effectiveness of sexual harassment policies in their respective institutions. It also asks respondents to indicate whether the incidence of sexual harassment at their institution is high or low. Their responses will be correlated with the responses in section B relating to the incidence of harassment. Section D focuses specifically on the sufficiency of grievance procedures to deal with complaints of sexual harassment. This section consists of 19 items which correlates with the requirements for an effective grievance procedure. These requirements are visibility, intelligibility, steps and time scales, credibility, support, commitment and fairness.

## Research methodology

South Africa currently has 23 universities which are divided into three types. Eleven traditional universities offer theoretically-oriented degrees, six comprehensive universities were formed by combining technikons with traditional universities and they offer a combination of theoretically-oriented degrees and practically-oriented diplomas and degrees while six universities of technology offer diplomas and degrees in mostly technical fields. All the universities were invited to take part in the study and were requested to provide name lists of all their full-time, permanent staff. A random sample will be drawn from each participating institution. The sample will be stratified to include staff members from the academic, administrative and other sectors of the institution. Questionnaires will be mailed to the participants together with a pre-addressed, stamped envelope to return the completed questionnaire. Regular mail was selected as electronic mail will identify the sender of the completed questionnaire and might compromise confidentiality. Given the sensitive, personal nature of the information requested, confidentiality is crucial to the success of the study.

## CONCLUSION

The majority of existing research has examined sexual harassment in non-academic settings or focused on the more traditional incidence of harassment among academics and students. It may be argued that because academic settings are regarded as training grounds for future professionals, harassment in such settings may serve to spread, rather than mitigate the incidence of harassment in other settings. The results of this empirical study will contribute to the body of knowledge on sexual harassment at Higher Education Institutions in South Africa. It will shed some light on the incidence of sexual harassment and will be an indication of the extent of the problem. Inferences will be made to determine if the reported cases of sexual harassment at Higher Education Institutions are isolated incidents or whether the occurrence is widespread. Meaningful data will be collected on the frequency of harassment, the characteristics of the harasser, awareness and knowledge of the dynamics of sexual harassment policies and whether grievance procedures are regarded as sufficient remedial measures to deal with complaints of sexual harassment. This data will be analysed and interpreted and will form the basis of the model to develop an effective sexual harassment policy for Higher Education Institutions in South Africa.

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# DYADIC ADAPTATION IN ONLINE MARKETING ALLIANCES OF KOREAN FIRMS

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## ABSTRACT

*Strategic alliances require mutual adaptation to execute strategies effectively. Also mutual adaptation is said to bring the performance gains result such as productivity gains, competitive advantage and stronger market position.*

*A few previous researches on buyer-supplier relationships have found some common drivers of mutual adaptation, but our research focuses on differential drivers of mutual adaptation. We assume the focal firm will mainly do adaptation to achieve its specific goals, whereas it will perceive that partner firm's adaptation is secured not by partner's goals but by alliance structure they adopt. This is because the focal firm wants to control partner's behavior and alliance structure can be used as a mean to do it.*

*Using OLS, we test a model of factors that includes purpose of alliance, alliance structure, dependence, and the partner's adaptation on the mutual adaptation of firms in the Korean e-business industry.*

*The results of the study indicate that main purpose of alliance (new product development, building distribution channel, and promotion) and the alliance structure (bilateral alliance vs. multilateral alliance, equity alliance vs. non-equity alliance) play different role for mutual adaptation. Specifically, focal firm adaptation is impacted not by the alliance structure but by the purpose of alliance. Partner adaptation, on the other hand, is impacted not by the purpose of alliance but by the alliance structure.*

## INTRODUCTION

The number of strategic alliances is increasing rapidly in recent years, and it is attributable to the emergence of the Internet and e-alliances. The compound annual growth rate of e-alliances from 1995 and 2000 was 103.5%, which was several times higher than that of traditional alliances, 14.8% (Ernst et al. 2001).

Online alliances are partnerships formed based on e-business strategies and often times involve multilateral partnerships (Ling 2002). Online alliances are faster and more flexible than traditional alliances and the depth of the relationships varies greatly (Segil 2001).

Online alliances can be regarded as firms' responses to new technologies so quick response to a new technology will garner first-mover advantage (Lee and Grewal 2004). Barnes & Noble's partnership with AOL to market its web site is an example of drawing on the IT expertise of partners. Advantages of alliance come from reduction of transaction costs (Gulati 1995), and increase of knowledge bases (Parkhe 1993).

Despite the rush of alliances, 75% of them fail or underperforms mostly due to poor or damaged relationships (Ertel et al. 2001). Dependence on partners for technological know-how causes a smaller share of alliance pie, which is another reason for low performance (Das, Sen, and Sengupta 1998).

Mutual adaptation allows each better fit together so it is a good way to improve the alliance performance (Hagberg-Anderson 2006). We investigate the drivers of mutual adaptation in online marketing alliance. We examine the influence of the main purpose of alliance, partner's adaptation, alliance structure, and dependence to test if they are significant in both parties of alliance.

# ADAPTATION

When the alliance partners strive to produce mutually beneficial outcomes, coordination efforts such as sharing of information and joint activities must be considered (Jap 1999). Interfirm or mutual adaptation is defined as adapting products, processes, and procedures to the capabilities of partner (Hallen et al. 1991). Mutual adaptation is very similar to joint action in industrial purchasing relationships because the latter includes various activities such as tool development and product design, value analysis and cost targeting, design of quality control and delivery systems, and long-term planning (Heide and John 1990). As the joint action increases the relationship becomes partnership. Similarly, in buyer-seller relationships mutual adaptation takes place when the two parties develop more effective relationships. There also are adaptation pressures that tend to go high in the transaction environment when demand, supply, and technology conditions change.

According to previous research drivers of mutual adaptation are economic elements such as dependence and social elements such as trust and commitment (Hallen et al. 1991; Mukherji and Francis 2007). Hallen et al. (1991) turned to social exchange theory, which views mutual adaptation as dynamic processes. For example, if one party starts by adapting the product, the other will respond by adapting production processes, which leads to another adaptation.

## RESEARCH HYPOTHESIS

A few previous researches on buyer-supplier relationships have found some common drivers of mutual adaptation, but our research focuses on differential drivers of mutual adaptation. We assume the focal firm will mainly do adaptation to achieve its specific goals, whereas it will perceive that partner firm's adaptation is secured not by partner's goals but by alliance structure they adopt. This is because the focal firm wants to control partner's behavior and alliance structure can be used as a mean to do it.

### *Purpose of alliance*

Firms have many different purposes when they form an alliance. R&D and marketing represent two common purposes of alliance. If the purpose accompanies greater risks of opportunism firms tend to form an equity alliance as mutual hostage taking. Alliances formed for new product development purpose may involve more mutual collaboration than those for promotion purpose. In high technology industries, firms often derive their competitive advantage from R&D or NPD activities (Pangarkar and Klein 2001). To achieve a success in joint new product development firms will have more incentive to adapt their products, processes, and procedures with those of their partners. Even firms in the same alliance can have different purposes and their intention to adapt will be mainly influenced by their own purposes.

H1: Firm's adaptation in an alliance will be influenced by its own purpose. Specifically firms with NPD purpose will adapt more than the firms with promotion purpose.

### *Partner's adaptation*

When partner firm adapts, a firm is more likely to adapt because partner adaptation signals a long-term commitment to the relationship. It also suggests a sense of partnership and collaboration firms can expect from their partners (Mukherji and Francis 2007). So partner adaptation is likely to reinforce mutual adaptation. Interfirm adaptations in a business relationship are elements in a trust-forming social exchange process so that the adaptations by the two parties in the relationships are related positively to each other (Hallen et al 1991).

H2: Firm's adaptation in an alliance will be positively influenced by the adaptation of partner firm.

### *Dependence*

In a buyer-seller partnership dependent buyers will not behave opportunistically against their suppliers (Keith et al. 1990). In the situation of reciprocal interdependence continuous adaptation between partners as ongoing decision making about task allocation (i.e. planning) and continuous communication (i.e. mutual adjustment) is required (Thompson 1967, Gulati and Singh 1998). Dependence is an economic power one firm has over another, which can result in high levels of adaptation (Zaheer and Venkatraman 1995). Dependence on partner increases when there is few alternatives, when partner's role is critical, and when a firm affected greatly

by losing its partner (Ganesan 1994). So we can expect that the more a firm is dependent on its partner, the more likely it is to adapt itself to its partner's needs.

H3: Firm's adaptation in an alliance will be influenced by its dependence on partner firm.

#### *Equity vs. non-equity alliance*

Equity stakes mitigate the possibilities of opportunism and free riding by partners thus are important decision parameters when forming alliances (Gulati 1995). Thus firms will choose equity alliances when the transaction costs in an exchange are high. Firms in an equity alliance may be able to have members on the Board of Directors, thus participating in management decision makings. In addition, equity owners can access to reliable and accurate information to each of the partners (Gulati 1995). Since firms in an equity alliance have much control power than those in a non-equity alliance, they will demand high level of adaptation from partner firms.

H4: Firm's adaptation will be higher in an equity alliance than in a non-equity alliance.

#### *Bilateral vs. multilateral alliance*

One outstanding aspect of e-alliance is multilateral alliances can be formed easily and at low costs. Information technology is used to establish a desired level of control and flexibility, thus wide spectrum of electronic partnership – ranging from dyads to multilateral linkages – has emerged.

Under the conditions of low process/product criticality companies may be encouraged to form loosely coupled partnerships so that they attract many more business partners and companies who are able to realize benefits from scale economies and specialization (Chatterjee et al. 2006). When dissipation risk is high firms prefer bilateral alliances which increase switching costs and thereby deters opportunistic behavior.

H5: Firm's adaptation will be higher in a bilateral alliance than in a multilateral alliance.

## **METHOD**

### *Measurement*

*Purpose of alliance:* The purpose of marketing alliance is categorized into three choices – new product development, building distribution channel, and promotion.

*Partner's adaptation:* Adaptation was measured by three items - product/service, marketing process, and marketing plan – using five point Likert scale. The measures are adopted from Hallen et al. (1991) and measured for both parties.

*Dependence:* Dependence was measured by single item five point Likert scale and measured for both parties. The scale was reversed.

*Equity vs. non-equity alliance:* Joint ventures and partial equity stakes are coded as equity alliance and other contracts without equity stakes are coded as non-equity alliance.

*Bilateral vs. multilateral alliance:* One to one alliance was coded as bilateral alliance and one to many and many to many alliances are coded as multilateral alliance.

### *Sample*

Our research population is the domestic companies that made an official contract of 'online marketing alliances', specified the cooperation area and time period. Banner exchange or affiliate program, not being accompanied by mutual commitment, did not considered in the study.

In order to search for companies that have made an online marketing alliance, we collected 378 online alliance cases through the Internet search of news items confined to last three years. We reviewed the cases and selected 308 cases which can be classified into marketing alliance. The contact information of alliance partner firms is collected by a research company in Korea through direct contact with the partners' PR department or Internet site of Korea Internet Company Association (KICA) ([www.kinternet.org](http://www.kinternet.org)). The contact information of total 530 companies is collected. During the contact with the members of KICA, we have identified additional companies that are likely to conduct online marketing alliance. These companies were included in the final list of research although they are not included in the online news list.

The telephone interviewers contacted companies' marketing managers and requested the survey of online marketing alliance. For the companies in the online news list, the survey was about the online marketing alliance

reported on the newspapers. For the other companies, the survey was about the latest online marketing alliance which can be evaluated in terms of performance. Survey was conducted through e-mail and fax, resulting 186 samples (response rate of 35.1%). Final 185 samples were used for empirical analysis, excluding the one sample in which the critical item was missing.

In the sample, 58.4 percent were online-offline alliance and 41.6 percent were online-online alliance. Alliance purpose was development of marketing channel and new sales network (35.1%), advertising/promotion/brand awareness building (24.86%), customer DB sharing and customer base expansion (12.43%), supply of contents (12.43%), product and solution development (7.57%), business diversification and new market penetration (6.49%), others (2.7%), respectively. The number of employees is as follows: under 10 (18.38%), 11-50 (24.86%), 51-200 (24.86%), 201-1000 (16.22%), above 1001 (6.49%), no response (9.19%).

## RESULTS

The hypotheses were tested using a regression analysis. Focal firm's sales volume (in log transformation) and alliance duration were included as control variables. Alliance purpose and alliance structure were coded as dummy variables. Specifically, promotion purpose was coded zero (0), while others were coded one (1). Likewise bilateral or equity alliance is coded one (1), and multilateral alliance or non-equity alliance were coded zero (0). Variation Inflation Factor (VIF) for all independent variables has shown that multicollinearity among independent variables would not be an issue during regression analyses (The highest VIF was 1.453 for partner's dependence in Model 1 and 1.403 for partner's dependence in Model 2, respectively). Regression results are shown in Table 1.

**Table 1. Regression results**

|  | Model 1<br>(DV : Focal firm adaptation) | Model 2<br>(DV : Partner adaptation) |
|--|---|--------------------------------------|
| <i>Alliance purpose</i>                  |   |                                      |
| NPD                                      | 0.389* (0.161)                          | 0.051 (0.163)                        |
| Building distribution channel            | 0.457** (0.148)                         | 0.113 (0.186)                        |
| <i>Partner's Adaptation</i>              | 0.420*** (0.076)                        | 0.492*** (0.083)                     |
| <i>Dependence</i>                        |   |                                      |
| Focal firm's dependence (reverse)        | -0.135 (0.074)                          | 0.187* (0.078)                       |
| Partner's dependence (reverse)           | 0.230** (0.071)                         | -0.323*** (0.074)                    |
| <i>Alliance Structure</i>                |   |                                      |
| Bilateral Alliance                       | -0.030 (0.134)                          | 0.325* (0.027)                       |
| Equity Alliance                          | -0.277 (0.189)                          | 0.665** (0.195)                      |
| Focal firm sales (in log transformation) | -0.059* (0.025)                         | 0.035 (0.027)                        |
| Alliance Duration                        | 0.002 (0.004)                           | -0.004 (0.005)                       |
| R square (Adjusted R square)             | 0.33 (0.28)                             | 0.38 (0.33)                          |
| F-value                                  | F (9, 119) = 6.6**                      | F (9, 119) = 8.0**                   |

DV : dependent variable

Entries are nonstandardized regression coefficients (standard errors).

\* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

In model 1 (focal firm adaptation model), focal firm's adaptation was regressed on the independent variables. In model 2 (partner adaptation model), partner's adaptation was regressed on the independent variables. As apparent in Table 1, multiple regression analyses confirm both Hypotheses 2 and 3, as the coefficients of partner's adaptation and partner's dependence were significant in both models. Hypothesis 1 was supported only in the focal firm adaptation model. In contrast, both Hypotheses 4 and 5 were supported only in the partner adaptation model.

The empirical results of the study have shown that main purpose of alliance (new product development, building distribution channel, and promotion) and the alliance structure (bilateral alliance vs. multilateral alliance, equity alliance vs. non-equity alliance) play different role for mutual adaptation. Specifically, focal firm adaptation is impacted not by the alliance structure but by the purpose of alliance. Partner adaptation, on the other hand, is impacted not by the purpose of alliance but by the alliance structure.

## DISCUSSION

Mot previous research on mutual adaptation focused on buyer-seller relationships. This study focuses on mutual adaptation in the situation of online marketing alliances.

We surveyed the perceptions of focal firms on mutual adaptation and found that the influences of each other's adaptation and dependence are significant for both parties. Those findings are consistent with previous research noting that mutual adaptation is influenced by both social and power elements of partnerships (Heide and John 1992; Mukherji and Francis 2007; Hallen et al. 1991).

Hallen et al. (1991) proposed a symmetrical model to explain interfirm adaptation and their result also indicated symmetry as the test does not reveal any significant differences between the parties in the explanation of adaptation. We also got the same symmetrical results for the variables they had used, but we found asymmetrical results for our new variables, alliance purpose and alliance structure.

A key contribution of this research is to find different influencers for each party's adaptation. Focal firm's adaptation was influenced by its own alliance purpose, whereas focal firm saw partner's adaptation had nothing to do with partner's alliance purpose. Instead focal firms perceived alliance structure influenced partner firm's adaptation. Specifically they perceived that bilateral alliance and equity alliance is effective to get partner's adaptation. Interestingly focal firms did not think that their adaptation was influenced by the alliance structure.

Previous research (e.g. Hallen et al. 1991) predicts that reciprocal adaptation develops over time and takes cost, but in online alliances those restrictions did not matter anymore.

## CONCLUSION

Our research provides some common and different determinants of mutual adaptation that can develop between partners. Reciprocity and dependence are commonly important to secure each other's adaptation. Different factors such as purpose of alliance, and alliance structure are also important to develop an alliance strategy. Firms are so self-oriented when they make a decision on adaptation that it would be very helpful to know partners' purpose of alliance in getting their adaptations. And also firms can show their intention to adaptation by choosing the right alliance structure.

The research has some limitations. Firstly, we tested a causal model but the findings should be considered with caution, as the data is cross-sectional. Secondly, we surveyed only one party of each partnership to validate determinants of mutual adaptation. If we survey both parties of a partnership we could understand the relationship better.

Finally, we did not include some relationship variable such as trust, and commitment in our model. Since we focused on online alliances mostly in the early stages of alliance omitting such variables that develops over time does not seem to hamper our results a lot.

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# FDI AND ECONOMIC GROWTH NEXUS EVIDENCE FROM SEVEN EMERGING ECONOMIES

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## ABSTRACT

*Globalization era attracted great attention to capital flows, especially among developing economies, thanks to the enhanced liberalization around the globe. While expectations regarding the positive effects of FDI flows to countries is a fact, recent time series evidences underline the possibility of a reverse causality running from economic growth to FDI inflows. In line with this causality debate, this study aims to make a quantitative assessment of the causal link between foreign direct investment (FDI) inflows and economic growth by using a sample of seven emerging economies. Results underline the dominance of a reverse causality running from FDI inflows toward economic growth.*

## INTRODUCTION

Recent two decades exhibit a significant shift on the discussion topics of global economy, from trade liberalization to capital accounts liberalization. Although these concepts are regarded as closely related, a vast amount of literature devotes itself about capital flows and economic growth. Especially emerging and/or developing economies are at the heart of this debate. According to the United Nations Conference on Trade and Development (UNCTAD), developing economies' inward stock of FDI amounted to about one-third of their GDP, compared to just 10 per cent in 1980. In addition, one-third of this trade accounts for intra-firm.

Moudatsou (2003) outlines the relationship between FDI and economic growth and argues that links between FDI and GDP may arise in possible three ways. First case may occur where economic growth in the host country attracts FDI. Second, FDI helps out with the economic growth of host country and third, FDI and economic growth may be bi directionally linked. Those links may possibly be attributed to the levels of economic development. In general, FDI aims to take advantage from cheaper resources of host country. Thus, a promised economic growth may seem desirable for investments coming from more developed economies. Empirical studies discussing the stated three hypotheses are clustered in late 1990s. Cross sectional studies underlines the efficiency of FDI to explain the economic growth levels of countries. Borensztein et al. (1998) uses a sample of 69 developing countries to investigate the relation between FDI flows and economic growth. The results indicate a strong positive relationship between the variables, running from FDI inflows toward economic growth. Moreover, Stiglitz (2000) asserts that FDI flows are preferable over portfolio investments, as latter causes higher levels of instability rather than economic growth. While the effect of FDI on economic growth is clarified by major cross sectional studies, rise of time series evidences remark the need for country based analysis. Chowdhury and Mavrotas (2006) underlines the presence of bi-directional causality for the selected three emerging economies.

Originating from the ongoing debate, we analyzed seven emerging economies for the post 1970 period to understand the causal relationship. Both short run and long run relationship is investigated by following VAR and VECM frameworks. In our sample of seven countries, all but one (India) presents an evidence for causation from GDP to FDI. Consequently, we may suggest that different phases in economic development would yield different types of causal relationships where our sample consists of countries with, more or less, similar characteristics and finally yield more generalized results.

The next section gives a literature review on the subject of the relationship between economic growth and FDI. The third section presents an overview of the methodology, the fourth one presents the findings of the study while the last section concludes.

## FDI INFLOWS AND ECONOMIC GROWTH

Dritsaki et al. (2004) builds up a model to understand the causal relationship in Greece. Findings state that FDI inflows is a significant factor behind the economic growth. Another study that validates the FDI leading view is constructed for Ghana by Frimpong and Oteng-Abayie (2006). Authors detect a relationship from FDI inflows to economic growth for a given time span of the overall sample. Meanwhile, Bashier and Batanieh (2007) in a recent study examine the interrelation between FDI inflows and savings in Jordan. Results underline that FDI inflows is a leading factor for saving accumulation. A second set of empirical studies concentrates on the possible reverse causality. Kholdy (1995) used five emerging economies to question the interaction of FDI inflows with technological efficiency and then with capital formation. Findings underline the absence of a significant relationship between FDI inflows and technological efficiency. However a significant relationship is detected between FDI inflows and capital formation, running from capital formation towards FDI inflows. Chakraborty and Basu (2002) discussed the relation in India proposing that economic growth is the driving force behind the acceleration of FDI inflows while reverse is not the case. Similarly Liu et al. (2002) examined China, underlining that a bi directional relation exists between economic growth and FDI inflows. Finally Chowdhory and Mavrotas (2006) also remarked two way causality for Chile. Findings of the study also show that economic growth is a leading factor behind FDI inflows in Malaysia and Thailand.

Meanwhile, Dhakal et al. (2007) examined the relationship in an outline based on economic and social variables. These variables are economic growth, capital accumulation rate and factors affecting the total factor productivity. (i.e. education level, institutional quality, macroeconomic stability, trade openness, and etc.) In that sense, we assume a matrix of FDI performance and FDI potential will help us to cover these matters all in one. Therefore, we introduce such a matrix following UNCTAD methodology for FDI flows. The inward performance criterion ranks the countries by the FDI volume that they receive relative to their economic size. In other words, it is the ratio of a country's share in global FDI inflows to its share in global GDP. The potential criterion is a more complex measurement, which consists of 12 different variables, to define the attractiveness level of a country for FDI inflows.

For simplicity reasons, we employed an average ranking for countries' FDI performance and potential, from 1989 to 2005. The following matrix yields the results for the countries that we include in our study. It should be noted that this matrix approach to the FDI evaluation holds a time horizon for more than two decades. Furthermore, some countries presented below are members of common global economic organizations and/or definitions (i.e. BRIC, ASEAN, and NAFTA) while their FDI practices differ.

**Table 1: FDI Performance Matrix**

|                           | <b>High FDI Performance</b>                  | <b>Low FDI Performance</b>                              |
|---------------------------|--|---|
| <b>High FDI Potential</b> | Front-runners<br>( <i>Malaysia, Mexico</i> ) | Below potential<br>( <i>Brazil, S. Korea</i> )          |
| <b>Low FDI Potential</b>  | Above potential                              | Under-performers<br>( <i>India, Indonesia, Turkey</i> ) |

Source: UNCTAD.

## METHODOLOGY

The model that we will introduce through out this study aims to evaluate the causal link between foreign direct investment and economic growth in seven emerging economies; Turkey, Malaysia, India, Indonesia, Mexico, Brazil, South Korea. In line with the literature we use real per capita GDP and FDI inflows as percentage of GDP for the period of 1970-2006. Data is obtained from World Bank's World Development



Indicators (WDI-2007) for the seven emerging countries. Overall for six of the countries in our sample we have 36 observations; however for South Korea we have 30 observations. We subtract Russian Federation from the study due to insufficient number of observations (12 observations). Moreover as also mentioned in the empirical investigation part, due to technical reasons we also subtract China from our sample of countries.

The standard procedure that we intend to follow will be building up vector autoregressive (VAR) models to understand the causal relationship between economic growth and foreign direct investment inflows in each of the seven countries in our sample. Moreover based on the integration order of the variables, we will try to distinguish the possibility of long run, short run dynamics and adjustments. As a starting point we will check for the stationarity of the variables under concern for each of the countries separately by implementing Augmented Dickey Fuller Tests -ADF- (Dickey, Fuller, 1979). If the variables under concern are found to be stationary  $I(0)$ , we will estimate a two variable (x and y)  $k^{\text{th}}$  order vector autoregressive model (VAR), described in equations one and two and directly apply Granger Non Causality test.

$$(1) \quad x_t = \eta_1 + \sum_{i=1}^k \omega_{1i} x_{t-i} + \sum_{i=1}^k \mathcal{G}_{1i} y_{t-i} + u_{1t}$$

$$H_0 : \mathcal{G}_{11} = \mathcal{G}_{12} = \dots = \mathcal{G}_{1k} = 0$$

$$(2) \quad y_t = \eta_2 + \sum_{i=1}^k \omega_{2i} y_{t-i} + \sum_{i=1}^k \mathcal{G}_{2i} x_{t-i} + u_{2t}$$

$$H_0 : \omega_{21} = \omega_{22} = \dots = \omega_{2k} = 0$$

Standard Wald test will be implemented for equations one and two respectively. Tested hypothesis are reported with the equations above. Rejection of the null hypothesis will help us to comment on the possible causal link. In such a case we will be rejecting the hypothesis of y (x) does not Granger Cause x (y) in equation one (two).

However if the observed variables are found to be non-stationary then we will check for the order of integration by using ADF test in the differences of the variables (Dickey, Fuller, 1979). Based on the results, if we detect that variables are integrated at the same order, we will apply Johansen cointegration test (Johansen, 1988). In case, we fail to find any cointegration between the non stationary variables, we will estimate the VAR models represented in equations three and four and apply directly the Granger Non-Causality Test as described above.

$$(3) \quad \Delta x_t = \eta_1 + \sum_{i=1}^k \omega_{1i} \Delta x_{t-i} + \sum_{i=1}^k \mathcal{G}_{1i} \Delta y_{t-i} + u_{1t}$$

$$(4) \quad \Delta y_t = \eta_2 + \sum_{i=1}^k \omega_{2i} \Delta y_{t-i} + \sum_{i=1}^k \mathcal{G}_{2i} \Delta x_{t-i} + u_{2t}$$

Though, if the observed variables are cointegrated, following a vector error correction model (VECM) seems to be more appropriate. As discussed by Engle and Granger (1987) and Johansen (1988), cointegrated variables should have an error correction term (represented by *EC* in equation 3 and 4) which has to be included into the model. *EC* represents a linear combination of the non stationary variables which at the end yields a stationary term. Overall all components of the VECM become stationary. Actually using the levels of the data in the error correction term will help us to capture the long run behavior of the variables while short term adjustments are also allowed. This property of VECM is the major answer to the VAR models' shortcoming; differencing the non-stationary variables causes some of the information to be lost, which at the end prevents us to comment on the long run behavior of the concerned variables. The bi variate VECM with one cointegration relationship will be as follows, where x and y represents the cointegrated variables based on Johansen test (1988);

$$(5) \quad \Delta x_t = \zeta_1 + \kappa_{11} EC_{t-1} + \sum_{i=1}^{p-1} \gamma_{1i} \Delta x_{t-i} + \sum_{i=1}^{p-1} \nu_{1i} \Delta y_{t-i} + \varepsilon_{1t}$$

$$(6) \quad \Delta y_t = \zeta_2 + \kappa_{21} EC_{t-1} + \sum_{i=1}^{p-1} \gamma_{2i} \Delta x_{t-i} + \sum_{i=1}^{p-1} \nu_{2i} \Delta y_{t-i} + \varepsilon_{2t}$$

After estimating the VECM, the major emphasis will be on the causality debate. However capturing the causal relationship in a VECM is not straightforward as implemented in a VAR model. There may be three sources of causality in a VECM. First coming from the long run relation of variables, second which may prevail during the short term adjustments of the variables and finally an overall causality may be found coming from their joint manners. Using equations five and six, we will first check the significance of the error correction component, which contains the information regarding the long run relationship, weak exogeneity test. Next we will test the significance of lagged differences of the variables that will help us to understand the short run dynamics of the relation. Finally we will check for the joint significance of the lagged differenced terms and the error correction term, strong exogeneity test. While first two tests will distinguish the short run and long run behavior, strong exogeneity test is also commonly used as to understand the overall relation between the examined variables. Based on the results we will have some room to discuss the direction of the relation between the selected economic growth indicator and the foreign direct investment indicator.

## EMPIRICAL FINDINGS

As a starting point, FDI indicator and economic growth indicator for each country is checked for stationary. Here ADF test results show us that for China, per capita real GDP becomes stationary in its second difference (not shown in table 2), whereas FDI indicator is stationary in its first difference. Hence we decide to exclude China and add Malaysia into our sample. ADF test result reported in table 2 underlines that, variables under concern are found to be non stationary in their levels and become stationary after first differences of variables are taken.

**Table 2: ADF Test Results**

|             | FDI/GDP |              | Per Capita GDP |              |
|-------------|---------|--------------|----------------|--------------|
|             | $Y_t$   | $\Delta Y_t$ | $Y_t$          | $\Delta Y_t$ |
| Brazil      | -1.584  | -4.490*      | -3.404         | -4.368*      |
| Indonesia   | -2.978  | -7.814*      | -2.032         | -4.457*      |
| India       | -1.165  | -3.775*      | 2.331          | -4.459*      |
| Mexico      | -3.344  | -7.323*      | -1.799         | -4.495*      |
| Turkey      | 0.235   | -4.706*      | -1.922         | -6.464*      |
| South Korea | -2.011  | -3.775*      | 1.763          | -4.861*      |
| Malaysia    | -2.627  | -6.525*      | -2.981         | -8.167*      |
| China       | -1.284  | -3.574*      | 4.503          | -0.611       |

\* represents rejection of unit root at 5% significance level

Once finding that all variables under investigation are I(1), we move on by applying Johansen Cointegration test to each of the countries separately as proposed by Johansen (1988). For the non stationary variables if cointegration is detected a VECM will be estimated, however in case we realize that variables are both non stationary and non cointegrated then estimation of a VAR model in the differences and Granger Non Causality test seems to be appropriate. Results of the Johansen cointegration test is reported in table 3. As results of Johansen test is sensitive to the selected lag length, we use both Akaike Information Criteria (AIC) and Schwarz Information Criteria (SIC) during the estimation of VAR models of the variables, which in turn will represent the relevant lag length of the Johansen test.

Table 3 gives the summary of the Johansen test. For simplicity just trace statistics are reported. Based on two different information criterions for each country two cointegration tests are implemented. Findings of the

Johansen Cointegration test propose that for the countries of Indonesia, India and South Korea cointegration is detected. For the remaining four countries we reject the presence of cointegration.

**Table 3: Johansen Cointegration Test Results Based on Trace Statistics**

|           | Selected<br>Lag Length Based on<br>AIC, SIC |     | k based<br>on AIC |         | k based<br>on SIC |         | 5%<br>Critical Values |      |
|-----------|---|-----|-------------------|---------|-------------------|---------|-----------------------|------|
|           | AIC   | SIC | r=0               | r≤1     | r=0               | r≤1     | r=0                   | r≤1  |
| Brazil    | 1   | 1   | 12.5187*          | 2.0977  | 12.5187*          | 2.0977  | 15.41                 | 3.76 |
| Indonesia | 6   | 6   | 32.9324           | 1.2814* | 32.9324           | 1.2814* | 15.41                 | 3.76 |
| India     | 1   | 1   | 25.2315           | 2.1544* | 25.2315           | 2.1544* | 18.17                 | 3.74 |
| Mexico    | 2   | 1   | 8.2968*           | 0.9509  | 8.8176*           | 0.6246  | 15.41                 | 3.76 |
| Turkey    | 2   | 1   | 9.1317*           | 3.5308  | 13.8028*          | 4.3639  | 15.41                 | 3.76 |
| S. Korea  | 2   | 2   | 19.1000           | 3.5990* | 19.1000           | 3.5990* | 15.41                 | 3.76 |
| Malaysia  | 1   | 1   | 8.2933*           | 0.1910  | 8.2933*           | 0.1910  | 15.41                 | 3.76 |

k is the lag order of the cointegration test, \* represents chosen integration order

Turning back to the core objective of the study, next we perform the Granger Non Causality tests to the relevant models. First of all, for the countries that we fail to find cointegration relation between FDI inflows and economic growth - Brazil, Mexico, Turkey, Malaysia -, we estimate VAR models in the first difference of the variables as constructed in equations 3 and 4. Lag order of the models are chosen based on AIC and SIC. For Brazil, Mexico and Turkey appropriate lag length is one based on both criterions. For Malaysia optimal lag length is found to be 1 and 6 based on SIC and AIC respectively. Finally Granger Non Causality test is performed as to understand the possible causal link between the variables in the countries under concern. Table 4 gives the results of the causality tests.

**Table 4: Granger Non Causality Wald Test Results**

|          |                        | k=1                | k=6               |
|----------|------------------------|--------------------|-------------------|
| Brazil   | FDI $\nRightarrow$ GDP | 0.09273<br>(0.761) | -                 |
|          | GDP $\nRightarrow$ FDI | 0.16302<br>(0.686) | -                 |
| Mexico   | FDI $\nRightarrow$ GDP | 2.4047<br>(0.121)  | -                 |
|          | GDP $\nRightarrow$ FDI | 4.263<br>(0.039)   | -                 |
| Turkey   | FDI $\nRightarrow$ GDP | 0.77942<br>(0.377) | -                 |
|          | GDP $\nRightarrow$ FDI | 21.653<br>(0.000)  | -                 |
| Malaysia | FDI $\nRightarrow$ GDP | 2.0123<br>(0.156)  | 7.2114<br>(0.302) |
|          | GDP $\nRightarrow$ FDI | 4.039<br>(0.044)   | 23.099<br>(0.000) |

k is the appropriate lag length based on AIC and SIC,  
P-values in parenthesis

Although, due to the absence of cointegration, we can not comment on the long run behavior of the variables, we may comment on the possible short run dynamics of the process in each country separately. Findings of table 4, the non causality test, underlines that; just for Brazil we report the absence of a relation between the variables. However, we fail to reject the hypothesis that FDI inflows does not Granger cause economic growth for the rest of the countries in the test reported above. Moreover findings underline that there exists a relation running from economic growth towards FDI inflows, giving rise to the view in favor of the growth leading view of the relationship.

Next we estimate VECM, presented in equations five and six, for the three of the countries that we detect cointegration: Indonesia, India and South Korea. First to understand the long run behavior, we test the weak exogeneity by observing the significance of the error correction term by using a simple t test. Second we test the joint significance of differenced FDI (GDP) indicator in GDP (FDI) equations, which will help us to comment on the short run relationship. And finally strong exogeneity test is implemented as to understand the joint significance of the differenced lagged values and the error correction term. To choose the relevant lag length of the VECM, we use AIC and SIC yielding 6, 1 and 2 levels respectively for each country. Note that as the lag length of the differenced variables in VECM is lag length of the VAR models minus number of cointegration relations, we fail to estimate the short run dynamics for India. Results of the VECM are reported in table 5. For Indonesia and South Korea we detect the presence of both a short term and also long term relation running from economic growth towards FDI inflows. Findings are in line with the results obtained from the VAR models. Finally for India, we can only comment on the long run relationship between economic growth and FDI inflows. Findings underline that unlike the whole sample, there seems to be a bi directional relation between two variables in India.

**Table 5: Estimation Results of VECM**

|             | Weak Exogeneity Test<br>for<br>$\kappa_{il} = 0$ |                     | Short Run Granger<br>Non Causality Test<br>for<br>$\gamma_{ij} or v_{ij} = 0$ |                   | Strong Exogeneity Test<br>for<br>$\kappa_{il} = 0$ and<br>$\gamma_{ij} or v_{ij} = 0$ |                   |
|-------------|--|---------------------|---|-------------------|---|-------------------|
|             | FDI→ GDP   | GDP→ FDI            | FDI→ GDP  | GDP→ FDI          | FDI→ GDP  | GDP→ FDI          |
| Indonesia   | -0.00353<br>(0.228)                              | -0.00024<br>(0.000) | 2.05<br>(0.8428)  | 18.29<br>(0.0026) | 2.17<br>(0.9034)  | 40.64<br>(0.0000) |
| India       | -17.611<br>(0.000)                               | -0.2013<br>(0.001)  | NA  | NA                | NA  | NA                |
| South Korea | 124.79<br>(0.421)                                | -0.5743<br>(0.000)  | 0.00<br>(0.9899)  | 6.36<br>(0.0117)  | 0.81<br>(0.6663)  | 23.12<br>(0.0000) |

P-Values in Parenthesis

## CONCLUSION

The causality debate between FDI inflows and economic growth give rise to two different conflicting views. While the traditional approach working in favor of FDI inflows as a motivation behind economic growth is a policy fact of neo liberal policies, another discussion also prevails proposing the demand pulling effect that causes economic growth to be regarded as an inspiration by the FDI inflows. In line with the remarks of the time series evidence the chosen emerging countries validates our concern regarding the causality issue. While three out of seven countries in our sample signals a long run relation, findings underline that other than India, which reports two way causality, Indonesia and South Korea are specific examples of economic growth driven models. It should also be added that short run dynamics of these countries also shows us a relation running from economic growth toward FDI inflows. Our sample for the remaining countries emphasize that, other than Brazil, we are detecting a short term relation running from again economic growth to FDI inflows. The general picture of the empirical study demonstrates that country based studies open a discussion regarding the reverse causality in the neo liberal expectations. It seems for emerging economies in our sample, FDI inflows have limited ability to explain economic growth. Instead there evolves a mechanism in these countries that direct FDI inflows. Assuming per capita GDP as the core indicator of demand potential, a mechanism based on the attractiveness of these countries in terms of income can be modeled and augmented.

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# CONSUMERS' PERCEPTIONS OF TECHNOLOGY AND THE BENEFITS OF TECHNOLOGICALLY IMPROVED MARKETING ACTIVITIES

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## ABSTRACT

*Studies about the effect of technological improvements on marketing are very common in the literature. This is because marketing activities occupy an important place in people's lives as consumers and marketers continuously seek ways to improve their offerings by the help of technology. Therefore, understanding whether these improvements are perceived to be beneficial by consumers is crucial. For this purpose, an exhaustive list of technological improvements in marketing has been created by the authors and individuals' perceptions of the value of these improvements have been measured. These perceptions are expected to be influenced from consumers' general dispositions toward technology; and they are expected to impact individuals' perceptions of their quality of life as consumers. These issues are investigated in this study based on the data collected in Turkey from 197 individuals.*

## INTRODUCTION

There is widespread acceptance that technology is a central component of business operations and extensively used in marketing (Brady *et al.*, 1999; Shugan, 2004; Smith and Culkin, 2001; Ranchhod and Gurău, 2004; Zineldin, 2000). In order to create a competitive edge, companies integrate technology into various aspects of their marketing activities. As Zineldin (2000) mentions, everything companies do to build consumer loyalty is affected by technology. As a result of these, customers face innovations in marketing in the marketplace through continuous improvements of the marketing mix: in products, prices, distribution and selling channels, marketing communications, customer services and customer relationship management.

In today's highly technology-oriented marketing environment, it is crucial for marketers to determine and design the marketing activities and implementations that produce the most positive benefits for their target consumers. Such activities can be expected to generate an overall consumer perception that technological improvements and their impact on companies' marketing practices enrich the quality of consumers' lives. Whether consumers' general dispositions toward technology also have an impact in the development of such perceptions can be an interesting research theme as well. In light of these ideas, the current research aims to find answers to the following questions:

- What are consumers' general dispositions toward technology?
- What are consumers' attitudes toward various technologically improved marketing activities?
- Do consumers' dispositions toward technology influence their attitude toward technological improvements in marketing?
- What is the overall perception of consumers with respect to the contribution of technological improvements in marketing to their quality of life as consumers?
- Which of these improvements play the greatest role in the creation of stronger perceptions of consumer quality of life?

## LITERATURE REVIEW

In the review of the literature for this research, one group of studies that has been examined is those that include a technology attitude measurement to form the basis of the assessment performed in this study. Another set of studies about the impact of technology on marketing has also been reviewed for the purpose of identifying the comprehensive list of marketing activities or implementations that are influenced from technological developments.

## **Attitude Toward Technology**

Consumers' attitudes toward technology affects the way they purchase, what they buy, when they buy, when they purchase and even how they pay for purchases (Mohr, 2001 c.f. Edison and Geissler, 2003). Therefore, people's attitudes toward technology has interested many scholars. Studies conducted on this subject cover a wide range of interest areas such as social impacts of technology on people's lives, organizational change caused by the necessity of IT, technological improvements and their environmental side-effects, public adoption to technology and its problematic areas, etc.

One of the most important studies in the marketing literature that offers a multi-item scale about this topic has been performed by Parasuraman (2000). In this study, the author proposes "The Technology Readiness Index" which aims to measure people's propensity to embrace and use new technologies for accomplishing goals in home life and at work. It includes four major dimensions: optimism (a positive view of increased control, flexibility, and efficiency offered by technology), innovativeness (tendency to be a technology pioneer), discomfort (feeling of lack of control over technology) and insecurity (skepticism and distrust toward technology). Edison and Geissler (2003) also developed a scale to observe individuals' behavior concerning technology. This scale measures people's degree of affinity (positive attitude) toward technology with 10 items about the technology friendliness of the individual in general, desire to learn about and use technology, computers and machines.

In another study, Mick and Fournier (1998) discuss technology as a paradoxical phenomenon which brings both privileges and difficulties into people's lives. After pilot researches and face-to-face interviews with 29 households, eight paradoxes, which are caused by technology and affecting human life were developed. They can be listed as "control vs. chaos" brought by technology, "freedom vs. enslavement" caused by technology, technology renewal frequency as "new vs. obsolete", "competence vs. incompetence" people feel because of technology, "efficiency vs. inefficiency" technology brings to people's lives, technology "fulfills vs. creates" needs, "assimilation vs. isolation" caused by technology and people's "engaging vs. disengaging" because of technology and the erosion of certain human skills as a result of this.

In this study, Mick and Fournier's (1998) paradoxes have been turned into statements for the purpose of capturing people's general dispositions toward technology and its impacts on their daily lives without any intention to assess their usage of or competence in technological devices, systems, etc.

## **Impact of Technology on Marketing**

Marketers and managers must be aware of new developments in technology and their possible effects because technology can and does affect marketing in many different ways and influences the creation of marketing mixes that satisfy customers (Zineldin, 2000).

The transformation starts within the organization. Brady et al. (1999) suggest that companies should make use of IT to be more innovative, flexible, and competitive so that they improve their ability to serve their customers and their overall marketing performance. Using computerized marketing information systems for decision making instead of using it simply for justifying decisions only can make a significant difference (Davenport, 1994 c.f. Brady et al, 1999). Another instance can be using IT to create new and strong relationships and alliances, e.g. between logistics suppliers, manufacturers and retailers (Zineldin, 2000). Another suggestion made by Barlow et al. (2004) for retail marketing is that the goal should be integrating offline and online operations, allowing consumers to purchase products in the way that suits them best and the most common way

to do this is utilizing the Internet. Ranchhod and Gurău (2004) posit that the role of information becomes highly important when fast decisions need to be made and systems have to be able to offer this facility. As technology becomes more sophisticated and can deliver data and video links at increasing speeds, marketers need to understand its capability in effective marketing implementation. Shugan (2004) goes one step further and suggests that the ability to perform rapid computations online allows rapid adaptation to unexpected demand conditions, complex loyalty programs, the use of complex interactive dynamic pricing mechanisms, etc.

Technologies used to enhance marketing activities exemplified by various studies and public surveys are numerous. Intranet, Internet, electronic data interchange (EDI) systems, ground positioning systems (GPS) into mobile phones, blue-tooth devices, ATMs, kiosks, interactive televisions, mobile phones, personal digital assistants (PDA) are some of the tools used to accomplish marketing activities. However, along with the tools the activities and implementations designed to offer advantages to consumers in various areas such as product development, advertising, CRM activities, distribution channels, customer services, pricing mechanisms, information and data collection systems, etc. are the major domains in which these impacts are felt most strongly. This study suggests 30 items relating to these different areas as crucially important for consumers. The aim is to assess how beneficial consumers find these technologically improved marketing activities.

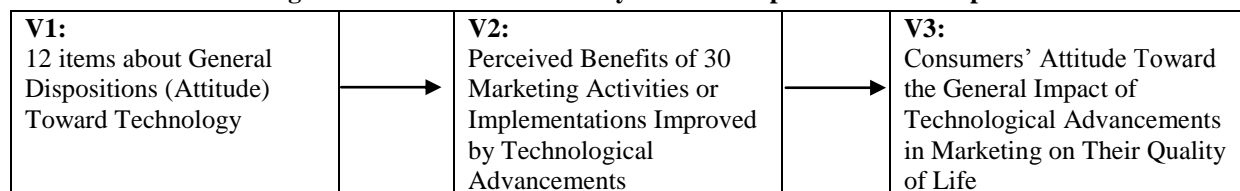
## RESEARCH QUESTIONS AND HYPOTHESES

In this study, there are three major groups of questions asked to individuals. One of them aims to measure their general attitude toward technology by determining their agreement level with a set of 12 statements consisting of 6 positive and 6 negative items. People's agreement level with each item has been measured with a 4-point interval scale with the labels *Strongly Agree*, *Agree*, *Disagree*, and *Strongly Disagree*.

The second group of questions assesses how beneficial consumers find each of 30 marketing activities and implementations affected from technological improvements. This has been measured with a 5-point interval scale with the labels *Very Beneficial*, *Partially Beneficial*, *Undecided*, *Not So Beneficial*, and *Not Beneficial At All*.

The third and last question aims to measure how the quality of consumer life is affected by technological improvements in marketing activities in general. A single question is asked to respondents about how much their life quality has been affected from the technological advancements in the field of marketing in general. The answer options were *Very Positively Affected*, *Partially Positively Affected*, *Not Very Positively Affected*, and *Not Positively Affected At All*. Figure 1 displays these question groups and the proposed relationships.

**Figure 1: Variables of the Study and the Proposed Relationships**



Based on these variables, there are three hypotheses in this study:

- H<sub>1</sub>: People's general dispositions' toward technology (V1) and the benefits they perceive from technologically improved marketing activities (V2) are correlated.
- H<sub>2</sub>: Technologically improved marketing activities and implementations are highly valued by consumers (V2).
- H<sub>3</sub>: The benefits of technological improvements in marketing (V2) will be perceived differently by consumers who experience different levels of improvements in their overall consumer quality of life (V3).

## Data Collection and Sampling



The data for this study has been collected from individuals in Turkey. The sample was targeted to be composed mostly from individuals who have some accumulated experience as individual consumers. Collection of the data was done through the Internet through two channels. One of them was sending the survey link directly to individuals who are members of the working population and who were conveniently available. The other channel was sending the survey to groups and communities in the online environment which used keywords such as technology, marketing, IT, management, business etc. in their descriptions. From the group descriptions, it can generally be inferred that most of the members are working and are aware of the recent developments taking place in the world of business and technology. The survey link was sent to the moderators/owners of these electronic groups (e-groups), and if they gave approval, an e-mail with the survey link was delivered to the members of selected e-groups.

Since it is not possible to have an exact population frame for this topic, using non-probability sampling is acceptable. Through the channels mentioned above, 197 units of data have been collected through convenience sampling. The demographic profile of the respondents is displayed in Table 1.

**Table 1: Demographic Profile of Respondents**

This distribution suits the targeted profile for this study with respect to four major demographic

|                  | <b>18-23</b>                      | <b>24-29</b>                              | <b>30-35</b>                               | <b>36-41</b>                       | <b>&gt;42</b> |
|------------------|-----------------------------------|---|--|------------------------------------|---------------|
| <b>AGE</b>       | 11                                | 123                                       | 30   | 17                                 | 16            |
|                  | 6%                                | 62%                                       | 15%  | 9%                                 | 9%            |
|                  | <b>Female</b>                     | <b>Male</b>                               |  |                                    |               |
| <b>GENDER</b>    | 113                               | 84  |  |                                    |               |
|                  | 57,4%                             | 42,6%                                     |  |                                    |               |
|                  | <b>High school<br/>(graduate)</b> | <b>University<br/>(graduate)</b>          | <b>Postgraduate<br/>Degree</b>             |                                    |               |
| <b>EDUCATION</b> | 6                                 | 115                                       | 76   |                                    |               |
|                  | 3%                                | 58%                                       | 39%  |                                    |               |
|                  | <b>&lt;1000 YTL.<br/>(≈\$815)</b> | <b>1000-2500 YTL.<br/>(≈\$815-\$2035)</b> | <b>2500-4000 YTL.<br/>(≈\$2035-\$3260)</b> | <b>&gt;4000 YTL.<br/>(≈\$3260)</b> |               |
| <b>INCOME</b>    | 23                                | 98  | 52   | 24                                 |               |
|                  | 12%                               | 50%                                       | 26%  | 12%                                |               |

variables. The sample consists of equally distributed groups of early adult and middle-aged consumers with 62% in the 24- 29 range which corresponds to a young urban working population. The number of females is a bit higher than males, but each gender group is represented adequately. Distribution in education levels shows that respondents with university and postgraduate degrees are dominant. The reason for this is because the survey was conducted online and shared with white collar employees of companies and academic or profession community groups. Regarding income levels, half of the respondents have an income of 1000-2500 YTL (\$815-\$2035) per month which can be accepted to correspond to a medium and mid-high income level for this population. The rest of the income levels are partially represented, too.

## FINDINGS OF THE STUDY

### Findings About General Dispositions Toward Technology

In this study, one of the goals is to assess people's general dispositions toward technology and to see if this variable is correlated with their attitude toward technological developments in marketing. For this purpose, a scale of 12 items has been formulated based on six of the paradoxes of technology offered by Mick and Fournier (1998). Table 2 includes the items used and the average agreement levels with each one.

**Table 2: Mean Agreement Levels with Statements about General Dispositions Toward Technology**

|  | <b>Mean<br/>(over 4)</b> | <b>St. Dev.</b> |
|--|--------------------------|-----------------|
|  |                          |                 |

|  |             |            |
|--|-------------|------------|
| As a result of technological developments, people can benefit from changes and novelties in science rapidly. <i>*(new)</i>   | 3.18        | 0.67       |
| Technological developments offered to consumers can become outdated quickly. <i>*(obsolete)</i>                              | 3.29        | 0.63       |
| Technology increases people's productivity and efficiency. <i>*(efficiency)</i>  | 2.86        | 0.79       |
| Technology can sometimes unnecessarily complicate people's lives. <i>*(inefficiency)</i>                                     | 2.72        | 0.72       |
| Technology makes it easier for people to meet their needs. <i>*(fulfills needs)</i>  | 3.13        | 0.52       |
| Technology can trigger or intensify needs that have not been felt or realized by individuals before. <i>*(creates needs)</i> | 3.17        | 0.66       |
| Technology makes people feel more intelligent and successful. <i>*(competency)</i>   | 2.38        | 0.70       |
| People may feel incompetent when they cannot use technology well. <i>*(incompetency)</i>                                     | 2.88        | 0.64       |
| Technology brings system and order to many aspects of human life. <i>*(control)</i>  | 2.83        | 0.62       |
| Technology may cause chaos when it is not used well. <i>*(chaos)</i>   | 3.24        | 0.70       |
| Technology makes people more independent with the conveniences it offers. <i>*(freedom)</i>                                  | 2.59        | 0.81       |
| Technology imprisons people to itself. <i>*(enslavement)</i>   | 2.77        | 0.82       |
| <b>Average Score for Dispositions Toward Technology</b>  | <b>2.41</b> | <b>.27</b> |

1-Strongly Disagree      2 – Disagree      3 – Agree      4 – Strongly Agree

*\*The asterisks denote which paradox from Mick and Fournier's (1998) study the item has stemmed from.*

As the results in Table 2 show, except one of the items about competency, subjects have agreed with all of the items at an above average level. Therefore, even though one positive and one negative statement was put for each paradox, when the negative items are reverse coded to compute the average technology attitude score, the sample produces a mean level of 2.41 over 4. This shows that people are equally aware of the benefits and challenges introduced to their lives by technology. This is confirmed by the reliability scores achieved for the scale. Without reverse coding the negative items, in its original form, the scale produces a Cronbach's alpha of .61 which is acceptable for exploratory studies (Hair, 1998). However, if the reverse coded items are used, alpha level decreases to .49 which shows that the scale is much more consistent in its original form with both positive and negative items. Thus, it can be said that people are aware of both the advantages and disadvantages of technology for their lives.

The next question is whether this disposition influences the benefits they perceive from the implementation and activities in marketing which are influenced from technological advancements. This is tested by correlating the average technology attitude score of the sample with their average score of the value they attach to 30 different technologically improved marketing activities and implementations. The correlation coefficient between these two variables is .119 with a significance level of .095. The mean technology attitude score is 2.41 while the mean perceived benefit score for the average of 30 technologically improved marketing activities is 4.08. Since the correlation is significant at the 90% confidence level but not 95%, we can say that ***H<sub>1</sub> is partially supported***. This shows that even though technology attitude scores of individuals are not as high as their scores for perceived value of technologically improved marketing activities, these variables still seem to have a tendency to move in the same direction.

## Findings About Perceived Benefits of Technologically Improved Marketing Activities

In this part of the study, consumers have been presented with 30 marketing activities from different implementation areas ranging from product development to pricing mechanisms, from selling channels to advertisements, from CRM to customer services, etc. They have been asked to state the level of benefit they perceive in each technologically improved marketing activity over a 5-interval scale ranging from "very beneficial" to "not beneficial at all". Table 3 displays the mean value of benefits attached to each marketing implementation.

**Table 3: Mean Values of the Perceived Benefits of Technological Improvements in Marketing**

| <b><i>Variables with a Very High Level of Benefit Perceived By Customers</i></b>  | <b>Mean<br/>(over 5)</b> | <b>Std.Dev.</b> |
|---|--------------------------|-----------------|
| Production of products in a way that improves customer safety   | 4.73                     | 0.60            |
| Production of products from nature-friendly inputs, protecting the environment and human health   | 4.59                     | 0.84            |
| Being able to make payments easily and in various ways  | 4.55                     | 0.71            |
| Being able to find a product easily in a specific sales point (computerized systems to locate products, opportunity to order a desired product immediately, etc.)   | 4.49                     | 0.73            |
| Constant accessibility of companies   | 4.49                     | 0.77            |
| Production of products with improved durability   | 4.45                     | 0.92            |
| The availability of a product in various sales points   | 4.45                     | 0.77            |
| Improved security of payment systems  | 4.45                     | 0.80            |
| Faster and more effective provision of after sale services  | 4.43                     | 0.80            |
| Decrease in service time during shopping (food ordering, retail shopping, etc.)   | 4.40                     | 0.87            |
| Emergence of alternative shopping channels (TV, telephone, Internet, etc.)  | 4.36                     | 0.81            |
| The geographical diversity of markets in which firms can sell their products  | 4.32                     | 0.82            |
| Customers' opportunity to find information about companies, people, etc. in a much shorter period of time   | 4.26                     | 0.84            |
| Increased level of information customers have about products and service in the market  | 4.25                     | 0.84            |
| Increase in price variety in most products  | 4.17                     | 0.98            |
| Improvements in shopping environments with respect to design, architectural and technological elements  | 4.05                     | 0.98            |
| Production of products by companies that are customized according to individual or customer groups  | 4.02                     | 0.93            |
| Capability of companies to offer personalized alternatives to customers (promotions, information about products and prices, etc.)                                   | 4.01                     | 0.88            |
| Increased security in companies' collection of customer data  | 4.01                     | 1.10            |
| <b><i>Variables with a High Level of Benefit Perceived By Customers</i></b>   | <b>Mean<br/>(over 5)</b> | <b>Std.Dev.</b> |
| Increase in variety in both durable consumer goods (automobile, mobile phone, white goods, etc.) and nondurable consumer goods (fast moving consumer goods)         | 3.97                     | 0.91            |
| Decrease in human factors in shopping (payment systems, learning product prices through barcodes, etc.)   | 3.90                     | 1.10            |
| Collection of customer data from various channels (telephone, Internet, sales points, etc.) in a much shorter period time   | 3.79                     | 1.16            |
| Improved attractiveness of advertisements and other marketing communications activities in terms of visual or other attributes                                      | 3.79                     | 1.04            |
| Personalized advertisements and marketing communications reaching the right target market at the right time and place through mobile advertising                    | 3.77                     | 1.05            |
| Rapid and frequent decreases in the prices of high-technology products  | 3.72                     | 1.14            |
| Being exposed to advertisements and marketing communications activities in a higher variety of media (TV, Internet, telephone, outdoor) and any visible environment | 3.51                     | 1.12            |
| Increased level of information companies own about customers  | 3.46                     | 1.17            |
| Frequent renewals and improvements of the attributes of products offered to consumers   | 3.40                     | 1.14            |
| Frequent exposure to advertisements and marketing communications activities   | 3.39                     | 1.20            |
| High amount of customer information recorded and retained by companies  | 3.26                     | 1.23            |
| <b>Average Perceived Benefit in Technological Improvements in Marketing</b>   | <b>4.08</b>              | <b>0.52</b>     |

*1-Highly Beneficial 2-Partially Beneficial 3-Undecided 4-Not So Beneficial 5-Not Beneficial At All*

In this part of the research, a set of technologically improved marketing activities or implementations have been presented to individuals for the purpose of measuring how much benefit they perceive in each. The expectation is that, in all of these various areas of improvements about products, sales channels, customer relationship management, customer information, advertising, and services, consumers will perceive and give high value to the benefits these developments introduce into their lives. This is the second hypothesis of this

research and the findings about the mean perceived benefit levels attached to the above factors confirm this hypothesis. From a set of 30 technologically improved marketing activities, 19 of them have a mean perceived benefit level that exceeds 4, and 11 of them have a mean perceived benefit level that exceeds 3.26. The mean value of the “Average Level of Benefit Perceived in Technologically Improved Marketing Activities” which is computed as the average score of all 30 items is 4.08 over 5. Based on these values, **Hypothesis 2 is supported.**

A closer look at the technologically improved marketing activities or implementations that are very highly valued by consumers yields interesting results. First of all, it is seen that consumers value improvements in production technologies greatly. They attach very high level of benefits to the production of products that improve customer safety, protect the environment and human health, have higher durability and are customized according to individuals or customer groups. This implies that product-based improvements are adopted by consumers rapidly and extensively. They value personalization not only at the production level but also in promotions or the information they receive about products, prices, etc. Additionally, consumers are also very significantly impressed by transactional improvements related to the shopping process. One such highly beneficial implementation is easy, convenient and safe payment mechanisms. Similarly, they have very positive attitudes toward the opportunity to find any product they want either through computerized systems or because of the availability of various sales points and alternative shopping channels. Service quality is also very important; faster and more effective services and reduced service provision time are significantly beneficial implementations. Moreover, consumer see great value in being able to access companies and find any piece of information they want very easily and constantly as well being able to give their information to companies in a secure way. They are aware that improvements in many marketing-related functions of companies such as offering a greater geographical diversity of markets and higher price variety in their products are have very positive reflections on consumers’ lives. Finally, consumers are also highly aware of the increase in the quality of the shopping process such as being exposed to superior-designed and technologically equipped shopping environments.

In the second set of findings, technologically improved marketing activities or implementations which are highly valued by consumers can be seen. There are some additional product-related features that are highly valued by consumers such as increase in product variety, frequent improvements in product attributes and rapidly decreasing prices of high-technology products. Consumers are also found to place high benefit on the automation of shopping systems as well as the efficient collection and utilization of customer information. Finally, advertisement and communication-related activities are found to be among the highly beneficial implementations affected from technological advancements. Improved attractiveness, personalization, and media variety in advertisements and marketing communications and consumers’ heightened exposure to these activities are all perceived as very high-value implementations.

In short, customers seem to be greatly aware of the impacts of various technologically improved marketing activities and implementations. Their general attitude toward such developments in a diverse set of areas mentioned in this section is generally very positive.

## **Findings About Impact of Technological Improvements in Marketing on Consumers’ Quality of Life Perceptions**

The third major research question in this study is “Which of the technological improvements in marketing play the greatest role in the creation of stronger perceptions of consumer quality of life?” Hypothesis 3 posits that if people have different perceptions of their quality of life as consumers as a result of technological advancements in marketing, the benefits they perceive in each improvement will also be different. For this purpose, a general question about the overall impact of technological advancements in marketing on consumer quality of life has been asked with the following response options: *very positively affected; partially positively affected; not very positively affected; not positively affected at all*. However, from 197 respondents, no one has selected the “not positively affected at all” response option and only 14 respondents have selected the “not very positively affected” response option. Table 4 shows the distribution of the respondents with respect to this variable.

**Table 4: Distributions of Respondents With Respect to the Overall Impact of Technological Advancements in Marketing on Consumer Quality of Life**

|                                | <b>Freq.</b> | <b>Perc.</b> |
|--------------------------------|--------------|--------------|
| Very positively affected       | 61           | 31%          |
| Partially positively affected  | 122          | 61.9%        |
| Not very positively affected   | 14           | 7.1%         |
| Not positively affected at all | 0            | 0%           |

According to this distribution, in order to test Hypothesis 3, only the two groups which can be distinguished as consumers who are “partially positively” vs. “very positively” affected from technological advancements in marketing can be compared. Thus, t-tests for differences of their means with respect to the benefits they perceive for each of the 30 technologically improved marketing activities and implementations have been conducted and shown in Table 5.  $\mu_1$  and  $\mu_2$  are the mean perceived benefits for partially vs. very positively affected groups respectively.

**Table 5: Differences in Perceived Benefits from Technological Improvements in Marketing Between Two Groups with Different Levels Perceived Quality of Life as Consumers**

|   | <b>t</b> | <b>Sign.</b> | $\mu_1$ | $\mu_2$ |
|---|----------|--------------|---------|---------|
| Increase in variety in both durable consumer goods (automobile, mobile phone, white goods, etc.) and nondurable consumer goods (fast moving consumer goods)       | -3.57    | 0.000        | 3.80    | 4.30    |
| Collection of customer data from various channels (telephone, Internet, sales points, etc.) in a much shorter period time   | -4.29    | 0.000        | 3.57    | 4.30    |
| Increased security in companies' collection of customer data  | -3.32    | 0.001        | 3.85    | 4.39    |
| Personalized advertisements and marketing communications reaching the right target market at the right time and place through mobile advertising                  | -3.45    | 0.001        | 3.62    | 4.16    |
| Capability of companies to offer personalized alternatives to customers (promotions, information about products and prices, etc.)                                 | -3.04    | 0.003        | 3.90    | 4.31    |
| Improved attractiveness of advertisements and other marketing communications activities in terms of visual or other attributes                                    | -2.92    | 0.004        | 3.68    | 4.13    |
| Increased level of information companies own about customers  | -2.82    | 0.005        | 3.33    | 3.82    |
| The availability of a product in various sales points   | -2.65    | 0.009        | 4.36    | 4.67    |
| Frequent exposure to advertisements and marketing communications activities   | -2.41    | 0.017        | 3.27    | 3.70    |
| Decrease in human factors in shopping (payment systems, learning product prices through barcodes, etc.)   | -2.32    | 0.022        | 3.80    | 4.20    |
| High amount of customer information recorded and retained by companies  | -2.20    | 0.029        | 3.14    | 3.56    |
| Faster and more effective provision of after sale services  | -2.16    | 0.032        | 4.36    | 4.62    |
| Being exposed to advertisements and marketing communications activities in a higher variety of media (TV, Internet, phone, outdoor, any visible environment)      | -2.06    | 0.041        | 3.44    | 3.79    |
| Customers' opportunity to find information about companies, people, etc. in a much shorter period of time   | -2.05    | 0.042        | 4.20    | 4.46    |
| Being able to find a product easily in a specific sales point (computerized systems to locate products, opportunity to order a desired product immediately, etc.) | -2.05    | 0.042        | 4.42    | 4.66    |

*1-Highly Beneficial    2-Partially Beneficial    3-Undecided    4-Not So Beneficial    5-Not Beneficial At All*

These findings demonstrate that consumers who feel the overall impact of technological advancements on their quality of life value the above technological improvements much more greatly than other consumers. Thus, this table can also be accepted as the list of technological improvements in marketing that contribute most strongly to improving consumer quality of life. In accordance with these findings, increase in product variety and widespread product availability improve consumers' life quality greatly. Additionally, consumers also value the information advantage offered by technological advancements greatly. Consumers who perceive very positive effects of technology on their quality of life attach very high levels of benefits to companies' collection of

customer data through various channels in a secure way and being highly informed about them by keeping this information for useful purposes. They also value being able to find any information they want very easily. Another group of variables which seem to improve consumer quality of life extensively are technological improvements in the field of advertisements and communications. Consumers value personalized advertisements and promotions and are highly affected from their attractiveness as well. Thus, they perceive frequent exposure to advertisements through a higher variety of media as a beneficial improvement. Finally, consumers who are partially vs. very positively affected from technological implementations have different significantly different values attached to service-related factors as well. In this area, decreased human factors in shopping services and faster and more effective services provided to consumers are highly influential. Although the mean benefits attached to these improvements are positive for both groups, this section denotes the variables that create a marginally higher contribution to consumers' life quality. These issues are crucially important for marketers to work on and develop further. Since 15 of the 30 technological developments have been found to create this marginally higher contribution and denote differences at the 0.05 level between the two consumer groups with relatively different levels of consumer life quality, we can say that **H3 partially supported**.

## CONCLUDING REMARKS

This study aims to shed a light on consumers' technology perceptions and the benefits they attach to technological improvements in marketing. Findings of the study show that individuals tend to be aware of both the benefits and limitations technology creates in their daily lives. However, regardless of this mediocratic view of technology, they perceive great benefits in the technological developments in marketing and believe these contribute greatly to consumers' quality of life. In other, their moderate dispositions toward technology are heightened when they are asked to state the benefits they get from technologically improved marketing activities.

Numerous benefits in the areas of product development, pricing, distribution and selling channels, CRM, services, advertisements and marketing communications have all produced very high levels of perceived benefits for consumer. Furthermore, in each of these areas, some of the unique benefits offered by technology are valued relatively more by consumers who believe these developments contribute strongly to their quality of life as consumers. These can be summarized as product variety and availability, advertisement effectiveness and availability, information advantages and service-related factors. These are obviously the most important areas marketers should keep working on to satisfy their customers further.

In short, marketers should see that consumers are highly aware and satisfied from the technological improvements in various aspects of the marketing functions in companies. As further research opportunities, the impact of technology on each area can be investigated deeply and factors that contribute further to the development of consumer quality of life can be discovered. Also, predictive or exploratory studies that aim to discover what consumers would like to be offered further by companies as technologically improved marketing benefits beside the current set of activities or implementations would contribute greatly to this area. This could lead companies to direct their resources and investments into those areas.

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# THE DOUBLE DIPLOMA IN AVE AS THE TOOL OF INTEGRATION OF RUSSIA IN THE EUROPEAN EDUCATIONAL SPACE

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## ABSTRACT

*In condition of increasing global competition, societal developments, globalizations of Economies and of markets, new information and teaching technologies development throw new challenges for contemporary Universities.*

*Universities need to adapt to a new realities in order to be more competitive and to keep the position at the market of educational services. This problem rises in conditions of restructuring the educational system of Russia in frame of Bolonian Process. Increasing demand in permanent education in all sectors of economy in conditions of rough growth is one of the most important and challenging goals of current EU and Russian policy. There is a great demand for the high skilled experts at Russian labor market, we have the overproduction of different kind of specialists who are looking for job and who want to have new profession. In these conditions the labor market needs the flexible system of education and training; it is possible to achieve this goal by the creating different Advanced Vocational Educational (AVE) programs.*

*AVE development and support is one of the ways of universities' internationalization and collaboration. Authors' personal experience of execution the transnational join project (Russian-Swedish) is described. Basic problems of the teaching and training process and their resolutions are shown from the professor's point of view. The main basic stages and points are given in this article.*

## INTRODUCTION

In condition of increasing global competition, societal developments, globalizations of Economies and of markets, new information and teaching technologies development throw new challenges for contemporary Universities.

Universities need to adapt to a new realities in order to be more competitive and to keep the position at the market of educational services. This problem rises in conditions of restructuring the educational system of Russia in frame of Bolonian Process. Increasing demand in permanent education in all sectors of economy in conditions of rough growth is one of the most important and challenging goals of current EU and Russian policy.

Nowadays Russia is going into WTO (World Trade Organization), in this case one of the most weak sector of economy is banking. They can suffer damages first of all because of the volume of assets and very important indicator as the degree of professional qualification of the staff of banks and relevant companies.

The Expansion of the Western banks into Russia will lead to the reduction competitiveness of the Russian bank sector. Russian banks risk to lose their positions in the market. Very often the management of banks (Russian and foreign) have to employ the specialists to the top positions who have graduated from the western universities, in this case they incur extra costs. But the problem is the lack of well educated skilled specialists and experts in Russian labour market. At the same moment there is a great overproduction of different kind of specialists who are looking for job and who want to have new profession. In these conditions the labor market needs the flexible system of education and training. As a rule, the people, who have graduated from the technical universities, have a great potential for studying of applied economic sciences. It doesn't take them long



time and hard work to get the new extra qualification for banking and relevant companies. Nowadays there is a great demand for different kinds of high qualified and skilled specialists in emerging financial market of Russia. Without any doubts, this kind of staff can be trained by Russian educational centers.

Following to Russian law the Educational services can be rendered only by the licensed establishments. Moscow State Forest University has this kind of license and it is well known in Moscow region, it has rather high rate among the technical universities in Russia, besides it collaborates with number of western European Universities.

The example of double diploma is not unique and new, but this practice used only in the system of MBA education and in segment of basic education. All of these reasons made us to look for new tools for increasing the competitiveness of our university in educational market. We wanted to start the encroaching the new segment of educational market-AVE (Advanced Vocational Education).

After the monitoring the situation on the labour market we have created the conclusion that it would advisable to make an agreement with the Western university which had rich experience in AVE program in this field. Our university has cooperated with the Swedish Agency (SIDA) for long period and SIDA has a long list of the AVE program for internal needs. So in 2006 year we signed the agreement with Swedish Folkuniversitet to get knowledge how to create and to realize the AVE project. The topic of our AVE program was "Economic analytics". The main goal of this project was to train the specialists for banking. This AVE program was occurred for 40 credits and had the following conditions:

- The model and style of education should be Swedish
- The trainers should meet the requirements of the students and to be certified by Swedish partner
- The training should be in close connection with business
- There program should include 2 trainee periods (one in Russia and the second in Sweden)
- As the result double diploma of AVE

## IMPLEMENTATION

It was a rather long period of preparation for this project, it took us much time to arrange all the details but in 2007 we started the program. These are the main stages of our project in table 1.

We started our activity by the monitoring the labour market in Moscow region. After this we evaluated the list of Companies (banks and relevant companies) in that market. The next step was collecting questionnaire for them to find out what kind of specialists the market needs. Analyzing the needs of employers we definite the title of AVE program: "Economic analytics". Very important point was to analyze the competition between the educational companies (Universities) in Moscow region. We surprised a lot to find out that the competition had not been still very strong. The next step was learning the Sweden experience in organization AVE program, the coordinator and administrator of this program were sent to Sweden. They got the special certificate. The draft of study plan was completed, it consisted of 3 parts (fig.1).

### **Market block includes:**

- Marketing
- Management
- Project management

### **General block includes:**

General disciplines like the probability theory, finance, currency and banking, financial management

### **The special block includes:**

Several very specific disciplines like: financial risk, financial math, financial analyze, financial derivatives financial dealing, business correspondence and etc.

And after that we started very important stage of selection of trainers. The criteria for them were:

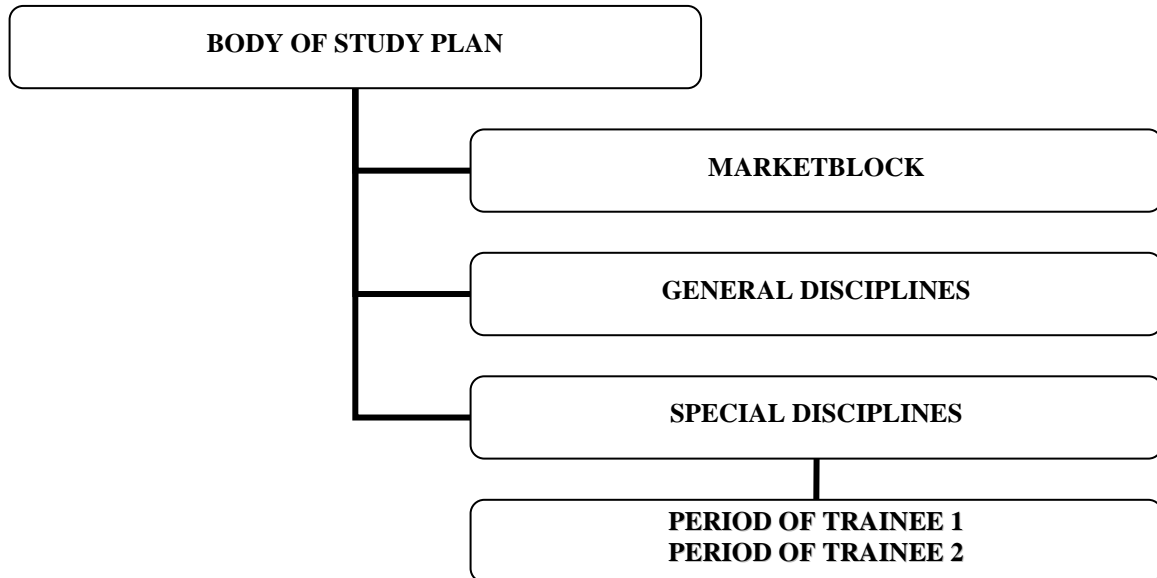
- Rich experience in education ( to deal with adults)
- Rich experience in business
- Flexibility
- Amiable and open
- "Member of the team"
- Fluent in English

All of the trainers should use main teaching methods for our program

- Case study

- Role play
- Interactive form of education
- Theoretical knowledge combined with practical learning

**Figure 1: Study plan**



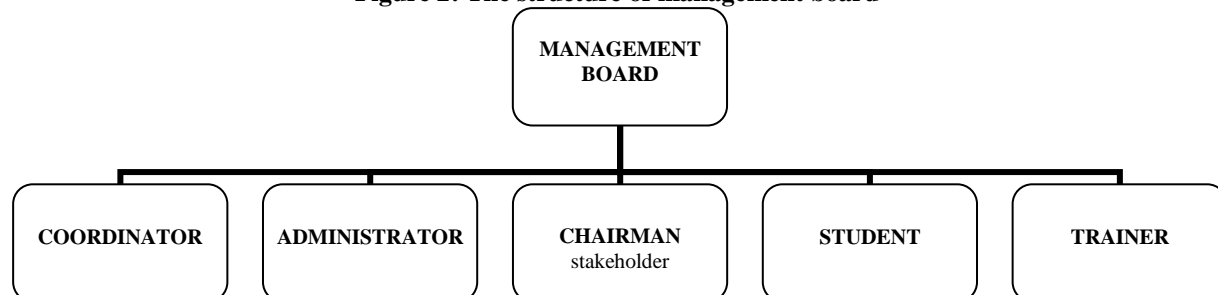
The students need to be motivated to make permanent job during the course: case presentations, research, home assignments, internet search and communications, written tests, group projects discussion and preparation.

Final confirming the candidatures for trainer was made after their examination by Swedish partner. Every trainer created his own study program and after this went to Sweden for study visit. And during this time we were recruiting the students for the pilot group. There were several criteria for them:

- To graduate from the institute (high technical education)
- To work at relevant field
- To wish such studying

We were ready to start our pilot program. At the very beginning we created the management board of our program, there were 5 members. It is quite unique position for Russian style of education (fig.2).

**Figure 2: The structure of management board**



During the period of study the students evaluated their skills and knowledge and the trainers. It helped the management body to analyze the progress. After the first part of study the students went for their first training period to Russian company, and after finishing theoretical course if they wanted they could go to the Swedish company for the second training period.

In the end of study the students have the task to write the final diploma work and to defend it in the expert council consisted of Russian and Swedish members. As the result they got double diploma (the diplomas of Swedish Folkuniversitet and Russian from Moscow State Forest University).

**Table 1: Main stages of AVE program.**

| Stage | Activity   |
|-------|--|
| 1     | Monitoring the labour market in Moscow region. Consumer study in the labour market.<br>Revelation the list of Companies in that market |
| 2     | Collecting questionnaire   |
| 3     | What kind of specialists does the market need? Analyzing the needs of employers  |
| 4     | Analyze the competition between the educational companies (Universities) in Moscow region.   |
| 5     | Learning the Sweden experience in organization AVE program   |
| 6     | Selection of trainers  |
| 7     | Developing the study plan for the AVE program  |
| 8     | Training the trainers in Sweden.   |
| 9     | Evaluation the competence of the trainers.<br>Training the trainers in Russia  |
| 10    | Recruitment of students to the pilot group   |
| 11    | AVE program in process. Training the pilot group   |
| 12    | Implementation of the final report.<br>Project evaluation report   |

## CONCLUSIONS

AVE development and support is one of the ways of universities' internationalization and collaboration. Educational activity today needs to be focuses on an international perspective. At the age of globalization national university integrate into international educational space, aimed to developing of the social partnership and creation the new employment possibilities. These transformations are taking place thanks to academic exchanges, foreign students extended usage of international educational materials, and because of growing demand of labour market for internationally oriented high educated and skilled people.

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# THINKING STYLES OF ENTREPRENEURS MATTER IN INNOVATION: A STUDY OF TECHNOLOGY- BASED FIRMS IN CHINA

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## ABSTRACT

*In an increasingly complex and volatile business environment, the growth and development of a firm depend on its ability to introduce innovation over time. This research examines the relationship between thinking styles of entrepreneurs and innovation in Chinese technology-based firms. In a mail survey of 66 technology entrepreneurs, results showed that only liberal style of entrepreneurs was related positively to innovation. Implication for practices was discussed.*

## INTRODUCTION

In an increasingly complex and volatile business environment, the growth and development of a firm depend on its ability to introduce innovation over time (Dougherty & Hardy, 1996; Penrose, 1995). Many studies have demonstrated that organization processes and leadership are conducive to innovation (Chandler, Keller, & Lyon, 2000; Elenkov, Judge, & Wright, 2005; Elenkov & Manev, 2005), but there is an increasing attention to look into individual entrepreneur's ability to innovate (see Baumol, 2006; Marvel & Lumpkin, 2007). Nevertheless, these studies focus on entrepreneurs' relative ability to create, and fail to study their preferences for using different thinking styles, which ultimately result in varying degree of innovation (Sternberg, 1997; Stewart et al., 1998).

There has been extensive research on the use of thinking styles but they focused on purely students and teachers. For instance, previous research that investigated thinking styles has considered from the educational and psychological perspectives in a number of cultural groups, including Hong Kong, Mainland China, the Philippines, and the United States (e.g., Balkis & Isiker, 2005; Bernardo, Zhang, & Callueng, 2002; Dai & Feldhusen, 1999; Zhang, 1999; Zhang, 2001; Zhang & Sternberg, 1998). This narrow focus limits the application of different thinking styles in the entrepreneurial context. It would be more intriguing to embrace such differences and consider how they relate to innovation. This line of research also serves to address the recent call for more research in entrepreneurial cognition (e.g., Gaglio & Katz, 2001; Krueger, 2003; Mitchell & Chesteen, 1995; Mitchell et al., 2000; Mitchell et al., 2002). Thus, this study seeks to examine the relationship between thinking styles of entrepreneurs and innovation in Chinese technology-based firms.

This research contributes to the growing body of literature on transitional economies by examining the role of thinking styles of Chinese entrepreneurs in innovation. It suggests that these thinking styles can make a difference in innovation. Goldsmith (1987) identified creative ability and creative style as separate constructs. In a similar vein, entrepreneurs not only differ in their relative ability to create, but also possess different thinking styles with which they prefer to innovate. If there is any particular thinking style that can help innovation, entrepreneurs can learn and practise thinking in a particular way, resulting in more innovation. This insight also extends the current state of knowledge about thinking styles to the entrepreneurial context.

# THEORETICAL UNDERPINNINGS

Innovation is an iterative process initiated by the perception of a new market and/or new service opportunity for a technology-based invention, which leads to development, production, and marketing tasks striving for the commercial success of the invention (OECD, 1991). From this perspective, innovation is viewed here as a multistage process, with different activities and different individual behaviors necessary at each stage (Scott & Bruce, 1994). It occurs along the dimensions of (a) new businesses, (b) new products/services, (c) new processes, (d) new markets, and (e) new ways of acquiring resources.

To date, a number of approaches have been used to understand what contribute and hinder innovation at and across multiple levels of analysis (see Gupta, Tesluk, & Taylor, 2007 for review). For example, Elenkov and Manev's (2005) work shows that leadership factors have strong effects on top-management innovation influence. Strategic leadership behaviors were found to have a strong positive relationship with executive influence on both product-market and administrative innovations (Elenkov, Judge, & Wright, 2005). Still other scholars (Anderson & West, 1998; Bain, Mann, & Pirola-Merlo, 2001; Cardinal, 2001; Damanpour, 1991; Oldham & Cummings, 1996; Sosik, Kahai, & Avolio, 1998, 1999) have emphasized the need for leaders to support creative efforts. Supervisory support and reward system support were also found positively related to innovative culture (Chandler, Keller, & Lyon, 2000).

At the individual level, entrepreneur's ability to innovate has increasingly received attention. For instance, Baumol (2006) indicated that independent entrepreneurs were more likely to account for the most fundamentally novel innovations. Marvel and Lumpkin (2007) also found that innovation radicalness was associated with technology entrepreneurs' formal education and prior knowledge. These behaviors are indicative of a level of creative ability possessed by entrepreneurs. However, among the literature focusing on the central role of individual entrepreneurs in innovation, entrepreneurial cognition emerges as a more promising area (e.g., Baron, 2004, 2006; Gaglio & Katz, 2001; Ko & Butler, 2006, 2007; Krueger, 2003; Mitchell & Chasteen, 1995; Mitchell et al., 2000; Mitchell et al., 2002; Mitchell et al., 2004; Mitchell et al., 2007; Ward, 2004).

Cognition is defined as "a forward-looking form of intelligence that is premised on an actor's beliefs about the linkage between the choice of actions and the subsequent impact of those actions on outcomes" (Gavetti & Levinthal, 2000: 113). In entrepreneurial cognition research, some scholars suggest that entrepreneurial decision is made upon some cognitive scripts, which include arrangements, ability, and willingness scripts of an individual in question (Mitchell, et al., 2000). Arrangement scripts entail the contacts, relationships, resources, and assets necessary to form a new venture. Ability scripts are about what capabilities, skills, knowledge individual entrepreneurs have to diagnose their ventures, apply learned experience, and create opportunities. Willingness scripts are commitment to venturing and receptivity to the idea of starting a venture, and therefore include actionable thoughts on opportunity seeking with such behaviours as openness, orientation, and drive toward seeking out new situations and possibilities and trying new things.

## Thinking Styles

While cognitive scripts (see Mitchell et al., 2000) provide a very important theoretical foundation for entrepreneurial cognition research, it fails to account for varying representation and processing of information in the individual mind that can help explain why some people and not others are able to innovate. In managing daily activities, people choose their own preferred styles to represent and process information. These different ways of governing or managing the activities are called "thinking styles" (Sternberg, 1988).

Because the ways individuals govern or manage their daily activities are just like the ways governments govern the societies, Sternberg (1997) used the metaphor "mental self-government" to illustrate the different preferred ways of thinking. It serves to describe how individuals prefer to use the cognitive abilities they possess, rather than the actual content of our thinking process (Sternberg, 1997). It also involves varying representation and processing of information in the mind given different situations and different times (Balkis & Isiker, 2005).

In mental self-government theory, Sternberg (1997) postulated 13 different thinking styles that fall along five

dimensions: functions, forms, levels, scopes, and leanings as applied to individuals. The first dimension is the function of mental self-government, including legislative, executive and judicial thinking styles. An individual with a legislative thinking style enjoys being engaged in tasks requiring creativity. An individual with an executive thinking style is more concerned with performing tasks with clear instructions. An individual with a judicial thinking style focuses his/her attention on evaluating the results of other individuals' activities.

The second dimension of the mental self-government form includes hierarchical, oligarchic, monarchic and anarchic thinking styles. An individual with a monarchic thinking style enjoys being engaged in tasks that allow him/her to focus fully on one thing at a time. An individual with a hierarchic thinking style prefers focusing his/her attention on tasks according to an order of importance. An individual with an oligarchic thinking style prefers to work on several tasks within the same period of time without setting any priority. Finally, an individual with an anarchic thinking style enjoys dealing with tasks that will grant him/her flexibility as to what, where, when, and how he/she works.

The third dimension is the level of mental self-government which includes global and local thinking styles. An individual with a global thinking style focuses on the whole and abstract ideas. An individual with a local thinking style enjoys dealing with tasks which allow him/her to focus on specific aspects of an issue.

The fourth dimension includes the internal and external thinking styles which lie in the scope of mental self-government. An individual with an internal thinking style enjoys being engaged in tasks which allow him/her to work independently. An individual with an external thinking style prefers to deal with tasks which allow interaction with other individuals.

The fifth dimension is the tendency of mental self-government which includes liberal and conservative thinking styles. An individual with a liberal thinking style enjoys dealing with tasks which present novelty and ambiguity. A person with a conservative thinking style has a tendency to perform his/her duties according to the approved rules and procedures.

In examining the usefulness of these measures, empirical research has been conducted in educational settings. For instance, students from higher socioeconomic status families scored higher on the legislative style than did students from lower SES families (Sternberg & Grigorenko, 1995). Students in natural science and technology tended to think more globally than those studying in social science and humanities (Zhang & Sachs, 1997). Teachers with long experience used more executive, local, and conservative styles than those teachers who had taught for a short time (Sternberg & Grigorenko, 1995). Zhang and Sternberg (1998) showed that higher achieving Hong Kong university students tended to score significantly higher on the executive, local, and conservative styles, while higher achieving mainland Chinese students scored significantly lower on the executive style.

While the concepts of thinking styles were applied to the educational setting in prior research, it could be extended to entrepreneurial domain. Teachers and students have different preferred ways of thinking, and so do the entrepreneurs. Stewart et al. (1998) suggested that entrepreneurs with comparable abilities to innovate might prefer widely different styles. Applying Kirton's (1989) Adaption-Innovation Theory, Goldsmith and Kerr (1991) showed that entrepreneurs tended to prefer a more innovative style in solving problems and making decisions than managers. However, there are different thinking styles with varying characteristics, according to Sternberg's (1997) mental self-government theory. It is therefore worthwhile to examine if any particular style(s) of thinking can enhance innovation. Thus,

***Hypotheses: Thinking styles of entrepreneurs (legislative, executive, judicial, monarchic, hierarchic, oligarchic, anarchic, global, local, internal, external, liberal, and/or conservative) are related positively to innovation.***

## METHODS

### Sample

I tested the hypotheses in a mail survey of 66 technology entrepreneurs from Guangdong Province of China, primarily in Guangzhou and Shenzhen cities where majority of Guangdong's technology firms are located. Late-wave analyses were conducted to evaluate non-response bias. Results indicated that late respondents did not differ significantly from the early ones in terms of demographic characteristics.

I received 63.6 percent of responses from business owners or entrepreneurs, 24.2 percent from CEOs, and the rest from directors (12.1%). On average, they were 37 years old. Their average industry experience was 10.7 years. Seventy-four percent (74.2%) attained tertiary education or above. Nearly two-thirds (64.6%) had varying degree of involvement in R&D. All this indicated that respondents were knowledgeable about the issue under study.

Of the responding establishments, 39.4 percent engaged in the information technology field, 21.2 percent in electronics industry, 10.6 percent in environmental products, 7.6 percent in telecommunication, and the rest from biotechnology, pharmaceutical, materials, and electric industries. The average firm size and age were 106 full-time employees and 7.0 years respectively. Mean R&D expenses as a percentage of sales were 19.6 percent. On average, 41.3 percent of firm's total full-time employees were engineers or scientists whereas 45.9 percent of management had engineering or science background. A total of 77.3 percent of establishments were independent firms while the rest (22.7%) were corporate divisions or subsidiaries. Eighty-five percent (84.8%) were privately-owned and the rest were joint venture (6.0%), state-owned (4.5%), wholly foreign owned enterprise (3.0%) and others (1.5%) respectively.

## Measures

The conventional method of back-translation was used to translate the measures from English to Chinese. I refined the measures to ensure their relevance to the Chinese context upon the results of pilot study. To minimize any bias associated with the retrospective data collection, I restricted target respondents to entrepreneurs/chief executive officers, and the recall time frame to three years in the questionnaire design.

The thinking styles, independent variables, were assessed from the Sternberg-Wagner Thinking Styles Inventory (1997) on a seven-point Likert scale, ranging from "not at all well" (1) to "extremely well" (7). Respondents indicated how well the statements describe themselves. Some sample statements included "when making decisions, I tend to rely on my own ideas and ways of doing things" (legislative style); "when discussing or writing down ideas, I follow formal rules of presentation" (executive style); "when discussing or writing down ideas, I like criticizing others' ways of doing things" (judicial style); "when talking or writing about ideas, I stick to one main idea" (monarchic style); "I like to set priorities for the things I need to do before I start doing them" (hierarchic style); "when I undertake some tasks, I am usually equally open to starting by working on any of several things" (oligarchic style); "when I have many things to do, I do whatever occurs to me first" (anarchic style); "I like situations or tasks in which I am not concerned with details" (global style); "I like to control all phases of a project, without having to consult others" (internal style); "I enjoy working on projects that allow me to try novel ways of doing things" (liberal style). The Cronbach's alpha values of all these scales were above .70.

These measures of thinking styles, Sternberg-Wagner Thinking Styles Inventory (1997), exhibited good reliability and validity. Internal validity of the measures has been demonstrated in many studies (e.g., Bernardo, Zhang, & Callueng, 2002; Dai & Feldhusen, 1999; Zhang, 1999; Zhang & Sternberg, 1998) conducted among students and teachers from a number of cultural groups, including Hong Kong, mainland China, the Philippines, and the United States. External validity of the measures also has been obtained through examining the nature of thinking styles in relation to Biggs' (1992) concept of learning approach (Zhang & Sternberg, 2000), Holland's (1973, 1994) notion of career personality types (Zhang, 2000), Costa and McCrae's (1992) big five personality traits (Zhang, 2002a), and Perry's (1999) construct of cognitive development (Zhang, 2002b).

Innovation, a dependent variable, was a composite measure computed by adding standardized values of R&D spending (the percentage of total annual sales on R&D spending) and number of patents. Combining patents and R&D spending captures organizational innovation efforts more completely, with R&D spending measuring investments in innovation and number of patents indicating innovation outputs (Balkin, Markman, & Gomez-

Mejia, 2000). Another reason for this composite measure is that R&D spending and number of patents are highly correlated with each other in this study ( $r = .47, p < .01$ ).

Several measures were used as control variables. These included firm size (the natural logarithm of the number of full-time employees), origin (dummy-coded: “independent” = 0, “corporate” = 1), and firm age (in years), which were used to control for scale effects on R&D spending and number of patents (Chandler & Hanks, 1994; Cohen & Levinthal, 1990; McCann, 1991).

## Analysis

Hierarchical regressions were performed to test the hypotheses. First, the three control variables were entered as a block in step 1. Next, I entered the thinking-style variables in step 2 to examine the corresponding level of statistical significance and the amount of unique variance in innovation accounted for by thinking styles.

## RESULTS

I tested the hypotheses using hierarchical regression analyses by first introducing into the equation the block of control variables, followed by the independent variables. Control variables exhibited no effects on innovation ( $p > .05$ ). To examine the hypotheses, thinking styles were entered into the equation. Results indicated that only liberal style produced a positive and statistically significant effect on innovation ( $\beta = .70, p < .01$ ). Other thinking styles were not related to innovation ( $p > .05$ ).

## DISCUSSION AND CONCLUSION

Results indicated that only liberal style was related positively to innovation. In other words, higher preference for thinking in a liberal way will lead to more innovation. To create more new products and/or services, one should think in a liberal style, which allows an individual to go beyond existing rules and procedures, maximize change, seek situations that are somewhat ambiguous, prefer some degree of unfamiliarity in life and work, and work on tasks that involve novelty (Sternberg, 1997: 74; Zhang, 2004: 1310). This also corroborates the work of Zhang (2002c) in that liberal style is one of the manifestations of creative endeavours.

Nevertheless, such thinking styles as legislative, judicial, or global that were considered a manifestation of creative efforts in the study of Zhang (2002c) were found not related to innovation. This divergence may be due to sample difference. In Zhang’s (2002c) work, her sample was mainly freshmen studying in the University of Hong Kong, while the current study was based on Chinese technology entrepreneurs. According to Sternberg (1997), legislative people like to “come up with their own ways of doing things, and prefer to decide for themselves what they will do and how they will do it” (p. 20). Judicial people like to “evaluate rules and procedures, and prefer problems in which one analyzes and evaluates existing things and ideas” (Sternberg, 1997: 21). Global people like to “deal with relatively large and abstract issues. They ignore or don’t like details, and prefer to see the forest rather than the trees” (Sternberg, 1997: 24). It is plausible that technology entrepreneurs are more down-to-earth sort of people who create new products, services, and technologies in the market. They are never comfortable with staying in their own ivory towers by thinking about methodology, evaluating existing things, or focusing on abstract issues. People with these three thinking styles may tie up with creativity but not innovation in a practical sense. This is also a good reason to explain why internal people who tend to “be introverted, task-oriented, aloof, and sometimes socially less aware” (Sternberg, 1997: 25) are not related to innovation in this study.

This research also suggests that an executive or conservative entrepreneur has no relationship with innovation. Executive people like to “follow rules and prefer problems that are pre-structured or prefabricated. They like to fill in the gaps within existing structures rather than to create the structures themselves” (Sternberg, 1997: 21), while conservative people like to “adhere to existing rules and procedures, minimize change, avoid ambiguous situations where possible, and stick with familiar situations in work and professional life” (Sternberg, 1997: 26). These styles have nothing to do with innovation because of their low tolerance for change.



In addition, entrepreneurs preferring monarchic, hierarchic or local thinking styles do not relate to innovation. A monarchic person is “someone who is single-minded and driven ... not to let anything get in the way of his or her solving a problem” (Sternberg, 1997: 22), while a hierarchic person “has a hierarchy of goals and recognizes the need to set priorities, as all goals cannot always be fulfilled, or at least fulfilled equally well” (Sternberg, 1997: 23). Local people like “concrete problems requiring working with details” (Sternberg, 1997: 24). However, innovation is about creation, which usually comes from “cross-over” or bisociation (Koestler, 1976), and draws from different perspectives and disciplines. Given its complexity and unstructured problem-solving in nature, innovation is never an easy task if one is single-minded, well-structured or detail-minded.

Lastly, the oligarchic, anarchic, or external thinking styles have no relationship with innovation. The oligarchic person likes to “do more than one thing within the same time frame ... but ... be motivated by several, often competing goals of equal perceived importance” (Sternberg, 1997: 23). The anarchic person likes to take what seems like a random approach to problems, reject systems, and fight back at whatever system they see as confining them (Sternberg, 1997: 23). Both oligarchic and anarchic people usually find themselves in busy time schedule, without much time to think about how to connect the dots (Baron, 2006; Ko & Butler, 2006). For external people, they tend to “be extroverted, outgoing, and people-oriented. Often, they are socially sensitive and aware of what is going on with others. They like working with other people wherever possible” (Sternberg, 1997: 25). Given the widespread of dysfunctional competitive behaviours in China (Ahlstrom & Bruton, 2001; Li & Atuahene-Gima, 2001), it is plausible that entrepreneurs prefer not to talk with others about their trade secrets, which potentially lead to innovation.

The above results are informative for both entrepreneurs and researchers with substantial interest in innovation. Entrepreneurs using liberal style are more likely to enhance innovation, which is critical to the viability of organizations in an increasingly complex and volatile business environment, like China. Entrepreneurs can practise thinking in a liberal way by asking themselves: “Are there any novel ways of doing this?” “Can I change routines to improve the way tasks are done?” “Can I challenge old ideas or ways of doing things and seek better ones?” “What would it be if I look from a new perspective?” By doing so, entrepreneurs can raise the awareness of their thinking styles, deliberately focusing on liberal way, which can potentially lead to more innovation.

Researchers also can benefit from this research, which is one of endeavours to answer the call for more entrepreneurial cognition research. Other than innovative ability, preference for thinking in a liberal style is equally important in innovation research, which supplements the widely used Adaption-Innovation Theory (Kirton, 1989) by applying Sternberg’s (1997) mental self-government theory. Although this study re-emphasizes the importance of centrality of individual entrepreneurs in innovation, there is no intention to downplay the roles of other individual, organizational and contextual factors that may contribute to innovation. Nevertheless, research on how individual represents and processes information in the mind given different situations and different times can add value to our understanding of innovation at the individual level because the cognitive processes of entrepreneurs “are likely to have strengths and weaknesses in various competitive environments” (Alvarez & Busenitz, 2001: 757).

When interpreting the results of the study, readers should be aware of certain limitations. Since a causal model was estimated on cross-sectional data in this study, one should be careful not to over-interpret the results with regard to causality. Future research should establish the causal claim that liberal style is related to innovation. To this end, field experiments and longitudinal research designs might be applied. Such designs may be more conclusive about the causal linkages among the constructs. Also, another concern is the generalizability of results. Other than the limited sample size and low response rate, the data in this study were drawn from a single research context that was bounded by industry considerations and geography. Care should be taken in generalizing these results to entrepreneurs in other settings. Future research can replicate this study and see if there is any convergence of the findings.

With self-report measures, one cannot entirely rule out the possibility that common method bias may have augmented the relationships between constructs (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The relationships between the predictor (thinking styles) and outcome (innovation) may include common method variance. The measures used to tap each of these constructs were taken from one source only (the entrepreneur), which means the answer to one item may influence the answers to others. These associations could therefore be

attributed to a response bias on the part of the entrepreneur. To address this issue, a Harmon's (1960) single-factor test was conducted. Results showed that no single factor emerged from the factor analysis, though the absence of a single factor is not evidence that the measures are free of common method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Nevertheless, a key informant approach is deemed appropriate in entrepreneurship research because entrepreneurs are more competent and knowledgeable to report the information of interest in this study (Kumar, Stern, & Anderson, 1993). Moreover, given a single-blind research technique applied to measure thinking styles and innovation, it seems unlikely that respondents could structure their responses (Doty, Glick, & Huber, 1993). Thus, the likelihood of common method variance is relatively small in this study.

Apart from the above possible avenues for further research, the findings of this study point to several new research agendas. Entrepreneurial cognition research can apply theories and concepts of cognitive science and neuroscience to explore and understand how representations and processes of information actually work in an individual mind that can lead to more innovation. Another promising research agenda is to examine what factors that may help entrepreneurs effectively activate their preference for liberal style of thinking. All this can add value to our understanding of innovation at the individual level, and ultimately create benefits for the mankind.

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# **POSITION OF LEADERS IN THE PROCESS OF TRANSITION TOWARDS MARKET ECONOMY IN SERBIA**

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## **ABSTRACT**

*Leaders have a great role in conducting the process integration of Serbia into EU, more exactly, concerning the development of qualitative economic and political relations with the countries-members of the EU. Leadership is the process of guiding and influencing the activities that are relevant for the realization of objectives of group members, and therefore we have indicated its importance in economic, political, non-governmental and other organizations in Serbia, whose activities contribute to the integration into the EU. In order to highlight the mentioned great importance of leaders, we have analyzed their role and contribution to the development of the economic system of Serbia, wherein they have been presented at the main carriers of the process of transition towards market economy. Besides that, we have pointed out the importance of participation of leaders in fulfilling the basic conditions for our country to become a member of the EU, related to the solution of complicated problems, as well as for the economic system and for the intensity of carrying out the institutional reforms.*

## **INTRODUCTION**

Facing challenges of the 21<sup>st</sup> century, for which it has been said, that it is “the century of changes” initiated by the tendencies of globalization, deregulation and liberalization, the political and economic leadership of Serbia will have a serious task to initiate economic potential in order to achieve competitiveness. That process would be impossible to achieve without industrial and developmental integration with the regional countries, bearing in mind the importance of synergetic effects that will be achieved in that way in certain economic activities.

For the recovery, development and return of the Serbian economy to the international market, the development of relations with the EU countries is of strategic importance and it is determined by the following reasons:

- The EU represents a significant market potential,
- The EU market is characterized by high purchasing power and the population able to pay demands.

From the standpoint of formulating the strategy of foreign-economic relations, the EU market potential cannot be treated simply as a trade or even only economic block, but as a highly integrated and homogenized space founded on simple values, political, developmental and geo-strategic postulates, whereby we should emphasize:

- The achieved high level of functional integration accomplished by long-term stimulation and support of the flows of goods, services, people, knowledge, capital and information;
- High level of connection in the field of communications, infrastructure, culture and public services;
- Established high level of institutional cooperation, by developing a network of supranational institutions, in the strategically sensitive field of foreign policy, security, environmental protection, monetary and economic policy;
- Compatibility of technical, technological, sanitary, health, safety and administrative standards as well as homogenization of the business regime of companies and banks;
- High level of intraregional market correlation.

In order to provide economic connection of our country with the European market defined in this way, it is necessary to carry out radical changes, more exactly, the reforms of economy in order to adjust it to the market principles and the international systems of quality.

Besides that, the process of integration of Serbia into the EU will depend on the success of transition of economy, bearing in mind that the fulfillment of economic criteria is a significant prerequisite for gaining membership. Implementation of such big and radical changes in the economic policy and economic organizations in our country can be realized efficiently, only if it is managed by the people who possess leadership abilities and skills, and who have energy to convey their vision into reality.

## **STARTING THE PROCESS OF TRANSITION IN SERBIA**

The role of a leader in the transition of economy implies initiating and carrying out changes that will enable the establishment of the market system, new ownership structure, competition and other changes, in order to improve the performances of economy and its connection with the international market.

Bearing in mind that one of conditions for gaining membership in the EU is the reform of economic system, Serbia started the process of transition of its economic system towards market economy in 2000. Even during the first year, the EU issued positive comments about that process. Thus, the European Bank for Reconstruction and Development proclaimed Yugoslavia to be the most successful country in transition, out of 27 countries of the Southeast Europe in 2001, whereby in the range of grades from one to four, it got the grade three for privatization, for liberalization of prices and foreign-trade exchange, grade two for infrastructure development, and grade one for restructuring the economic and banking system. The fact that the FRY entered the world of transition as the last country on the continent, which opted for that transitional stage into the capitalism, speaks also in favor of the importance of obtained positive grades.

The role of political leaders was especially highlighted in the processes of reforming the economic system of our country, considering the fact that only they have a legal authority to create economic policy, as well as the fact that they lead the foreign policy, influences considerably the development of economic relations and cooperation with foreign countries.

However, within a scope of the leadership in economic organizations, and the leadership which dominates on the political stage, it is possible to identify various types of leaders, characterized by various attributes and styles of behavior. Taking into consideration that the process of transition is associated with carrying out a great number of radical and complex changes, there is an understanding represented in the literature that the main carriers of transition the so-called leaders of changes, i.e. the leaders reformers. Their key tasks are:

- To motivate the followers by increasing the level of cognition of importance and value of set of goals,
- To explain to the followers the possibilities of adjusting their personal interests with the general public interests,
- To create the atmosphere of trust and to convince the followers of the necessity of relying on one's own strength.

Beside the reformist, more exactly transforming leadership, one cannot neglect the implication of charismatic leadership on the reform of economy, especially bearing in mind that this type of leadership has often been related to the political leadership. The following table demonstrates that the charismatic leaders have an important role in the process of transition and the basic differences between charismatic and non-charismatic leaders have been shown.

Based on the analysis of the characteristics of charismatic leaders it can be clearly observed from the table that their main role in the process of transition is to initiate changes, which they manage by a strong vision and personal expertise, and thereby transform the system of values and understanding of the followers in order to include them in their implementation. The main motive, that moves those leaders to initiate transitional changes,

is their dissatisfaction with the status quo, which refers to the low economic efficiency, unreasonable use of the production factors, unfavorable economic structure, unfavorable relation between small, medium-sized and big companies, high unemployment.

Duration and complexity of the process of transition in the world have differed between certain countries, depending on the level of development of their economic systems, more exactly the seriousness and the scope of reforms that had to be carried out.

**Table 1.- The main behavioral differences between charismatic and non-charismatic leaders**

|  | <i>Charismatic leader</i>   | <i>Non-charismatic leader</i>  |
|--|---|--|
| Relation towards status quo                            | Essentially against status quo & strives to change it   | Essentially agree with status quo and strives to maintain it                     |
| Goal   | Idealized vision, considerably different in relation to status quo  | Goal is not essentially different than status quo                                |
| Disposition of followers                               | Mutual prospects and idealized vision make him popular and honest hero worthy of identification and imitation | Mutual prospects make him popular  |
| Expertise  | Expert in using non-conventional means to overcome the existing situation                                     | Expert in using available means to achieve goals in the existing situation       |
| Feeling for environment (attitude towards environment) | High need to know the environment (to change status quo)  | Small need to know the environment (wants to maintain status quo)                |
| Articulation   | Strong articulation of vision and motivation  | Weak articulation of goals and motivation  |
| The basis of power                                     | Personal power, based on expertise, (expert power), respect and admiration                                    | Power of position and personal power (based on prizes, expertise and similar.)   |
| Relation towards followers                             | Elitist, entrepreneurial, exemplary, transforms people so to accept radical changes                           | Egalitarian, based on consensus or directive imposes his own attitudes to people |

Source: Jay A. Conger and Rabindra Kanungo, “*Toward a Behavioral Theory of Charismatic Leadership in Organizational Settings*“, Academy of Management, San Francisco, 1987, pp. 637- 647

In the past seven years, the leaders in Serbia have carried out numerous reforms in order to establish macroeconomic stability and viable and stable economic development, to restructure big systems, to privatize companies and join the EU that includes various legislative adjustments in all domains of economy and society.

In the process of managing transitional changes the Serbian leadership had the first task of facing a difficult heritage, which referred to

- The economic structure formed a quarter of a century ago, and dominated by energy, raw materials, and food, with the additional consequence of foreign indebtedness;
- Non-market behavior of economic participants as a consequence of self-managing and state socialist model of economy that lasted for decades;
- And finally, difficult economic and social crises in terms of a dramatic fall of the social product and the standard of living during 90-ties, due to the break up of the former SFRY, the international sanctions, wars and numerous failures of economic and total policy.

Thereby, in order to change over to the market economy, it was necessary to achieve certain macroeconomic objectives, which referred to: the inflation, prices, export, import, balance of payments, earnings, unemployment, etc. Namely, it was necessary for the leaders to define adequate policy directions that would enable the realization of macroeconomic stability, such as:



- Anti-inflation policy
- A new fiscal policy and reform,
- Equilibration of the balance of payments,
- Income policy,
- Social program, as the set of measures for solving problems caused by the strict anti-inflation policy.

Thus, the main objectives of our economic policy include sustaining macroeconomic stability and at the same time attaining a high rate of economic growth (the average GDP growth rate for the period 2001 to 2006 was 5.3%). The market activity after 2000 has encompassed some positive processes of economic transition and reform of the tax system, labor market and social sector. There has been a stability of the exchange rate of national currency – dinar with a continual growth of foreign currency reserves, considerable deregulation of prices and international trade and better relations with international financial institutions. A considerable improvement has been made in the field of structural reforms, especially in company privatization and consolidation and privatization of banking sector that includes 350 new laws that support structural reforms.

## ACHIEVED RESULTS AND THEIR IMPORTANCE

The improvement in structural and institutional reforms in 2006 in 20 European transitional countries has been summarized by European Bank for Reconstruction and Development (EBRD). It was done with the help of transitional indicators that confirm that Serbia finished the first phase of transition successfully. The following table shows the value of EBRD indicators for Serbia for the period 2000 – 2006.

**Table 2. The values of annual EBRD indicators for Serbia for the period 2000 – 2006.**

| EBRD indicator                              | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|------|------|------|------|------|------|------|
| Liberalization of prices                    | 2.3  | 4.0  | 4.0  | 4.0  | 4.0  | 4.0  | 4.0  |
| Exchange system and trade liberalization    | 1.0  | 2.7  | 3.0  | 3.0  | 3.0  | 3.3  | 3.3  |
| Privatization of small companies            | 3.0  | 3.0  | 3.0  | 3.0  | 3.3  | 3.3  | 3.7  |
| Privatization of big companies              | 1.0  | 1.0  | 2.0  | 2.3  | 2.3  | 2.7  | 2.7  |
| Restructuring of company                    | 1.0  | 1.0  | 2.0  | 2.0  | 2.0  | 2.3  | 2.3  |
| Competition policy                          | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.7  |
| Reform of bank sector                       | 1.0  | 1.0  | 2.3  | 2.3  | 2.3  | 2.7  | 2.7  |
| Reform of non- bank financial institutions  | 1.0  | 1.0  | 1.7  | 2.0  | 2.0  | 2.0  | 2.0  |
| Infrastructure reforms                      | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| <i>Mean value of annual EBRD indicators</i> | 1.6  | 1.9  | 2.3  | 2.4  | 2.5  | 2.6  | 2.7  |

**Source: EBRD Transition Report 2006**

Comparing the average annual transitional indices of 20 European transitional economies shows that in 2006 Serbia was on the 17<sup>th</sup> place with the index of 2.7, while only Belarus, Bosnia and Herzegovina and Montenegro had worse results. Hungary, with the highest index (4), was closest to the level of developed market economies of Europe.

In 2006, Serbia was successful in two fields: in small company privatization and in the policy of competitiveness. However, there is still the biggest lag in the field of the policy of competitiveness where the indices are at the lowest level (1.7). The average improvement was made in the process of privatization of big companies (2.7), banking sector reforms (2.7) and company restructuring (2.3), while a modest result (2) was made for the economy security, non-banking financial institutions and in the field of infrastructural reforms.

After the price liberalization, with reduction of the most important price disparities which was done in phases, the inflation was reduced from 111.9% in 2000 to 17.7% in 2005, i.e. 6.6% in 2006. The key factors that the

leaders are going to consider while planning the inflation reduction in the following period will be coordinated activity of macroeconomic policies, monetary and fiscal policies and structural reforms.

The mentioned facts clearly show the success of Serbian transitional economy so far, i.e. explain the current state of affairs of the economic system whose future development will depend on the leaders' aptitude to recognize mechanisms for effective continuation of the process towards market principles.

Another important task that the leaders have will include the construction of modern material and informational infrastructure, i.e. modernization of companies in order to enhance value added per an employee. This is especially important since the process of approaching GNP *per capita* in Serbia to the revenues in the EU, except in some exceptional circumstances and in short terms, is possible only through a constant growth of productivity and competitiveness.

The changes at the political scene of Serbia in 2000 considerably changed the structure and way of functioning of its economic system. That is why the subject of the analysis in this chapter will be economic indices for the last seven years since the very change of political objectives contributed to reconsideration of the old type of economic activities, which is also a turning point to market principles, i.e. the process of huge transitional changes began.

One of the main economic growth indicators of a country is related to its GDP that presents the final result of its manufacturing activity. Graph 1 shows GDP growth in Serbia in percentages in the period 2001 – 2006. It can be seen that real economic growth in 2006 was 5.7%, which is lower comparing to 2005 when it was 6.2% and especially comparing to 2004 as the record year when it was 8.4%. The consequence of such a state is poor growth of production and growth in service sector (especially in retail and wholesale). It happened because of the reduction of the public expenditure due to the slowing down of credit activity of banks, i.e. restrictive measures of the National Bank of Serbia.

Transitional changes affected the whole structure of the economic system of our country with considerable implications on all its sectors. These changes redefined the participation of individual sectors in forming gross value added. According to the data from 2005, manufacturing industry and trade generated the biggest part of the total turnover (66.9%), gross value added (50.9%), profit (47. 7%) and employees in Serbia. This can be clearly seen in the following table that shows their proportion comparing to other sectors.

**Table 3. Economy structure of Serbia in 2005 (in %)**

| Sectors                | Turnover | GVA   | Profit | No of employees |
|------------------------|----------|-------|--------|-----------------|
| Economy                | 100.0    | 100.0 | 100.0  | 100.0           |
| Agriculture            | 2.9      | 3.7   | 2.9    | 4.8             |
| Industry               | 36.5     | 41.9  | 43.8   | 43.2            |
| Manufacturing industry | 25.9     | 30.0  | 25.1   | 36.4            |
| Civil engineering      | 5.1      | 7.0   | 6.5    | 7.2             |
| Trade                  | 41.0     | 20.9  | 22.6   | 23.1            |
| Traffic                | 7.2      | 13.9  | 17.4   | 8.8             |
| Other services         | 7.3      | 12.6  | 6.8    | 13.0            |

Source: Report on Serbian development in 2006, Republic Development Bureau, Belgrade, 2007, p.18

These results are the consequence of manufacturing industry privatization, as well as the service sector in which we have to emphasize trade, traffic and tourism. However, our country is still facing the challenges of new economic structure changes. The most prominent are: structural problems in the field of industry, dominated by traditional ways of production, low level of technical and technological equipment and low level of company competitiveness.

The favorable aspect of the economic growth in recent period has been the important growth of investments thanking to state companies' privatization. In 2006, Serbia had record sales from privatization including €1.5

billion from the sale of a mobile communications provider to Norwegian Telenor and mobile telecommunications license sale to Austrian Telecom for €320 million. Investments were also ensured by selling of Panonska bank to Italian SaoPaolo IMI for €122 million and Vojvodjanska bank to Greek NBG for €385 million. These transactions in 2006 were record ones and the total income was €3.2 billion, which was the best result since the beginning of transition.

However, the process of privatization has not been realized to the end. That is necessary to be done in order to enable market economy.

The success of privatization in Serbia is best illustrated by EBRD indicators that can help us make a comparative analysis of individual countries so that we can position our country. The following graph shows how EBRD transitional indicators moved after the big companies' privatization in Serbia, Albania, FYR of Macedonia and Slovenia. It can be seen that Serbia had a growth from 1.00 in 2001 to 2.67 in 2007. However, that is much lower comparing to other surrounding countries. The most important success in big companies' privatization is made by Hungary that has had a constant EBRD indicator of 4.00 since 2001.

High rate of unemployment that was 33% (ILO: 21%) continues to be one of the biggest challenges for Serbian economy. However, in 2006, there were no changes in the labor market. The unemployment rate increased from the average 32% in 2005 to 33.2% in 2006 while the employment decreased for about 1.5% due to the current restructuring in market sector. The real net earnings growth was considerably accelerated during the last months of 2006 as the result of governmental policy of earnings in pre-voting period. They were characterized by the average growth of 11.6% (2005: 6.4%). At the same time, manpower productivity rose for 13.5% (2005: 9%) which is, most probably, rather the result of reducing the number of employees due to restructuring than enhanced productivity.

One of the possible ways for the unemployment problem solving and improving economic competitiveness of Serbia present FDI (foreign direct investments), that have an important place for new job openings, export enhancement and improvement of corporative management. In last two years, the investment climate in Serbia has considerably improved which resulted in FDI enhancement that amounted to USD 4.4 billion in 2006. The largest part of FDI was in postal activity and telecommunications (28.3%), manufacturing industry (18.2%) and financial intermediary services (36.8%).

Foreign direct investments in Serbia in the period 2000 – 2006 amounted to net USD 7.96 billion. The following graph presents the participation of individual countries in FDI in Serbia (in percentages) that brought the biggest amount of money.

## CONCLUSION

According to the analysis of the main indicators of Serbian economic growth we can conclude that, beside some improvements in the period 2001-2006, there is still no macroeconomic stability, that the process of economy restructuring is harder than planned, that domestic accumulation is minimal and pressures on personal and public expenditure are far above manufacturing possibilities of the economy.

Thus, the strategy of economy development should base upon:

- Change of GDP usage in favor of investments in fixed funds,
- Maintaining a dynamic and sustainable economic growth,
- Reduction of the public expenditure share in GDP
- Monitoring current balance of payments so that it will not affect the foreign debt,
- Sustaining price stability – all in conditions of liberalized international trade and enhanced price liberalization (monopoly elimination).

In the next five years, Serbian economy should make sure that the value of annual export will be enhanced from present \$3.8 billion to over \$10 billion. Such an improvement is possible only if the competitiveness of Serbian economy become significantly better and with the full benefits in relation with the process of approaching the EU and WTO, as well as with much more effective usage of Free Trade Agreement and co-operation with

neighboring countries.

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# **INTERNATIONAL INITIATIVE IN BIOLOGICAL MEDICAL SUPPLY: A PARTNERSHIP IN INTRAVENOUS IMMUNOGLOBULIN PRODUCTION**

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## **ABSTRACT**

*The growth and use of medicinal biological regimens since 1950 are exponential. This fact necessitates new production strategies and partnerships to meet a price sensitive demand for products such as Intravenous immunoglobulin. Intravenous immunoglobulin (IVIG) is a medicinal biological that is used to treat multiple diagnoses, such as Kawasaki's Disease. International collaboration on IVIG production is not a common occurrence except between technologically similar and medically mature and experienced countries (such as between the USA and Austria by the Sandoz Corporation). This is due to governmental regulations and issues regarding purity of the blood based IVIG product. This paper evaluates the following questions: 1) Can a partnership in IVIG production develop between an USA based company and an India based company? And 2) Can the IVIG product developed through the USA-India partnership be competitive in the global marketplace given the governmental, safety, and consumer perception barriers?*

## **INTRODUCTION**

International collaboration in the business of healthcare and healthcare product manufacturing is commonplace among developed and medically sophisticated nations. As a growing industry niche, medical tourism has established itself as an option for people residing in high medical cost nations, as in the United States, to seek medical procedures in developing nations such as cardiac surgery in India and plastic surgery in Mexico and Thailand. Collaborative international medical product processing and/or manufacturing, in this case a biological pharmaceutical, Intravenous Immunoglobulin (IVIG), is commonplace between developed and medically sophisticated nations. However, biological pharmaceutical processing is rare as a collaborative business venture between developed and underdeveloped nations. In this manuscript the medicinal background of IVIG is reviewed, the key elements of a U.S. and Indian business venture are detailed, and the socio-cultural barriers of the marketplace as it pertains to the IVIG processing venture are explored.

## **MEDICINAL BACKGROUND OF INTRAVENOUS IMMUNOGLOBULIN**

IVIG is a biological, namely a blood based product, delivered to appropriate patients through an intravenous line directly into the blood stream. IVIG contains heightened levels of antibodies extracted often from a thousand or more donors' blood plasma. IVIG was first used to treat immune deficiency in 1952. (Scheinfeld, 2008) Treatment regimens with IVIG fall into three major patient categories of diseases; 1) Immune system compromising diseases or syndromes; 2) autoimmune diseases including chronic inflammatory (Gern, 2002; Nimmerjahn and Ravetch, ) conditions; and 3) Highly acute infectious diseases. Typically, IVIG builds in the patient's system to reduce and then negate inflammation, which lessens the acuity of disease

in the patient (Sirigam, et. al., 2006) through the Fc receptor or by reacting with T and B cells and monocytes. (Bayry, et. al., 2003)

IVIG, according to Scheinfeld, serves as a critical treatment component of the following U.S. Food and Drug Administration (FDA) approved condition and a rather lengthy list of off label conditions:

“The FDA has approved the use of IVIG for the following 6 conditions:

- Primary immunodeficiencies
- Immune-mediated thrombocytopenia
- Kawasaki disease
- Hematopoietic stem cell transplantation in patients older than 20 years (Gamimune-N only)
- Chronic B-cell lymphocytic leukemia
- Pediatric HIV type 1 infection

Its reported uses have been outlined by the National Guideline Clearinghouse, including the following (off-label) applications:

- Hematology
- Aplastic anemia
- Pure red cell aplasia
- Diamond-Blackfan anemia
- Autoimmune hemolytic anemia
- Hemolytic disease of the newborn
- Acquired factor VIII inhibitors
- Acquired von Willebrand disease
- Immune-mediated neutropenia
- Refractoriness to platelet transfusion
- Neonatal alloimmune/autoimmune thrombocytopenia
- Post transfusion purpura
- Thrombotic thrombocytopenia purpura/hemolytic uremic syndrome
- Infectious diseases: Conditions in which acquiring an infectious disease could be deleterious include low birth weight (i.e., <1500 g), solid organ transplantation, surgery, trauma, burns, and HIV infection.
- Neurology
- Epilepsy and pediatric intractable Guillain-Barré syndrome
- Chronic inflammatory demyelinating polyneuropathy
- Myasthenia gravis
- Lambert-Eaton myasthenic syndrome
- Multifocal motor neuropathy
- Multiple sclerosis
- Obstetrics: IVIG may be helpful for recurrent pregnancy loss.
- Pulmonology
- Asthma
- Chronic chest symptoms
- Rheumatology
- Rheumatoid arthritis (adult and juvenile)
- Systemic lupus erythematosus
- Systemic vasculitides
- Dermatomyositis, polymyositis
- Inclusion-body myositis
- Wegener granulomatosis: Successful remission induction with the use of IVIG and steroids alone as been described in a woman diagnosed with de novo Wegener granulomatosis during the first trimester of pregnancy.
- Miscellaneous

- Adrenoleukodystrophy
- Amyotrophic lateral sclerosis
- Behçet syndrome
- Acute cardiomyopathy
- Chronic fatigue syndrome
- Congenital heart block
- Cystic fibrosis
- Autoimmune blistering dermatosis
- Diabetes mellitus
- Acute idiopathic dysautonomia
- Acute disseminated encephalomyelitis
- Endotoxemia
- Hemolytic transfusion reaction
- Hemophagocytic syndrome
- Acute lymphoblastic leukemia
- Lower motor neuron syndrome
- Multiple myeloma
- Human T-cell lymphotropic virus-1–associated myelopathy
- Nephritic syndrome
- Membranous nephropathy
- Nephrotic syndrome
- Euthyroid ophthalmopathy
- Opsoclonus-myoclonus
- Recurrent otitis media
- Paraneoplastic cerebellar degeneration
- Paraproteinemic neuropathy
- Parvovirus infection (general)
- Polyneuropathy, organomegaly, endocrinopathy, M-protein, and skin changes (POEMS) syndrome
- Progressive lumbosacral plexopathy
- Lyme radiculoneuritis
- Rasmussen syndrome
- Reiter syndrome
- Acute renal failure
- Thrombocytopenia (nonimmune)
- Streptococcal toxic shock syndrome
- Uveitis” (Scheinfeld, 2008)

Clearly, IVIG is an important treatment component for a vast array of medical diagnoses. Nine major companies are processors/manufacturers of IVIG and serve the United States and Europe; at least one of these companies, Sandoz in Vienna, Austria collaborates in an international venture with the United States (blood plasma donors are from the U.S.). (Scheinfeld, 2008) As a medically sophisticated biological pharmaceutical blood product, much less processing/manufacturing occurs in underdeveloped regions of the globe. This sets the stage for the business venture of interest to this manuscript, the MIT Holdings (U.S. company) and TriGenesis Lifesciences (Indian company).

## **U.S. – INDIAN BUSINESS VENTURE REVIEW**

In January 2006 the decision was made to take MIT’s pharmaceutical division into the global market focusing initially on Intravenous Immunoglobulin (IVIG) products and medical supplies. After making contacts in the Dominican Republic (DR) with the intent to sell IVIG blood products and medical supplies/equipment to the DR government and others, the search for a supplier began. MIT was interested in IVIG products

manufactured outside of the US that was World Health Organization (WHO) certified, instead of US Food and Drug Administration (FDA) approved, in order to find a product at a lower price. One of MIT's domestic suppliers introduced MIT to National BioProducts Institute (NBI) who is a manufacturer of WHO certified IVIG in South Africa. Negotiations began with NBI to buy product from them and import it into the Free Trade Zone in San Juan Puerto Rico and then ship to countries throughout the Caribbean and Latin America. MIT purchased the IVIG product (Polygam, powder) in August 2006 and stored it in space leased from Imex Zone Logistics in Puerto Rico. With product ready, MIT entered into a business relationship with the pharmaceutical company, Redifar, to purchase and sell IVIG and other medical products within the Dominican Republic.

With the relationship between MIT and Redifar established and product ready for distribution, MIT began searching for other suppliers of IVIG, this time focusing on India. A manufacturer was located in Bangalore, TriGenesis Lifesciences, who MIT accepted as an established pharmaceutical supplier since 1981 selling a wide range of pharmaceuticals and medical supplies. TriGenesis claims to have ISO 9001 certification, to follow ICH guidelines and cGLP (current Good Laboratory Practices), and to have "WHO-GMP Certified International Standards Manufacturing Facilities." After approximately three months of communication (including a visit from the manufacturer's representatives to MIT in Savannah), TriGenesis and MIT signed a letter of intent to enter into a joint agreement that would give MIT exclusive distribution rights to all of TriGenesis' products in the international market, except in countries where they have an already established agreement. TriGenesis began work on the local documents necessary for MIT to do business in India, prepared paperwork for registering their products with the Dominican government, and began designing the packaging and labeling for MIT. Both parties then signed a distribution agreement. In February 2006, MIT negotiated a purchase order for IVIG kits from the Dominican government for use in its hospitals. TriGenesis agreed to fill the order upon receipt of half of the payment from MIT. Several months were spent attempting to register the product in the DR and getting government approval for the purchase. By May 2007 approval from the Dominican government for the purchase had not occurred, so MIT cancelled the order from TriGenesis. MIT learned later that TriGenesis does not manufacture the IVIG product at its Bangalore facility. Instead, Harbin Sequel Bio-engineering Company, Ltd, manufactures the IVIG that TriGenesis sells in China. TriGenesis provided MIT with a GMP certificate issued by Chinese authorities for the manufacturer, but the certificate did not claim GMP certification according to the WHO and it was a not for the specific product.

During the time spent working with TriGenesis, no further progress was made in selling the IVIG product previously purchased from NBI (South Africa). The product being stored in Puerto Rico was not sold and distributed. It was allowed to expire, some in June 2007 and the remainder in February 2008.

## **SOCIO-CULTURAL MARKETPLACE BARRIERS**

Numerous accounts of quality and safety problems of pharmaceutical and other products manufactured in developing countries by the public have lead to increasing pressure upon businesses and diplomatic agencies to not only address but resolve this problem. There is only one satisfactory solution - manufacture of all precursors and products used within the pharmaceutical industry must originate from facilities satisfied as using Good Manufacturing Practices (GMP). Below are brief excerpts from the GMP certification guidelines used by key organizations.

### **World Health Organization Certificate Scheme on the Quality of Pharmaceutical Products Moving in International Commerce**

"Guidelines are based on good manufacturing practices (GMP) in operation within countries participating in the Convention for the Mutual Recognition of Inspection in Respect of the Manufacture of Pharmaceutical Products, and other major industrialized countries. The Scheme (WHO Certification Scheme) is an administrative instrument that requires each participating Member State, upon application by a commercially interested party, to attest to the competent authority of another participating Member State that:

- A specific product is authorized to be placed on the market within its jurisdiction or, if it is not thus authorized, the reason why that authorization has not been accorded;



- The plant in which it is produced is subject to inspections at suitable intervals to establish that the manufacturer conforms to GMP as recommended by WHO; and
- All submitted product information, including labeling, is currently authorized in the certifying country.”

States (countries) who feel that they meet eligibility requirements apply for membership in the certification Scheme. The WHO maintains a list of authorities in each participating country. Authorities of participating countries issue certificates for products and are asked to follow a standard format to ease in interpretation. Attached to certificates are “Explanatory Notes” about the product. The certificate is not directly issued by the WHO, but by the certifying authority of the manufacturer’s country of origin. Certificates should not bear the WHO emblem, but a statement should always be included to confirm whether or not the document is issued in the format recommended by WHO. The importing country uses the certificate issued by the exporting country when considering licensing the product or extending the license of a product. Applications to certify products include: “the name and dosage form of the product, the name and amount of active ingredient(s) per unit dose (International Nonproprietary Name(s) where such exist(s)), the name and address of product licence holder and/or manufacturing facility, formula (complete composition including all excipients; also particularly when no product licence exists or when the formulation differs from that of the licensed product), and product information for health professionals and for the public (patient information leaflets) as approved in the exporting country.” (WHO, 2008)

## **GMP from Pharmaceutical Inspection Co-operation Scheme (PIC/S) Guide to Good Manufacturing Practice For Medicinal Products**

PIC/S began as the Convention for the Mutual Recognition of Inspection in Respect of the Manufacture of Pharmaceutical Products (cited in the WHO certificate scheme explained above.) The PIC/S GMP Guide is currently used by 33 member authorities in 32 countries, including 22 of the 25 European Union member states, 4 other European nations, Argentina, Australia, Canada, Malaysia, Singapore, and South Africa.

“Originally, the PIC/S GMP Guide (“PIC Basic Standards” of 1972) derives from the WHO GMP Guide and was further developed in order to comply with stringent manufacturing and health requirements in PIC/S countries, to cover new areas (e.g. biologicals, radiopharmaceuticals, etc.) and to adapt to scientific and industrial technology (e.g. biotech, parametric release etc.). The aim of such improvements was to ensure that high quality medicines were produced in line with the PIC Convention and then the PIC Scheme. In 1989, the EU adopted its own GMP Guide, which – in terms of GMP requirements – was equivalent to the PIC/S GMP Guide. Since that time, the EU and the PIC/S GMP Guides have been developed in parallel and whenever a change has been made to one, the other has been amended so that both Guides are practically identical.” (PIC/S, 2008)

## **The International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH)**

The ICH includes representatives from regulatory agencies and pharmaceutical experts from Europe, Japan, and the United States who meet to, “discuss scientific and technical aspects of product registration.” From this group, a subcommittee was formed in 1999 called The ICH Global Cooperation Group (ICHGCG) whose purpose is to, “make available to any country or company that requests it, the information on ICH, ICH activities and ICH guidelines.” In addition to representatives from the three regions mentioned above who make up the ICH Steering Committee, the ICHGCG also includes the ICH Secretariat at the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA), and ICH Observers (from the WHO, Canada and the European Free Trade Association (EFTA)). The IFPMA is a non-profit, non-governmental Organization (NGO) representing national industry associations and companies from both developed and developing countries. “Other regional harmonisation initiatives (RHIs), namely Asia-Pacific Economic Cooperation (APEC), Association of Southeast Asian Nations (ASEAN), Gulf Cooperation Countries (GCC), Pan American Network

on Drug Regulatory Harmonization (PANDRH) and Southern African Development Community (SADC), have been invited to designate permanent representatives to the GCG.” (ICH, 2008)

## **U.S. Food and Drug Administration (FDA)**

The FDA is responsible for protecting the public health by assuring the safety, efficacy, and security of human and veterinary drugs, biological products, medical devices, our nation’s food supply, cosmetics, and products that emit radiation. The FDA is also responsible for advancing the public health by helping to speed innovations that make medicines and foods more effective, safer, and more affordable; and helping the public get the accurate, science-based information they need to use medicines and foods to improve their health. The Code of Federal Regulations (CFR) is the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the U.S. Federal Government. As part of the GMP certification a number of regulations are used. Title 21: Food and Drugs, part 640 addresses Additional Standards for Human Blood and Blood Products. Subpart J addresses Human Immune Globulin including 1) Proper naming, 2) General Requirements, 3) Manufacture of Human IG, 4) Final product and 5) Potency. (National Archives, 2008)

## **PREPARING FOR GLOBAL SALES OF IVIG**

Returning to the fundamental questions that sparked this inquiry, 1) can a partnership in IVIG production develop between an USA based company and an India based company? and 2) can the IVIG product developed through the USA-India partnership be competitive in the global marketplace given the governmental, safety, and consumer perception barriers? The answers are somewhat opaque but learning from this experience, a partnership such as this can be developed, should be developed and must be developed considering the worldwide production of such products. Barriers can be reduced to create a salient marketplace for these products. In order to have positive outcomes considering both of these questions a number of steps must be taken in order to develop a successful partnership between an U.S. and foreign manufacturer in order to distribute IVIG and other blood products within a viable market. These include:

- 1) Identifying a manufacturer that is GMP certifiable under an accepted regulatory agency
- 2) Thoroughly reviewing the GMP certification of the potential manufacturer under the appropriate regulatory agency.
- 3) Thoroughly reviewing the GMP certification requirements of the countries exporting and importing the IVIG product.
- 4) Ensuring proper logistical support to maintain the products viability as well as meeting agency regulations.
- 5) Ensuring oversight by in-house managers qualified in pharmaceutical GMP.

These steps of due diligence would enhance the potential and reduce the risk of such business ventures.

## **CONCLUSION**

In the ‘no error’ healthcare treatment business, safe and effective blood-based biological products such as IVIG are essential to modern medicine. Demand for such products will continue to increase yet the business culture, social culture and worldwide standards must be considered in the equation of a business partnership of this kind. The due diligence required should incorporate the essential steps listed previously. Originally, it was hoped that this partnership would produce the desired outcomes and that this manuscript would focus on the socio-economic marketplace and barriers to psychological entry into that market, however, the reality of the struggles of this type of partnership produced a more valuable set of tenets that could facilitate improved international partnerships of this kind in the future.

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# THE STRUCTURE OF COUNTRY AND BRAND IMAGES AND THEIR IMPACTS ON PRODUCT EVALUATION

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## ABSTRACT

*This paper studies country and brand image multi-dimensional structures across several brands, countries, and products. Results show a consistent direct effect of country image on brand image, a consistent direct effect of country image on product evaluation, and a less consistent effect of brand image on product evaluation. Results support Laroche et al (2005) finding that there is a simultaneous effect of country and brand images on product evaluation in addition to there separate effects.*

## INTRODUCTION

The marketing literature abounds with research evidence in support of a significant effect of country of origin information or product country image on brand image perception, product evaluation, and consumer subsequent behavior (Bilkey and Nes, 1982; Verlegh and Steenkamp, 1999; Jaffe and Nebenzahl, 2001).

Though numerous were the research, few that have attempt to conceptualize country image and brand image as multidimensional constructs actually measured by a set of separate dimensions (Hsieh et al, 2004; Laroche et al, 2005). The multidimensional aspect of human cognitive structure (Farquhar and Herr, 1993) implies that consumers are likely to perceive images through different dimensions varying in terms of strength and number. The present paper aims at studying those two concepts and their potential interactions across several products, brands, and countries. The primary goal is to provide further clarifications on the complex issue of country image and brand image cognitive processing and structure. We first describe and empirically test country image and brand image as multidimensional concepts. Subsequently, we test the relationship between country image, brand image, and product evaluations. The findings are then interpreted and practical implications are discussed.

## BACKGROUND

Brand image is the reasoned or emotional perceptions consumers attach to a specific brand. It consists of functional and symbolic brand beliefs (Dobni and Zinkhan, 1990) (10). Brand image is made up of brand associations. "Brand associations are the category of brand's assets and liabilities that include anything "linked" in memory to a brand" (Aaker, 1991) (11). Associations are informational nodes linked to the brand node in memory that contains the meaning of the brand for consumers (Keller et al, 1998) (12). According to the associative network model (Farquhar and Herr, 1993) (8), a person's memory is made up of links and nodes: links represent relationships (positive or negative, weaker or strong), and nodes represent concepts (e.g. brand associations) and objects (e.g. brands). Beliefs have two structural properties, namely, abstraction and complexity. Its must be taken into account in assessment of the structure of brand associations. The role of abstraction in classifying associations finds its evidence in the means-end chain theory, which reflects the

memory linkages among attributes (i.e., means), consequences, and attitude (i.e., end) on the basis of the notion that the product and the consumer's sense of self may be hierarchically linked through an interconnected set of cognitive elements along with different levels of abstraction. The role of complexity finds its rigueur in Eagly and Chaiken's (1993) (15) work. The authors affirmed that the complexity of beliefs associated with an attitude object is typically defined as the dimensionality of the beliefs that a person holds about an attitude object, i.e., the number of dimensions needed to describe the space utilized by the beliefs ascribed to the attitude.

The matricidal shape of human memory backs of multidimensional perceptions of human being. Brand image is likely to be perceived along different dimensions linking the nodes in human memory. In an international study about cars, Hsieh et al (2004) found that brand image has a three-dimensional structure enclosing symbolic benefits, experiential benefits, and functional benefits. Koubaa (2007) found similar results with brands of electronics. Brand image has multiple facets in consumer's imagination. Early researches on brand image perception revealed differences among brands images with brand image concept taken as an overall entity across countries of production (Barnabas and Jonathan, 1999; Usunier, 2002), across brands (equities) (Baker and Michie, 1995; Buhian, 1997), and across products. Knowing that brand image is better assessed when conceptualized as multidimensional and relying on past researches' results, it is safe to expect that brands images structures will differ across countries of production, across brands, and across products.

*H1: brand image has a multidimensional structure rather than a single factor structure.*

*H2: brand image structures differ across countries of production, across brands, and across products*

Papadopoulos (1993) posits that the image of an object results from people's perceptions of it and the phenomena that surround it. Based on the studies conducted in eight countries, Papadopoulos et al (1988) were among the first to incorporate distinct country image measures in country of origin research, and the first to attempt to model the relationship between country beliefs, product beliefs, familiarity, and product evaluation and willingness to buy, using structural equation modeling. After further elaborating of the data from the above and other studies, they proposed that consumers' perceptions of the country image comprise: a cognitive component, which include consumers' beliefs about the country's industrial development and technological advancement; an affective component that describes consumers' affective response to the country's people; and a conative component, consisting of consumers' desired level of interaction with the sourcing country.

Despite the theoretical appeal of the above conceptualization, most empirical studies have not considered the multidimensionality of country image when operationalizing the construct (Laroche et al, 2005). Further, most measured country image through product rather than country measures (Han, 1989), and some focused on affect-oriented country/people measures rather than cognitive ones (Knight and Catanlone, 2000). Laroche et al (2005) tested Papadopoulos et al (1988) model of multidimensional country image. Relying on a large investigation and on a structural equation modeling, they found that country image is well assessed through three dimensions namely; country beliefs, people affect, and desired interaction with the people of that country.

Adding the matricidal shape of human memory presented earlier, similarly with brand image, country image should be conceptualized as a multidimensional concept enclosing country beliefs, people affect, and desired interaction. Such conceptualization appears to be more suitable and accurate in extracting country of origin effects.

As with brands, country images had been found to be different across countries (equities) when taken as an overall entity. Hence, we expect that different countries will exhibit different image structures.

*H3: country image has a multidimensional rather than a single factor structure.*

*H4: different countries will exhibit different image structures*

A significant impact of country image on brand image perception was well supported (D'astous and Sadruddin, 1999; Kotler and Gertner, 2002; Stennkamp et al. 2003; Hsieh et al, 2004; Cervino et al, 2005)

When evaluating a product, consumers compare the sponsor brand to a brand A on attribute X (e.g. country of origin), to brand B on attribute Y (e.g. style), to brand C on attribute Z (e.g. reliability) and so on. For a final choice to be established, one brand is likely to be evaluated along many dimensions. In line with pervious findings (product country image as a single factor affects brand image as a single factor), we propose that product country image as multidimensional construct will affect brand image as multidimensional construct.

*H5: multidimensional country image will have a significant effect on multidimensional brand image.*

Categorization theory suggests that since the capacity of short term memory is limited and external stimuli are many, people will divide stimuli in their environment into categories to get the most useful information for the least effort and to ensure that the environment is inherently structured (Coupey and Nakamoto, 1988). According to the categorization theory, attitudes toward a stimulus are directly related to attitudes associated with the activated category (Alba and Hutchinson, 1987; Fiske, 1982). Consumers have to deal with categorical cues like brand name and country of origin when they form attitudes toward products. In term of consumers purchasing

foreign products, the country of origin information as well as others products attributes may serves as cues, which will activate certain experience or information (schema) associated with the relevant country or brand, which in turn will guide the consumer to put the product in a certain category stored in memory. The consumer will make then a favorable or unfavorable decision (product evaluation, purchase intention) accordingly. Consequently, when consumers are processing product related information, the activated stereotyped country or brand image associated with the product will have significant impact on product evaluation and preference formation.

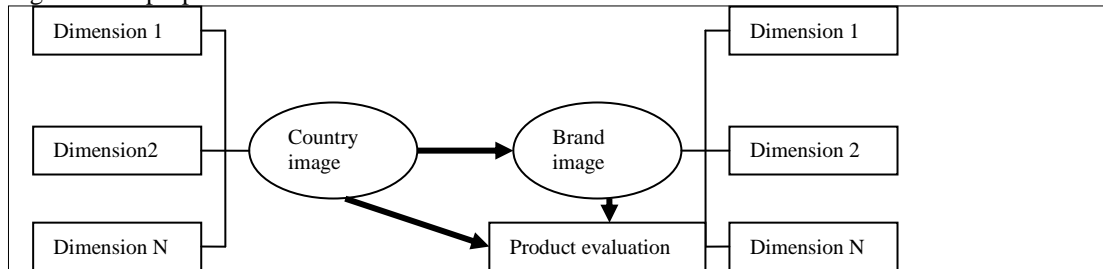
*H6: product country image and brand image are significantly related to product evaluation*

To test our hypotheses, we propose a model inspired from the “flexible” model of Knight and Calantone (2000). The product country image and brand image are both conceptualized as multidimensional constructs. Dimensions are drawn based on a principal components analysis (PCA) followed by a confirmatory factor analysis (CFA) of the pattern of items measuring each brand and each country image. Han (1989) concluded that, depending on consumers’ level of familiarity with the country’s products, country image may serves as a Halo from which consumers’ infer a product’s cues, or as a summary construct that summarizes consumers’ beliefs about these cues. Knight and Calantone (2000) criticized Han’s conceptualization for not accounting for the simultaneous processing of country image and brand image that take place during consumer attitude formation. They came with a “flexible” model that explicitly accounts for the simultaneous processing of country image and brand image. The authors argue that both the country image and brand image are used simultaneously and in varying degrees to form attitudes toward the product. Furthermore, country image is assumed to have indirect effect on product evaluation through brand image. The proposed model posits a simultaneous processing of country image and brand image. Country image is expected to influence brand image (H5) which in turn will affect product evaluation. In addition country image is expected to have a direct effect on product evaluation.

*H7a, Country image is significantly related to brand image*

*H7b: Country image and brand image are significantly related to product evaluation.*

Figure I: the proposed model



## METHOD

A within-subject investigation was performed in Japan, reflecting the Japanese-Asian culture; France, reflecting the European culture; and Tunisia, reflecting the Arab-Muslim culture. Three products (computer, hand cream, and sport shoes) and three brands for each product were investigated. Each respondent was provided with two alternatives for each brand. In total we had 3\*3\*2 combinations (3 products\*3 brands\*2 alternatives) which result in 18 alternatives. Other product cues (e.g., price, warranty, etc) were provided in accordance with their appearance on the market. Brands and country labels were varied among alternatives by a way to have different combinations in terms of brand and country of origin equities. Product categories, brand names, country labels, and other product cues were fixed through two phases. First, a discussion séance involving marketing professors and MBA students was held. The séance ends with three product categories namely, electronics, apparels and shoes, and cosmetics; and three brands, respectively three countries of origin, for each product category. Similarly, we selected a product to be investigated from each category. Product cues, other than brand name and country of origin, were fixed by the researchers based on a literature review. Second, final respondents were asked to evaluate countries labels and brand names equities. Brand image items were developed from the set of retained cues. Items for country image were reproduced from the work of Laroche et al (2005). Table 1 presents brands and country labels and their classifications via the discussion séance.

**Table 1: brands and country labels classification**

| Product category | Brand by order of equity | Country by order of equity |
|------------------|--------------------------|----------------------------|
|------------------|--------------------------|----------------------------|

|             |                         |                    |
|-------------|-------------------------|--------------------|
| Computer    | Dell/Sony/Acer          | Japan/France/China |
| Hand cream  | Nivea/L'oreal/Shiseido  | France/Japan/China |
| Sport shoes | Nike/Asics/Lecoqsportif | France/Japan/China |

All scales were a five point scales ranging from 1: totally disagree to 5: totally agree. 1400 respondents were provided with the questionnaire: 500 from Japan, 500 from France, and 400 from Tunisia. The main criterion of selection was the experience of buying and/or using the product. Useful returned questionnaire were 448. Respondents have an average age of 34.5 years, an average yearly income of 10000 USD, 32% have a senior high school education, 54% have a university education, 10% have a graduate level and 4% have other levels. 220 were males and 228 were females. Cronbach's alphas were all superior to the cut point of 0,7 indicating acceptable reliabilities. KMO-Bartlett test of sphericity were all significant supporting the multidimensional structure of the used scales.

## FINDINGS

Scores' mean and standard deviation (*SD*) values confirmed the classifications of brands and countries labels via the discussion séance with computers and hand cream. With sport shoes, Asics and Lecoqsportif as brands and France and Japan as country labels had similar means values and a *SD* close to 1. Asics was slightly better than Lecoqsportif and France and Japan had almost same perception. China had the lowest score as a producer of good sport shoes and Nike had the highest score as a famous brand of high quality sport shoes. Though, the classification via the discussion séance was not exactly confirmed, it was almost confirmed. To extract country and brand images structures, we proceed by a principal components analysis (PCA) with Varimax rotation.

**Table 2: PCA results for brands images structures:**

| Alternative | Structure       | Specification   | %     |
|-------------|-----------------|---|-------|
| DELL1       | Bi-dimensional  | Operational and market performance                          | 54.34 |
| DELL2       | Bi-dimensional  | Operational performance and appearance                      | 62.08 |
| SONY1       | Bi-dimensional  | Overall performance and economic performance                | 57.88 |
| SONY2       | Bi-dimensional  | Overall performance and durability                          | 59.63 |
| ACER1       | Bi-dimensional  | Durability and economic performance                         | 64.27 |
| ACER2       | Uni-dimensional | Overall performance   | 59.94 |
| SHISEIDO1   | Uni-dimensional | Overall performance   | 49.14 |
| SHISEIDO2   | Uni-dimensional | Overall performance   | 51.03 |
| NIVEA1      | Uni-dimensional | Overall performance   | 53.46 |
| NIVEA2      | Uni-dimensional | Overall performance   | 57.07 |
| L'OREAL1    | Bi-dimensional  | Suitability and reliability                                 | 54.57 |
| L'OREAL2    | Bi-dimensional  | Suitability and operational and market performance          | 63.45 |
| NIKE1       | Bi-dimensional  | Operational and market performance                          | 50.77 |
| NIKE2       | Tri-dimensional | Reliability, appearance, and durability                     | 63.95 |
| ASICS1      | Bi-dimensional  | Appearance and durability                                   | 57.07 |
| ASICS2      | Tri-dimensional | Operational performance, appearance, and market performance | 65.25 |
| COQSPOR1    | Bi-dimensional  | Operational and economic performance                        | 63.12 |
| COQSPOR2    | Bi-dimensional  | Operational and market performance                          | 51.53 |

When most of items are correlated to one factor, we named it as "overall performance". Otherwise it is named with accordance to the following classification: operational performance (those items assessing the operational aspect of the product such as good performers, do not need frequent repairs, long lasting, and highly technical with computers; has no undesirable effect, highly efficient, and with long effect with hand cream; and highly technical, good performers, does not harm my feet, and long lasting with sport shoes); appearance with computers and sport shoes (those items assessing the outside appearance of the product such as good looking and luxurious) and suitability with hand cream (e.g., suitable for my hands and reliable); perfection (manufactured under strict norms); and finally economic performance (inexpensive) and market performance (sold worldwide). 13 alternatives revealed multidimensional structures and 5 delivered one-dimensional structures. Though, there is a dominance of "operational performance" as a first factor across several brands, consistent differences are remarkable along the second factor and the third factor. Differences were found across brands (e.g., Dell1/Sony1; Shiseido1/L'oreal1; and Nike1/Asics1), across the same brand produced in different countries

(Dell1/Dell2; L'oreal1/L'oreal 2; and Asics1/Asics2), and across products. The robustness of the extracted structures (multidimensional structures) was examined via a confirmatory factor analysis (CFA). First PCA was run based on the data of the whole sample (the data collected in the three countries together). With CFA, each structure was checked three times with reference to the data of each country separately. Such method ensures the diversification of data among different contexts and hence strengthens the reliability of the results. Table 3 presents CFA results:

**Table 3: CFA results for brands images structures:**

| Alternative  | GFI   | RMR   | RMSEA | Chi <sup>2</sup> | Alternative           | GFI          | RMR          | RMS EA       | Chi <sup>2</sup> |
|--------------|-------|-------|-------|------------------|-----------------------|--------------|--------------|--------------|------------------|
| Dell1 Jap    | 0.913 | 0.084 | 0.142 | 3.159            | L'oreal2 Tun          | 0.954        | 0.087        | 0.077        | 1.623            |
| Dell1 Fra    | 0.955 | 0.066 | 0.085 | 2.067            | Nike1 Jap             | 0.988        | 0.016        | 0.000        | 0.994            |
| Dell1 Tun    | 0.968 | 0.050 | 0.039 | 1.164            | Nike1 Fra             | 0.979        | 0.034        | 0.017        | 1.039            |
| Dell2 Jap    | 0.940 | 0.036 | 0.103 | 3.079            | Nike1 Tun             | 0.953        | 0.076        | 0.100        | 2.082            |
| Dell2 Fra    | 0.956 | 0.040 | 0.074 | 1.821            | Nike2 Jap             | 0.978        | 0.031        | 0.000        | 0.996            |
| Dell2 Tun    | 0.946 | 0.053 | 0.067 | 1.487            | Nike2 Fra             | 0.969        | 0.047        | 0.035        | 1.172            |
| Sony1 Jap    | 0.951 | 0.027 | 0.093 | 2.707            | Nike2 Tun             | 0.944        | 0.048        | 0.080        | 1.698            |
| Sony1 Fra    | 0.971 | 0.030 | 0.058 | 1.505            | Asics1 Jap            | 0.976        | 0.032        | 0.043        | 1.382            |
| Sony1 Tun    | 0.948 | 0.048 | 0.066 | 1.470            | Asics1 Fra            | 0.967        | 0.033        | 0.057        | 1.471            |
| Sony2 Jap    | 0.984 | 0.013 | 0.000 | 0.933            | Asics1 Tun            | 0.935        | 0.065        | 0.088        | 1.836            |
| Sony2 Fra    | 0.970 | 0.030 | 0.074 | 1.803            | Asics2 Jap            | 0.971        | 0.044        | 0.000        | 0.947            |
| Sony2 Tun    | 0.960 | 0.051 | 0.073 | 1.569            | Asics2 Fra            | 0.967        | 0.051        | 0.000        | 0.980            |
| Acer1 Jap    | 0.968 | 0.020 | 0.071 | 1.982            | Asics2 Tun            | 0.951        | 0.091        | 0.055        | 1.320            |
| Acer1 Fra    | 0.947 | 0.043 | 0.076 | 1.846            | Coqsportif1 Jap       | 0.971        | 0.040        | 0.040        | 1.322            |
| Acer1 Tun    | 0.965 | 0.039 | 0.015 | 1.023            | Coqsportif1Fra        | 0.949        | 0.046        | 0.087        | 1.862            |
| L'oreal1 Jap | 0.969 | 0.045 | 0.087 | 2.518            | <b>Coqsportif1Tun</b> | <b>0.923</b> | <b>0.092</b> | <b>0.096</b> | <b>1.999</b>     |
| L'oreal1 Fra | 0.980 | 0.012 | 0.058 | 1.424            | Coqsportif2 Jap       | 0.983        | 0.027        | 0.000        | 0.997            |
| L'oreal1 Tun | 0.962 | 0.032 | 0.109 | 2.830            | Coqsportif2 Fra       | 0.961        | 0.056        | 0.087        | 2.082            |
| L'oreal2 Jap | 0.991 | 0.018 | 0.000 | 0.724            | Coqsportif2 Tun       | 0.960        | 0.062        | 0.093        | 1.929            |
| L'oreal2 Fra | 0.949 | 0.023 | 0.085 | 2.013            |                       |              |              |              |                  |

*Note: Jap: Japan/ Fra: France/ Tun: Tunisia*

Except for Coqsportif1 with Tunisia sample, all others structures had been confirmed. Structures' confirmations were based on a combination of indices namely, GFI (Goodness-of-fit index), RMR (Root-mean-square residual), Chi<sup>2</sup> (Chi-square), and RMSEA (Root mean square error of estimation). GFI should be near to 1, RMR should be close to 0, and RMSEA should be within the interval 0.05 and 0.08 or close to those two poles. Based on PCA and CFA results, albeit the one-dimensional image structures for some brands, most of the studied alternatives revealed multidimensional image structures. Differences in brand image structures were found across different brands produced in the same country, across brands produced in different countries, and across products. Hence H1 is partially confirmed and H2 is totally confirmed.

Similarly with brands images, countries images were first extracted through PCA from the data set of the three countries then checked via CFA with reference to the data set by country of investigation. Because the items drawing country image cannot be used to ask respondents about the image of their own country, the images of Japan and France are thus checked with reference to two samples only.

**Table 4: PCA results for countries images:**

| Country | Structure      | Specification                           | %     |
|---------|----------------|---|-------|
| Japan   | Bi-dimensional | Country beliefs and people affect       | 56.04 |
| France  | Bi-dimensional | Country beliefs and desired interaction | 57.79 |
| China   | Bi-dimensional | People affect and country beliefs       | 61.66 |

**Table 5: CFA results for countries images:**

| Alternative | GFI   | RMR   | RMSEA | Chi <sup>2</sup> | Alternative | GFI   | RMR   | RMSEA | Chi <sup>2</sup> |
|-------------|-------|-------|-------|------------------|-------------|-------|-------|-------|------------------|
| Japan Fra   | 0.977 | 0.020 | 0.049 | 0.974            | China Jap   | 0.963 | 0.034 | 0.075 | 1.533            |
| Japan Tun   | 0.943 | 0.056 | 0.071 | 1.533            | China Fra   | 0.961 | 0.044 | 0.039 | 1.222            |
| France Jap  | 0.973 | 0.026 | 0.054 | 1.574            | China Tun   | 0.941 | 0.057 | 0.051 | 1.275            |
| France Tun  | 0.959 | 0.053 | 0.075 | 1.607            |             |       |       |       |                  |

*Note: Jap: Japan/ Fra: France/ Tun: Tunisia*



Goodness-of-fit indices (GFI, RMR, and RMSEA) show an acceptable fit and hence extracted country images can be confirmed. Japan, France, and China had all multidimensional and different image structures. Dimensions differ in terms of content and explanation power. Country beliefs was the first dimension with Japan and France, however it was the second with China which had people affect as the first dimension. People affect was the second dimension with Japan and desired interaction was the second dimension with France. “Country beliefs” appears to be a consistent dimension with high equity countries. People affect was the most dominant component of low equity country image. Hence H3 and H4 are totally confirmed.

A full model was developed for each alternative revealing a multidimensional brand image. Country and brand images were those confirmed via CFA. Product evaluation was an observable variable actually measured by one question. Structural equation modeling (SEM) using AMOS4 served for analyzing those models.

**Table 6: SEM estimation results:**

*NB: only significant models that are presented*

| Alternative  | GFI   | RMR   | RMSEA | Chi <sup>2</sup> | CI→BI (p)     | CI→PE (p)            | BI→PE (p)           |
|--------------|-------|-------|-------|------------------|---------------|----------------------|---------------------|
| Dell1        | 0.937 | 0.069 | 0.051 | 3.987            | -.0123 (0.03) | 0.268 (0.10)         | <b>3.078 (0.31)</b> |
| Sony2        | 0.884 | 0.051 | 0.085 | 4.276            | 0.453 (0.06)  | 0.069 (0.10)         | 0.939 (0.07)        |
| Acer1        | 0.918 | 0.054 | 0.081 | 3.931            | 0.157 (0.08)  | -0.234 (0.07)        | 0.883 (0.08)        |
| L'oreal1     | 0.967 | 0.024 | 0.051 | 2.109            | 0.121 (0.04)  | -0.189 (0.08)        | <b>1.374 (0.16)</b> |
| Nike1        | 0.929 | 0.095 | 0.085 | 4.308            | 0.011 (0.02)  | -0.429 (0.09)        | <b>1.476 (0.18)</b> |
| Asics1       | 0.927 | 0.061 | 0.082 | 4.112            | 0.230 (0.06)  | -0.323 (0.06)        | <b>1.375 (0.13)</b> |
| Coqsportif 2 | 0.895 | 0.090 | 0.078 | 3.849            | 0.270 (0.08)  | <b>0.274 (0.147)</b> | <b>1.577 (0.23)</b> |

*Note: CI: country image/BI: brand image/PE: product evaluation*

Only 7 alternatives led to consistent models. Across the three product categories, there are alternatives of high equity brands and country labels. However, there are alternatives of high and low equity brands (Dell, Sony, and Nike/ Acer, Asics, and Coqsportif) with low and high involvement products only. Risky products (hand cream) had only one alternative of high equity brand (L'oreal). As with CFA, selection of consistent models was based mainly on three indices namely, GFI, RMR, and RMSEA. All the 7 alternatives revealed a significant effect of country image (CI) on brand image (BI) at  $p < 0.1$  and 6 supported a significant impact of country image on product evaluation (PE) at  $p < 0.1$ . However, only 2 alternatives that had a significant effect of brand image on product evaluation. Hence H5 is totally confirmed and H6 is partially confirmed.

## DISCUSSIONS

Consistent with Hsieh et al (2004) and Koubaa (2007) we found that brand image may have a multidimensional structure in consumer mind. Brand image structures are found to be different across brands, across the same brand produced in different countries, and across products. Dimensions of brand images differ in terms of number and strength. Multidimensionality implies a need among consumers for multiple and specific information. Depending on the product category, brand's equity, and country of origin; consumers' need for brand related information differ. When brand and country of origin are incongruent (high vs. low equity brand and country and vice-versa) and there is no advantage in other attributes, (e.g., price, warrant, etc) consumers express a need for numerous information with the focus on operational performance (e.g., Dell2, Sony2, L'oreal2, and Nike2). However, if they are incongruent and one or many other attributes are better than those of other available alternatives, consumers appear to proceed by a trade off between main attributes (attributes they perceive the most important) and try to infer an overall performance of the product without segmenting the brand image (e.g., Acer2, Shiseido1, Shiseido2, Nivea1, and Nivea2). In the later case, marketers should focus more on the upper attributes to orient consumers towards a trade off and escape the incongruence of the brand-country match.

Moreover, this research proved that country image has a multidimensional structure varying across countries. Nevertheless, unlike Laroche et al's (2005) findings, we found that country image has a bi-dimensional structure. With high equity countries (e.g., Japan and France), the cognitive component dominates followed by the affective component with Japan and the conative component with France. With low equity countries (e.g.,

China), the affective component had the biggest contribution followed by the cognitive one. Marketers should look at the country image as a combination of those country specificities. Product country image related research concentrated on how consumers feel and behave when they are exposed to the country of origin information. In this research, we focus on what shape this image in consumers mind and how they may use it to perceive brand image and infer product evaluation. Our findings indicate that regardless of the country image structure, there is a strong effect of country image on brand image. However, the effect on product evaluation was stronger with countries that have a strong cognitive component (e.g., Dell1, Acer1, Shiseido1, L'oreal1, Nike1, and Asics1) than with countries that have a strong affective component (e.g., Sony2 and Coqsportif2). Country image and brand image affect simultaneously product evaluation. The latter finding was not strongly supported, only Sony2 and Acer1 that led to significant simultaneous impacts of country image and brand image on product evaluation. Sony2 and Acer1 are alternatives of high involvement products and both experience incongruence between brand and country equities. Dell1, a congruent alternative led to a non-significant impact of brand image on product evaluation. Congruent (Nike1 and asics1) and incongruent (Coqsportif2) alternatives of low involvement products led to non-significant effects of brand image on product evaluation. The unique congruent alternative of risky products (L'oreal1) led too to non-significant impact of brand image on product evaluation. When the cost of inappropriate evaluation is high, case of most high involvement products, consumers express a higher need for an accurate evaluation. Previous findings showed that a high equity brand logo or a high equity country label provide consumers with a psychological warrant about the reliability of the alternative and ease the task of evaluation. Nevertheless, those two cues are not always congruent and usually lead to disparate information. Anderson (1981) proved that corroborate information lead to an easily deductible positive evaluation and disparate information lead usually to a negative evaluation preceded by a developed cognitive effort. This research testifies Anderson's (1981) conclusions. With incongruent alternatives of high involvement products, country image and brand image interact (positive effect of country on brand image) and both images influence simultaneously product evaluation. Consumers seem to indulge in an effortful processing of all the available information hoping for the most accurate evaluation and hence minimizing the probability of a costly wrong choice. With low involvement products, brand image appears to be with less effect on product evaluation comparing to country image. However, product evaluation was influenced by country image in both cases of congruence and incongruence. The effect of brand image on product evaluation appears to be absorbed by, and transferred into the effect of country image with low involvement products. Congruent alternative of risky products had similar results to those of low involvement products. Regardless of product category, brand name, and brand-country congruence; product country image looms heavily in product evaluation and affects significantly brand image perception. Nevertheless, brand image effect is product and brand-country congruence specific. When highly involved; under brand-country incongruence, consumers tend to recall more information, to process it independently and simultaneously to get the most accurate evaluation; under brand-country congruence, the process is simplified and product country image gains in importance in deducting brand image perception and product evaluation. Marketing actions should be specified along a matrix of criteria including product category, brand equity, country equity, and brand-country congruency/incongruence. Under brand-country congruency of high involvement products, product country image should be emphasized through promotional activities. Brand should also be emphasized; nonetheless, it should be under the shadow of the product country image which prime in consumers' minds. Under brand-country incongruence, both cues should be emphasized with more effort to the brand image. With the two incongruent alternatives Sony2 and Acer1, the absolute value of the effect of brand image on product evaluation is much higher than the absolute value of the effect of country image on product evaluation. Under incongruence, brand image primes in consumers' minds. Under brand-country congruency of low involvement and risky products, country image should be the focus. Implications for low involvement and risky products under incongruence conditions could not be provided as there are no significant alternatives. This question is a window for future researches.

As most studies, this research has its limitations. First, we could not test for the effect of consumers' familiarity with the country product. Further research may face those limits by a more convenient choice of brands and countries and a wider sample. Second, the use of non-experimental data in modeling casual relationships may relatively affect the reliability of our findings. However, we think that this limitation is attenuated by the use of structural equation modeling.

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# RECONSIDERING COUNTRY OF ORIGIN EFFECT

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## ABSTRACT

*This paper proposes that the confliction marking COO researches may be due in part to the quantification of human judgment and the research settings. Relying on the scatter model and on a likely real purchase situation, this paper shows that the impact of country of origin related attitudes is either significant or non-significant and varies in strength depending on a matrix of attitudes influencers. Moreover, it tests for the effect of any variation of country of origin information on product evaluation and for potential interaction between country of origin and product evaluation in affecting consumer behaviour.*

## BACKGROUND

Human cognitive structure is complex (Farquhar and Herr 1993) and product's cues are numerous and variable. Hence consumers as well as researchers tend to simplify the task of decision, the former by relying on image to infer a judgment (Huber and McCann 1982) and the later by assuming linear or a specific non-linear structure of human thinking (Goldberg 1968). The study of behaviour is, in large part, the study of decision making. Decision making is a major characteristic of consumer behaviour (Green and Wind 1973). Whenever we make a decision, we are faced by a multitude of alternatives; each one may be specified along numerous attributes. One alternative may be better than another on one attribute, yet worse on another. Attributes may be consistent or inconsistent. Hence going to gain on accuracy, consumers anchor their decisions on a multi-attribute evaluation. Understanding consumer decision making requires ascertaining how one trades off between attributes. The task is no doubt complex. Marketers have two choices when dealing with this complexity. Either they will severely simplify the phenomena under study and base all their conclusions on the simplified model; or attempt to grapple with all the complexities simultaneously, hoping for an inspired solution. Statisticians, psychologists, and marketers are struggling since decades to find the best way to quantify human decision making which results in a multitude of scales and models.

Although, COO researches were many, conflicting were their results (Samiee, 1994). Many scholars have tried to find the reasons behind such confliction. For instance, Bilkey and Nes (1982) argue that the single-cue research setting may be one of the reasons and Lielfeld (2004) posits that most of the significant detected COO effects are probably due to experiments' manipulations and not due to its reliability in affecting consumers' decisions. However, possible effects of inappropriate human decision quantifying models in creating such confliction were not evoked. Most of the COO researches were designed to check for the presence or the absence of effects. Each research had a specific setting and researchers, usually relying on comparative methods, e.g., T-tests, ANOVA, and MANOVA; or on linear explicative methods, e.g., linear regression; tried to prove a significant effect of COO on product evaluation or to deny it within the framework of their experimental settings. Those settings suffer often from being unrealistic or manipulated to drive respondents' answers. Moreover, usually researchers decided about the way they will process respondents' answers before collecting the data and forget that what we expect (as researchers) to have -in terms of shape and quality of the data- from respondents' answers is not necessary what we will get exactly and sometimes does not even converge toward what we expect. Our position is that a reconsideration of COO effects along two dimensions may draw us near to its exact effect, namely situation's characteristics (research setting), and decision making assessment. First we propose to simulate a real purchase situation. Second, with reference to Brannick and Bannick's (1989) scatter model, we will try first to detect the shape of respondents' answers and then study COO effects related attitudes accordingly.

One intriguing observation in the marketing research is that some attitudes have a strong impact on consumer's perception and behaviour, whereas some others attitudes do not influence a person's actions at all (Doorn et al. 2007). Albeit, the proven strong relation attitude-behaviour in psychology literature, many empirical researches in marketing find only low effects of attitudes on behaviour, namely those related to COO information. We suggest that the conflicting evidence on the attitude-behaviour link is partly due to only extreme attitudes effecting behaviour. Thus, possible non-linearity not detected by standard linear models could occur in the relationship attitude-behaviour. That's to say, depending on attitudes' strength, consumers are likely to proceed either by a simple way (mostly reflected in traditional linear models) of processing the information related to the attitude's stimuli or by a more complex way of combinations (better assessed through non-linear models) (Holland, Verplanken, and Van Knippenberg 2002) before they took the final decision. An example from the field of public policy is that many consumers –to some extend- are aware about the global warming and care about the environment; however most of them do not behave in an environmentally friendly way, which is reflected in the excessive use of energy, excessive consumption, and continuous devastation of the eco-system. In terms of consumers purchasing products, COO, brand, and others cues will serves as attributes to evaluate and distinguish between alternatives. Attitudes towards attributes differ in terms of strength (relative importance for consumers) and sign (positive with one alternative and negative on another alternative); and alternatives are many. Thus consumers may proceed by a simple or a complex way of combining attitudes towards attributes and then infer an evaluation. hence, going to solve a part of the COO effects confliction, it seems wise to set first a reliable research setting and second to look on the shape of consumers' thinking (linear or non-linear) before studying the effect of attitude, e.g., COO related attitudes, on judgment and behaviour.

Several linear models have been developed to assess consumer decision making. Linear regression is probably the famous and the most used one. Similarly, many non-linear models emerged. Perhaps logarithmic, exponential, and the multiplicative models are the most known and used. However, and despite its salience and proven superiority to other non-linear models, the scatter model (Brannick and Brannick 1989) had been rarely used to assess human decision process. The Scatter model is a mix of a linear model and a Scatter term. Eq1:

$$y = a + b_1 X_1 + b_2 X_2 + ..... + b_n X_n + b_{k+1} \sqrt{\sum_{i=1}^n (X_i - \bar{X})^2} \text{ Where:}$$

$X_i$  is the  $i$ th reaction toward an attribute,  $\bar{X}$  is the average of reactions in one profile,  $B_{k+1}$  is a coefficient to estimate. It indicates whether consumer is more influenced by negative values or positive values when evaluating a product. The first part is as a linear model. The second part is a sum of the negative or positive values that may occur when evaluating each attribute according to the decision maker expectation. The scatter term measures the sum of deviation of consumer's reactions toward each attribute. The scatter term model enables us to disclose whether consumers have referred to a linear combination or to a non-linear combination while evaluating the product. If the estimated relation is really linear then the scatter term will be non significant and the traditional linear model is rejoined. However, if it was really non-linear, the scatter term will be significant and subject to a negative or a positive value. The signal of the scatter term is of a great utility. In fact, if it is negative, that means that the consumer evaluation is more influenced by negative reactions toward attributes than by positives ones. If it is positive, that means that the consumer is more influenced by positive reactions than by the negative ones.

*H1: the significance and the strength of the country of origin related attitudes on product evaluation will depend on the situation's characteristics and the way consumers process attributes related attitudes.*

The Scatter model may result in either a linear or a non-linear model depending on the way consumers combine information. Though linear combinations seem to be easy to understand, non-linear combinations require further investigation. Non-linearity in decision making can be expressed in two different functions: the marginal utility function and the interaction effect

Once the evaluation along one attribute increases or decreases, the resulted effect on overall evaluation will occur at a decreasing or increasing rate for each increase or decrease in the reaction to the attribute. That's to say there is a disproportional effect of each reaction toward a given attribute on the overall evaluation: a marginal utility. An increasing marginal utility means that increases in overall evaluation will occur at an increasing rate for each unit of increase in reaction towards a single attribute. A decreasing marginal utility argues that increases in overall evaluation will occur in a decreasing rate for each unit of increase in reaction toward a single attribute. Marginal utility can be assessed through a second-order polynomial model.

Eq2:

$$y = a + \sum_{i=1}^n biXi + \sum_{i=1}^n bjXi^2 + e \text{ Where}$$

$Y$  is the overall evaluation,  $X_i$  is the attribute evaluation (reaction),  $a$ , the intercept,  $bi$ 's are coefficients to estimate,  $e$  an error term. The coefficient  $b_j$ 's determines whether or not there exists a marginal utility function. A positive value of  $b_j$  indicates an increasing marginal utility and a negative value indicates a decreasing marginal utility.

*H2: depending on the situation's characteristics and the attributes related attitudes assessment, the return of COO related attitudes on product evaluation will be either increasing or decreasing*

An interaction between reactions towards attributes and overall evaluation may exist. That's to say some attributes may interact and this reaction may weight in the last evaluation. For example, if countered with negative reactions towards some attributes- even if they are few in number compared to positive reactions- consumer may result in an overall negative evaluation. Negative reactions towards some attributes may weight heavily in shaping consumers' judgment. Adding the values of cues to determine the observed response will not account for evaluations when cues are inconsistent (Anderson, 1981). Instead, when cues present contradictory signals, consumers focus on the negative cues and anchor their perception accordingly (Ahluwalia 2002). Anderson (1965) found that when confronted with negative information, respondents weighted it more heavily in averaging it with positive information. Weights used in information integration are determined by cues' usefulness and salience. Thus it seems rigorous to take into account such interactions when testing for the effect of COO on product evaluation and consumer behaviour. A multiple regression with an interaction term will be used to address this question. The general form of the equation is as following:

Eq3:

$$Y = a + \sum_{i=1}^n biXi + bjE + \sum_{i=1}^n bkXiE + e \text{ Where}$$

$Y$  is the willingness to buy,  $E$  is a dichotomous positive-negative overall product evaluation variable,  $e$  is an error term,  $a$  is the intercept, and  $b$ 's are coefficients to estimate. If  $b_k$  is a significant coefficient then we can conclude that an interaction effect exists between overall evaluation and reaction to the attribute.

*H3: depending on the situation's characteristics and the attributes related attitudes assessment, COO related attitudes may interact with product evaluation and affect consumer behaviour (willingness to buy)*

## METHOD

A within-subject investigation was performed in Japan, reflecting the Japanese-Asian culture; France, reflecting the European culture; and Tunisia, reflecting the Arab-Muslim culture. Three products (computer, hand cream, and sport shoes) and three brands for each product were investigated. Each respondent was provided with four alternatives for each brand. In total we had 3\*3\*4 combinations (3 products\*3 brands\*4 alternatives) which result in 36 alternatives. Other product cues (e.g., price, warranty, etc) were provided in accordance with their appearance on the market. Brands and country labels were varied among alternatives by a way to have different combinations in terms of brand and country of origin equities. Product categories, brand names, country labels, and other product cues were fixed through two phases. First, a discussion séance involving marketing professors and MBA students was held. The séance ends with three product categories namely, electronics, apparels and shoes, and cosmetics; and three brands, respectively three countries of origin, for each product category. Similarly, we selected a product to be investigated from each category. Product cues, other than brand name and country of origin, were fixed by the researcher based on a literature review. Second, final respondents were asked to evaluate countries labels and brand names equities and attribute importance.

**Table 1: brands and country labels classification via the discussion séance**

| Product category | Brand by order of equity | Country by order of equity |
|------------------|--------------------------|----------------------------|
| Computer         | Dell/Sony/Acer           | Japan/France/China         |
| Hand cream       | Nivea/L'oreal/Shiseido   | France/Japan/China         |
| Sport shoes      | Nike/Asics/Lecoqsportif  | France/Japan/China         |

All scales were a five point scales ranging from 1: totally disagree to 5: totally agree. 1400 respondents were provided with the questionnaire: 500 from Japan, 500 from France, and 400 from Tunisia. The main criterion of selection was the experience of buying and/or using the product. Useful returned questionnaire were 448. Respondents have an average age of 34.5 years, an average yearly income of 10000 USD, 32% have a senior high school education, 54% have a university education, 10% have a graduate level and 4% have other levels.

220 were males and 228 were females. Cronbach's alphas were all superior to the cut point of 0,7 indicating acceptable reliabilities. KMO-Bartlett test of sphericity were all significant supporting the multidimensional structure of the used scales.

## FINDINGS

Scores' mean and standard deviation (*SD*) values confirmed the classifications of brands and countries labels via the discussion séance with computers and hand cream. With sport shoes, Asics and Lecoqsportif as brands and France and Japan as country labels had similar means values and a *SD* close to 1. Asics was slightly better than Lecoqsportif and France and Japan had almost same perception. China had the lowest score as a producer of good sport shoes and Nike had the highest score as a famous brand of high quality sport shoes. Though, the classification via the discussion séance was not exactly confirmed, it was almost confirmed. Overall, and across the three products, all the selected attributes had had relatively considerable importance (means values >3 and *SD* ≈ 1) in forming judgment toward products.

Collected data were processed by alternative across products following the Scatter model. Alternatives evaluations were as following:

Table2: alternatives evaluations:

| Alt       | Specification                               | R <sup>2</sup> | Alt           | Scatter value                                      | R <sup>2</sup> |
|-----------|---|----------------|---------------|--|----------------|
| Dell1     | 2.39+0.24COO+0.21CPU-o.16Price              | .2             | Nivea3        | 2.22+0.21COO-0.14Sui+0.3Price                      | .4             |
| Dell2     | 0.68+0.23COO+0.18CPU+0.24RAM-0.27Scatter    | .5             | Nivea4        | 1.78+0.11COO+0.25Sui-0.42Scatter                   | .3             |
| Dell3     | 0.15+0.17COO+0.25RAM+0.25HD+0.27Scatter     | .4             | L'oreal1      | 1.99+0.16COO+0.24Price+0.12Per-0.23Scatter         | .4             |
| Dell4     | 0.47+0.25COO+0.2CPU+0.12Price               | .5             | L'oreal2      | 1.57+0.14COO+0.31Price-0.37Scatter                 | .4             |
| Sony1     | 0.83+0.17CPU+0.28RAM+0.28Price              | .5             | L'oreal3      | 1.55+0.31COO+0.14Per                               | .4             |
| Sony2     | 0.95+0.21COO+0.16RAM+o.23Price-0.37Scatter  | .5             | L'oreal4      | 0.86+0.3COO+0.34Sui-0.24Scatter                    | .5             |
| Sony3     | 0.11COO+0.26CPU+0.2HD+0.23Price-0.41Scatter | .6             | Nike1         | 1.46+0.15COO+0.18Price+0.21Flex                    | .4             |
| Sony4     | 0.23COO+0.42CPU+0.12Price-0.17Scatter       | .6             | Nike2         | 2.27+0.24COO+0.09Price-0.35Scatter                 | .3             |
| Acer1     | 1.2+0.27RAM+0.22Price                       | .5             | Nike3         | 1.9+0.31Price                                      | .3             |
| Acer2     | 0.57+0.12COO+0.32RAM                        | .5             | Nike4         | 1.98+0.16Cus+0.3Price-0.4Scatter                   | .4             |
| Acer3     | 0.31HD+0.11Price+o.16War                    | .5             | Asics1        | 1.54+0.36COO-0.13Cus+0.27Price-0.24Scatter         | .5             |
| Acer4     | 0.81+0.13COO+0.25Price+0.11War              | .5             | Asics2        | 1.76+0.21COO-0.2Cus+0.26Price+0.19Flex-0.37Scatter | .4             |
| Shiseido1 | 0.59+0.27COO+0.11Sui+0.17Price+0.23Per      | .6             | Asics3        | 1.95+0.17COO+0.24Price                             | .4             |
| Shiseido2 | 1.45+0.14COO+0.17Sui+0.13Price-0.4Scatter   | .4             | Asics4        | 1.91+0.19Price+0.14Flex-0.47Scatter                | .4             |
| Shiseido3 | 2.55+0.13Per                                | .2             | Lecoqsportif1 | 1+0.18COO+0.27Cus+0.23Price-0.36Scatter            | .4             |
| Shiseido4 | 1.15+0.18COO+0.21Sui+0.13Per-0.31Scatter    | .4             | Lecoqsportif2 | 2.62+0.1COO+0.37Price+0.17Flex-0.5Scatter          | .4             |
| Nivea1    | 2.64+0.36COO-0.24Sui+0.2Price-0.37Scatter   | .5             | Lecoqsportif3 | 1.37+0.26COO+0.22price                             | .4             |
| Nivea2    | 1.35+0.38COO+0.17Sui                        | .4             | Lecoqsportif4 | 2.15+0.14Price-0.23Scatter                         | .2             |

COO: country of origin; HD: hard disk; War: warrant; Sui: suitability in term of quantity per tube; Per: perfume; Cus: cushion; Flex: flexibility; Scatter: scatter term; l: linear; nl: non-linear

Except for Dell1, Nike2, and Nike3; all the other alternatives present an acceptable fit to the data in term of R<sup>2</sup>. Thomas and Pawel (2006) argued that with large sample, even low R<sup>2</sup> values are acceptable. Scatter values show that consumers' evaluation of product may be linear or non-linear. Linear and non-linear combinations were found across different products and different alternatives in terms of COO, brands, and other cues' combination. Similarly, the significance and the strength of COO related attitudes (the coefficients associated with the COO attribute) varied across products and alternatives. Thus H1 is confirmed

The estimation via the Scatter model results in 20 non-linear combinations as presented in table 2. When an alternative is evaluated, a variation in one attribute is likely to result in a variation in the overall evaluation. However, the latter variation –and due to complex combinations in consumer mind- is likely to be disproportional to the former. The aim of this section is to see how variations in attributes will affect the overall evaluation. To do so product attributes were loaded on overall evaluation following the marginal utility function for each of the alternative that had a significant scatter value (non-linear evaluation). Estimation was performed following the forced entry method.

Table3: estimation results for marginal utility

| Alternative  | Marginal utility function   | R <sup>2</sup> |
|--------------|---|----------------|
| Dell2=       | 0.84COO+0.83CPU-1.11HD-0.1COO <sup>2</sup> +0.15HD <sup>2</sup>   | .54            |
| Dell3=       | 1.3CPU-0.21CPU <sup>2</sup>   | .5             |
| Sony2=       | 0.45COO+1.03RAM-0.13RAM <sup>2</sup>  | .58            |
| Sony3=       | -1.77+1.28CPU+1.21HD+0.07COO <sup>2</sup> -0.15CPU <sup>2</sup> +0.1RAM <sup>2</sup> -0.15HD <sup>2</sup>                       | .64            |
| Sony4=       | 0.77COO+0.14Price-0.08COO <sup>2</sup>  | .67            |
| Nike2=       | 2.65+0.27COO+0.77Cus-0.87Flex-0.13Cus <sup>2</sup> +0.09Price <sup>2</sup> +0.13Flex <sup>2</sup>                               | .39            |
| Nike4=       | 3.82-0.49Cus+0.35Price-0.83Cus <sup>2</sup> +0.13Flex <sup>2</sup>  | .45            |
| Asics1=      | 3.41-1.37Cus+1.15Price+0.07COO <sup>2</sup> +0.17Cus <sup>2</sup> -0.13Price <sup>2</sup>                                       | .6             |
| Asics2=      | 1.97+0.24COO-0.91Cus+1.46Price-0.61Flex-0.18Price <sup>2</sup> +0.13Flex <sup>2</sup>   | .48            |
| Asics4=      | 1.95+0.27Price+0.07COO <sup>2</sup>   | .59            |
| Coqsportif1= | 0.36COO+0.15Cus-0.91Price-0.01COO <sup>2</sup>  | .52            |
| Coqsportif2= | 3.26-0.5COO+0.42Price-0.73Flex+0.09COO <sup>2</sup> +0.09Flex <sup>2</sup>  | .39            |
| Coqsportif4= | 1.45+0.51Price  | .23            |
| Nivea1=      | 2.78-1.53Sui+1.21Price+0.1Per+0.2Sui <sup>2</sup> -0.16Price <sup>2</sup>   | .59            |
| Nivea4=      | 1.94+0.89COO+1.03Sui-0.94Price-0.74Per-0.11COO <sup>2</sup> -0.11Sui <sup>2</sup> +0.14Price <sup>2</sup> +0.11Per <sup>2</sup> | .42            |
| L'oreal1=    | 2.57+0.23COO-1.37Sui+0.69Per-0.003COO <sup>2</sup> +0.19Sui <sup>2</sup> -0.09Per <sup>2</sup>                                  | .51            |
| L'oreal2=    | 0.64+0.2COO+0.25Price+0.48Per-0.004COO <sup>2</sup> -0.09Per <sup>2</sup>   | .48            |
| L'oreal4=    | 0.37COO+1.26Sui-0.96Price+0.65Per-0.14Sui <sup>2</sup> +0.14Price <sup>2</sup> -0.1Per <sup>2</sup>                             | .58            |
| Shiseido2=   | 0.55COO+0.15Sui+0.1Price+0.1Per-0.06COO <sup>2</sup>  | .49            |
| Shiseido4=   | 1.02COO-0.13COO <sup>2</sup>  | .46            |

COO: country of origin; HD: hard disk; Cus: cushion; Flex: flexibility; Sui: suitability in term of quantity per tube; Per: perfume

Except for Lecoqsportif4, all the remaining alternatives had an acceptable R<sup>2</sup>. Table 3 shows clear differences among COO related attitudes effects on product evaluation. Depending on the alternative characteristics, the effect of COO related attitudes and their respective variations on product evaluation differ. Hence H2 is confirmed.

The interaction effect was analyzed by introducing an interaction term (product term) of consumers' reactions to product attributes and a dichotomous overall brand evaluation variable. A dichotomous variable was created by assigning 1 or 2 to each case depending on the score of the alternative overall evaluation variable. The score of 4 (good choice) and 5 (very good choice) in overall evaluation are classified as positive evaluations and assigned with the value 1 in the dichotomous variable. The score of 1(very bad choice), 2 (bad choice), and 3 (average choice) were classified as negative evaluations and assigned with the value 2 in the dichotomous variable. The dependent variable in the model was the “willingness to buy” and independent variables were the dichotomous overall evaluation variable, the first order variables of product cues, and the interaction variables. First all the attributes variables, the interaction variables, and the dichotomous variable were forced into the model. Second, the stepwise selection method was utilized for only interaction terms.

Table4: interaction effects:

| Alternative  | Interaction effect   | R <sup>2</sup> |
|--------------|--|----------------|
| DELL2=       | 2.92-1.02E+0.08COO+0.06Price0.04CPUint+0.08HDint+ 0.08Warint | .78            |
| DELL3=       | -0.82E+0.17HD+0.07War  | .72            |
| SONY2=       | 2.85-0.97E+0.07COOint+0.08RAMint                             | .8             |
| SONY3=       | -0.33E+0.27RAM+0.25Price                                     | .7             |
| SONY4=       | 2.83-0.96E+0.05COO+0.1RAMint+0.06Priceint                    | .79            |
| NIKE2=       | 4.36-1.22E+0.07COOint-0.03Priceint                           | .67            |
| NIKE4=       | 3.67-1.09E+0.09COO   | .66            |
| ASICS1=      | -1.25E+0.16Flex+0.13Cusint                                   | .73            |
| ASICS2=      | -1.15E+0.11COO+0.1Price                                      | .71            |
| ASICS4=      | -1.7E  | .79            |
| COQSPORTIF1= | -1.04E+0.11Price+0.13Cusint                                  | .64            |
| COQSPORTIF2= | 4.49-1.19E+0.07COO+0.09Flex-0.08Cus                          | .65            |
| COQSPORTIF4= | 3.39-1.03E+0.09Cus-0.07Price+0.1COOint                       | .69            |
| NIVEA1=      | -1.31E+0.14Suiint  | .69            |
| NIVEA4=      | 4.36-1.5E+0.03COOint+0.03Priceint+0.04Perint                 | .77            |



|            |  |     |
|------------|--|-----|
| L'OREAL1=  | 4.01-1.04E+0.12Suiint                        | .59 |
| L'OREAL2=  | -1.1E+0.11Priceint                           | .68 |
| L'OREAL4=  | 3.84-1.2E+0.04COOint-0.04Suiint+0.12Priceint | .78 |
| SHISEIDO2= | -1.03E+0.04COOint+0.06Perint                 | .73 |
| SHISEIDO4= | 3.73-1.29E+0.06COOint+0.06Perint             | .75 |

NB: only significant attributes that are presented in the table

E: evaluation; COO: country of origin; HD: hard disk; War: warrant; Cus: cushion; Flex: flexibility; Sui: suitability in term of quantity per tube; Per: perfume; int: interaction

R<sup>2</sup> values are all acceptable. Table 4 shows that, regardless of product category and alternative characteristics, product evaluation is a significant influencer of consumer behaviour (willingness to buy); and the significance and the strength of the COO related attitudes and their interactions with product evaluation vary across products, across alternatives, across brands, and across COO labels. H3 is then confirmed.

## DISCUSSIONS

Brands evaluations are either linear or non-linear depending on the pattern of available cues and their relative salience and importance for the consumer. When COO and brand are congruent, i.e., similar equities (Dell1, Sony1, Nivea3, L'oreal3, Nike1, Nike3, Asics3, Lecoqsportif3, Shiseido1, and Shiseido3), product evaluation is linear and consumers tend to diversify their evaluations among many attributes, differentiation among alternatives was based on compensating between attributes. With low equity a brand, regardless of the COO and others attributes, evaluations are linear. It seems that consumers have a pre-judgment about low equity brands that cannot be changed via others cues. Hence they do not spend great effort in evaluating such alternatives. Simply they compensate between attributes. It was the case of Acer across the four alternatives. When the brand and COO are incongruent, consumers proceed by complex evaluations. It was the case of Dell2, Sony2, Sony4, Nike2, Nike4, Asics2, Asics4, Lecoqsportif2, Lecoqsportif4, Shiseido2, Shiseido4, Nivea4, L'oreal2, and L'oreal4. Scatter values are all negative with the above alternatives that show a greater influence of negative attributes. Because only COO that among the above alternatives and it was a significant attribute, it is safe to infer that the COO was the negative cue that influenced at most consumers' evaluations. Consumers could not find a warrant that simplifies the task of evaluation, thus they tend to combine many attributes in a complex way to get the most accurate evaluation.

With Dell3, Sony3, Asics1, and Lecoqsportif1 and despite the brand-COO congruency, evaluations had non-linear shapes. Consumers relied on a pattern of attributes including COO. However COO was the attribute with the lowest significant contribution except with Asics1. Similarly with Dell4 and Nivea2, and despite incongruence between brand and COO, evaluations were linear. Further investigations are required to understand this finding.

Variations in COO had significant effects on product overall evaluation in 12 alternatives (Dell2, Sony3, Sony4, Asics1, Asics4, Lecoqsportif1, Lecoqsportif2, Nivea4, L'oreal1, L'oreal2, Shiseido1, and Shiseido2). With low equity COO, a variation in COO results in a diminishing marginal return on product evaluation. All second-order COO variables were negative and significant when China was the country of origin for the three products (except for lecoqsportif2) namely Dell2, Sony4, Nivea4, L'oreal2, Shiseido2, and Shiseido4. The strongest marginal effect of COO was with hand cream namely Nivea4 and Shiseido4. The lowest marginal effects were with L'oreal1 and L'oreal2. With high equity COOs, COO had an increasing marginal effect on brand overall evaluation across high and low involvement products alternatives namely Sony3 and Asics1.

Across the 20 alternatives, regardless of brand and country of origin equities, overall evaluation had a significant effect on consumer's willingness to buy. The dichotomous overall evaluation variable was significant across all the alternatives. When the brand and COO are congruent (Dell3, Sony3, Asics1, Lecoqsportif1, Nivea1, and L'oreal1), regardless of product category, COO was significant neither as a first order variable nor as an interaction variable. Nevertheless, several others cues had significant interactions. If brand and COO information lead to corroborate conclusions, the impact of COO information on overall evaluation is annihilated and consumers shift to others cues to distinguish between alternatives. When the alternative is produced in a low equity country and it presents similar or better attributes -other than the COO- comparing to the other available alternatives, COO had a significant positive interaction (relatively small to the interactions of other cues) in the case of risky and low involvement products (Lecoqsportif4, Nivea4, L'oreal4, and Shiseido4). In case of high involvement products, when a high equity brand is produced in a low equity country (Dell2, Sony2, and Sony4), regardless of others product cues, COO information had a relatively considerable interaction with overall evaluation.

Attitudes towards marketing actions have always been a major point of interest due to their presumed consequences on judgment and behaviours. However, empirical evidence on the effect of attitudes towards marketing-mix is mixed, namely those towards the country of origin information. While some researchers claim that country of origin has no or little effect on consumer judgment and subsequent behaviour (Lielfeld 2004) especially when other cues are available to consumers (Bilkey and Nes 1982), others support a strong effect of COO information regardless of others product cues (Hong and Wyer 1989; Papadopoulos 1993). In this research I found that those conflictions can be due to the ways researchers quantified human thinking and conceive their researches. Our position is that country of origin information may have no, little, or a strong effect on product evaluation depending on the strength of attitudes towards the country of origin information. Those attitudes in turn, vary depending on the situation characteristics. Because consumers' evaluative decisions vary across product categories, across brands of the same product category, and across the pattern of other available cues and their relative salience to consumers, the effect of COO on human judgment should be assessed either linearly or non-linearly depending on the situation characteristics (i.e., salience of COO, importance of COO comparing to other available cues, product category, etc). According to the literature on consumer behaviour, extreme attitude should have strong behavioural consequences, whereas moderate and weak attitudes often do not have much impact on behaviour (Abelson 1995). Consumers' thinking quantification should be specified accordingly. One of the attitude strength dimensions is attitude extremity (Bizer and Krosnick 2001). Attitude extremity can be described as the degree of favorableness or unfavorableness towards an object or a person (Peterson and Dutton 1975). Our findings show that when brand and COO are congruent, consumers tend to have less extreme attitude and proceed by a linear combination of several cues, including COO and brand, to infer an evaluation. However, when they are incongruent, consumers tend to have extreme attitude reflected in a non-linear processing of available cues. In the later case, COO appears to be of significant effect on product evaluation and consumer subsequent behaviour. Moreover, it proves statistically that other product cues such as price, warrant, etc may moderate or annihilate the effect of COO and/or brand on product evaluation.

An interesting finding is that COO impact's weight on consumers' judgment varies across product categories, across brands, across COO, and across the pattern of other cues. Results show that consumers' evaluation may change proportionally or disproportionably to any change in COO information (Marginal effect). Moreover, results show that there is a significant interaction between from one part, willingness to buy and product evaluation and from the other part between COO and product evaluation that varies in strength and sign depending on COO-brand match, product categories, and the set of other available cues (interaction effect).

Marketers should thus look at COO as a component of a product-mix. The effect of COO appears to be a complex issue and should be studied within a matrix of influencers such as COO-brand congruency, product category, and salience and importance of other available cues. Consumers tend to combine the product-mix related information either linearly or non-linearly depending on the above matrix. Marketers are advised to go deeper in investigating the COO effect by specifying a separate method for each possible combination in the above matrix.

As most studies, this research has its limitations. First some models had a relatively low fit to the data in term of  $R^2$ . Further research may face those limits by a more convenient choice of brands and countries and a wider sample. Second, and despite the multicultural data set, I did not test for possible difference in consumers' judgment processes and then in the effect of COO among culturally different respondents. Differences among culturally different consumers are questions for future researches.

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# **CREDIT RISK MANAGEMENT: A PRACTICAL EXAMINATION OF TURK EXIMBANK**

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## **ABSTRACT**

*International trade has emerged as an important component of the developing economies of the world. In this setting, by supporting exports, export credit agencies play a unique role, as they complement the role of commercial banks as important financial institutions. At the same time, credit risk management is emerging as one of the main areas of competitive edge, and as an area that regulatory bodies consider crucial. We examine the credit risk management practices of Turk Eximbank, the official Turkish export credit agency, and also compare it with Export Development Canada, its counterpart in Canada. We find that Turk Eximbank's practices conform to the current requirements of the Turkish bank regulatory body, but also that there is room for improvement.*

## **INTRODUCTION**

World trade volume has increased between 2 to 6% per year in the past two decades. Although there were and there will be some slowdowns from time to time, officials expect this trend to continue in the long run. In 2003 world exports of merchandise were 7.274 trillion dollars, and world exports of commercial services were 1.763 trillion dollars. Of this huge amount, Turkey had a relatively small portion, with 73 billion dollars of merchandise and 26 billion dollars of services exports in 2005. However, pretty good export growth on average for the last two decades, and these levels of exports, does not help Turkish economy's one major problem, the current account deficit. Founded in 1987, Turk Eximbank A.S. aims at supporting and improving Turkish exports by providing help to exporters with their financial needs. This is inline with the practices of most developed world economies. Many OECD members (at least 28), including most EU states and the US, have Export Credit Agencies (ECA) that support exporters. These ECAs are usually state owned private companies. In that sense, they are financial institutions that provide credit to a designated sector.

Similar to banks, credit risk is the dominant source of risk for these agencies, and they are subject to strict regulatory oversight: the new regulatory capital framework (BASEL II) which places increased emphasis on credit risk management. Salas and Saurina's (2003) results also point towards the relevance of strengthening the regulatory concerns for credit risk Banking Regulation and Supervision Agency of Turkey (BRSA) is strict and keen on following the credit risk and the capital adequacy standards (parallel to BASEL II) for the banking system in Turkey. This behavior of BRSA is not unexpected, especially when one remembers the bad memories of 2000-2001, the crises that stemmed from the banking system and damaged the Turkish economy. In this framework, Turk Eximbank, as a public investment bank, is also subject to most of the regulations of BRSA.

In this study, we describe the risk management principles of Turk Eximbank, and then compare it with Export Development Canada (EDC), the Canadian official ECA which represents the state of operations in a developed economy.

In the following section, we present information about Turk Eximbank, and its risk management process. Then in section 3, we make comparisons to EDC's risk management practices. Then we conclude with some recommendations for Turk Eximbank.

The evaluation and the recommendations that we provide for Turk Eximbank can be used for any similar ECA from developing economies, in order to achieve the higher level of risk management practiced by well functioning institutions.

## **TURK EXIMBANK A.S. CREDIT RISK MANAGEMENT**

### **Overview**

Turk Eximbank is a fully state-owned bank acting as the Turkish government's major export incentive instrument in Turkey's sustainable export strategy. As Turkey's official export credit agency, Turk Eximbank has been mandated to support foreign trade and Turkish contractors/investors operating overseas. Turk Eximbank's main objectives are promoting Turkey's exports through diversification of exported goods and services by increasing the share of Turkish exporters in international trade, finding new markets for traditional and non-traditional export goods and providing exporters and overseas contractors with support to increase their competitiveness and to ensure a risk-free environment in international markets.

Turk Eximbank currently supports Turkish exporters, contractors and investors through various credit, guarantee and insurance programs. The Bank does not compete, but works closely with commercial banks encouraging them to increase their support for the export sector. As well as providing direct lending, the Bank also provides insurance and guarantees to Turkish commercial banks to encourage them to finance export transactions.

### **Organization of Risk Management and Internal Audit**

The risk management and internal audit activities are carried out in compliance with the relevant legislation and independently from the executive functions. The Audit Committee works under the Board of Directors, which is the ultimate responsible unit. The Committee, on the behalf of the Board of Directors, is authorized and responsible for: ensuring the efficiency and adequacy of the internal control, risk management and internal audit systems, monitoring the operations of the internal systems, accounting and reporting and the integrity of the information generated by them in compliance with the related legislation.

As a separate executive unit Risk Management Department;

- Continually reviews and critiques the overall credit risk management process to examine credit risks and devise means to manage them
- Continually reviews the overall credit analysis and monitoring processes and recommends and implements improvements
- presents the risk reports prepared in coordination with the related execution units

### **Credit Granting**

The scope of the annual operations of the Bank is determined by the Annual Program that is approved by the Supreme Advisory and Credit Guidance Committee. It is chaired by the PM or the State Minister and other members are the executives of related government departments. Loans are extended under various credit programs within the framework of the authority given to BOD by the Supreme Advisory and Credit Guidance Committee.

Analysis of credit, guarantee and insurance transactions are realized by the execution units. In case of granting support to the same country, bank/financial institution or firm by more than one execution unit, the analysis responsibility belongs to the unit undertaking the highest risk. If the responsibility turns out to be an issue during the analysis phase, Risk Management Department decides which execution unit will assume the analysis responsibility.

### **Concentration Limits**

The percentage share of risk balance of the cash credit, guarantee and insurance transactions is continuously monitored on the basis of countries, banks and firms within the total cash credit, guarantee and insurance. Especially Top 100 Borrowers in the risk ranking is watched carefully by the relevant execution units. The

execution units are also to gauge any systemic risk higher than acceptable concentration in final borrowers, for both credit risk and public policy reasons; and to evaluate risk concentrations in all programs systemically (e.g. sector risks).

To further portfolio diversification objectives and avoid concentration risks, the Bank has additionally established the following exposure limits:

- • Direct/Indirect loans or credits approved to any commercial customer will not exceed a certain percent of the Bank's capital
- • Direct/Indirect loans or credits approved to commercial group will not exceed a certain percent of the Bank's capital
- • Direct/Indirect loans or credits approved to any financial institution will not exceed a certain percent of the Bank's capital.

The above limits are for best quality (risk-rated) borrowers. Specific sub-limits will be set for borrowers with lower quality risk ratings.

In order to prevent the concentration, Risk Management Department can suggest limit reduction for the cash loan, guarantee and insurance opportunities provided to any of the borrowers, and can apply for Board approval.

### ***Credit Risk-Related Limits and General Policies***

The Supreme Advisory and Credit-Guidance Committee approves the upper limits of credits to be extended, guarantees to be issued and insurance transactions to be effected by the Bank either as a total amount or by countries and product groups. The Board of Directors observes these limits and extends the loans in line with this approval.

For cash loans and guarantees, Board of Directors approves the limits for both domestic and foreign credit risks. The Board itself or the Executive Committee by the authorization of the Board may change these limits.

Provided that, the upper level of cash loan limit is not exceeded for a company, the loans are extended by the decision of Credit Committee in line with the maturity, interest and collateral conditions determined by the Board. The maximum amount is limited to 1% of the total shareholders equity.

The Bank is not bounded by the Article 54 of Banking Law numbered 5411, which regulates the credit limits. However, the Bank obeys the general loan limitations of Banking Law ( i.e. customer risk, connected group risk).

The annual program approved by The Supreme Advisory and Credit-Guidance Committee determines the upper limits of credits to be extended to foreign countries. The Board of Directors is authorized to allocate the risk limits of loans, and guarantee and insurance premiums to country, sector and commodity groups within the boundaries of the annual program.

The term "country limit" in the annual program of the Bank limits the new commitments of credit, insurance and guarantee operations in annual basis under buyer's credit; "utilization limit" limits the total amount of cash/non cash disbursements in the whole of the year. The program restricts the "maximum limit that can be undertaken" and the "maximum amount that can be used annually".

The buyer credits operations are implemented through the approval of the Board of Directors, the Minister in charge of Treasury / decree by Council of Ministers according to the article 10 of Law on Regulating Public Finance and Debt Management numbered 4749.

In addition, all of the foreign exchange denominated operations and other derivative transactions of the Bank are carried out under the limits approved by the Board.

The significant volume of bank risk necessitates a strong risk management function in the Bank. With this respect, a risk limit is applied to the borrowers at the level of country, bank, firm and transaction basis. Approved credit lines are rated and in the case of potential loss, the risk limits are reviewed.

## **Risk Rating System**

The risk analysis of credit, guarantee and insurance transactions are realized by the execution units. While the credit risk analysis for a borrower is to be determined, minimum below conditions are taken into account:

- Economic conditions of the borrower's country,
- Structure of the borrower's sector,
- Minimum capital adequacy,
- Asset quality,
- Repayment ability,

- Liquidity adequacy,
- Profitability level,
- Administrative quality, experience and ability to control,
- Acceptance and marketability of its products or services,
- Quality and sufficiency of its customers and providers,
- Cash flow regularity and sufficiency,
- Permanency of its activities,
- Adequacy and quality of its credit collaterals, their marketability and price sensitivity,
- Compliance to the credit documentation and credit conditions,
- Accuracy of the financial information of both the borrower and the guarantor,
- Adequacy of the economic and financial power of the borrower, bail and guarantor,
- Morality of the borrower and its protested bill or bounced check position.

Country, bank, firm, project and transaction risk analysis procedures are prepared by Risk Management Department in coordination with the related execution units and become effective by the decision of Senior Risk Committee. There is an internal rating system for banks used for the measurement of their limits. In principal, the future aim of the Bank is to implement a Risk Rating System to use in the cash and non-cash credit allowance, limit allocation and collateral analysis stages of the export or buyer companies' operations as well.

The prime aim of the risk rating system is to build a tool that can reasonably predict the risk of client default (country, bank, or firm) and predict the risk of loss in the underlying transaction. Over time, Risk Management Department will test the risk rating system to fine tune ratings against actual results and to increasingly uncover those variables (qualitative or quantitative) that actually correlate with default and with loss.

## **Risk Monitoring**

Risk monitoring; starts with the approval related to the transaction, ends with the total settlement of the risk. The risks and limits of the companies and banks are monitored by both loan and risk departments on a weekly and monthly basis. Besides, business and geographic distribution of the loans risks are followed regularly in conjunction with the export composition Turkey. Methods and instruments used for risk monitoring are listed below:

- Following the reports of the OECD, Berne Union, reinsurance institutions and independent rating institutions,
- Examining the reports related to the country's' balance of payments, the financial performance of the banks/financial institutions,
- Reports of the periodical visits to the country, bank, firm or project locality,
- Reports obtained from the international information institutions or other export credit agencies,
- Reports prepared in-house related with the country loans and short-term country risk groups,
- Any news or statistics about the country, bank/financial institution, firm, sector or the guarantor,
- Information in the Central Bank of the Republic of Turkey,
- Monitoring reports related to the transaction or developments of the project,
- Records of the protested bill or bounced check,
- Monitoring Social Security Institution(SSK) and tax liabilities,
- Fulfillment of the payments of accrued premium, commission, interest and principal in time,
- Monitoring of the borrower's or guarantor's fulfillment of liabilities to other institutions in time,
- Monitoring of the information about the other internal execution units.

## **Provisioning**

The principals and procedures of provisioning are determined by the Executive Committee in line with legal provisions. Risk Management Department monitors the Bank's provisioning policy and if required, makes suggestions within the context of the Bank's risk rating system.

In accordance with the Provisioning Act, the Bank;

- sets aside 100% specific provisions for short-term non-performing receivables,

- sets aside free provisions at specific rates (25%-100%) depending on the overdue period for the political risk-related losses from the medium and long term credits characterized as the buyer's credits most of which was granted within the framework of the country's foreign economic policy, despite the fact that Turk Eximbank is under the guarantee of Turkish Treasury according to the its Establishment Law,
- sets aside general provisions for cash and non-cash credits at the rates determined by the Executive Committee,
- for the insurance transactions; sets aside special provisions for the fixed collateral determined by approval of the related Ministry and variable collateral determined as a specific proportion of the total premium revenues and indemnification payments at the coverage rate defined on the insurance bill over the Bank's share.

## **Risk Mitigation**

### **Insurance**

Turk Eximbank reinsures major portion of its underwritten commercial and political risks emerged in Short-Term Export Insurance Program. The risk for the portion is transferred to a group of domestic and overseas reinsurance companies. The bank holds (approximately 30%) a portion of the above-mentioned risks that can be indemnified from its own sources

### **Collaterals**

The major collateral required for the Pre-Shipment Export Credits Program (cash loans granted through commercial banks) is the Debtor Banks' Current Account Undertaking Contract, similar to a comprehensive bond, issued by intermediary commercial banks in accordance with their respective credit limits.

Direct lending secured by fundamental collaterals is in an amount between 100%-110% of the principal plus the interest amount of the loan. The rate of fundamental collateral may decrease depending upon the financial soundness of the company and fulfillment of Turk Eximbank's financial and moral requirements approved by the Board of Directors of the Bank. Fundamental collaterals can be commercial bank guarantees, government securities or the promissory notes issued by Ministry of Finance / Central Bank of Turkey in the name of the relevant exporter company.

The fundamental collateral of the foreign country loans are the sovereign guarantee of the counter country and the guarantee of banks that Turk Eximbank accepts as accredited. Sovereign guarantee letters are regulated by the finance minister or cabinet related to the counter country legislations. Guarantee letters cover the principal and interest and all other obligations of the borrower and are valid till the maturity date.

In addition to sovereign guarantee, promissory notes of the correspondent bank or the entity, "comfort letter" regulated by the authorized entities of the correspondent country could be requested. Besides these, additional collaterals such as "escrow account" could also be requested according to the structure of the project.

#### *Monitoring Collateral and Documentation*

Historically Turk Eximbank has typically relied on collaterals like bank guarantees, government bonds or receivables from public, however as this may change in the future and as collateral risks are critical in managing Risks of Loss, the Bank staff will have to increase focus on management of collateral risks.

The Account Officer as the sole responsible for the loan should monitor the value and legal status of collateral and other security at all times. Although Accounting may undertake the legal aspects and registration of collateral, the Account Officer must monitor its quality on an ongoing basis. The Account Officer must schedule periodic inspections of collateral, and must be sensitive to market changes, which could influence liquidation value of collateral. Any indications that liquidation value may decline must be reported to the responsible senior management and the credit must be risk rated accordingly.

Besides collateral inspections should be performed by a professional appraiser whenever possible, to ensure Turk Eximbank's collateral is fairly and objectively appraised. The Credit Department should maintain a list of contacts in each member country where legal advice, collateral inspections, and liquidation assistance can be obtained when necessary.

## **Risk Measurement**

Currently credit risk is measured in accordance with the BRSA regulations by means of a method proposed by BRSA. Risk weights of the assets are determined in accordance with BRSA regulations. But, in the future, Turk



Eximbank plans to employ a risk measurement system which is fundamental to managing credit risk and which is a basic tool of credit risk management.

The Bank assumes that the risk measurement system will:

- Create a standardized, universal language to measure and track credit risk
- Let managers quickly capture declines in risk quality – in individual credits or within the portfolio – allowing proactive management
- Permit objective comparisons - among products, across clients, among staff, across time
- Communicate aggregate risk levels to all stakeholders - both outside and inside the bank
- Compel managers to better allocate resources and capital
- Permit measurement of risk-adjusted return (RAROC, etc.)
- Allocate realistic provisions and reserve against capital that can be tested over time

## **Pricing Policy**

In the pricing; the issues such as international rules and regulations the bank is subject to, cost of funding, tenor of the transaction, minimum risk-adjusted return on capital, quality of collaterals, level of market rates, public policies in order to support export sector, relevant prices of other export credit agencies both international and domestic and the Bank's mission of providing funds with costs that enable the exporters to gain competitive power not only in the existing markets but also in the risky/new markets are taken into account. Basic financial conditions are approved by the Executive Board of the Bank for the cash credits.

Short-Term Export Credit Insurance premium rates differ according to the criteria such as risk classification of the buyer's country, payment terms, credit length and the legal status of the buyer (private/public). The premium rates increase as the risk classification of the buyer's country is high and/or as the payment terms are long. The premium rates are revised regularly according to necessities and are valid after the approval of the Board of Directors. The quotation strategy, which is the basis of determining the premium rates, is generated taking into account the domestic market conditions, the international quotations of export credit insurance services and the size of the past years' accumulated losses.

Credits should be priced to meet the Bank's minimum Risk-Return hurdles but credits may be priced below these rates when:

- breakeven of the overall client relationship, on a risk-adjusted basis, meets the targets (e.g. including insurance premiums); or
- special circumstances or conditions warrant concessionary pricing, in which case the credit must be approved by the next highest level of authority; or
- the credit meets explicit public policy objectives that are defined in the credit analysis in compliance with the mission of the Bank.

In the case of (c), where a credit is priced below minimum Risk-Return hurdles for public policy reasons, the credit analysis (initial or review) must explicitly calculate the effective credit price at the minimum Risk-Return rate. For term credits, this difference must be calculated annually through the life of the credit. This difference will be known as the Public Mandate Cost and will be recorded internally by the Accounting Department. The proposed risk rating system mentioned above will also help Turk Eximbank to systematically quantify public policy costs in the implementation of a Shadow National Interest Account system. If Turk Eximbank is unable to actually implement risk-based pricing, at least it will allow the bank to track the gap between government-mandated pricing and that determined to reflect actual risks. Besides that it will also be used to better allocate capital by creating a database of credit history for implementing any risk-adjusted return on capital (RAROC) system.

## **Capital Adequacy**

Capital adequacy ratio is calculated within the framework set by the Banking Regulation and Supervision Agency (BRSA) legislation. Risk weights of the assets are determined in accordance with BRSA regulations.

## **Public Policy Objectives and Preservation of Capital**

As a public institution the main objective of Turk Eximbank is to promote Turkish exports. Given the Public Policy mandate, Turk Eximbank must ensure that all credit risk extensions conform to defined guidelines to achieve these export-promotion objectives. The responsibility for identifying, measuring, and managing export-promotion objectives will remain outside of the purview of the Risk Area and within execution unit. Each Credit Memorandum will have a separate section that confirms and describes how the extension achieves these objectives. The development, maintenance, and monitoring of this will also be the responsibility of execution unit.

While achieving Public Policy objectives, the Bank must at the same time ensure that it employs the capital invested by the Turkish government in the most effective means possible. Capital preservation is the primary objective of the Risk Management area and Risk Managers must assure that credit extensions meet Risk / Return guidelines. The credit committee will determine which specific tools are used to measure Risk-adjusted Return. The Bank will ultimately aim to measure all credit extension on a RAROC (Risk-adjusted Return on Capital) basis, both individually and globally.

At times, the Bank may not be able to price a credit risk sufficiently high to achieve a satisfactory Risk-Adjusted Return, for example when encouraging export growth among priority targets of the Turkish borrowing population. In such cases, the execution unit will calculate the difference between the real break-even price for a credit or group of credits and the actual price charged. This difference will be considered the cost of achieving the specific public policy objective and will be tracked to help stakeholders measure the cost / benefit of such policies and their impact on Turk Eximbank's overall capital and on its risk management process

## COMPARISON of ECAs

Both banks, Turk Eximbank and EDC, have independent risk and audit management structures as they are obliged by the regularity institutions (BRSA in Turkey and BIS-Bank for International Settlements as an international regularity institution). Due to the rule of "segregation of duties", risk and audit departments work directly under the Board of Directors. These departments do not have any responsibility against Chief Executer Officer. For both banks the Board of Directors is the ultimate authority of responsibility for the risk management and internal audit functions.

The banks normally have similar assessment processes prior to granting a credit. However, whereas EDC use Risk Rating software packages, Turk Eximbank applies an analysis procedure which is not based on a software package for Turkish export companies and foreign buyer companies. Risk rating system employs statistical methods on the basis of past data, and enables EDC to determine the default probabilities, expected and unexpected losses, and capital requirement. For some of its product lines, EDC makes use of a rating methodology which is combination of external ratings (Moody's and/or Standard & Poors) and the internal rating. Turk Eximbank, in the case of extending credit line to domestic banks for export credit intermediation and treasury operations, utilizes an internal rating software package. The credit line limits for foreign banks and countries for treasury operations are based on the external ratings (Moody's, Standard & Poors, Fitch). The limits set by the Supreme Advisory and Credit Guidance Committee for country credits are monitored by following external ratings and special reports of international institutions like Berne Union, World Bank etc. EDC has a similar limit procedure for country and treasury limits except that country limits are set by the Economic Department.

Concentration Limits, for an efficient portfolio management and risk diversification, have been set in both banks, but as a consequence of being official export credit agencies of their countries, there may be some exceptions regarding the issue due to a political or an export development strategy purpose. Such intention is to be approved by the Board of Directors.

Turk Eximbank covers the capital adequacy issue within the framework formed by the BRSA regulations. EDC, on the other hand, gives a special importance to capital adequacy. Besides complying with the Basel II guidelines, it implements a new feature called Strategic Risk Capital to respond the unforeseen or unexpected changes for high risk businesses.

EDC measures the credit risk by using value-at-risk (VAR) based analytical and statistical methods, but Turk Eximbank relies on the measurement method imposed by the BRSA.

Since EDC and Turk Eximbank are official export credit agencies (ECAs), they have to obey the international rules of OECD in pricing for international products. Besides OECD rules, EDC imposes market prices for its products and aims a certain level of risk adjusted return. Turk Eximbank also targets a risk adjusted return but for only country credits. For domestic products, follows a cost based pricing policy.

For the credit risk mitigation, EDC appears to apply all methods generally accepted: Insurance, Use of derivatives, Collaterals, Netting Agreements and National Interest Account. The derivatives used by EDC are credit default swaps. Turk Eximbank implements collateralization, use of national interest account and reinsurance of some part of short-term export insurance policies. There is no application of derivatives for credit products and netting agreements, the use of insurance is limited to short-term insurance products, nothing for cash/non cash loans.

## CONCLUSION

Considering bad memories of the past, especially in Turkey, and witnessing the today's ongoing sub-prime mortgage crisis, the importance of efficient credit risk management is clear. So financial institutions especially banks should have a sound credit risk management policy, should follow the necessities of that policy. With the focus on regulation and risk management in the Basel II framework gaining prominence, the post Basel II era will belong to the banks who manage their risks effectively. The banks with proper risk management systems would not only gain competitive advantage by way of lower regulatory capital charge but also add value to the shareholders and other stakeholders by properly pricing their services, adequate provisioning and maintaining a robust financial health. Besides, with the increasing volume of transactions, new financial products, global market places and expanding use of the internet, the nature of the securities business is constantly changing and becoming more complex. As a result, a dynamic approach to risk management is required. The institutions need to devote adequate time and resources to assess risk management procedures and controls, and modify such systems to reflect changing market conditions.

Our comparisons show that Turk Eximbank is a little behind its counterparty. Although the structure established is sufficient for the BRSA standards, considering the strategic importance of Turk Eximbank for the Turkish economy and the highly competitive international arena it takes place in, the Bank should initiate the necessary steps to catch up the rivals. Setting up a good technological infrastructure, employing a sound credit risk software package and a risk rating system, entering the credit derivative markets, introducing more insurance products for the credit side, and establishing netting agreements are necessary steps to catch up with EDC and other ECAs of the developed economies.

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# FROM ANTHROPOLOGY TO THE POINT OF SALE: TOWARD A MARKETING CONCEPT BASED ON “PLACE / NON-PLACE” PRINCIPLES.

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## ABSTRACT

*This work is part of the contributing theories concerning space or physical environment of customer service establishments. New constructs are defined here, such as “store” versus “office” and “ES+” (experiential space +) versus “ES-” (experiential space -). These constructs create axes which can be used for plotting all kinds of sales or public establishments. The questions that need answering are as follows: 1. Do these concepts really exist in the consumer’s mind or are they just theoretical concepts with no useful reality? 2. If they do, in fact, exist, how are they defined by customers or consumers? The constructs defined in this work have relevant implications for management. The empirical project is conducted with bank customers.*

## INTRODUCTION

Service sector companies spend millions of dollars each year designing, building and restoring the facilities where they operate. However, they still do not have a system that allows them to find the right combination of physical environmental factors that influence consumer decisions (Aubert-Gamet and Cova, 1999). The authors posit that such weaknesses are possibly due to a lack of solid theoretical work available to support companies’ decisions in terms of “serviscape” management (Bitner, 1992).

If we look at the banking market, what do we see happening currently with branches in the United States? Banks such as Wells Fargo, Washington Mutual, UMPQUA Bank and others have already had years of experience with a type of branch office that looks nothing like one would expect. The same trend is spreading in the European market, as summed up in an article by Miguel M. Mendieta, “Banking Service 2.0” (“*Llega la oficina bancaria 2.0*”), published in the financial newspaper, *Cinco Días* (July 16, 2007): “Banking has started speaking a new language through the design of its branch offices... no longer fortresses for guarding cash, banks have become ‘financial shops’. In May, 2007 in London the SMI Group organized one of the top international conferences on the topic of strategy and profitability of branch offices. Seventeen financial institutions from various continents participated in the symposium and after two days of debate the main conclusion was that branches had been revived....One of the participants, Sparkasse de Forchheim (a German Savings Bank in southern Germany), is selling cars and Deutsche Telekom products. They even have some automatic teller machines that come up from the floor, almost levitating... The banks look increasingly more like stores, from the shop window to the product presentation... Deutsche Bank and Caja Navarra actually *can* their products, ‘displaying’ their loans, bank cards or savings accounts in the form of metal cans on shelves. Inside them are the forms the customer needs to sign to take out this product. Two teenagers gaze as a Porsche in the store window. Inside the bank an elderly woman buys a chess set for a birthday gift and a group of tourists check out the guidebooks on Berlin. This is not a shopping mall, but rather, branch Q110, Deutsche Bank’s test laboratory.

What is the current situation in Spain with respect to the consumer’s experience and relationship with his/her bank (or banks)? According to the market research company TNS, the Spanish people are not satisfied with the experience offered to them by their banks. Only 37% of bank or savings and loan customers would recommend their bank to others (only 4 out of 10). This data is reported in *TNS Benchmarking Banca Particulares 2007*, a

new study by TNS Financial based on 8,000 opinion responses from Spaniards regarding their banks or savings and loan institutions.

## JUSTIFYING THE RESEARCH

With the above background material cited, what follows is the basis, or rationale of this study:

1. Despite the large amount of investment made by many companies, there is no system for companies to determine the correct combination of physical environmental factors.
2. Consumers do not only look for use value in bank facilities, but other types of values as well. Therefore, the experience offered to them must be managed.
3. The trend within retail banking is to experiment with branches that do not resemble banks at all.
4. In Spain, a large number of bank customers would not recommend their bank to others, since they are not satisfied with the experience their bank offers them.

There are great weaknesses in management in this area, which also justify interest in this research project. The basic questions which the authors will attempt to answer (after the quantitative phase) are the following: What type of physical space is appropriate for company facilities where customers are taken care of? What types of experiences do banks wish to offer their customers in this space? How can these experiences be managed? Where is our company, or the competition, positioned?

In short, the subject of study in this paper are the opinions, perceptions and experiences of customers regarding establishments that deal with the public, offering services to customers and consumers, whether stores or offices. Specific attention will be placed on retail banking establishments.

## THEORETICAL FRAMEWORK

As a conceptual framework for this research project, a synthesis can be made of the following four inter-related contributions: 1. Experiential Marketing (Schmitt, 1999), 2. The Science of Shopping (Underhill, 2000), 3. *Servicescapes* (Bitner, 1992), and 4. "Place and Non-place" (Augé, 1995).

To illustrate the theoretical synthesis cited above, a summary is offered of the most relevant aspects of these contributions, beginning with Schmitt (1999) and his Experiential Marketing. Firstly, as a matter of interest, it should be pointed out that many other authors fit under the category of "Experiential" theories. The following is a partial selection: Pine and Gilmore (1998): *"The Experience Economy"*; Longinotti-Buitoni (1999): *"Selling Dreams. How to make any product irresistible"*; Robinette, Brand and Lenz (2001): *"Emotional Marketing. The Hallmark Method of Earning Customers for Life"*. Schmidt and Simonson (1997): *"Marketing and Aesthetics. Strategic Management of Brand, Identity and Image"*. We consider Schmitt (1999) to be the author who most clearly defines the main conceptual lines of this "new framework" which he himself labels as "Experiential Marketing", differentiating this from traditional marketing.

The second aspect of this theoretical framework which inspires the present research comes from the contributions of Underhill (2000), who developed the *Science of Shopping*. He himself defines this as a practical discipline which deals with the necessary research, comparisons, and analysis for making stores and products more sensitive to shoppers. This "science" is centered on analysis of what happens when the product and the shopper are under the same roof (using tracking devices, videotaping, and surveys). The fundamental principle behind the Science of Shopping is that stores and facilities must adapt to the needs (including anatomical ones) of human beings, with the clear goal of making shopping a pleasant experience.

"*Servicescape*" is the theoretical framework created by Bitner (1992). This theory assumes that the atmosphere, the physical environment, the store's layout and design have an effect on the consumer (and employees) and how they behave in the store. Ever since Kotler (1973) established the concept of atmosphere as one more component of the marketing mix, it has been generally accepted throughout the literature, and is put into practice by many companies throughout many retail sectors. According to Bitner, the ability of the physical environment to influence behavior and create a product image is particularly clear in services such as hotels, restaurants, professional offices, banks, retail stores, and hospitals. This is due to one fundamental reason, very characteristic of the service sector: the production factory is the store itself (the concept of *servuction*); The place where services are offered cannot be hidden, as production of physical goods can be; the consumer participates actively in the place, above all looking for clues or signals that allow him/her to evaluate the company from where he/she is, in addition to looking for something on which to base his/her expectations, which ultimately affects the

degree of customer satisfaction. Servicescape does not affect behavior directly, but rather, through emotions, beliefs and psychological feelings, as they are converted into behavior. In terms of these consumer responses and behaviors, environmental psychologists have already determined through some of their models that, in general, individuals react to places in one of two ways: “Approach” or “Avoid”. Approaching is understood as wanting to be in the space, explore it, work in it or affiliate oneself with it, while Avoidance is the desire to not be there, not explore the space, not work in it or affiliate oneself with it.





Since each sector or industry has its own characteristics, Bitner establishes a classification and typology that allows one to be operative in putting into practice the measures and steps related to servicescape. For this, Bitner (1992) sets two axes: on the one, those who act (employees, customers, or both); and on the other, the degree of servicescape complexity (simple or complex), thus creating six different types of servicescapes.

Finally, the fourth theoretical framework that our work is based on has to do with the concepts of “Place” and “Non-place”. These concepts come from urban design (Arefi, 2004), but it is Agué (1995) who defines them precisely within the discipline of anthropology. For these authors, the constructs of “Place” and “Non-place” are defined as follows:

1. Place = place of identity, with history, sense of belonging, memory... human interaction; connection to the senses (smell, sight, sound, touch), that is, sensorial qualities. These places have at least three traits in common. They are considered identifying, relational and historical.
2. Non-place = place of connection, freeway, bridges, parking areas... No meaning, mechanized, banal. No interaction, unidirectional (“single minded space”), that is, thinking only of one purpose, with few possibilities for other purposes. Absence of history, emotion, cultural context; these are places of transit or transition, housing emotions such as insecurity and unfriendliness. Overabundance of signals. Non-places are both the necessary facilities for accelerated circulation of people and goods (fast lanes, connected highways, airports), as well as means of transport themselves or large shopping malls. They can also be camps of prolonged transit where world refugees stay. If a Place can be defined as one with identity, one that is relational and historical, then a place that cannot be defined as such is a Non-place. Space in a Non-place does not create a unique identity or relationship, but rather, loneliness and uniformity.

Therefore, in light of all the previous work (Experiential Marketing, the Science of Shopping, Servicescapes and “Place/Non-place”) we present new constructs here, those of “Store – Office” and “Experiential Space +/-”. These are synthesized in the table below:

**Table 1: New Constructs: Store and Office / Experiential Space + and Experiential Space –**

| Experiential Marketing   | Science of Shopping  | Servicescape  | Place and Non-place   |
|--|--|---|---|
| <ul style="list-style-type: none"> <li>Consumer experiences must be managed</li> </ul>   | <ul style="list-style-type: none"> <li>Custom-designed establishments suited to the individual</li> <li>The shopper’s experience in the physical space of the establishment</li> </ul> | <ul style="list-style-type: none"> <li>Servuction</li> <li>Search for signals and evaluate them</li> <li>Expectations and emotions</li> <li>Satisfaction</li> <li>Behavior: approach or avoid</li> <li>Types: Who acts? What degree of complexity?</li> </ul> | <ul style="list-style-type: none"> <li>Place: Identity + Relationship + History</li> <li>Non-place: No identity + No relationship + No history</li> </ul> |
| Axis of Experiential Space positive or negative<br> | Axis of Experiential Space positive or negative<br>   |  Axis of Store to Office (physical characteristics and processes)<br>Axis of Experiential Space positive or negative   | Axis of Experiential Space positive or negative<br>                  |

Next, we define the constructs (Store versus Office and Experiential Space + versus Experiential Space -), which, as can be seen in the table above, are perfectly interwoven into the four previous theoretical frameworks.

1. Definition of constructs: “Store” and “Office”. (axis of processes and physical characteristics):

Store = **St** = Df {establishment open to the public with processes oriented mostly towards waiting on and serving the customer; physically designed to generate positive experiences and processes of communication and sales}

Office = **Of** = Df {establishment open to the public oriented mostly towards administrative processes and production in which the customer may or may not participate. Physically designed this way for administration and production. Factory of services.}

Thus, an axis is created with pure “Office” on one of its extremes and pure “Store” on the other.

2. Definition of constructs: “Experiential Space+” and “Experiential Space-”. (experiential axis):

Experiential Space+ = **ES+** = Df {establishment open to the public in which there are signals of personal identity for the customer. Produces a desire to approach, to go, be and stay in the place. Evaluation of environment or atmosphere is warm and friendly. A place that generates positive experiences}

Experiential Space- = **ES-** = Df {establishment open to the public in which there are no signals of personal identity for the customer. Produces a desire to avoid, to not go, be or stay there and reduces to the maximum the time of remaining in the place. Environment or atmosphere considered cold and unfriendly. A place that does not generate positive experiences.}

Thus, an axis is created with pure “ES+” on one extreme and pure “ES-” on the other.

## RESEARCH SETTINGS

Having defined the four new constructs above, a research plan is designed which consists of two phases: 1. qualitative (focus group) and 2. quantitative.

The first qualitative phase (whose results are presented herein) will make possible the second quantitative phase. This second phase will statistically test the hypothesis of these newly defined constructs, their precise definition, as well as possible generalizations derived from them and the necessary practical implications which follow from the study, mostly for retail companies in the service sector.

Therefore, in this phase of the project the goal is to be able to answer the following questions:

1. Do these concepts (Store – Office / Experiential Space + or –) really exist in the consumer’s mind or are they just theoretical concepts with no useful reality?
2. If these constructs exist, how are they defined by customers and consumers?
3. Exploratory research to know consumers’ opinions, feelings and sensations about the most relevant aspects (physical and experiential) of commercial establishments, as well as the lexicon and terminology they use when expressing these ideas.
4. Identify the main attributes (identification, item inventory) and group them according to the main factors which guide customer judgments in commercial establishments. This data will be needed to build scales in quantitative research at a later point.

The qualitative technique chosen is that of a focus group. The technical file on the study is presented below, with all the relevant details.

**Table 2: Technical file of the research (focus group)**

|                           |  |
|---------------------------|--|
| Number of groups and ages | Two homogenous groups representing the over 18 Spanish population: “young adults” from 20 to 35 (9 total, 4 women and 5 men); “adults” from 40-55 (8 total, 4 women and 4 men). Middle class.  |
| Representativeness        | A screening questionnaire is used to achieve representativeness. Participants were chosen through phoning procedure by Market Spoon, a company specialized in this area. Market Spoon had previously sent all participant profiles to the researcher for preliminary approval. |
| Dates                     | October 4 and 9, 2007.   |
| Location and Duration     | Universidad Rey Juan Carlos (Vicálvaro campus, Madrid). Each meeting lasted approximately an hour and a half.  |
| Moderator and Assistant   | Expert in qualitative techniques. The moderator notified participants that the meeting was being recorded. A “meeting script” was used to ensure the achievement of objectives. One  |

|           |  |
|-----------|--|
| Moderator | of the researchers acted as assistant moderator during the meetings. |
|-----------|--|

For data gathering, analysis, and interpretation of results, audio recordings were made by the moderator, two others experts and the researchers themselves, (5 experts in total). The expert panel worked by selecting keywords, or those words important to the study's objective. Analysis of relevant content followed the text-based data technique: considering what was said (items and vocabulary), how many times it was said (frequency), how it was said (emphasis and intensity), as well as the specificity of the responses and their relevance to the object of the study. Participants' opinions were moved into the "categories/factors" which grouped the items. Such categories had been established through strong consensus. In order to categorize opinions, experts used a methodology similar to the Delphi technique: we hear – we note down – we summarize → we exchange information with other experts→ we reevaluate (reducing, etc.) → we agree (consensus).

## RESULTS

As is the norm, information resulting from the focus group is rich and extensive. For this reason, we list below the main results which relate to the subject of this study and its objectives:

1. Whether participants were talking about "commercial establishments in general", "stores", "offices" or "banking offices" in particular, a set of variables appeared in their descriptions. We can easily group these under one of the six aspects or discursive axes (three for physical aspects and three for experiential aspects).

Physical Aspects:

- The type and size of establishment.
- The services or products they offer (type, range) or exchange.
- The appearance of the store or establishment.

Experiential Aspects:

- The staff in these establishments and their behavior.
- What takes place in the establishment.
- The sensations, feelings and perceptions produced in customers.

2. If we analyze each of the discursive axes we find the main items which define them, but with notable differences between what the group participants understand to be "Stores" as compared to "Offices". We can deduce that the participants in the focus group have a clear concept of what for them is a "Store" and what for them is an "Office". This statement is not generalizable, however, nor is it valid or representative until it is quantitatively proven.

3. Participants clearly identify (and differentiate) the existence of places (commercial establishments) in which they are more comfortable as compared to others, and those which give them positive feelings versus others which create negative ones. This is what we call "Experiential Space + or -". This statement is not generalizable, however, nor is it valid or representative until it is quantitatively proven.

4. The group participants had no difficulty in putting various types of establishments into the different quadrants that form our constructs. For example, for them a bank is an office whose experiential space is negative. However, certain participants point out that banks are beginning to look like stores.

5. Due to limitations of space, certain valuable research results were obtained which cannot be presented here. These illustrate how items define factors in the aforementioned constructs. This data will be the basis of a later quantitative survey during the second phase of the project.

## IMPLICATIONS FOR MANAGEMENT AND FUTURE RESEARCH

In terms of managerial implications, if the hypotheses (existence of new constructs, etc.) are proven through quantitative research, companies will have two axes (four quadrants) with which to spatially plot any commercial establishment, hence, helping them to define the role that physical space plays in their marketing mix. In addition, companies can create positioning maps with respect to their competitors. These axes will have the added advantage of offering companies the customers' specific view of their establishment's physical space. By defining the factors and items that each factor contains for each axis clear marketing recommendations can be made. These will help a company to move within each quadrant, creating an establishment that is viewed more



as a “store” or more as an “office”, with a generally positive experiential space. Moreover, this positioning could be related to the company’s sales figures, profits, number of customers, customer loyalty, etc. Nonetheless, none of these alternatives can be recommended until the qualitative research phase is finished. Consequently, a questionnaire must be developed with the factors and items obtained in order to progress to a quantitative phase. The quantitative phase will lead to knowledge that can test the hypothesis of the newly created constructs (Store versus Office / Experiential Space + versus Experiential Space –) and perhaps obtain generalizable results.

In conclusion, before laying out any practical repercussions, we must wait for the results of the next quantitative phase of the project in progress.

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# RAISING BRAND EQUITY TO GENERATION Y

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## ABSTRACT

*The paper points to the relevance and possible ways of increasing perception of brand equity for generation Y consumers worldwide. Generation Y is a cohort in today's market who does not accept traditional marketing methods; it is disloyal to brands; and has been largely ignored in current academic literature. We propose a theoretical framework to raise brand equity of this young generation based on importance of building relationships with the individuals, using integrated marketing communications to connect with the generation Y consumers emotionally, and segmenting the market properly to ensure that the messages are targeted to the right consumers.*

## INTRODUCTION

Generation Y is a large segment argued to number about 80 million people around the globe (Brand Strategy, 2007; Braunstein and Zhang, 2005; Clausing et al 2003). They currently spend around \$153-\$155 billion a year (Bush et al 2004; Cui et al, 2003; Tsui and Hughes, 2001). These consumers have significant influence upon their parents and younger siblings spending; about 25-33 percent of their overall spending (Glass, 2007; Lippe, 2001; Wolburg and Pokrywczynski, 2001; Russell, 1996). Choosing to ignore this cohort could be very risky for companies considering that generation Y is the future and will dominate the market when it matures (Neuborne and Kerwin, 1999). Generation Y as a consumer group is present all around the world, therefore, the issue of their loyalty to brands is relevant for all markets.

Born between 1977 and 1994, generation Y has a unique attitude towards brands (Sebor, 2006; Bush et al, 2004). Its consumers have been raised in a time where just about everything is branded, making them more comfortable with brands than previous generations and thus responding to brands differently (Merrill, 1999).

There are many similarities between the individuals that make up generation Y. Generation Y individuals are very well educated and very self-assured (Glass, 2007; Clausing et al., 2003; Wolburg and Pokrywczynski, 2001). They have been socialized to believe that *they live in a materialistic oriented society* and they act accordingly (Bakewell and Mitchell, 2003; Moschis and Churchill, 1978). In this society, material belongings are seen as an expression of who a person is and how important he/she is (Belk, 1985). Generation Y has an ability to act as trendsetters for the rest of the market, as it is not only receptive to new products but actively seeks them out globally (Sebor, 2006). Generation Y consumers act as early adopters to influence other segments of the market (Glass, 2007; Lippe, 2001; Wolburg and Pokrywczynski, 2001; Gronbach, 2000; Merrill, 1999).

The product lifecycle theory argues that certain parts of the market adopt new products and then influence the rest of the market to adopt the product (Park and Yoon, 2005). Innovators in the market initially take up new products. They then influence the early adopters to try the product (Park and Yoon, 2005). Early adopters are those willing to try new things as they come to their attention and then persuade the early majority and late majority to trial the product (Park and Yoon, 2005). The last group to adopt the product are laggards who only try after everyone else has (Park and Yoon, 2005). It is evident from the theory that early adopters are critical to the diffusion of new products to the majority of the market (Park and Yoon, 2005). Therefore, having generation Y in this role could increase the speed of market adoption and diffusion for the new product.

Generation Y consumers are difficult to group together as they are very individualistic (Wolburg and Pokrywczynski, 2001). Beverland and Ewing (2005) found that a portion of generation Y known as 'edges' oppose marketing and are distrustful of it. They do not like being coerced into buying products and are cynical towards marketing clutter (Beverland and Ewing, 2005). 'Edges' prefer getting their product information from credible sources such as friends and trendsetters in their social groups (Beverland and Ewing, 2005). Other researchers argue that the entirety of generation Y consumers is anti-marketing because they have been marketed to and targeted by advertising more so than other generations (Sebor, 2006; Lippe, 2001; Wolburg and Pokrywczynski, 2001; Merrill, 1999). Generation Y consumers do not like being assailed with advertising and marketing tricks, and they prefer marketers who understand that they are knowledgeable and clever consumers who know what they want (Lippe, 2001). Bakewell and Mitchell (2003) found that because of this marketing saturation, one in six generation Y consumers fight against marketing by being uninterested in shopping. The implications of this are that because firms cannot apply traditional marketing methods, they should work harder to appeal to or capture these consumers in innovative ways. This break from tradition seems to be important for marketing to this segment.

Marketers are now in a difficult position to explore new ways to approach generation Y consumers. The difficulty is in finding an approach that does not push away other profitable segments while being involved with generation Y. Tsui and Hughes (2001) propose to maintain the brand's core identity and keep it the same across segments. Further, Keller (1993; 1999) argues that if marketers successfully build up brand equity in the minds of generation Y consumers, it would cause them to value more, be more likely to buy and become more loyal towards the brand.

Reviewing the theories related to generation Y and brand equity concept; we found that the contemporary literature has failed to address this crucial marketing tool to use for the generation Y consumers globally (Lazarevic and Petrovic-Lazarevic, 2007). In order to fill this gap in the literature, we propose a relevant theoretical framework.

## **THEORETICAL FRAMEWORK TO INCREASE BRAND EQUITY IN GENERATION Y CONSUMERS**

The theoretical framework comprises of marketing theories such as segmentation, branding and integrated marketing communications. Segmentation provides the rationale for using a different approach to generation Y and why it needs to be separated from the rest of the market. Both branding and integrated marketing communications are important for getting consumers to initially purchase as well as subsequently purchase (Keller, 1993). We now concentrate on theoretical analysis of each of these theories looking for their applicability in increasing perception of brand equity to the generation Y.

### **Segmentation**

Segmentation is important because it explains why the market must be broken up into sections such as generations. Segmenting allows marketers to know more about the consumers they are trying to target. Marketers communicate with consumers more successfully and more cost-effectively because they target the right group of people. If marketers presume that all segments of the market respond to marketing efforts to increase brand equity in the same way they will waste a lot of resources (Megehee, Dobie and Grant, 2003). This is why marketers split the market up in some way to distinguish between those consumers they want to target and those they do not.

Demographics are used to describe a population by such variables as age, geographic distribution, and structure (FitzGerald and Arnott, 1996). A demographic frequently used is generation, which splits the market by age. A generation refers to a specific group of people who are born within a restricted duration around 22 years (Glass, 2007). Schewe and Noble (2000) argue that grouping consumers by generation is appropriate because each generations' collective nature toward others is influenced by what happens in their lifetimes. Each generation has

a set of shared experiences that form values and the way they interpret things (Wolburg and Pokrywczynski, 2001).

It seems important to understand these shared experiences in order to comprehend why generation Y consumers behave differently from previous generations and how this affects their attitudes towards brands (Wolburg and Pokrywczynski, 2001). Once these factors are understood marketers can design their advertising to be more effective at reaching this particular group of consumers.

The branding and integrated marketing communications efforts from companies should be targeted at segments, which can help characterize the target market better and increase likelihood of successful raising of brand equity (Keller, 1999).

## **Branding and Brand Equity**

A brand acts as a symbol that allows consumers to form relationships with multiple products (Keller, 1999). Branding creates a brand image, which when presented to the consumer enables relationship building as a crucial factor for brand equity (Wood, 2004). Brands represent the values behind the product that the consumer can relate to (Keller, 1999). Therefore, building brand equity seems to be important because consumers first value the brand to want to purchase it and then become loyal to it. Branding for generation Y appears to be of more importance because this generation uses brands as forms of self-expression (Lippe, 2001; Aaker, 1997).

A brand allows an organization to create meaning and attach values to a standardized product (Frow, 2002). It is defined as a name, image, drawing, or mixture of these which sets apart a specific product from others in the market and makes it appear superior (Keller, 1993). Marketing tools such as integrated marketing communications help create brands (Grassl, 1999).

Using brands on products allows the firm to construct more successful and economical marketing communications and bring together many different product associations into one (Rooney, 1995). However, advertising alone is not sufficient. Therefore, firms should use integrated marketing communications because it improves communication with the consumer (Hartley and Pickton, 1999; Duncan and Moriarty, 1998). According to Hackley (2003), brand marketing theory proposes that the values of the brand must match the strategies marketers use and what they communicate about the brand to consumers. If this matching is not achieved and the brands' core identity seems jeopardized, then generation Y consumers may lose all respect for the brand and see it as fake (Merrill, 1999). This is why maintaining the brands' core identity and what it is really about, is so important. Consequently, consistency is an imperative for consumers to believe what marketers are telling them about the brand. It can be achieved by utilizing integrated marketing communications (Keller, 1999). Marketers should then consistently tell their consumers what the brand does for them, what it represents, and why it is better than other brands (Keller, 1999).

Brand equity is defined as the value of the brand in the minds of consumers comprising the consumers' belief that the product is better than others on the market (Grassl, 1999; Keller, 1999). As such, brand equity influences whether they buy a certain product over others (Keller, 1993). Aaker (1991) conceptualizes brand equity as having four components: perceived quality, brand loyalty, brand awareness and brand associations. Integrated marketing communications strengthen brand associations to develop and sustain brand equity (Duncan and Moriarty, 1998; Jones and Blair, 1996). Brand equity occurs when the consumers perceives the brand as having strong, unique and favorable associations (Keller, 1999).

A critical factor for building brand equity is developing a relationship between the consumer and the brand (Blackston, 2000). For generation Y specifically, Tsui and Hughes (2001) state that marketers should concentrate on emotional relationships with brands. Using a celebrity endorser can facilitate this process of building the relationship because endorsers can represent similarities between themselves and the brand, and themselves and the consumer (Braunstein and Zhang, 2005). A celebrity endorser is easier to identify with than the brand itself, because she/he is more tangible and identifiable (Braunstein and Zhang, 2005).

Celebrities are people whose name and image captures the awareness and attention of consumers (Stevens et al, 2003). They are a highly regarded part of society, particularly in the US but also everywhere in the world, and very influential on young adults purchasing behaviors (Shuart, 2007; Bush et al., 2004; Morton, 2002). According to Knott and James (2003), celebrities are used to make advertising messages more convincing. Bush et al (2004) go further arguing that marketers can use celebrity endorsers in two ways; by having them wear the brand or appear in advertising to talk about it.

Celebrity endorsers may be influential to generation Y because young people view them as attractive, likeable and real (Atkin and Block, 1983). Young people the whole world over admire and idolize athletes and entertainment celebrities, who they see as setting the fashions. Consequently, we suggest that marketers should utilize celebrities to exert influence upon those young people by endorsing products or appearing in advertisements (Merrill, 1999). In order for celebrity endorsers to reach the audience effectively, Sukhdial et al (2002) propose that they connect or identify with the audience.

With generation Y that actively seeks out products to reflect and communicate their self-perception (Lippe, 2001), if the endorsers match their self-perception, then they can persuade generation Y to buy. Further, Kamins (1989) proposes that in order for the consumer to be influenced by an endorser there has to be a match between the endorsers' characteristics and the consumers' characteristics. In addition, McGuire (1985) suggests that the message coming from an endorser can only be believed if the endorser is similar enough to and liked by the target audience.

When using celebrity endorsers, marketers should choose someone who fits with the brands/products characteristics and values, so that the consumer more easily associates the celebrity with that brand/product (Braunstein and Zhang, 2005; Brooks and Harris, 1998). Every country will have particular celebrities who will appeal to that market most.

Since all of the celebrity's values and behaviour become tied in with the brand, any negative actions on their part can damage the brand as well (Shuart, 2007; Brooks and Harris, 1998; Keller, 1993).

By using a celebrity endorser, the loyalty that the market segment shows to the celebrity can be transferred to a brand/product (Braunstein and Zhang, 2005). This may be a good strategy if the celebrity is well liked or connected to something relevant for the brand (Keller, 1993). In addition, for the message to be received successfully, the celebrities' image and the image of the product should match each other (Kamins, 1989; Kahle and Homer, 1985). To ensure an effective match, Braunstein, Zhang (2005) and Keller (1993) recommend that firms communicate this linkage to the consumer, showing that a long relationship has been established between the brand/product and the celebrity using integrated marketing communications (Braunstein and Zhang, 2005; Keller, 1993).

To use celebrities to influence consumers to buy a product/brand, Stevens et al (2003) and Shank (1999) argue that celebrities have to have source credibility and source attractiveness. Source credibility refers to whether the person has skill and authority (Stevens et al., 2003; Shank, 1999). Source attractiveness refers to how physically attractive the person is and how appealing his/her personality is (Stevens et al., 2003; Shank, 1999). The latter is more important according to Kahle and Homer (1985) as they found only attractiveness can positively relate to imitation of behavior. However, this can differ according to product category or it may be because attractiveness is more easily judged and seen as more relevant.

For the generation Y the implication may be that celebrities should be used for their physical or personality attractiveness rather than their credibility or expertise. This is because the generation Y worldwide is very image conscious.

## **Integrated Marketing Communications**

Integrated marketing communications comprise of the integration of a variety of convincing messages across various forms to communicate and develop relationships with consumers (Eagle, Kitchen and Bulmer, 2007). They contribute to the efficiency of an organization by creating synergies and integration of the information

presented to consumers. Integrated marketing communications are viewed as more important than advertising (Reid, 2005; Zahay et al 2004). They strengthen brand equity through creating strong, favorable and unique associations (Reid, 2005). They lead to increased brand equity through communications with the consumer (Reid, 2005), and they shape consumers perceptions (Keller, 1993).

Sebor (2006) states that the generation Y consumers worldwide are raised believing in themselves and knowing who they are. Therefore, they feel offended by marketers who claim to know them better than themselves. The generation Y consumers also resent when marketers try to enter their world by using trendy slang that comes across as fake and condescending. Perhaps a better approach, as suggested by Sebor (2006) could be to use simple and to the point honest messages.

We suggest that for generation Y marketers should use integrated marketing communications to increase brand equity, but the approach needs to be unique. That is, integrated marketing communications should remain essential for making the generation Y consumers familiar with the brand and what it stands for and conveying the relevance to them (Wood, 2004).

Since raising brand equity to generation Y has not been well explored in the literature, after an in depth theoretical analysis we propose both branding and integrated marketing communications to be used by marketers to influence the loyalty behaviors of generation Y.

## **IMPLICATIONS FOR MARKETERS**

The first significant step for marketers trying to capture the loyalty of generation Y consumers is to segment closely enough to capture a group of generation Y consumers that are similar enough to approach in the same way (Wolburg and Pokrywczynski, 2001). This will allow marketers to create a consistent message and utilize the synergies afforded by employing integrated marketing communications strategies.

Subsequently marketers must conduct market research in order to determine how best to connect with the particular group of generation Y consumers they are trying to target. This involves finding out what gets them excited, how they see themselves, and what kinds of things they aspire to.

Once marketers have the necessary knowledge, it must be applied to their integrated marketing communications and branding strategies. This means showing advertisements at times they watch TV, in magazines they read, events they attend and places they frequent. In addition the message must be consistent, showing them how the brand compliments their lifestyle and fits in with their self image. If generation Y consumers see the brand as reflecting who they are or who they want to be perceived as they will develop a relationship with this brand (Sebor, 2006).

## **CONCLUSION**

Based on the literature review, this paper develops a theoretical framework to increasing brand equity in generation Y consumers. The framework comprises of

- Segmenting the market properly to ensure that the messages are targeted to the right consumers
- Building relationships with the individuals from this market segment
- Using integrated marketing communications to connect with the generation Y consumers emotionally.

If applied by marketers, the framework can contribute to maintaining the brand's core identity and keeping it the same across segments, as Tsui and Hughes (2001) highlighted the importance of this. In addition, as suggested by Keller (1993, 1999) raising brand equity can lead to a more brand loyal generation Y consumer segment.

The theoretical framework remains to be tested as to whether this is really the case in the market.

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# THE ECONOMIC FUTURE OF PUERTO RICO: THE NEED FOR RADICAL CHANGE

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## ABSTRACT

*The island and people of Puerto Rico have experienced endless periods of colonialism and neocolonialism since European settlers arrived in the late Fifteenth Century. This study presents a brief history of the economic effects on the island of this continuing dependency. It examines post-World War II efforts by both the insular and mainland United States governments to assist the island's population in its struggle toward self-determination both politically and economically, with its accompanying alleviation of poverty and underdevelopment. The study concludes that at best only moderate success has been achieved and suggests that radical political and economic efforts need to be undertaken to significantly alter Puerto Rico's destiny.*

## INTRODUCTION

Puerto Rico is quite literally unique in Spanish Latin America, in that since the first arrival of European settlers in the late Sixteenth Century, it has never really experienced a single period of independence. As a result, it may well be argued that the island has been plagued by political and economic, to say nothing of social, problems from its inception which have been directly attributable to its linkage with foreign powers. This is an island nation (if not independent state) which clearly manifests the effects of colonialism, possibly post-colonial (depending upon one's view of its current political status), and certainly dependency (clientalism).

It must be noted that the economic status of the island during its period colonization and rule by the Spanish was one of significant, and at times, extreme poverty. While significant improvements have been achieved under United States' jurisdiction, nevertheless, despite the fact that some might argue its economy has improved significantly *vis a vis* some of its Caribbean neighbors, it still remains an area poorer than the poorest United States state (Mississippi), and one in which there is a significant disparity of the spread of wealth. It is estimated that the per capital income of Puerto Ricans is approximately one-third that of mainland Americans (Collins, *et al.*, 4).

It should be noted that parts of this study are based upon the ongoing work of decades of one of the authors (Le Veness), some, but not all, of which are cited in the study, and the major ethical considerations have been contributed by the other author (Flanagan). This paper is particularly a revision and enlargement of one delivered at the Midwest Political Science Association Annual Conference, Chicago, IL, April 2008.

## Life Under Spanish Colonialism

From the late Sixteenth Century through the late Nineteenth Century, Puerto Rico languished under Spanish colonial rule, which was mainly military and oligarchic. The island held provincial status, was ruled by a military governor, and had little evidence of any democratic participation in government prior to the Nineteenth Century. It was, in fact, one of the oldest Spanish settlements in the Western Hemisphere. The economy was

typically imperialistic, with the major profits (limited at best, in Puerto Rico) reaped by the creoles or *peninsulares*, to say nothing of the Spanish government. While there was an initial discovery of gold which was soon depleted, and main revenues subsequently came from agriculture, mainly sugar, with other agricultural products explored with less success. Unlike some of the remainder of the Americas, after the first few decades, there was relatively little wealth found from mineral resources or other raw material exports. Poverty was widespread, and with much richer territories available to the Spanish in the Americas, often scant attention was paid to the island, its inhabitants, and its economic development. It has been argued that one of its saving features might well fall into the category of geopolitics, as the territory stands at the "cockpit" of the Caribbean, and, therefore, was extremely useful to the Spanish as a bastion of defense of the trade routes to Spain. As a result, Puerto Rico was awarded the revenues from a Spanish tax levied on the Viceroyalty of Mexico, whose ships were protected by island facilities and services, known as the *situado*.

Historian Lidio Cruz Monclova has written, "The history of Puerto Rico can be divided into two major periods: the organic era comprising the 16th, 17th, and 18th centuries, and the critical era beginning with the 19th century and extending to the present (Cruz Monclova). Thus, it is really only in the 19th Century that the true political saga of the island commences. By that point, of course a number of world political conditions had drastically altered and had a most significant impact upon the island and its development. First, the thirteen North American colonies successfully revolted against England, the first colonies in modern history to have so done. Secondly, the French overthrew the Bourbon monarchy and the *l'ancienne regime*, leading to a period of serious unrest, but again, demonstrating the weakness of European monarchies. The French occupied the Iberian peninsula under the Napoleonic regime, offering the Latin American colonies a philosophical justification (under theories derived from such as Aquinas and Suarez, and finally, in 1803, the Haitians successfully drove the French from their shores, giving significant impetus to the rest of the South American revolts which speedily led to independence to virtually all of South America by the end of the first several decades of the 19th Century.

This impact was clearly felt in Puerto Rico. On the one hand, as the revolts spread throughout South America, it must be noted that many of the so-called "royalists" who fled their own lands, resettled upon Puerto Rican shores. On the other hand, it offered the island a first and unequalled opportunity to participate in Spanish politics, which it continued to do with varying degrees of success throughout that century.

The die was cast, and political exercise spread throughout the island. Essentially, two movements, arose, the first, and perhaps most obvious, was that of self-rule, with *independentistas* seeking a complete separation from Spain. However, a second version of home-rule suggested autonomy, with the possibility of maintaining considerable constitutional ties with Spain while, nonetheless, exercising significant control of local affairs. The first is, perhaps, best illustrated by the *Grito de Lares* of 1868, an unsuccessful uprising, but one which did bring at least very brief self-rule to a limited area before it was crushed, and which is still celebrated as an insular solitary. The second, of course is, without question, best viewed through the Charter of Autonomy granted by Queen Regent Maria Cristina on the twenty-fifth of November, 1897.

The gains were significant, albeit short-lived. The very next year, as gubernatorial elections were underway, the island was invaded by the Americans at Guanica, as part of the larger Spanish-American War, and as a result of the Treaty of Paris (1898), ratified by the American Senate the following year, the island was ceded, without any local input or consent, to the United States.

## **American Rule in the Early Twentieth Century**

As was to be expected, the Americans established military occupation in Puerto Rico, and the Spanish troopers were rounded up and housed in *El Arsenal* in San Juan (where they were permitted to continue to fly the Spanish flag) until ships arrived to transport them to Spain. Afterwards, military rule was quickly terminated under the Foraker Act (see works cited -- hereafter, w.c.) That provided for what was essentially a colonial government, with the governor, upper chamber of the legislature (governor's council), and courts, all appointed by Washington, gubernatorial veto over all legislation, and Congressional veto above and beyond. Only the lower house, the Chamber of Delegates, was locally elected. However, most beneficial, were the fact that all Federal taxes, including import duties and excise taxes, were to be awarded to the insular government, a "500-acre" law protected against exploitation of land usage -- though this spent years in the courts, and a new position

was created in the U.S. House of Representatives, known as the Resident Commissioner of Puerto Rico, which meant that one Puerto Rican commissioner could sit in and speak in the House, serve on committees, etc., but could not actually vote on legislation, as that was reserved to Members of Congress elected from states. However, subsequent U.S. Supreme Court decisions, collectively known as the Insular Cases, denied automatic citizenship and all the rights of the Constitution to insular residents. In a real sense, these rulings by the Court left such islanders as virtually stateless, since they were no longer Spanish citizens. Citizenship was finally granted in 1917 with the passage of the Jones-Shafroth Act (w.c.). *Independentistas*, of course, claim that such citizenship was essentially forced upon the islanders, their being no other practical option, and since it was automatic unless personally rejected. It was claimed many of the island's poor might well not have had sufficient opportunity to make such a decision.

Whatever the case, at least the citizenship issue was decided. However, the economic issues remained. Puerto Rico remained dismally poor, poverty and ill health were rampant, and while the island had some caring, efficient, and progressive governors, such as Theodore Roosevelt, Jr., son of the former president, such was most certainly not uniformly the case. Poverty ran rampant, and social, health, and educational services often left very much to be desired. Some advancements were made, particularly in the area of university education.

Politics continued much as it had in the 19th Century, with parties centering around the issues of how best to ensure the economic, political, and social betterment of the island, now through three basic status choices, independence, some type of autonomy, or statehood. Emerging from this movement was don Luis Munoz Marin, son of don Luis Munoz Rivera, and head of the *Partido Popular Democratico* (PPD). Having seen the devastating effects of the Great Depression as well as the 1936 hurricane, he worked closely with Presidents Roosevelt and Truman, as well as presidential advisor and later insular governor, Dr. Rexford Guy Tugwell, to seriously endeavor to change both the political and economic (and of course resulting social) conditions of the island.

## **Commonwealth Achieved**

Working together, the governments of the United States and Puerto Rico effected a number of crucial changes during the late 1940s and early 1950s. Highlights include the appointment of don Jesus T. Pinero as the first Puerto Rican governor of the island in 1946, the passage by the U.S. Congress of the Elective Governor Act for Puerto Rico in 1947 (w.c.), and the subsequent selection of PPD candidate don Luis Munoz Marin as the first elected governor of Puerto Rico the following year. In that election, Munoz defeated candidates of both the *Partido Independentista Puertorriqueno* (PIP), whose positions on the issue of overwhelming importance, namely constitutional status, are obvious from its name, and statehood advocates. The latter coalesced into one party named *Partido Estadista Republicano* (PER) after Commonwealth was achieved, and that evolved into the current *Partido Nuevo Progresista* (PNP), which still maintains a platform calling for at least eventual statehood.

In 1950, Congress, with the full backing of President Truman passed the now famous Public Law 600 which "in the nature of a compact" enabled Puerto Ricans to "organize a government pursuant to a constitution of their own adoption (w.c., Sec. 1). During the subsequent several years, a constitutional convention drew up a document for the proposed government which was approved by the voters of Puerto Rico (with some boycotting because of the lack of other viable choices), and was subsequently approved (after some changes subsequently approved by the Puerto Ricans but not germane to this present paper) by a Joint Resolution of the U.S. Congress (w.c.) and signed into law by President Truman.

In the over half century since the passage of those pieces of legislation and the creation of the Commonwealth of Puerto Rico, there has been clarification of points concerning the insular and United States relationship, several referenda specifically concerning continuation of the current constitutional status of the island, elections of governors and legislators (now of both houses of the insular legislature -- the Senate and the House of Representatives) which somewhat reflects the status viewpoints of voters, but the reality is that there has been no substantial change in the "compact" between the two. The courts have not really even tackled the issue of whether or not an agreement made in 1952 between the Federal government and a regional government is perpetually binding upon the Federal government. Referenda and other polls and voting analysis seem to generally suggest that a majority of Puerto Rican voters still wish to maintain the current status, though those

favoring statehood seem to be "closing in" so to speak. Independence advocates lag far behind, at least in the vote count. Statehood candidates are elected, but not necessarily with the intention of applying for that status immediately or in the near future, as, for example, appeared to be the position of Governor Luis Alberto Ferre. To date, the government has made no formal moves toward or application toward statehood (or independence either, for that matter). An illustration of the above would be the referendum of 1993, in which 48.4% of the voters chose Commonwealth, 46/2% favored the option of becoming a state, and 4.4% chose separation from the United States (Diaz, 203).

Though there have been no official modifications of the Compact, President Clinton established the President's Task Force on Puerto Rico in 2000. President Clinton also issued a presidential memorandum in 2000 which noted "Puerto Rico's ultimate status has not been determined." In Executive Order, he directed the Task Force to consider options for the political and constitutional future of the island (U.S. Senate.....Marshall). President Bush sustained the Task Force and in its conclusions delivered in December 2005 and updated in November 2007, it noted that viable options included the three generally accepted proposed solutions, independence (though a version would establish the island as a freely associated state, for example, in the manner of Micronesia [President's Task Force, 2007, 8]), statehood, or continued Commonwealth. In the case of the last, various options are possible, but administration opinions issued under both the Clinton and Bush administrations suggest that the concept of a status which could only be altered by "mutual consent" is not available, as it is inconsistent with the United States Constitution (U.S. Senate.....Marshall). It is interesting to note that President George W. Bush

"issued a Memorandum that recognized Puerto Rico's popularly approved Commonwealth structure as 'provid[ing] for self-government in respect of internal affairs and administration,' described Puerto Rico as 'a territory,' and directed the Executive Branch to treat Puerto Rico as much as legally possible 'as if it were a State' (U.S. Congress, House.....Marshall).

Thus, the premise of this paper is to examine the economic realities and discuss suggested possibilities based on the likely continuation of the current constitutional status for the foreseeable future. Should, however, the island's voters, and the U.S. government choose a different status, then clearly the entire economic scenario could be drastically changed and would need significant further study.

## **Economic Developments of the Munoz Era and Beyond**

What this paper describes as the "Munoz era" really describes the period of his gubernatorial administration which extended from 1949 through 1964. It was a time of transformation of the Puerto Rican economy, about which much has already been written. Luis Munoz Marin seemed to shake many of his socialist concepts as governor, perhaps having seen how poorly the island's economy had fared since the Americans took control of the island and particularly during the Great Depression of the 1930s, the aftermath of the 1936 hurricane, and during World War II (although in the last instance, the economy was somewhat stimulated by the military bases - over thirty -- established on the island, particularly the huge Roosevelt Roads naval supply base, and the wartime activities associated with them). As a result of the persistent poverty which had been the early 20th Century fate of the island, Munoz embarked upon a new course, entitled "Operation Bootstrap" it, in a sense, embraced capitalism and the concept of "foreign" (i.e., mostly U.S. mainland) investment, in an effort to stimulate manufacturing and, thus, increase employment, which, in a situation all too typical of developing regions, witnessed low wages, far below those of the mainland states, and unemployment and underemployment well into double figures.

Thus, the Munoz government created numerous incentives to entice the mainland (and other) investors to look Southward towards Puerto Rico for expansion of operations, particularly of industries which were labor intensive. They were, of course, greatly aided by the U.S. taxation structure, which permitted (and still permits) exemption from Federal income tax all profits and salaries earned in Puerto Rico (although at that time, the profits could not be repatriated to the mainland without taxation). This, of course, meant that the Commonwealth government could raise its own taxes, thus enabling it to develop infrastructure that would support the growth of such industries. This included everything from roads to electricity to communications, and

education of a type to meet the needs of industry, including a school of tourism for what would hopefully be an increase in that industry, particularly after Cuba effectively was closed to United States tourism in the early 1960s. In addition, it should be recalled that Federal taxes collected on the island are donated to the insular government, and, of course, that shipment of goods and services between the island and the mainland is "domestic," and is, therefore, free of any import taxation (although subject to excise taxation if sold on the mainland).

Other advantages included various aid programs available to the Puerto Rican government and people, continuing Federal services, including, for example, currency, Postal Services, defense (and the benefits of the U.S. Army Corps of Engineers), and the services of the other agencies of the U.S. government. Clearly, the island was also assisted by technological developments, including a crucial one to insular trade, shipping "containerization," which greatly reduced costs of loading and unloading ships, and offset the increased cost of shipping between the island and mainland caused by the fact that all ships must be of U.S. registry and meet U.S. maritime requirements, considerably more costly than expenses of those registered in various other locations of the world. However, disadvantages included "lack of natural resources, training costs, high turnover rates among the industries which do invest on the island, shipping charges to and from the mainland, and the like" (Le Veness, 1986, 8).

The Puerto Rican government also established its own agencies of development. While it is not possible to review all of these, perhaps notation of some is appropriate at this point, and offers a clear window as to the type of assistance to business offered by the insular authorities. The insular government established the Puerto Rican Planning Board which operated as the initial insular civic planning agency (Lewis, 98). Three agencies were established in 1942, namely, *Fomento Economico* (the Economic Development Administration), created in the 1940s, initiated a vast number and variety of stimulus programs to encourage investment in manufacturing and tourism, The Puerto Rican Industrial Development Company (PRIDCO) which initially was "a secondary source of capital through second mortgages, personally guaranteed loans, and minority equity capital investment" also supporting "joint venture projects between U.S. or foreign and local capital in which Puerto Rican residents participate with 50 per cent or more of the capital" (EDA, 1970, 3), and *Banco de Fomento* (The Government Development Bank of Puerto Rico, the successor to the Development Bank of Puerto Rico, which

acts as financial advisor and fiscal agent of the Commonwealth, its public corporations and municipalities in connection with all short-term borrowing and bond issues.....[It] provides financing mechanisms for public entities to fund infrastructure development, public works, and public services. It also facilitates financing for private enterprises to advance the island's economy. In addition GDB offers products and services specially designed to satisfy the banking needs of government instrumentalities (GDB, 2008).

*Banco de Fomento* has emphasized that it "has always firmly maintained a policy of non-competition with other sources of credit. Its loan program is always designed to supplement other types of financing (GDB, 1972, 5).

During the early years of Commonwealth, the Puerto Rican government endeavored to reinforce and develop agencies to assist in this type of economic growth, including, the innovative Free Trade Zone at Mayaguez, its first endeavor at such a venture, supported by both *Fomento Economico* and PRIDCO, which permitted shipment of raw materials or semi-processed materials to the zone, their completion, and then export to other territories taking advantage of less expensive labor and other lower costs, excellent facilities, and, of course, crucially, the absence of customs duties on any goods (unless imported into Puerto Rico). It also created a whole series of tax incentives including program of up to fourteen years of varying tax relief from insular taxation (which was fairly high due to the absence of additional Federal taxation), which were a very significant extra added incentive to the absence of Federal taxation.

It may be stated that, in the early years, Operation Bootstrap concentrated on an endeavor

to gain the industry and capital it need for economic advancement through mainland investment and the creation of what amounted to an import-export economy, with the importation of raw materials and the export of finished products. Concentration was upon

light industry, in those days perhaps best illustrated by the textile industry, and the island advertised to manufacturers the advantages of inexpensive labor, a large and available work force, no federal taxation (though over the years there have been restrictions on the repatriation of untaxed profits), low island taxes, and available ports, electric power, other infrastructural benefits, training programs, and the like, all of which became available to corporations which still retained the obvious political advantages of investing in a region which retained the protection of the United States flag (Le Veness, 1986, 7-8).

During the period 1950-1960, production rose dramatically, as labor intensive industries offered wide opportunities for both investors and workers who generally took significant advantage of the programs offered by government. By 1960 per capita income rose from \$279 to nearly \$582 despite a 6.4% population growth during the previous decade, production climbed from \$755 million to \$1.681 billion, manufacturing jobs rose to over 81,000, and hourly wages were approaching \$1.00. By 1970, manufacturing income had again risen by over 25%, over 2,600 plants were built, and per capita income rose to \$1,400, which was claimed to be "the highest in Latin America" (AFE, 1972, 1).

Nevertheless, one persistent and plaguing factor was very visible: unemployment remained relatively constant and an endemic problem. As with any developing area, underemployment as well as high unemployment comprise serious drains on the economy.

The fact that unemployment was not reduced during his decade in spite of the new jobs created and the relief which the emigration to the United States represented, was due to the fact that together with these two factors, the disappearance of marginal employment or jobs of low productivity was also taking place in the traditional industries, thus resulting in a decrease in total employment (EDA, 1971, 4-5).

Despite the relatively good news, economies change with such rapid growth, expenses rise, labor costs tend to continually skyrocket, tax incentives diminish or expire, and new inexpensive labor markets enter the international competition for investment. Thus, Puerto Rico, by the 1970s was forced to reevaluate its investment efforts. While endeavoring to maintain mainland investment and a resulting import-export economy, it sought to diversify and sophisticate its industrial endeavors in order to offset the loss of industrial plants relying on low-income positions in order to achieve profitability, and to replace those with industries with a more technological, though with the downside of the likelihood of more labor-extensive operations. It coupled its quest for new industries with efforts at securing further Federal tax advantages for industries which invested on the island.

One of the major disincentives to mainland or foreign investment in Puerto Rico was the prohibition of repatriating profits to the mainland or foreign land without a 48% Federal tax being applied. This greatly reduced profitability, and when higher freight charges due to the insular nature of the Commonwealth were added, the combination might well offset any incentive to invest. The only "loophole" was that under Sec. 931 of the IRS Code, if the firm was liquidated, then such profits could be repatriated. Thus, many firms, as soon as the Puerto Rican tax incentive period expired, were liquidated, and the profits removed from the island. Puerto Rican Secretary of the Treasury Julio Cesar Perez noted, "It is hard to believe that the law, almost by design, would make it extremely profitable for an enterprise, at the end of a given period, to suddenly pull up stakes, wreaking widespread havoc on the very community that had gone out of its way to give that firm a home" (Cesar Perez 3).

## **Prosperity During 936**

To correct this obvious impediment to such investment, in 1976, Congress revised Sec. 931 with a new Sec. 936 (Tax Reform Act of 1976) which enabled mainland and foreign corporations to repatriate profits provided they "use it as a corporate vehicle for a period of 10 years. In addition, 80% of .....[their].....income must be earned in Puerto Rico and 50% of it must come from the active conduct of trade or business (EDA, 1978, 6). This also enabled the insular government to revise and diversify its incentive programs to encourage business to, among other items, settle away from the greater San Juan area in order to receive higher incentives, and of

course, relieve underemployment and unemployment in poorer, often rural, areas.

However, what has proven to be a dire warning was issued by Arturo Morales Carrion, one of Puerto Rico's most prominent historians when he wrote that the "1970s saw the weakening of Operation Bootstrap and an increasing dependence on Federal funds.....a sizable portion of the population came to rely on Federal transfers.....Federal disbursements arose almost fourfold....." (Morales Carrion, 312-13).

Yet, underemployment and unemployment unrelentingly persisted!

In previous studies, Le Veness noted that the period following the enactment of Sec. 936 was one of rapid growth and prosperity for much of the Puerto Rican economy (Le Veness, 1977, 229; Le Veness, 1996, 915). In that study, he noted various statistics to support this claim, including a statement by then governor don Rafael Hernandez Colon, that up to one-third of all insular jobs depended upon the island's connection with the United States (U.S. Congress, Senate....., *Political Status*....., I,159), while the Securities Industries Association of the island reported that "funds deposited by 936 corporations amounted to \$65.9 billion, representing 38% of all deposits and 39% of private deposits" (U.S. Congress, Senate....., *Political Status*....., II, 229-30, 233). It was also noted by the Puerto Rican Chamber of Commerce, that in terms of the import-export relationship with the mainland, the island sold \$216.3 billion while buying \$23.2 billion, very significant figures both with regard to trade and with regard to the overall insular economy. That organization called 936 "a major, if not the principal, building block of Puerto Rico's modern industrial sector (U.S. Congress, Senate....., *Political Status*....., II, 218-19). U.S. Assistant Secretary of the Treasury Kenneth W. Gideon noted "that in FY 1989, the tax benefits received by 936 corporations amount to about \$1.9 billion" (U.S. Congress, Senate....., *Political Status*....., III, 205).

## **From Boom to Bust: Will the Cycle be broken?**

It has been suggested by historians that during its colonial period, especially under Spanish control, the economy of Puerto Rico tended to experience a boom to bust cycle. For example, initial boom from gold quickly became bust as the small Puerto Ricans quickly yielded their riches and little more gold was to be found therein after a few decades. Other efforts, such as cattle herding, and various agricultural pursuits suffered the same fate, as other Spanish colonies, often other Caribbean islands such as Cuba and Hispanola instituted similar economic ventures with far greater success. It has been suggested that during one decade virtually no shipping stopped at Puerto Rican ports (except, perhaps for the pirates). Will that also be the fate of Operation Bootstrap and the benefits of Sec. 936?

Well, that remains to be seen, but there can be no doubt but since the days of the enactment of Bootstrap, the economy of the island, particularly *vis-a-vis* employment prospects has drastically changed. As indicated previously, wages and salaries have risen sharply, and with that has been an increasing insular minimum wage requirement, and several decades ago, the application by the Federal government of the U.S. minimum wage to all island workers (from which they had previously been exempt to encourage employment). In other words, labor costs, in addition to other types of costs, have risen sharply. At the same time, the world has been experiencing globalization, and many U.S. firms, as well as those of other North nations, have looked to South nations in order to secure cheaper labor for their labor-intensive industries. This "out-sourcing" has not only become a problem for employment in any number of U.S. states, for example, Ohio with its lost steel industry, but for Puerto Rico as well. Jobs have been leaving the mainland United States in significant numbers, and these often include high technology positions which can be filled, for example, in nations such as India, which have excellent educational facilities which produce skilled workers who are employable at relatively low wages.

This trend has been worsened or appeared to be going to be worsened by U.S. efforts such as the enactment of the Caribbean Basin Initiative during the administration of President Ronald Wilson Reagan. That effort encouraged United States business operations to invest in Caribbean basin nations. Some have suggested that it may have been significantly politically motivated, and have had specific nations in mind, but whatever the case, it appeared to threaten Puerto Rico's position with regard to receiving jobs from U.S. mainland concerns. Perhaps of far greater significance, was the enactment of the North American Free Trade Area (NAFTA) which, among other changes, has seen very significant transfer of U.S. jobs to the Mexican labor market, a very



worrying concern for Puerto Rico, which used to be the recipient of such positions. Perhaps such transfer was inevitable, and indeed, it was proceeding prior to the enactment of NAFTA, once the Mexican government had opened its borders to such foreign investment and job creation. Again, whatever the case, the threat to Puerto Rican employment and investment was very real.

Sec. 936 was enacted, at least in part, "to help Puerto Rico to obtain employment-producing investments from the U.S. mainland," and so "distinguished Puerto Rico from foreign tax jurisdictions" (Bosworth and Collins in Collins, *et al.*, 24) in which such funds are tax upon repatriation to the U.S. However, these authors suggest that is not what has actually resulted. Rather, they suggest that what happened was the type of industry attracted to Puerto Rico changed dramatically. Indeed, it may be seen that the low-income employment-intensive industries were being replaced by higher technology industries, often significantly automated, and really much less labor-intensive, if not simply classified as labor-extensive. These included such industries as pharmaceuticals and petrochemicals, to name but two. Clearly during that same general period, The Economic Development Administration of Puerto Rico (which has since merged with PRIDCO) changed its advertizing, and increasingly appealed to Fortune 1000 and even Fortune 500 companies for investment on the island. James L. Dietz and Emilio Pantojas-Garcia reported that "since the oil induced recession of 1973-1975" there has been an "evolution.....from a predominantly export-platform economy based on capital imports to its recent emergence as a secure tax haven, as an international financial center, and as a regional base of operations for vertically integrated North American transnational corporations (TNCs) operating in the Caribbean" (Dietz and Pantojas-Garcia, 103).

However, all good things come to an end, as the old saying goes. So did Sec. 936. Critics of that section argued "that it gives U.S. corporations an incentive to close down domestic operations and to move them 'overseas' at a cost of U.S. jobs. [S]econd, they contend that it subsidizes U.S. corporations that are undeserving of any subsidy. Third, they criticize it on the grounds that its tax cost per job created in the U.S. Possession is excessive compared with the wages paid, especially in times of economic recession" (Mendez-Torres). Juan C. Mendez-Torres made note of a General Accounting Office study of 1993 based upon the year 1989, noting that:

U.S. subsidiaries located in Puerto Rico were granted \$2.6 billion in section 936 tax credits. In that year, section 936 manufacturing corporations' benefits slightly exceeded the average compensation that these firms paid to their employees. Average tax benefits per employee were \$24,300, while average wages paid, including fringe benefits, were \$22,800. Those figures include some industries, such as chemical and pharmaceuticals industries, in which the average tax benefits considerably exceeded employees' compensation (Mendez-Torres citing GAO Report to the Chairman, Committee on Finance, U.S. Senate, "Puerto Rico and the section 936 Tax Credit," GAO/GGD-93-109 [June 1993]).

During the economic downturn of the 1990s in the U.S. and with rising Federal costs, and "the high cost to the U.S. Treasury and lack of significant job-creation" of Sec. 936 (Bosworth and Collins in Collins, *et al.*, 24), the U.S. Congress sought and eventual won is repeal, with a halt to new corporate applications and a phase out for existing corporations during the period 1995-2005 (Small Business Job Protection Act, 1996). What the former Sec. 936 firms could do, is to convert to the status of Controlled Foreign Corporations, which would permit deferring of taxation unless or until it is repatriated to the mainland United States. The Puerto Rican tax is capped at seven per cent or less. However, citing John R. Stewart, deputy executive director of PRIDCO, Lisa Jarvis in the *Chemical Market Reporter*, claimed that the advantages of becoming a CFC included the facts that:

a company with excess foreign tax credits that operates globally can avoid US taxation of active business income. Alternatively, a company looking to expand its global presence could invest in Puerto Rico and channel the profits, tax-free, into investments in other countries. Another route would be for a start-up to move to Puerto Rico and set up a corporation, as individuals who are resident of Puerto Rico do not pay tax on their Puerto Rico source income (Jarvis).

. This would appear especially attractive to foreign corporations which did not seek to repatriate profits to the U.S. mainland. An additional difficulty has arisen as serious competition is now emanating from other island nations, including Ireland in Europe and Singapore in Asia. At least initially, that CFC solution seemed at least

somewhat unsatisfactory in off-setting the loss of sec. 936, as Mendez-Torres reported, citing a Puerto Rican Department of Labor survey, that between 1996 and 2001 there was an overall job loss on the island from 151,116 to 132,607 positions (Mendez-Torres). On the brighter side, Brian E. Andreoli and David M. Press, while admitting to the loss of "thousands of low-skilled manufacturing jobs.....over the past few years (and more expected in the future) to emerging market outsourcing," nevertheless contend that "high-tech manufacturing constitutes the cornerstone of the island's economic future. Indeed, development officials are positioning Puerto Rico as being primed for a 'second economic transformation' as a concentrated center for pharmaceuticals and medical devices" (Andreoli and Press). Governor Anibal Acevedo-Vila has spoken of the establishment of a "pharmaceutical industry hub" and claimed the island "is becoming a biotechnology center known as Bio Island" (Acevedo-Viila).

Reports rather steadily emerging from the island since the earliest years of the Twenty-First Century have indicated what appears to be modest improvement to the economy at best, indeed, at times, rather the opposite. An examination, for example, of various issues of Banco Popular's *Progreso economico* (formerly quarterly and later monthly) reports utilize such wording as "fiscal year 2003 ended with no clear sign of recovery" (2Q, 2003). "At the close of calendar year 2004, both the behavior of economic indicators and the values of the BPPR Indexes of Economic Activity pointed towards a lackluster performance of the local economy" (4Q 2004). "Fiscal year 2004-05 ended with sluggish economic activity within a scenario of fiscal crisis and indications of new inflationary pressures" (2Q, 2005). "By the end of 2006, the economy of Puerto Rico had sunk into a recession" (4Q, 2006). That last bank report added "[a]s in the previous quarter, all economic sectors show some degree of deterioration, the only exception being the job market, which, although demonstrating substantial improvement in the rate of unemployment, also reflects significant declines in the labor force" (4Q, 2006). For the fiscal year 2006-2007, the bank indicated that the recession had "deepened" They noted this recessionary trend had lasted for some eighteen months and that for the second quarter of 2007 "the contraction in economic activity has intensified, and this finding clearly demonstrates the fragility of the local economy." The bank report noted that the recession was widespread with regard to "key" economic areas such "as employment, manufacturing, commercial activity, banking activity, tourism, and construction" (2Q, 2007).

The Central Intelligence Agency has noted that the "real growth rate" of GDP was estimated at -1.2% for 2007, unemployment stood at 12% in 2002, 2001 imports were \$29.1 billion while exports stood at \$46.9 billion, and that by far the most important trading partner was the mainland United States, which accounted for 90.3% of exports and 55% of imports (CIA). The CIA unemployment figures were largely substantiated by the U.S. Department of Labor which quoted 11.2% unemployment for February 2008 (US, Labor). Banco Popular's Index of Real Economic Activity (Indices de Actividad Economica) was -2% for 2007 (*Progreso Economico*, February 2008, 1)..

Finally:

Economic activity in Puerto Rico continued to show signs of deterioration between January and March 2007. The performance of economic indicators suggests that the recession deepened in the first three months of the year, contributing even further to a contraction of considerable concern, as the slowdown has already lasted for over 12 months and produced adverse effects across all economic sectors on the island (1Q, 2007).

The year-over-year slowdown of the PBPR-IREA also continued in December 2007. (-3.1%) setting the record of 21 consecutive monthly decreases on an annualized basis. This scenario suggests that the current recessionary cycle has been longer, more widespread, and deeper than any other recession on the island in recent times, including those of the '70s and '80s. All the index's components show negative growth, with or without seasonal adjustment, especially when compared with their value a year earlier (Feb. 2008).

Part of the problem facing Puerto Rico, of course, is that a number of issues which have vital impact on the island's economy are really out of the control of the insular government due to the island's relationship with the United States. These include regulation of currency, issues of federal taxation, matters of foreign policy, international trade and its regulation, to name but a few. For instance, the current drastic drop in the value of the dollar against major world currencies, such as the Pound Sterling, the Euro, and the Yen, while positive with

regard to the sale of Puerto Rican goods sold on the international market, has had a devastating effect on the price of oil and oil products on the island. The problem for the island, of course, is that oil is its major source of energy, and is 100% imported. In early 2008 Banco Popular reported:

James L. Dietz has claimed that the island's relationship is "another fetter to Puerto Rico's development" because of "the colonial-type political relation to the US that has existed since 1898 with only a modification in who administers the local political apparatus. The nature of Puerto Rico's status *vis-a-vis* the US has consumed untold financial and human assets.....that have diverted the allocation of scarce resources from higher-valued uses" (Dietz, 262-63).

Still another major problem which must be faced by the Puerto Rican government is one of public expenditure. There is little question but that the insular government is bloated, and that it cannot really continue to absorb the number of public employees currently retained. Of course, with the limited number of private sector employment opportunities available, and the already high underemployment and unemployment, the issue of dismissal of public sector employees becomes extremely politically sensitive.

Speaking of the gubernatorial election year of 2004, for example, it has been noted "that most new jobs were in the public sector or entry-level positions, with the government employing 30% of the salaried employees. In November 2004, the government payroll climbed to 327,000 employees." Concerning the more general outlook, that same article noted that, "The economy continued to be driven by public investment and government expenditures, as is always the case during election years. Yet, despite this, the quality of life in Puerto Rico didn't improve. The public education system continued in shambles; streets remained unsafe; and Puerto Ricans continued moving in large numbers to the U.S. mainland, especially to Florida" (Roman, 2004). A dramatic illustration was offered by *Caribbean Business*, which noted that by the end of 2004, Puerto Rico ranked second among U.S. states in public employment, after California and in front of Texas (Roman and Marquez, 18). In 2005, it was reported that the island had a \$1.3 billion structural deficit (Hughes).

Clearly a crisis in the public sector was looming, and by 2006 it struck. For example, during the second quarter of that year, "the financial situation of the Puerto Rico government worsened.....General fund revenues fell by some 4.3% as a consequence of a substantial decline in tax collections in April.....[T]he Treasury Department revised income projects downward, which would leave a shortfall of at least \$325 million in the 2006-07 budget" (Banco de Popular, 2Q, 2006). Early 2007 reports were no more positive, as Banco Popular in its First Quarter report noted that government revenues had dropped 10% as compared with the previous year, (\$1.72 billion, a loss of \$200 million from that previous period). It noted that "all categories of tax collections showed significant declines in the first three months of 2007."

## **Hans Küng : The Possibility of a Global Ethics for a post-colonial world**

The history of Puerto Rico, as described above, has been checkered, at best. While there have been periods of somewhat stability, these eras seem to have been short lived only to be eclipsed by a new cache of challenges. In the lives of many nation states, these fluctuating dynamics of political control and economic stabilities would not seem to be an anomaly, but Puerto Rico has had its unfair share of domination and manipulation. Fifteen years ago in Chicago a "global ethic" was proposed that could infuse the future of Puerto Rico and other post-colonial possessions with a promising hope. It would require solidarity and commitment on the part of the citizenry and the governments in the global village. Spearheading the move was Küng.

Hans Küng (1928 - ) is a Roman Catholic priest, renowned theologian, and prolific author. He engages world affairs, tackles political, economic, institutional relations, and human rights issues, and proposes a global ethic, what might be considered as an analogue to the common good, as an appropriate response to worldwide situation. Its impact for global reformation can ripple through parts of the world, namely Puerto Rico here, and ameliorate the challenging conditions that have plagued and continued to stymie growth since colonialist conquests. Küng's work issues a clarion call to representatives of all the world's religious traditions to take a leadership role in the promotion of a global ethic and to consider a joint response. This is not to deny the Roman Catholic Church's efforts to engage the global community, particularly since it has had such a prominent role in colonialist efforts and subsequent endeavors to bring about a viable nation state rich in human rights. Küng,

however, does it in a broader expanse that encourages a global ethic transcending religious differences. There are poignant risky moves that Küng has made in his theology in proposing challenging viable solutions.

In his writings, Küng has made strident moves to challenge the status quo of the Roman Catholic Church particularly in its authoritative reach. He writes: "I affirm the papacy for the Catholic Church, but at the same time indefatigably call for a radical reform of it in accordance with the criterion of the gospel (Küng, 2001). In *Infallible? An Inquiry*, Küng questioned the principle of infallibility in place since the First Vatican Council in 1870 as well as the Church's position on contraception and women's ordination. The "Cologne Declaration" of 1989 would be another illustration of this line of thinking. In signing this document, 162 theologians and Küng protested the Church's "Roman centralism" (Montalban, 1; Wilson, 1).

Undoubtedly, Küng's Swiss background has enormously impacted his thinking, colored his perspective, and seasoned his writings. It has led him to "an almost instinctive antipathy to all dictatorship in state, church, and society, to all state totalitarianism and ecclesiastical integralism." This disposition has made him "resistant to the worship of church leaders and the idolization of institutions, whether party or church" (Küng, 2003, 16).

I would argue that such a suspicion or distrust of authority and the bodies they represent and protect is not grounded in a bitter campaign to dismantle them, but to challenge them to a greater self-awareness. Religions need to be prompted, Küng believes, to see that it is their very selves that can hold captive peace and flourishing. His thinking about ecclesial relationships took root when writing his doctoral dissertation. It foreshadowed his life's work to challenge religions to reconcile through dialogue and consensus. His work on a global ethic might then be considered the capstone of his work that began as a graduate student.

Doctoral dissertations have a life of their own at times and their authors often choose topics that will define their research for, at least, the initial stages of an academic career. Küng's doctoral thesis, "Justification. La Doctrine de Karl Barth et une Réflexion Catholique" seems to have influenced his entire academic career. In his dissertation, Küng sought to demonstrate the points of concord between Karl Barth's theory and the traditional Roman Catholic appreciation of justification. Küng would conclude that the differences were not so fundamental as to warrant a division in the Church. The content of Küng's dissertation is not as important to this discussion as the effort to reconsider the possibility of reconciling long disparate Christian churches. In arguing his thesis, he did not defer to any lofty theological or philosophical position, but reviewed the history of the relationship between the two churches and couched his firm belief within the then-present pervasive challenging to authority and institutional structures.

Küng is probably not known for ecumenical efforts like these, but better remembered for his removal from the Roman Catholic faculty of the prestigious Tübingen University, for his attack on papal infallibility, and for his subsequent haranguing critique of John Paul II's first year of pontificate. Despite the fact that Küng had been a colleague of Benedict XVI, the former Josef Ratzinger, it would be safe to say that they have taken divergent paths, often marked with "bitterness." Notably, however, in one of his first private audiences, Benedict XVI received Hans Küng. Prior to this display of respect and friendship, however, it could be observed that Küng has continued to wrestle with Church dogma while Ratzinger, in his role as prefect of the Congregation of the Doctrine of Faith, has tried to explain and defend it.

Küng's steady criticism was not leveled without repercussions. For many years after his removal from the Roman Catholic faculty at the University of Tübingen, he did enjoy being a professor of Ecumenical Theology there. After a formal investigation by the Catholic Church's Congregation of the Doctrine of Faith, however, he was forced to leave that position in 1996 and was reclassified as "emeritus." Contrary to what might be believed about his situation, his clerical status is not irregular. He remains a priest in good standing with priestly faculties.

Subsequent to his departure from the University of Tübingen, Küng assumed the role of president of the Global Ethics Foundation (*Stiftung Weltethos*), headquartered in Tübingen, Germany. This institution promotes inter-cultural and inter-religious research, education, and encounter. It capitalized on the momentum and interest stemming from the Parliament of the World's Religions' 1993 "Declaration Towards a Global Ethic," which Küng drafted. The Global Ethics Foundation serves as an institutional clearinghouse for Hans Küng's research efforts and initiatives as well as an organ to disseminate and encourage a global ethic (Muck, 215).

The possibility of a global ethic has its origins for Küng in his 1990 book *Global Responsibility: In Search of a New World Ethic*. Küng argues in this text that religions have a grave responsibility to affect the peace of the world. This, Küng contends, can only be accomplished if they themselves are peaceful and shift their focus from what divides them to what they share in common. In engaging each other through dialogue about their historical relationships, religions might realize that they hold similar ethical stances. In turn, they might be able to come to “a fundamental consensus on binding values, irrevocable standards and personal attitudes.”

His book took life as he drafted a “Declaration Towards a Global Ethic” in preparation for the historic 1993 Parliament of the World’s Religions in Chicago, IL. This Declaration challenged representative leaders of the world’s religions to achieve a consensus about the hopes and values they shared in common as well as the moral standards they would agree to. The Parliament subsequently endorsed the Declaration.

There are five parts to this Declaration. The Introduction forms the first section followed by an elucidation of the principles required for a global ethic. The next section, the Declaration makes a claim and offers a subsequent explanation that there can be no new global order without a new global ethic. In the following third section, the fundamental demand to treat every human being in a human manner is made. The fourth section names four irrevocable directives that must be met in order for this global ethic to take effect are named. The final section discusses the transformation of consciousness, a key factor in both the appeal and the implementation phase of this global ethic, is considered.

The Declaration’s Introduction builds its cause for concern on the reality of the day. The Declaration does not mince words in its observation of the global condition:

The world is in agony. The agony is so pervasive and urgent that we are compelled to name its manifestations so that the depth of this pain may be made clear. Peace eludes us - the planet is being destroyed - neighbors live in fear - women and men are estranged from each other - children die! (Küng, 1993)

And:

After two world wars and the end of the cold war, the collapse of fascism and nazism, the shaking to the foundations of communism and colonialism, humanity has entered a new phase of its history. Today we possess sufficient economic, cultural, and spiritual resources to introduce a better global order. But old and new ethnic, national, social, economic, and religious tensions threaten the peaceful building of a better world. We have experienced greater technological progress than ever before, yet we see that world-wide poverty, hunger, death of children, unemployment, misery, and the destruction of nature have not diminished but rather have increased. Many peoples are threatened with economic ruin, social disarray, political marginalization, ecological catastrophe, and national collapse. (Declaration, no. 3)

The assembled Parliament members found the reality of the human condition “abhorrent,” because “this agony need not be.” They then moved to condemn environmental abuse, all forms of poverty, self-serving justice and leadership; they then appealed to religion to be a forerunner in promoting a just and peaceful society. Very apropos for Puerto Rico’s condition.

The Declaration asserts that there exists already within religions an ethic that motivates religious people to envision a better global order which is constituted by hope and progress. In order to activate that ethic, people of different religious backgrounds affirm that there are a “common set of core values” that can be culled to construct a global ethic. The more challenging task is moving from admitting this reality to a conversion of heart and subsequent demonstration of commitment. The Declaration’s signers believed that there can be definite moral behaviors that can be agreed upon for the different dimensions of life and order.

To that end, they acknowledged their solidarity with one another and that their interconnectedness also involves the entire earth’s ecosystem, all resources and living creatures. Responsibility cannot be shirked if a “sustainable world order” is to be realized. All people must subscribe to the “golden rule,” to treat another person as one would like to be treated. That may involve sacrifice in attending to the marginalized, those on the

fringes due to economic status, orientation, age, or physical (dis)ability.

The Declaration envisages a world of peace where justice and respect are constitutive components, where people choose to settle differences more amicably rather than resorting to oppression or violence. In this new global order, each person will have an equal opportunity “to reach full potential as a human being.” This involves engaging each other honestly in speech and action and not oppressing or manipulating others for the sake of self-aggrandizement.

All these moves and the founded hope for a new way of interaction for the global community cannot occur “unless the consciousness of individuals is changed first.” The consciousness is transformed through discipline, reflection, connection with one’s “ultimate reality,” and, in many instances, sacrifice.

The signers of this Declaration encouraged others, “religious or not,” to join them in their commitment “to understanding one another, and to socially beneficial, peace-fostering, and nature-friendly ways of life.” Brining to life this Declaration would not be easy as the values presented were contrary to the ones being lived by many people. The postures, behaviors, and attitudes adopted by contemporary society, however, were destroying people and stunting their potential to maximize their full human potential.

In the second section, the Declaration next asserts emphatically that there can be “no new global order without a new global ethic!”

By a global ethic we do not mean a global ideology or a single unified religion beyond all existing religions, and certainly not the domination of one religion over all others. By a global ethic we mean a fundamental consensus on binding values, irrevocable standards, and personal attitudes. Without such a fundamental consensus on an ethic, sooner or later every community will be threatened by chaos or dictatorship, and individuals will despair. (Declaration, no. 2).

It argues for this new global ethic by reminding people that, despite religious and cultural differences, all must come together and take their right “responsibility for a better global order.” Differences between peoples must not preclude denouncing “forms of inhumanity and working for greater humaneness.” The array of religious traditions committed to this global ethic, the Declaration asserts, can offer some wisdom to encourage and implement “a vision of peoples living peacefully together.” While Puerto Rico has been historically predominantly Roman Catholic, the Protestant faith with its evangelistic tradition has made greater inroads onto the island more recently. All these faith traditions, in an exemplary way, can cull from their ancient histories some lasting truths that will promote a “vision [that] rests on hopes, goals, ideals, standards.” Building upon the 1948 United Nations’ *Universal Declaration of Human Rights*, K  ng’s Declaration also rests on a recognition of the rights of the human person that admits “the full realization of the intrinsic dignity of the human person, the inalienable freedom and equality in principle of all humans, and the necessary solidarity and interdependence of all humans with each other.” (Declaration)

The next section puts forth the “fundamental demand” that all “human beings must be treated humanely.” Evil in the world is real and the responses individual religions make to evil depend on how each of them distinguishes good from evil. Traditionally, the emphasis has been on respecting the different approaches which religion makes towards evil. The Declaration challenges religions to shift their focus to what they already identify as evil and, in some instances, do so in concert, while respecting the “religious or ethical grounds” from which their actions stem. Very concretely this means that religions can position themselves in a credible leadership role to help resolve some of the “environmental, economic, political, and social problems of Earth,” by encouraging a renewal of heart, an inner transformation.

The Declaration appeals to the first rule of Natural Law “to do good and avoid evil” to encourage people of the world to treat others more humanely. It also appeals to a negative variant of the golden rule, “to not do unto others what you yourself would not like done to you.” This means that every human being without distinction of age, sex, race, skin color, physical or mental ability, language, religion, political view, or national or social origin possesses an inalienable and untouchable dignity, and everyone, the individual as well as the state, is therefore obliged to honor this dignity and protect it. Humans must always be the subjects of rights, must be ends, never mere means, never objects of commercialization and industrialization in economics, politics and

media, in research institutes, and industrial corporations. No one stands "above good and evil" - no human being, no social class, no influential interest group, no cartel, no police apparatus, no army, and no state. (Declaration, no. 3)

Humankind should seek to unbind people held hostage by oppression, diminished in their human dignity, or cutoff in their opportunities for human flourishing. A global ethic can assist people "to find and realize once again their lives' direction, values, orientations, and meaning." This is a tall order that demands "every form of egoism," that fails to account for responsibility to others be jettisoned because of these expressions stifle authentic human development.

To achieve the ends articulated above, the Declaration, in its fourth section, proposes four non-negotiable directives:

1. Commitment to a Culture of Non-violence and Respect for Life.
2. Commitment to a Culture of Solidarity and a Just Economic Order.
3. Commitment to a Culture of Tolerance and a Life of Truthfulness.
4. Commitment to a Culture of Equal Rights and Partnership Between Men and Women.

These commitments are essentially a new rendering of the ancient Judeo-Christian commandments for contemporary times.

In the first commitment to a culture of non-violence and respect for life, the ancient commandment "thou shalt not kill" is recalled. In a transformed positive light, the commandment is converted into the ethical charge "have respect for life," and seeks the well being and safety of all people despite their cultural heritage or color. Its range is not limited to the human person but extends to the Earth's ecosystem which includes plants and animals. Further, people who wish to transform the world should commit themselves to a social and political justice that promotes life for all. In a milieu that can so easily defer to revenge through violent means, a culture of non-violence combined with a move towards universal disarmament is espoused.

In the second commitment to a culture of solidarity and economic justice, "thou shalt not steal" is translated into "deal honestly and fairly." This is rendered in an ethic that decries the poverty and violence and counter-violence which occur in a wealthy-polarized society, where theft becomes necessary for sheer survival and hatred and resentment inevitably well up. For a global ethic to be realized, just economic institutions need to be established and regular set of checks and balances in place to ensure their justice. Further, in a new global order, a market economy must be more socially and ecologically conscious.

A commitment to a culture of tolerance and to a life of truthfulness references the commandment "thou shalt not lie." This ancient order takes on new meaning and becomes "speak and act truthfully." Such an ethical directive has particular import in Küng's appreciation of how the media conveys its news, arranges its programming, and "serves the truth." It is also a clarion call to politicians to be integral, fairly representative, and accountable.

The final commitment to a culture of equal rights and partnership evokes the order "thou shalt not commit sexual immorality." This evolves into "respect and love one another." It calls for responsible partnership between peoples guided by a deep respect and concern. Such a commitment is sorely needed in less developed countries where a history of domination, misuse, degradation, exploitation, and objectification, particularly of women and children, has been the operative way of expressing sexuality "Sexuality is not a negative, destructive, or exploitative force, but creative and affirmative. Sexuality as a life-affirming shaper of community can only be effective when partners accept the responsibilities of caring for one another's happiness" (Declaration, no. 5). The Declaration concludes reflections on this commitment by reminding its readers that "there is no authentic humaneness without a living together in partnership!"

The Declaration's imagining of a new global order spurred on by a new global ethic is attractive. Nothing, however, as the Declaration observes in its last pages, will transpire if people are not motivated to take responsibility for its implementation. This challenge forms the final fifth section. Yet much hope abounds as "the possibilities for transformation have already been glimpsed in areas such as war and peace, economy, and ecology," since in recent decades fundamental changes have taken place" (Declaration, no. 7). What is also

required is “a transformation of consciousness” by which people commit themselves on the deeper level of “ethics and values.” Religions figure in this task of encouraging a change of heart.

In the end, the Declaration asserts that while “a universal consensus on many disputed ethical questions (from bio- and sexual ethics through mass media and scientific ethics to economic and political ethics) will be difficult to attain,” it is not impossible and therefore should not be dismissed haphazardly (Declaration, no. 9). Signs of hope in current professional codes of ethics should buoy up people in their efforts to grow in “a new consciousness of ethical responsibility,” and they can form a template. Communities of faith need to attend to “their very specific ethics” and ask themselves what they truly believe about some pressing issues. This exercise can serve as prelude to the larger dialogues about a global ethic.

This global ethic is not limited to religious people, but extends to all the global community. The harsh reality of suffering, degradation, and violence, to name a few tragic realities, is ever before the human community. The signers of the Declaration will do and have done their part to disseminate the hope for a more promising world. In turn, they encourage the “inhabitants of this planet” to be converted in heart, to have an openness to consider the world differently, and to be willing to sacrifice when necessary. Otherwise, the world risks continuing in the same hopeless strain (Carey, 791-796).

Küng’s Declaration, promulgated by leaders of the world’s religions and subsequently tweaked to reflect the concerns and hesitations of the members of the Parliament, is a watershed document. The Declaration is significant achievement in getting religions to cooperate and talk with one another. What makes the Declaration appealing is that it is precisely that – an invitation to begin a conversation about what are some crucial concerns religions share and what are some of the behaviors religions could assent to. It is not connected with any specific philosophical, religious, or political agenda, but has the whole global human community and its well-being and peace in mind. It is the first step, Küng admits, on what could be a long journey towards a global ethic, but a critical positive move.

Giving life to the profound aspirations of the Declaration has and will continue to entail a willingness to engage in honest conversation and, where necessary, be open to conversion. An appreciation for the interrelatedness of the global human family, solidarity, needs to be in place. A markedly different and hopefully better arrangement of the human family through the earth will be formed from this global ethic, but “a global order will not come simply from laws, prescriptions and conventions alone” (Küng, 1993). As Küng notes, “what is needed is a profound religious ‘conversion’ in order for the specifics to happen” (Declaration, no. 22). Without that conversion, nothing can change for the better (Declaration, no. 36).

This Declaration starts a conversation to forge a future of hope acknowledging that, despite some trenchant histories, religion does not have to dog the process of development or peace. Religions can concede what is held in common and identify shared expectations for relationships.

As Küng’s global ethic took on a life of its own, so did the Declaration. The Declaration attracted the attention of the United Nations, due in no small part through the efforts of many of the delegates to the 1993 Parliament. In 1995, the United Nations initiated a “Dialogue Among Civilizations” and enlisted Küng to serve as one of its nineteen “eminent persons.” They reported their findings in November of 2001, but media reports were drowned out by the September terrorist attacks in the United States. In 1997 another notable event occurred. The InterAction Council, comprised of former heads of state or government called for a global ethic; Küng served as advisor. This Council subsequently advanced the concerns and contents to be included in the United Nations’ “Universal Declaration of Human Responsibilities,” a document that promotes an ethical approach to human rights. In December 1999, the third Parliament of World Religions held in Cape Town, South Africa promulgated “A Call to Our Guiding Institutions,” which built upon the earlier Chicago Declaration. This document moved the challenge to engage in dialogue from a personal level to an institutional one.

There have been two other gathering that illustrate the world’s religions’ commitment to engage in conversation and strive for consensus in an effort to resolve some of the global community’s more frightening problems. In 2004, the Parliament assembled in Barcelona, Spain. At this gathering, there was an emphasis on perhaps the most critical ingredient for implementing a global ethic: conversion of heart. In September 2007,



the Parliament participated in the Universal Forum of Cultures in Monterrey, Mexico; at this gathering, the relationship between culture and religion and spirituality will be explored. The Parliament will assemble on its own in 2009. Hans Küng will be in the forefront of these gatherings to encourage his global ethic.

Hans Küng's common good is the world community and he is greatly frightened by what he sees. Peace is elusive; abuse is rampant and dismantling the ecosystem; terrorism grips the world leaving people in fear; unjust economies hold citizens hostage to poverty; and, there is a blatant disregard for justice as evidenced by the attitude of carelessness towards human life. "The world is in agony," Hans Küng writes in the opening of his Declaration. This agony exists at every level: social, economic, and political. The reordering of such a miserable world depends on the formulation and execution of a global ethic. Given the present state of affairs, what Küng calls the *global problematique*, the only other result would be eventual self-destruction.

While post-modernists celebrate the accomplishments in science and technology, Küng is quick to caution about the use of science and technology. More science and more technology cannot correct the damage wrought by previous science and technology. The abhorrent situation does not call for more science and technology, rather it urges humankind to pause and claim responsibility for the world and each other.

Küng envisions this global ethic, "a planetary responsibility," as a real possibility. Despite historical efforts that have failed, have been ineffective, or have been stymied by politics, Küng is confident that the world community, even divergent religious groups, can come to a consensus on those things that all the earth holds dear to it. In his hope for a better world, he proposes a core set of positive values where interdependence is cherished more than independence, people take greater responsibility for their actions, and an honest equality that forsakes status and respects diversity is valued. In the end, Küng sees the work of the common global good as a commitment to acknowledging our solidarity and equality with one another and all creation and being more responsible global citizens.

## CONCLUDING COMMENTS

Elisabeth Roman is quite correct when she writes that "Economic leaders agree the time has come for a complete economic reform, not just a fiscal reform, and to focus on developing efficient public institutions and entities that would strengthen the links between economic growth and social progress" for the island of Puerto Rico." She is equally correct when she indicates that "There is, of course no quick and painless fix to all that ails Puerto Rico" (Roman, 2005). Some measures have been taken since as the 2005 creation of the Alliance for Development of Puerto Rico," described by its founding chair, Manuel Cidre, as "a last ditch effort to shake the private sector from its complacency and make it part of the island's future economic development" (Martinez, 14). One immediate suggestion is that "Puerto Rico would do better as a regional center for finance and business services." The authors offering that suggestion note the favorable geographic situation of the island, as well as its available workforce and technology, and point to Ireland and Singapore as possible models of such development. However, they also stress that considerable financial resources would have to be expended in such efforts (Collins, *et al.*, 578).

However, it would appear that what is needed is virtually an entire overhaul of the Puerto Rican economy, one which would loosen it from its neo-colonial elements, and which would seek to truly maximize the advantages, particularly those of human capital, available to the island. The island has been mired in a colonial economic straightjacket for centuries. Whether one argues that since 1952 this has become neo-colonial or, perhaps, remains colonial, there is clear evidence that the current economy is still heavily influenced by the U.S. mainland and by a neo-colonial culture, including use of the mainland to send the unemployed to seek work, heavy reliance on U.S. subsidies and other forms of economic assistance, external funding of local enterprises (which virtually always has the effect of preventing or hindering at least some areas of local investment in the economy), and, quite frankly, with the debate over continued Commonwealth or future statehood, still revolving to a most significant degree, over which status offers better economic benefits from that U.S. relationship,

Details of such reform are far beyond the possibilities of this brief study. However, its authors urgently recommend the study produced by the Center for the New Economy of San Juan and the Brookings Institution of Washington, D.C., entitled *The Economy of Puerto Rico: Restoring Growth*, edited by Susan M. Collins, Barry

P. Bosworth, and Miguel A. Soto-Class. Particularly impressive are the five issues which they see as needing to be immediately and vitally addressed if significant growth is to be restored:

- raising the employment rate of adult Puerto Ricans
- promoting a more dynamic private sector that would create additional job opportunities
- improving the skills of the workforce
- investing greater resources in the economic infrastructure
- reforming government with a more efficient tax system and targeted expenditure programs (Collins, *et al.*, 573).

Of similar importance is the 2004 study by the Comision Economica para America Latina y el Caribe (CEPAL). Among its recommendations, cited in an article by Carlos A. Rodriguez, such as

- The necessity to strengthen the chain of value in manufacture;
- An increase in the promotion of investments in the service sector and consequent grounding in manufacturing;
- An increase in public and private services of support for Puerto Rican enterprises; and an improvement in the method of financing, including venture capital;" (Rodriguez, citing CEPAL, 230).

The list continues, including items relating to research, infrastructural improvements, education, health, environmental issues (Rodriguez citing CEPAL, 230).

However, when addressing these issues, a band-aid approach will not prove effective, and indeed, over the years, has already proven a failure. A truly radical economic, and perhaps political, approach needs to be developed, one requiring initiate, innovation, and a willingness to devote considerable expenditure of human and other capital to the task. The global ethic, proposed by Küng, offers a viable way on shaping the future.

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# **CUSTOMER COMPLAINTS VIA E-CONTACT CENTERS: THE ROLE OF COMMUNICATION**

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## **ABSTRACT**

*Considering both the increase of e-commerce websites and the low cost of e-contact centers, firms need to try to communicate with customers effectively via e-contact centers and manage customers' complaints. The main purpose of this study was to examine the relationships between two dimensions of e-contact center listening (i.e. evaluating and responding) and interpersonal service quality and the relationships between interpersonal service quality and two types of loyalty (i.e. loyalty to e-contact centers and loyalty to an online retail store). The research model fits well and all of the hypotheses were supported by the results.*

## **INTRODUCTION**

Customers particularly want to contact firms when they experience product or service failure. While effective customer-firm interaction can retain customers by satisfying them, weak responses can lead to customers' switching behavior (Smith, Bolton, and Wagner, 1999). Therefore, this is the time when firms must make every effort to satisfy and keep their customers (Schoefer and Ennew, 2005). In other words, effective complaint handling can build successful customer relationships (Tax, Brown, and Chandrashekar, 1998).

The channel of complaint has evolved from face-to-face encounters to call centers and then to e-contact centers. Unlike traditional call centers, e-contact centers are not limited to a call center but involve other channels such as online bulletin boards, online chat rooms, and e-mails (Scullin, Fjermestad, and Romano, 2004). The new channels for customer-firm interaction such as call centers and e-contact centers are easy to use and save time compared to face-to-face encounters. On the other hand, it is more difficult to manage customer relationships by using call centers than by face-to-face interaction (Crome, 1998). Since the voice is considered to be "leakier" than the face (Argyle, 1994), call center employees need to be more skillful in controlling their emotions. In contrast, e-contact centers generally do not depend on voice. Accordingly, customer service employees can easily learn how to communicate more effectively with customers via the Internet. However, the Internet is considered to be a channel with little human contact (Grewal, Iyer, and Levy, 2004). Therefore, customers might feel they have not been well-served if they get at this lower level of human contact. In general, customers are more emotional when they contact firms with complaints. Consequently, interpersonal service quality might be critical to manage unsatisfied customers. In order to provide customers with a high quality of interpersonal service, an effective communication process is needed. The main reason for using the Internet is to communicate with others via e-mail in order to maintain interpersonal relationships (Hampton and Wellman, 2001; Howard, Rainie, and Jones, 2001; McKenna and Bargh, 2000; Stafford, Kline, and Dimmick, 1999). It shows the potential of e-contact centers as an appropriate communication channel.

Although there have been studies on service recovery and traditional call centers, e-contact centers have not been actively studied yet. It is, therefore, important for firms to know whether they can communicate with customers effectively via e-contact centers and manage customers' complaints. It is important because miscommunication might cause negative customer experiences. The purpose of this study is to examine the influence of e-contact center communication on perceived interpersonal service quality and to explore the relationship between perceived interpersonal service quality and customer loyalty. Organizations can save money by using e-contact centers. Accordingly, they might want to encourage customers to choose e-contact centers over face-to-face encounters or call centers. Thus, this study also examines whether high interpersonal

service quality in e-contact centers can lead customers to be loyal to e-contact centers as a means to interact with firms.

## LITERATURE REVIEW

### Listening

In the process of communication, listening is the main component (Ramsey and Sohi, 1997). According to Goss (1982), listening is the process of hearing a spoken message and understanding the meaning. Castleberry and Shepherd (1993) argued that passive and active listening should be differentiated and nonverbal cues should also be included in the definition of interpersonal listening. Accordingly, they defined interpersonal listening as “the cognitive process of actively sensing, interpreting, evaluating and responding to the verbal and nonverbal messages of present or potential customers” (Castleberry and Shepherd, 1993, p. 36).

Based on previous studies, Ramsey and Sohi (1997) suggested three components of perceived listening behavior: sensing, evaluating, and responding. First, sensing refers to sensing nonverbal cues as well as hearing verbal cues. In face-to-face communication, people might assume that the listener is paying attention to what they are saying if they notice nonverbal behaviors such as eye contact, nodding, etc (Yrle and Galle, 1993). Second, evaluating means cognitive activity of the listener assigning meaning to the speaker’s message and understanding it (Ramsey and Sohi, 1997). The last component is responding. According to Ramsey and Sohi (1997), an appropriate response to a customer requires answering in a short time and offering relevant information. These answers also should be provided with full sentences instead of just saying yes or no. Unlike face-to-face encounters and call centers, customer-firm interactions via e-contact centers do not involve nonverbal cues. Therefore, this study examined only evaluating and responding as the components of perceived listening behavior.

According to the interpersonal needs theory (Schutz, 1966), interpersonal needs are basic human needs. In customer-firm interactions, listening to customers is critical to meet these interpersonal needs (Ramsey and Sohi, 1997). Castleberry and Shepherd (1993) suggested that a salesperson’s listening skill might have a positive relationship with their performance. Therefore, we propose that active and effective listening will have a positive influence on interpersonal service quality.

**H1:** Evaluating has a positive relationship with interpersonal service quality.

**H2:** Responding has a positive relationship with interpersonal service quality.

### Interpersonal Service Quality

While manufacturing quality is more objective, service quality is more subjective (Parasuraman, Zeithaml, and Berry, 1988). In addition, service quality is regarded as being related to satisfaction but is not the same. Service quality is an overall evaluation with long-lasting effects, whereas satisfaction is transaction-specific (Parasuraman et al., 1988). The SERVQUAL scale developed by Parasuraman and colleagues (1988, 1991) is one of the widely accepted measurements for service quality. Parasuraman et al. (1985) initially identified 10 components of service quality: access, communication, competence, courtesy, credibility, reliability, responsiveness, security, tangibles, and customer knowledge. Based on the result of factor analysis, Parasuraman et al. (1988) reduced it to five dimensions with the 22 items. The five major constructs of SERVQUAL are: tangibles, reliability, responsiveness, assurance, and empathy. On the other hand, Baker, Parasuraman, Grewal, and Voss (2002) extracted four items from the SERVQUAL scale and named it the interpersonal service quality.

Zeithaml, Berry, and Parasuraman (1996) argue that a high level of service quality leads to positive behavioral intentions including loyalty. More specifically, service quality had both direct and indirect effects on loyalty (Sirohi, McLaughlin, and Wittink, 1998). Baker et al. (2002) supported the positive effects of interpersonal quality on loyalty. Thus, this study proposes the following hypotheses.

**H3:** Interpersonal service quality has a positive relationship with loyalty to e-contact centers.

**H4:** Interpersonal service quality has a positive relationship with loyalty to an online retail store.

### Loyalty

Customer loyalty is critical for success of firms (Oliver, 1997). Customer loyalty has been defined as “sticking with a supplier who treats him well and gives him good value in the long term even if the supplier does not offer the best price in a particular transaction” (Reichheld, 2003, p. 48). Customer loyalty is often viewed as the interplay between attitude and behavior (Rowley and Dawes, 1999). For example, repeated purchase is a form of loyal behavior. However, customer loyalty is not just about repeat purchases (Reichheld, 2003).

In this study, two types of loyalty have been studied. One is loyalty to e-contact centers as a complaint channel. The other is loyalty to an online retail store.

## METHODOLOGY

To accomplish the research objective, an online survey was conducted to collect data. Two thousand e-mail invitations were distributed to a randomly selected national sample purchased from an independent research company. Furthermore, the usable responses were limited to those who contacted e-contact centers because of complaints. The usable sample was 175 after this screening process. Sample Characteristics are presented in Table 1.

**Table 1: Demographic Characteristics of Respondents (n = 175)**

|           |                                      | Frequency | %      | Mean (SD)     |
|-----------|--------------------------------------|-----------|--------|---------------|
| Gender    | Male                                 | 79        | 45.1 % |               |
|           | Female                               | 96        | 54.9 % |               |
| Age       |                                      |           |        | 39.05 (11.89) |
| Education | Less than High School                | -         | -      |               |
|           | Some High School                     | 2         | 1.1 %  |               |
|           | High School Graduate                 | 9         | 5.1 %  |               |
|           | Some College                         | 41        | 23.4 % |               |
|           | College or Technical School Graduate | 69        | 39.4 % |               |
|           | Graduate School                      | 53        | 30.3 % |               |
|           | Prefer Not to Answer                 | 1         | .6 %   |               |
| Ethnicity | African American/Black               | 4         | 2.3%   |               |
|           | Asian/Asian American                 | 10        | 5.7%   |               |
|           | Caucasian/White                      | 139       | 79.4%  |               |
|           | Hispanic Origin                      | 3         | 1.7%   |               |
|           | Native American, Inuit or Aleut      | 2         | 1.1%   |               |
|           | Native Hawaiian/Pacific Islander     | 2         | 1.1%   |               |
|           | Spanish, Hispanic or Latino          | 6         | 3.4%   |               |
|           | Other                                | 1         | .6%    |               |
|           | Prefer Not to Answer                 | 8         | 4.6%   |               |

The measures in this study were adopted from previous studies. The questionnaire consists of e-contact center listening, interpersonal service quality, loyalty to e-contact centers, and loyalty to an online retail store. Evaluating and responding constructs in e-contact center listening were measured by using a five-item scale and a four-item scale, respectively (Ramsey and Sohi, 1997). Interpersonal service quality was measured based on a four-item scale which was extracted from the SERVQUAL (Baker et al., 2002). We developed both loyalty to e-contact centers and loyalty to an online retail store measures based on the previous study (Atcharyachanvanich, Okada, and Sonehara, 2006). Before conducting structural equation modeling, a confirmatory factor analysis was used to verify the measurements. As shown in Table 2, all of the final multiple scales in this study demonstrate high reliability.

**Table 2: Summary of Measurement Scales**

| Construct                                  | Measures   | $\alpha$ |
|--|--|----------|
| E-Contact Center Listening<br>(Evaluating) | 1. Asked for more details.<br>2. Paraphrased my questions<br>3. Didn't interrupt me.<br>4. Changed subject too frequently. | .624     |

|   |  |      |
|---|--|------|
|   | 5. Tried hard to understand what I was saying.   |      |
| E-Contact Center Listening (Responding) | 1. Used full sentences instead of saying yes and no.<br>2. Offered relevant information to the questions I asked.<br>3. Showed eagerness in his or her responses.<br>4. Answered at appropriate times.   | .898 |
| Interpersonal Service Quality           | 1. Treated well<br>2. Personal attention<br>3. High-quality attention<br>4. Prompt service   | .939 |
| Loyalty to E-Contact Centers            | 1. I would recommend contacting customer service via a live chat to others.<br>2. I would encourage others to contact customer service via a live chat.<br>3. I would consider a live chat as my first choice when I want to contact customer service.<br>4. I am inclined to contact customer service more via a live chat. | .962 |
| Loyalty to an Online Retail Store       | 1. I would recommend the e-commerce website to others.<br>2. I would encourage others to purchase through the e-commerce website.<br>3. I would consider the e-commerce website as my first choice when I want to buy a product.<br>4. I am inclined to shop more via the e-commerce website.                                | .971 |

## RESULTS

Given that there is no single recommended measure of fit for SEM, the fit of the overall measurement model was estimated by various indices. The empirical estimates for the research model are shown in Table 3. The  $\chi^2/df$  value for this model is 1.901 which is below the generally desired cutoff value of 3.0 (Segars and Grover, 1993). Although GFI (=0.888) is slightly lower than the desired value of 0.9, AGFI (=0.842) is greater than the satisfactory level 0.8 for AGFI (Hayduk, 1987). CFI (=0.971) was above the required criteria, 0.9, as well. With regard to RMSEA, the fit index is 0.072, which is below the recommended cut-off level of 0.08 (Browne and Cudeck, 1993). With these multiple fit indices indicating a reasonable fit for this model, the results indicate that the data fit our conceptual model fairly well.

**Table 3: Fit Analysis**

| Fit Measures | Fit Guidelines | Proposed Model |
|--------------|----------------|----------------|
| $\chi^2/df$  | $\leq 3.0$     | 1.901          |
| GFI          | $\geq .90$     | .888           |
| AGFI         | $\geq .80$     | .842           |
| TLI          | $\geq .90$     | .965           |
| CFI          | $\geq .90$     | .971           |
| RMSEA        | $\leq .08$     | .072           |

The path coefficients are presented in Table 4. According to the results, evaluating has a positive impact on interpersonal service quality and supports hypothesis 1. Responding also has a positive influence on interpersonal service quality. Therefore, hypothesis 2 is supported as well. In terms of the strength of the relationship between e-contact center listening and interpersonal service quality, responding has a stronger effect than evaluating. It shows that responding with relevant information within a short time is a key for success in e-contact center communications. The hypothesized relationship between interpersonal service quality and e-contact center loyalty was also significant. Thus, hypothesis 3 was supported. Finally, the relationship between interpersonal service quality and loyalty to an online retail store is supported by the results of this study. Therefore, hypothesis 4 was also supported.

**Table 4: Path Coefficient**

| Hypotheses | Paths      |                                 | Estimate |
|------------|------------|---------------------------------|----------|
| H1         | Evaluating | → Interpersonal Service Quality | .386**   |
| H2         | Responding | → Interpersonal Service Quality | .605***  |



|    |   |         |
|----|---|---------|
| H3 | Interpersonal Service Quality → Loyalty to E-Contact Centers      | .702*** |
| H4 | Interpersonal Service Quality → Loyalty to an Online Retail Store | .718*** |

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

## DISCUSSION

The main purpose of this study was to examine the relationships between two dimensions of e-contact center listening and interpersonal service quality and the relationships between interpersonal service quality and two types of loyalty (i.e. loyalty to e-contact centers and loyalty to an online retail store). As presented in the preceding section, the research model fits well and all of the hypotheses were supported by the results.

Two dimensions of e-contact center listening, evaluating and responding, were hypothesized to have positive influences on interpersonal service quality. The results supported these hypotheses. In traditional customer-firm interaction, active listening and responding are very important (Ramsey and Sohi, 1997; Castleberry and Shepherd, 1993). The role of effective listening and responding are also important in e-contact centers. Although both evaluating and responding had positive influences on interpersonal service quality, the strengths of relationships show differences. Responding had a stronger influence on interpersonal service quality than evaluating. In other words, providing customers with relevant information in a timely manner is more important than showing customers that e-contact center representatives listen to customers and understand what they say. However, active listening is necessary for appropriate responses.

The results also confirm that customers become more loyal to the firm when the firm maintains high interpersonal service quality. It is consistent with many previous studies (Zeithaml, Berry, and Parasuraman, 1996; Sirohi, McLaughlin, and Wittink, 1998; Baker et al., 2002). The strong relationship between interpersonal service quality and loyalty to an online retail store give an idea that paying attention to customers' concerns and building emotional relationships with customers is important on the Internet as well.

Finally, the results show that customers might contact firms via e-contact centers in the future if they had a positive perception on interpersonal service quality. Therefore, educating e-contact center representatives to provide a high level of service can reduce the cost of customer service recovery by resulting in increased usage of e-contact centers.

There are many possibilities for further research. It would be interesting to test which form of e-contact centers (e.g. live chatting, e-mail, bulletin board) is most effective in terms of communication quality and interpersonal service quality. Since e-commerce centers usually do not reveal the face or the voice of contact center representatives, the only way to show their empathy is by writing styles. Therefore, firms need to educate their e-contact center representatives to use appropriate words and sentences. More importantly, they need to customize their responses to each customer in order to make their customers feel they have received personal attention.

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# PUSHING LIMITS

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## ABSTRACT

*In a public consultation paper, the European Union (EU) asks its citizens and Member States to come up with ideas how to reform the EU Budget. The challenge of our paper---to answer the consultation paper---is to give a novel angle from the point of Austrian/Constitutional economics towards the selection among the budgetary powers made available to the EU.*

*We do suggest guidelines for exclusion and inclusion of provisions in the EU-Budget that are not prizes captured in negotiations, often partisan struggles, between the Member States. The focus is on the normative evaluation of quasi-permanent budgetary institutions and their tasks. We do also suggest that such a constitutional framework creates trust and facilitates a robust democratic debate. The emphasis is not, as is usually the case based on a benevolent EU, to enhance economic efficiency (making the EU “work better”) and/or to increase the equity of budget rules. We do test a different approach: an analysis that we define by the limits it places on the powers of Brussels, an egoistic despot, to “tax and spend”.*

## BACKGROUND AND APPROACH TO THE PROBLEM

The 2007 consultation call by the Commission is, in the words of Dalia Grybauskaitė (European Commissioner for Financial Programming and Budget), a “unique, may be once-in-a-lifetime opportunity”, to discuss a fundamental review of the EU Budget (Reforming the Budget, 2007). The road suggested in the Commission’s consultation paper, just as the approach after the rejection of the draft Constitutional Treaty, can be a very toilsome process inside the realm of partisan (Member States’) advocacy. Solidarity, for instance, has to be bought with financial pet projects for individual Member States. Alternatively, budget reform is discussed by the direct application of abstract ethical norms in a vacuous (without a model of governmental-political behavior) institutional setting.

The paper shifts the grounds for the debate on the reform of the EU budget towards a fundamental review: it focuses on the choices among quasi-permanent constraints (within which alternatives should the EU’s budgetary powers be exercised) and not, as is usually the case on choices within given constraints. The paper adopts a rule-based perspective on the EU Budget: we do choose long-lived rules: once selected, they will remain in being over an indeterminately long sequence of budgetary periods. We should take literally Grybauskaitė’s remark about an “once-in-a-lifetime possibility”. Member States are unable to predict with precision what their position will be at any particular moment in the future. In particular, they are presumed to be unable to identify their position (a veil of ignorance) either as payer or as spending beneficiary in a sequence of separate budgetary periods. History shows that these kinds of debate about a framework for political action, not an instrument thereof, have been possible and fruitful (Elster, 2000).

## AUSTRIAN ECONOMICS

### The limits of democracy

In the middle of the previous century, Friedrich Hayek (1949, pp. 255-72), an Austrian-born economist, wrote that democracy can only under very restricted conditions be transposed to a supra-national organization. A little later, his American counter-ego Milton Friedman said the same. If you apply both ideas to the situation in Europe, we have to conclude that the EU is not only missing the necessary homogeneity to form clear policy goals in a democratic way, but it misses as well the stimuli not to waste money.

Why is it so hard to expect concrete policy goals and fiscal constraint from the European parliament---the most democratic institution of the EU? Of course, very general objectives (e.g., prosperity for everyone) will be easy to agree on. After that, however, it becomes difficult. Concrete objectives will be difficult to formulate. The countries of the EU differ too much in culture, history and economic development. Every choice supposes a balancing of the pros and cons. The recently weakened Services Directive of 2006, e.g., is supposed to show the social face of the EU. No worker from Eastern Europe, however, will be glad with the “social protection” of the revised directive or the “social clause” in the new Treaty of Lisbon (2007). Within a relatively homogeneous country like the Netherlands, however, the original directive would be no problem. Every plumber from the north of the Netherlands is welcome in the south. Likewise, the Netherlands, e.g., is supporting with a low price of gas a national pride: the agriculture of vegetables in greenhouses in the west of the country. However, the very same solidarity for, e.g., a Spanish national pride is something completely different.

Hence, if a parliament cannot give and agree on policy objectives, the European Commission remains de facto the administration. Often below the guise that it concerns only a technical affair. That is hard to maintain. Over a change in policy, no matter how technically it does look like, the parliament belongs to decide. Moreover, also the Commission has to do with the various wishes of the Member States that do make up the members of the Commission.

The EU, also, has hardly any incentives not to waste money. The best guarantee not to waste money is that the same person both owns and does spend the money (Friedman, [1979], 1981, p. 146). For then we can expect that people and Member States do loan on the penny and see to it that you they do get value for your money. Members of parliaments or commission members, however, do spend others men’s money, on behave of, often again, other men. That is almost a guarantee for ineffective and inefficient spending. Of members of a local parliament we can expect some restraint in spending the taxpayers’ money of their own citizens. What to think, however, of an Eastern-European member of the EU-parliament who does spend the money of West-European taxpayers at projects in Eastern Europe? To satisfy the members of parliament of Western-European countries pork-barrel legislation will rise. Not much different as is presently the case in the US where the support of congressional representatives has to be bought with financial presents (pet projects) for their local constituents. In short, we will see more signs along the roads that state, “This project has been realized with the help of the EU”. A project, if the Member State had to decide and pay for itself, it would not have spent the money on.

## **The limits of centralizing knowledge**

Why does the Treaty of Lisbon set out individual freedom as one of the core values of the EU? It is a good in itself. Man is first and for all a spiritual being. We can only make real choices based on individual freedom. Freedom is also essential to develop as a moral being. The choices, e.g., we make to help other people, have to be taken in freedom.

Individual freedom, however, is also a necessity for the market economy. Not only, quite visible, the climate and the physical characteristics of the Member States do differ, but, less visible, though of more importance, also men in their preferences and knowledge do differ. A market economy does make an optimal use of those differences in knowledge (Hayek, 1982, Vol. 1). Hence, the problem in a market economy is not to give the central authorities, be it Brussels or a local government, all the extra knowledge it needs to pursue policy. The problem is to give each individual all the extra knowledge he needs, mostly in the form of price (profit) signals, so he can decide for himself how to pursue his own goals. In this way, society does make use of often-unique knowledge of local circumstances and preferences that do differ in time. Knowledge that is difficult to centralize. An idea as valid for individuals as it is for countries. Hayek describes the market process as one of learning by discovery. We are looking at the core of Austrian economics: knowledge dissemination and the discovery thereof are of central importance.

In short, a market economy makes room for human freedom and uses existing knowledge the best. Hence we should make decisions re rules on an as decentralized level as possible. The economic way to solve problems when sovereignty sharing by the way of a complete harmonizing of all rules is impossible is to apply the concept of mutually recognition of differences (Backhaus, 2001, p. 9). In a market exchange, strong

differences of opinion are taken care of in a peaceful way. Subsidiarity, an organizing and enforceable principle, is congruent with the market. Subsidiarity has remained a part of the new (reformed) European Treaty of Lisbon. It states that we should only shift powers to Brussels when Member States themselves cannot achieve the same results. (Treaty, 2004, Title III, Article I-11). From this principle, which we can also describe as economic federalism, flows the responsibility of the Member States to provide the legal conditions under which the citizens can accumulate wealth in order to satisfy their needs themselves. In a sense, competition between local authorities or Member States, where there is freedom of movement, provides experimentation with alternative models that is conducive to growth. It resembles the market economy best (Hayek, [1960], 2006, p. 230).

## CONSTITUTIONAL ECONOMICS

A constitution contains a principle-based limitation of the role of government in society and defines the basic rules for ordinary politics. A constitution is a framework for political action, not an instrument for action (Elster, 2000, p. 100). In constitutional economics, we define the rules of the socio-economic-political game. We have to make two sorts of constitutional decisions. First, we must choose from possible constitutional (so-called higher law) rules. Behind a veil of ignorance, countries and people choose electoral and non-electoral constitutional rules. No one knows his future position. (Of all the Member States, Germany broke the rules of Pact on Stability and Growth. Though beforehand Germany was a most unlikely candidate.) It is at this initial constitutional decision stage, where we choose the basic fiscal arrangements, that citizens not only can really control the state, but widespread public agreement is possible (Brennan and Buchanan, 2000). This since the prospect for general agreement changes dramatically if we allow for some introduction of ignorance and/or uncertainty into the Member States' calculus. The prospects of agreement relate directly to the predicted length of life of the tax reform. Then we will tend to opt for rules that are "fair". Hence the measures to be discussed below are meant not just for the upcoming, 2013, sixth financial framework but "forever". Besides, it is always easier to secure agreement on a set of rules than to secure agreement for example on who is our favorite player. The tone of the discussions is theoretical and argumentative. Gains for all members are real.

Second, we have to state rules for day-to-day policies within the framework. Making decisions by majority ensures the workability of the political process. The tone of the discussions is one of weighting up interests and bargaining (Elster, 1991). Ordinary politics, post constitutional choice, tends to be conflictual. The reformed EU treaty, however, gives unanimous consent a smaller role, without making the distinction between the just-mentioned two sorts of decisions.

Part of the difficulty of our answer is constitutional illiteracy. As Hayek said: "The most important outcome of the socialist epoch, however, has been the destruction of the traditional limitations upon the powers of the state" ([1960], 2006, p. 223). We have to shore up constitutional understanding: the choice by individuals, who are related one to another in an anticipated set of interactions, of a reciprocally binding constraint. Rules and institutions rather than outcomes should be the focus. In general, orthodox public finance, with its emphasis on the direct application of normative criteria to tax arrangements, does not give us an understanding of observed fiscal processes in the EU nor is it a basis for improvement on grounds that are acceptable to the taxpayers. As we do test in this paper, the logic of a constitutional approach can give such an interpretation, just as it gave an analytic interpretation of the popular tax revolts sweeping across the U.S. in the late 1970s (Buchanan, [1980], 2000, p. 220-221).

There are no unique constitutional solutions; several combinations of electoral and non-electoral rules are possible. In this paper, we first look at the tasks the EU has to do, and second we look at the way fiscal policy is decided. If political and cultural differences do exist and freedom of choice and free initiative of citizens is important, limiting constitutional rules do make sense. Which reform of the EU budget is necessary? We can look back and learn from history. We look at what did shape the American fiscal constitution (Dam, 1977). If the problem is to carry over tasks to supranational authorities, as is the case in new Treaty of Lisbon, we do feel protected if these supranational authorities can act on two provisions. Firstly, and, for James Buchanan, most importantly, on provisions that lay out the (limited) range and scope of activities that are appropriately to be undertaken (2001, p. 442). Secondly, on provisions that state a bicameral fiscal (constitutional) framework (cp. Friedman, [1962], 2002, pp. 2-3).

### Limiting the tasks of the EU

If the problem is how to establish a limited government, we can look at the constitution of the U.S. In the U.S., two authorities are of interest: the authorities in each of the states and the federal government in Washington. Is that not too much government? Not if both authorities compete with each other in the sense that they each have their own branch of power. We can guard a branch if a constitution does support us. As has been said by James Madison, one of the founders of the American constitution, in the U.S. constitution the central authorities do have little and limited and the states do have many and large competences. The former has powers related to foreign policy and national defense. The latter has powers related to the criminal justice system and the protection of the family. In the EU Treaty of Lisbon, however, the opposite seems to be the case: there seems to be little that does not fall under the jurisdiction of Brussels. The Treaty describes tasks that the EU has to do under all circumstances (e.g., customs, competition and monetary policy, fishing, trade and the internal market policy), tasks that can be appropriated if necessary (e.g., environmental policy and consumer protection) and tasks the EU supports (e.g., tourism) (Treaty, 2004 and 2007).

Power, however, wants more power, all to the good or to the bad. Hence, every possibility, how artificially, the EU will use to enlarge it. The manner of subsidizing activities, for instance., enormously enhances the influence of the EU. Suppose the EU gives a subsidy of 50% to a certain activity. That is almost blackmail; no local government, in their good mind, is opposed to it. For the local authorities the gains of the activity has to be only half of the total costs (cp. Edwards, 2005). The pressure to accept the subsidy is enormous. Even, however, if the given task for the (federal) central authorities is small, as, e.g., described in the U.S constitution, for interstate trade. Just as the EU-authorities do have a stake in border crossing interests. That, however, is a license for government involvement, at least in the US, in approximately everything. Look at what did happen in the US. The federal authorities may not meddle with agriculture in the separate states. Yet---with the rule and power of the authority over interstate trade in hand---it states how many acres in the separate states have to remain wasted. How can the federal authorities motivate this? A farmer did grow grain on his “wasted” land and fed the grain to his cattle. At first site, no interstate trade seems to take place. The Supreme Court, however, did argue that if the farmer had not grown grain on his wasted land, he would have bought it. He, also, influenced the price of grain on the market and so interstate trade (Snyder, 1998).

In sum, even if there is a clear separation of powers and limitation of tasks, as in the US, central government often grabs the possibility to enlarge its powers. What then can we expect of the description of tasks in the (revised) EU treaty? There seems to be little that does not fall directly or indirectly under the jurisdiction of Brussels. The EU has tasks to do under all circumstances (e.g., customs, competition and monetary policy, fishing, and internal market policy), tasks that can be appropriated if necessary (e.g., environmental policy and consumer protection) and tasks it supports (e.g., tourism) (Treaty, 2004, 2007). The just-stated possibility of subsidizing activities enormously enlarges the influence of the EU. See how acute the gold rush response is with “matching” grants. In general, also EU-tasks, in principle, are many and hard to control by a democratic decision-making process. A process in which everyone thinks that other people do pay for a certain policy and changing majorities have to be bought, time and again. An ever-increasing government budget might be expected.

## **Limiting benefits to members of identified groups or countries**

Democratic politics should be more than groups or Member States each seeking to further particular interest. The ultimate justification of collective action should be the persuasive force of nondiscriminatory objectives (Hayek, 1960). For Buchanan and Hayek this means the extension of the legal tradition in Western civil order of nondiscrimination to the workings of ordinary politics. Nondiscrimination is already the rule on the taxing side but not on the spending side of the EU-budget. The principle disqualifies all programs that target persons and Member States who qualify in accordance with identification by ethnicity, location, occupation, industry, or activity (Buchanan, 2000).

## **Limiting the powers of fiscal decision-making**

For Hayek it is necessary to create a Legislative Assembly (upper house) that states the rules and a Governmental Assembly (ordinary legislature or parliament) that administrates within those rules (1982, Vol. 3). A new and differently elected and organized Legislative Assembly should draw up semi-permanent fiscal rules, and should not be subject to influences of particular groups. In the EU, however, there is an intentional combination, the decision-making (institutional) triangle, of the European Commission, the European Council

and European Parliament. All of whom state what the budget is and make the policy within it (Treaty, 2004 and 2007). Consequently, the proposed change in policy of the EU from unanimity to majority rule is no effective constraint on the exercise and growth of EU power (Brennan and Buchanan, 2000).

Constitutional economics is both thinking outside the box and back to basics. For the EU it is scientifically largely uncharted territory. Hayek's model of bicameralism for fiscal powers for example, to my knowledge, has never been part of any political agenda. It is thinking outside the box of mainstream public finance (Blankart, 1991). In due course, the separate "taxation chamber" can even grow into an institution where all legislation in the EU is made independently from the direct policy use of it. For Buchanan the European constitution is an opportunity, EU citizens need to grasp, for going back to constitutional basics (1991, 1996a). The constitutionalist mindset, however, that says that persons owe loyalty to the constitution rather than to the government, is (has become) foreign to European thinking (Buchanan, 1996b, 2003). The idea that there are, or should be, any limits on the powers of the government has largely passed from the contemporary scene. This lack of a constitutional mindset is also part of the problem this research program has to tackle.

Of central importance is that constitutionalism can be the core of fiscal constraints in which subsidiarity (the primary liability for the solution of problems lies with the smallest functional unit) and the consent of free individuals (trust), two of the main problems of the EU, are of central importance.

## CONCLUSION

In general, the EU-budget hovers between one that redistributes money between members and one that achieves certain EU-wide policies. The budget is the cause of many of the bitterest arguments between the Member States. Often, the objective of spending seems to be to achieve acceptable net balances rather than agreed policy. It has been said that the EU budget has never been used as a means to meet the objectives of the Union but rather as a negotiating tool for its members.

If fiscal dissatisfaction in the EU is the result of a growing tendency in which majorities do decide, and hence does give changing majority coalitions political authority, within that framework we can never solve the problem. There is another possibility. From the point of view of constitutional economics and fiscal sociology two things are necessary. One, we need a fiscal constitution on the bases of a clearly enumerated list of tasks for the EU. Second, we have to split fiscal powers: the establishment of a separate legislative branch of the EU that does state the principles of taxation and another branch that makes policy inside those rules. Presently, however, often majority by means of the European Commission and the European Parliament does set the fiscal rules as well as does make policy inside those rules on a seemingly endless list of possible tasks.

In sum, this paper shows how we can use the reformed new EU-budget by imposing constraining rules to promote solidarity and trust, a shared framework facilitates a robust democratic debate, in the setting of an EU-Leviathan. Instead of emphasizing efficiency, to up-date goals and means, and/or to aim at greater fairness the paper shifts the emphasis to the making of authentic rules: the design of possible constraints on a revenue-maximizing EU. Because of their voluntary consent (an internal criterion based on the desires of the Member States themselves) it is acceptable to the Member States that are to be subject to it. No external criteria, and hence no agreement over the goodness or badness of these criteria used, e.g., allocative efficiency or equal treatment for equals, are necessary. The shared framework of a model EU-budget (politically independent fiscal rules) creates trust and social cohesion between the Member States, the European Parliament, Commission, and Council of Ministers. It facilitates a robust democratic debate within a consistent, transparent and reliable policy and legislation framework. Member States can anticipate making appropriate behavior adjustments, including those made over a long-term planning period. The paper gives the analytical arguments in support of two appropriately designed budgetary measures (moderately permanent features) re the up-coming EU Budget Review: a clear limitation of tasks, nondiscriminatory budget politics, and a split in budgetary powers. Though the model of a budget-maximizing Leviathan-like EU bureaucracy, a discretionary agency, may seem extreme, the norms laid down may possibly prove acceptable as embodying the strategy to ensure that the best remains a possibility by guarding against the worst.

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# SOCIAL AND ECONOMIC DEVELOPMENT: RUSSIAN PRIORITIES

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## ABSTRACT

*Eight years of economic growth have transformed Russia. Many of the social and economic problems inherited from the soviet system or which developed during the crises of the 1990s have already been, or on the point of being, resolved. For the first time in more than sixteen years Russia is in a position to move from short-term crisis-solving to long-term strategic development goals.*

*Priority is a task, which implies a prime decision. Accordingly, urgent tasks are connected with actual problems. However, a problem can have several solutions, consequently, to make priorities it is necessary to take into account global trends of economic development and peculiarities of certain national economies.*

## INTRODUCTION

Bearing in mind the principles, described above, let's set the priorities of country's social and economic development. Analysis of social and economic development helps to reveal the challenges of the long-term period:

Macroeconomic – exhaustion of opportunities for intensive development in the current structure;

Raw – rapid growth of the capital intensity of minerals (oil and gas), decrease of profitability and investments appeal of projects; exhaustion of hydrocarbon goods;

Social – high and stable poverty level; social effect of development «lock up» (becomes apparent in high and growing differentiation, emergence of «standstill poverty», degradation of human capital);

Demographic – ageing of the population, in future – fast growth of the retirement load. Emergence of consequent problems, connected with migration;

Technological – start of the new stage of technology development in developed countries and shift of «high technology» into industrializing countries, which increases the competition.

Consequently, the priorities of development could be formed:

**1. Providing the branch structural shifts policy.** Interbranch redistribution of resources by carrying out of the corresponding budgetary-tax and investment policy using tools of differentiation of the taxation, subsidizing and mechanisms of attraction of investments, and also direct state investments in branches of national importance.

**2. Providing the technological structure shifts policy.** Strengthening of attention to scientific and technical development and stimulation of innovative manufactures, by expansion of financing of scientific activity, stimulation of investments into scientific and technical and developmental development.

**3. Human potential development.** Carrying out strong measures to overcome the social degradation of society, first of all, elimination of poverty, by redistribution of the national income, strengthening the policy of employment, expansion of availability of the social benefits - education, public health services. Strengthening the social security. Activation of the demographic policy.

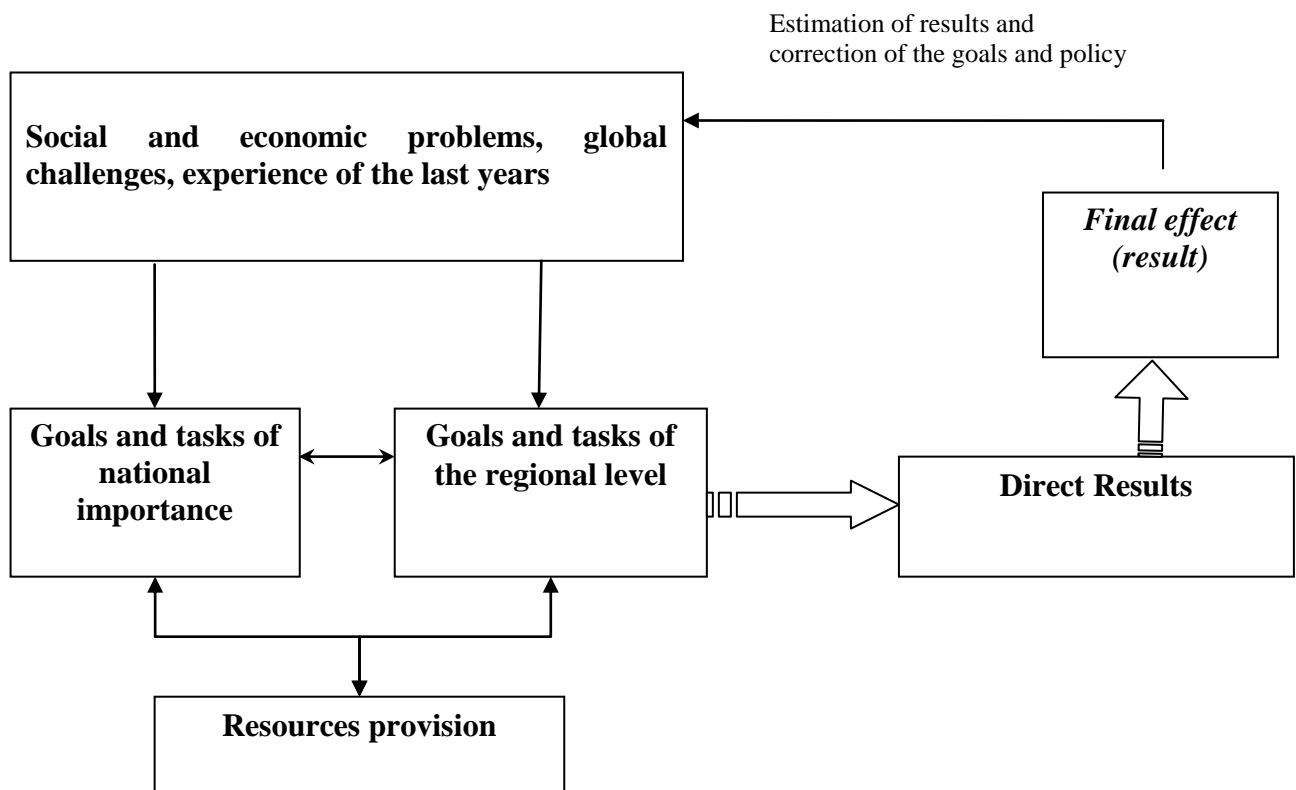
- Regional equalizing. Carrying out the regional policy directed on alignment of the standard of living of the population, creation of points of growth, and active measures on development of depressive regions.
- Internal market development. Orientation of economy to internal market provides economic growth due to expansion of internal demand, which promotes increase in well-being of the population.

## DIFFERENT APPROACHES TO THE FORMATION SOCIAL AND ECONOMIC DEVELOPMENT OF RUSSIA

Economic development is always multi-variant and depends on the choice of goals and economic policy instruments of their achievement.

Comparison of the purposes and objective opportunities of social and economic development of the country, analysis of threats interfering it, diagnostics of reasons generating them, and also account of laws of modern development of global economic system allows to reveal priorities of the state social and economic policy.

**Figure 1 Technology of goals choosing (management upon results)**



The choice of priorities should be carried out in dynamics of economic changes, meaning that the priorities are corrected in an appropriate way according to the changes in economic system.

Formation of the purposes and problems of economic development is carried out on the basis of revealing problems of social and economic system, the analysis of global world tendencies of development, and also regarding the past experience and features of the municipal economy.

The priority purposes and problems are corrected regarding the presence of the resource base.

In the process of realization of the purposes and tasks the estimation of results and, accordingly, updating of priority directions of development is necessary.

## **CLASSIFICATION OF SOCIAL AND ECONOMIC DEVELOPMENT PRIORITIES**

Having analyzed all the priority sets of theoretical concepts and models of social and economic development, and also the program, plans and the strategies offered for Russia and accepted in foreign countries, certain criteria of classification of priorities of social and economic development were defined.

The following criteria of classification could be singled out:

1. Valuable reference points:

- Spiritual
- Material

or

- Social
- Economic

These criteria define, that in strategy of social and economic development cultural values, which act as a basis of social development, are put on the foreground, or the material component, considered to be basic prevails.

It is possible to formulate some alternatives differently, turning to the economic sphere, which has the paramount value for the development of solutions of especially economic problems (for example, high economic growth, low inflation, a high level of gross national product, competitiveness), achievement of social well-being (a high level and life expectancy, health of the nation, education) is a priority.

That is the choice consists in definition of that is an ultimate goal, and that means of its achievement. Economic parameters define social well-being of a society, or socially safe society reaches a high level of economic development.

2. Transformation model:

- Concept of growth
- Concept of development

According to the criterion indicated above the extent to which the priorities of the state correspond to one of the models of transformation: growth or development is defined.

The main difference between these two models consist, first of all, that the first one is focused on the achievement of quantity indicators, abstracting from qualitative, second, the first model abstracts from such important parameters of public well-being, as ecological, ethical, cultural, remaining within the limits of especially economic sphere.

3. Resources used:

- Priority of human resources;
- Priority of natural resources;

- Priority of capital resources.

The modern world tendency connected with the development of knowledge economy, - reorientation to the prime role of human resources which carry the knowledge and information and are capable to create the innovative product with the high added cost.

However, according to the current situation in Russia, for us natural resources are a priority which have the prime value in manufacture and export of goods and maintenance of filling of the state budget act.

#### 4. Priority of public institutes:

- Priority of market mechanisms;
- Priority of government machineries;
- Priority of balance between the market and the state, and also orientation to the non-profit organizations.

The priority purposes and problems can lean on various tools of realization so certain concepts, such as liberal for example, allocate paramount value to market mechanisms and, accordingly, the problems of expansion of market freedom become the priorities, discharge of the state from the regulation of economic processes, maintenance of business-structures, creation of a legal field are put forward, otherwise the role of the state to be put on higher level and then machineries of government of influence are put in the foreground.

Modern tendencies state the importance of public institutes; in that case priorities serve as the stimulation of formation of the non-profit organizations and giving them certain powers.

#### 5. Terms of realization:

- Short-term priorities - 1-2 years;
- Intermediate term priorities - 2-5 years;
- Long-term priorities - from 5 years.

## IMPLEMENTATION

Today, Russia has the opportunity to become an intellectual and cultural world leader capable of absorbing as well as producing cultural, scientific and technical ideas and implementing them within the country.

Different social groups and branches of the intellectual elite view the countries future differently. But the general idea of commonly-desired long term results can be expressed in a shot formula – “Prosperous Russia”

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# THE DETERMINANTS OF HONG KONG FDI IN CHINA: LOCATIONAL CHANGE FROM PEARL RIVER DELTA TO YANGTZE RIVER DELTA

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## ABSTRACT

*The Chinese economy attracts a variety of Foreign Direct Investment (FDI) inflows, however, despite the increasing investment from developed economies, Hong Kong remains the largest investor in China due to similarity in culture and locational advantage. This paper seeks to identify the determinants of Hong Kong FDI in two globalised deltas in China: Pearl River Delta and Yangtze River Delta. They are both the fastest and most developed economic regions in China and together attract nearly 80% of inward FDI. Utilising secondary data, this paper analyses global flows of FDI in China, then moves on to Hong Kong FDI in China, and finally focuses on Hong Kong FDI in the Deltas. Data suggests there is a trend for FDI to transfer from the Pearl River Delta to the Yangtze River Delta. We use three determinants in our attempt to explain the trend for the location change of Hong Kong FDI. These are market demand and market size, labor quality and labor cost. By comparing these determinants between the two deltas, it is concluded that the Yangtze River Delta has a competitive advantage in three factors over the Pearl River Delta. The results, to some extent support FDI theory, that is, firms will be initially attracted by low labor costs, and then may relocate to tap market size.*

## INTRODUCTION

China has become the most popular FDI destination in the world, in 2002, when FDI reached US\$53bn, the first time that FDI to China exceeded that of the United States. Source of FDI changed as well such that after 1998 China's FDI from Southeast Asia fell while investment from US and EU increased. Despite the fact that the EU, the United States, and Japan (the Triad) supply 90% of global foreign direct investment and China is one of the largest FDI recipients in the world, most FDI into China does not come from the Triad but from Hong Kong and Taiwan. Whilst there is much research into the volume and characteristics of FDI in China, there is a little literature about the location determinants and spatial distribution of FDI among Chinese regions or provinces (Cheng, 2006). This paper aims to investigate the location choice for intra-country spatial distribution of FDI by focusing on Hong Kong FDI in the Pearl River and Yangtze River Deltas since 1992. These two regions are chosen because the two regions together account for about one third of China's GDP and absorb about two thirds of China's FDI. Furthermore, both regions together produce about 65% of China's exports and have a large private sector.

This research project is intended to reconcile earlier conflicting results about the effects of labor cost on incoming FDI in China. There are two main types of foreign-invested enterprises in China: the cost-reduction-oriented type and the market-oriented type. Typically, the first type usually invests in small-scale, labor-intensive industries while the second type targets China's domestic market (Tian, 1999). Generally speaking, FDI from different origins may have different labor cost requirements or sensitivities. Fung et al. (2002) investigated the locational choices of Hong Kong and U.S. direct investments in China and found that Hong Kong investment is more sensitive to local labor costs. They concluded that Hong Kong firms tend to invest in China to take advantage of the lower labor costs to export, whereas U.S. firms invest in China mainly to sell in China. Zhao and Zhu (2000) argue that American and European FDI generally seek regions or provinces with high labor

productivity and strong local economic bases. This paper focuses on the emergence of two major globalised delta economies (GDEs), namely Pearl River Delta and Yangtze River Delta, due to FDI inflows and the critical effects of a core city, Shenzhen and Shanghai respectively, in promoting FDI into GDEs. Since Hong Kong FDI accounts for a such a large proportion of total FDI, to control the effects of the aggregated FDI data, the research questions in this paper are to 1) investigate the impact of and reason of Hong Kong FDI in China; 2) to find out determinants of Hong Kong FDI location change; 3) to determine whether Hong Kong FDI reveals any unique preferences by comparing two major FDI receiver regions: Pearl River Delta and Yangtze River Delta.

## **CHINESE ECONOMIC DEVELOPMENT**

An understanding of economic structure and the institutional background of China is fundamental to any meaningful analysis of the trends and patterns of FDI in the country. In this section we provide a brief overview of the Chinese economy and Hong Kong FDI in the context of developing economies in order to lay the foundations for the subsequent discourse. Since 1978 foreign capital has become the primary dimensions of China's contact with foreign countries in terms of funds, materials, technological exchange and economic cooperation. Effective utilisation of FDI needs to be accompanied by an appropriate macroeconomic environment, hence a location-based policy promoting FDI was adopted. Initially, it was concerned with the southern provinces of Guangdong and Fujian which were expected to become especially attractive for foreign investors for their preferred location. In addition to developing the administrative power of the provinces, four Special Economic Zones (SEZs) in Guangdong - Shenzhen, Zhuhai, Xiamen and Shantou - were approved in 1979 and 1980, providing various incentives such as preferential tax treatment. These "open economic zones" offered special motivations to foreign investors and for promoting foreign trade and FDI. In 1992, after Deng's famous "South China Tour", a number of major cities in the inland provinces such as Shanghai were given privileges similar to those of the coastal areas, particularly in the Yangtze River valley and in border areas, and this heralded a new era in China's FDI policy. The first SEZ -Shenzhen - is situated in the south-east, close to Hong Kong and Taiwan, which would be expected to make the most of the new investment opportunities as well as being familiar both with the language and culture (Pont, 2000). The unique feature of FDI in China is that the majority of China's inward investment has been contributed by ethnic Chinese. According to official Chinese data (MOFCOM), the predominance of FDI Flows was from Hong Kong which accounts for nearly 35% of the share of total flows. In 2005 and 2006 this represented \$18bn and \$20bn respectively. The top sources of FDI for China in 2006 remained largely the same from previous years and were not expected to change significantly in 2007. Besides the ethnic Chinese from Hong Kong, Taiwan and Macao, FDI continued to be made by people of Chinese extraction from other Asian, European, Australian and North American countries (Wei and Liu, 2001).

### **Types of Foreign Direct investment in China**

Foreign direct investment in China encompasses wholly foreign owned ventures (WFOVs), equity joint ventures (EJVs), cooperative joint ventures (CJVs), and joint exploration ventures (JEVs). While WFOVs and EJVs have clear definitions, investment made by CJVs is an arguable category of foreign direct investment. Because of the vague definition, many CJVs have been treated as EJVs. This type of FDI was very important in earlier years, predominately for investors from Hong Kong. It played a role as a mode of entry for foreign investors after 1985 (Qu and Green, 1997). Hong Kong investors favoured EJVs because they were in a position to make good use of specific advantages such as shared culture and family relations. Chinese partners also favoured the EJV route since this gained preferential treatment from the government (Wei and Liu, 2001). However, with the share of WFOVs steadily increasing from 15% of total FDI projects to 48.9% in 1998, the popularity of joint ventures especially CJVs gradually declined. Besides the growth of FDI, China has also shown huge economic growth in the past two decades. Among the reasons for China's rapid growth, much of the literatures has emphasized that foreign direct investment (FDI) may best explain its rapid growth record at both national and regional level (Tuan, 2006). Why has China attracted FDI so successfully? Several studies in the literature pointed out by Cantwell (1991) and Lan (1996) help to explain it by highlighting market power, internationalisation, international competitiveness, and the production-cycle model. Broadmand and Sun (1996) have argued that abundant cheap labor is the key factor to attract FDI. The position of China as a major host country of inward FDI is mainly due to the overwhelming contribution by overseas Chinese from Hong Kong and other Asian countries. Some authors have emphasised the unique role of overseas Chinese firms, because the similar culture and language have reduced the communication costs (Plummer and Montes, 1995).



## Hong Kong FDI in China

Although FDI in China comes from more than 100 countries, the overwhelming source is overseas Chinese, especially those from Hong Kong (SSB, 1999). Hong Kong and Macau rank first, accounting for 59% of total foreign capital invested over 1983-1995, followed by Taiwan (8.6 %), the United States (8.1 %) and Japan (7.8 %). Since the early 1980s, capital from Hong Kong has always accounted for about 53-68 % of the annual inflow of FDI in China. Investments from developed countries remained limited compared with their overall FDI stocks in the world. For instance, the United States is the largest source of FDI in the world while China is the largest FDI recipient among developing countries. But as far back as 2000, only 1% of the U.S. outward FDI was in China (Wei and Liu, 2001). Although FDI from US and EU have been increasing the past few years, Hong Kong is still the major source of FDI in China.

The leading position of Hong Kong FDI in China can be seen from Statistical data in the *China Foreign Economic Statistical Yearbook* which shows major sources of FDI into China over 1979-1999 by three indexes: realized value, contracted value, and project numbers. The figures show that there is no difference in the three indexes: Hong Kong is the chief source, contributing to half of China's total inward FDI (Zhang, 2005). As Zhang points out there are three major driving forces for Hong Kong FDI in China: structural transformation from labor-intensive to capital-intensive industries, China's export-promotion FDI strategy, and Hong Kong Chinese ethnic links to mainland China. Hong Kong FDI has tended to be concentrated in the coastal areas, especially the Pearl River and Yangtze River Deltas, because HK FDI is attracted by coastal cities with good transportation and linkages to shipping routes for exports. Hong Kong's share of China's FDI inflows has been steadily declining since 1996 when it was almost 50% to approximately 36% in 2006. The decline continued after 1997 when it was handed over to China. This was due to some of the world's largest multinational companies setting up joint ventures or wholly-owned ventures in China on a large scale. However, Hong Kong is still a crucial and a major foreign direct investor in China. Several studies have indicated the role of overseas Chinese FDI in providing entrepreneurial, managerial and international marketing skills, and technical know-how, especially for mature products (Thoburn et al., 1990; Hobday, 1995). Lemoine (2000) argued that affiliates from Hong Kong, Macao and Taiwan are much less capital-intensive than others. Furthermore, the World Bank (1994) and Liu and Song (1997) suggested that since wages were lower and the labor force reasonably skilled, much of FDI by overseas Chinese displaces the production of labor-intensive and low-value products from Hong Kong and Taiwan to the mainland.

## Hong Kong FDI in Pearl River Delta

The Pearl River Delta, located in Guangdong Province, has been a leader in China in introducing foreign capital, especially in FDI for the last 2 decades years. With Guangzhou, Shenzhen, Zhuhai and their satellite cities, the Pearl River Delta has a population of 21 million and an area of 41,596 square kilometres, accounting for 31 % and 23.4 % respectively of the whole province. It is a comparatively developed area in Guangdong and has had the most rapid economic growth both in Guangdong and in China (Lan, 1999). In 1995, the actual foreign direct investment in Guangdong was US\$10.18bn, comprising 27 % of the country's yearly intake. By the end of 1995, the number of registered foreign-invested enterprises (FIEs) in Guangdong reached 59,600, which was 25.5 % of the national figure (Guangdong Statistical Bureau, 1996). The sum of FDI in Guangdong from 1979-1995 was 29.1 percent of the national figure. Guangdong province contains three of the four Special Economic Zones (SEZs) -Shenzhen, Zhuhai and Shantou, and the Pearl River Delta region has been able to attract inward FDI from other countries, especially from nearby Hong Kong and Taiwan. Guangdong province has a unique advantage other than proximity to Hong Kong in that it was one of the first provinces allowed to implement special policies and to establish SEZs. It remains as the largest FDI recipient sharing at least one-third of the national total FDI in 2000 and more than a quarter of the total in 2003 despite the competition from Yantze River Delta (Ng and Tuan, 2006). Guangdong is well known as the "world's largest manufacturing base" due to the huge manufacturing FDI during the past two decades.

## Sources of FDI in Guangdong

Since the rapid economic development and rise in income, millions of talented, well-educated young people have been attracted to work in this area from all over the China. Therefore, the Delta has one of the best educated and skilled labor forces in China, and is also attractive for high-tech and knowledge-intensive FDI projects. However, the fact remains that overwhelmingly FDI projects from Hong Kong and Taiwan to Pearl River Delta are traditional, labor-intensive FDI projects (Lan, 1999). Geographically, Guangdong is more accessible to foreign investors and more integrated with other economies, especially Hong Kong's economy. It is estimated that Hong Kong employs more than 3 million workers in the Delta. So Guangdong, and the Pearl River Delta in particular, has become a huge factory for Hong Kong's re-exports. Since the FDI from Hong Kong takes the lion's share of the total FDI in Guangdong, the economy of Guangdong is in fact a Hong Kong-oriented economy (Lan, 1999).

## **The Difficulties and Problems**

Since 1993 when the Central government gradually unified its policies toward foreign direct investment all over the country, it weakened the advantageous position of Guangdong and slowed down the rapid growth of FDI in Guangdong. Therefore, Guangdong, particularly its special economic zones (SEZs), no longer hold policy advantages in attracting FDI projects. Moreover, the higher labor and land costs make Guangdong less attractive to some foreign investors. Meanwhile, the implementation of Pudong's new area policy in 1992 meant Shanghai and Yangtze River Delta became the second largest place for attracting FDI. Therefore, Pearl River Delta has been facing more difficulties in utilizing FDI and whether it can keep its top position in China is questionable (Lan, 1999).

## **Hong Kong FDI in Yangtze River Delta - Sectoral distribution**

The Yangtze River Delta or Yangtze Delta, also called the Chang Jiang Delta, generally comprises the triangular-shaped territory of Shanghai, southern Jiangsu province (8 cities), northern Zhejiang province (7 cities) and the eastern part of Anhui Province (3 cities) of China. With a population of 87.43 million (2000) and an area of about 99600 square kilometres, Yangtze River Delta is one of the most densely populated regions on earth, and includes one of the world's largest cities on its banks—Shanghai. In modern times, the Yangtze Delta, led by Shanghai, is the centre of Chinese economic development, and the leading region in China in terms of economic growth, productivity and per capita income. Shanghai emerged as a major centre for attracting FDI after 1984 and has gained largely FDI inward growth since the development of the Pudong area in 1992. One of the primary reasons for this change is that multinational corporations (MNCs) have increasingly concentrated their investment in Shanghai's capital or skill-intensive manufacturing and service sectors. Compared to other coastal provinces such as Guangdong and Fujian where FDIs are located in labor-intensive sectors to take advantage of cheaper Chinese labor, FDI in Shanghai seems to be driven more by the motive of accessing the domestic Chinese market. Many Multinational Corporations have invested in Shanghai and Yangtze River Delta because of its dynamic comparative advantages such as its comprehensive industrial structure, the larger number of research institutes and universities and the large amount of skilled labor (Tian, 1999).

From the 1990s, Shanghai began shifting to high-tech and capital-intensive industries which are different from the labor-intensive industries located in Pearl River Delta. Tuan (2006) argues that Shanghai as the core city in Yangtze River delta has played a significant role in attracting FDI. Compared with Pearl River Delta, the Yangtze River delta has relatively higher estimated elasticities in FDI absorption and a more diversified industry structure. In recent years, foreign investment in service industries has surpassed that in the secondary industries. As a result, FDI in service sectors has accounted for 45 % of total FDI, which is close to that of FDI in manufacturing at the end of 1993 (Tian, 1999).

## **Sources of FDI in Shanghai**

Shanghai has not only attracted Hong Kong FDI to invest in the capital-intensive industry, but has also attracted OECD countries such as the United States, Japan and Germany. According to Tian (1999), its success in attracting FDI is because of Shanghai's advantages in terms of its comprehensive industrial base, advanced technology, superior infrastructure and the availability of a large skilled labor force. In addition, it is argued that the success of MNCs in Shanghai is the result of the preferential national and provincial policies which encourage these large-scale capital-intensive projects. Hong Kong has been the largest investor in Shanghai since

1987. By the end of 1993, Hong Kong ranked first at around 40% of total inward FDI in Shanghai. However, in terms of the average scale of FDI projects in manufacturing, Hong Kong at (US\$0.9 million) is much smaller than projects invested in by Germany (US\$ 4.7 million) and Japan (US\$ 2.3). Besides the heavy investment in the manufacturing sector, Hong Kong firms also raised their investment in Shanghai's service sectors, especially in the real estate and retail sectors, banking and land development after 1992 (Tian, 1999). This is in line with the Pudong district becoming financial and commercial hub. Shanghai's other attraction include Waigaoqiao the largest free trade zone in mainland land, in north-east Pudong; the Jinqiao Export Processing Zone, a major industrial area in Pudong; and Zhangjiang Hi-tech Park, a special area for technology-oriented businesses, covering 17 km<sup>2</sup> in central Pudong.

## **DETERMINANTS OF LOCATION OF FDI IN CHINA**

With regards to previous literature, a comprehensive locational framework for the location of foreign direct investment is lacking. Qu and Green(1997) have summarised and recommended several studies such as those on joint ventures (Shan, 1991; Beamish and Wang; 1989; Tao, 1988), those on China's trade system (Shan, 1989), those on SEZs (Chu and Wong, 1986), and those on China's investment environment (Ruggles, 1983). However, scholarly research into the locational characteristics and the locational mechanism is lacking. This is not only because of the newness of the issue, but also because of data constraints. Three of the descriptive studies were (Xie and Dutt, 1993; Leung, 1990; and Schroath, Yu, and Chen, 1993) based on joint ventures found that that first, foreign direct investment was disproportionally distributed in east coastal regions and larger urban centres. Second, the location of foreign direct investment was also affected by the social and kinship relationship between investors and host regions, and third, location patterns differed across industries and country of origin' (Qu and Green, 1997). These results provide the most useful information on general location patterns of foreign direct investment in China before 1986, and lay the foundations for the subsequent analysis as well. Several theories have been advanced to explain the FDI e.g. Hymer (1960), Bhagwati and Srinivasan (1983) and Grossman and Helpman (1991) etc. However, more relevant to our study is the location theory, which is often used to explain why a foreign company would choose to invest in a particular region of a host country. It can also be used to explain why foreign investors would choose to invest in a specific location within a particular host country.

Previous researchers have identified several determinants for the location of FDI. For instance, Coughlin et al. (1991) assume that profit maximization is the only driver for a foreign firm to choose to invest in a particular state. They considered state land area, per capita income, agglomeration, labor market conditions (wage rates, the degree of unionization, the unemployment rate), transportation network, taxes, and state expenditures to attract FDI as the determinants of FDI across the states within the US. Their results show that more FDI can be attracted with higher per capita incomes and higher densities of manufacturing activities. Similarly, Bagchi-Sen and Wheeler (1989) argued that population size, population growth, and per capita retail sales were crucial determinants of the spatial distribution of FDI in the US. Furthermore, Friedman et al. (1996) noted that skilled labor, wages, market potential, construction costs and major ports have an important effect on the location of foreign investment in the US.

A crucial survey conducted by Xin and Ni (1995) ranked provinces of China according to the best investment environment. They found that there were eight variables with the following weightings: 'market scale 30%, wage level 20%, education level 10%, extent of industrialization 10%, transport facilities 10%, communication facilities 10%, living environment 5%, and the level of scientific research 5%'. Based on previous research findings, Sun et al (2002) identified eight potentially significant determinants of FDI distribution across provinces within China. However, due to a number of constraints, we focus on three significant determinants of FDI distribution: market demand and market size; labor quality and labor cost and compare Yangtze River Delta and Pearl River Delta on these determinants. At first glance, we would expect market demand and market size to have a positive impact on FDI flow because one major motivation for FDI is to look for new markets and gain expected revenue from the investment. The larger the market size of a region is, the more FDI the region can attract. Kravis and Lipsey (1982) and many other previous studies find such a similar positive relationship. Sun et al (2002) use GDP, GDP per capita, retail sales, and retail sales per capita to show market demand and size effect. Therefore, the market demand of a particular region for FDI can be evaluated by analysing GDP, GDP per capital and retail sales.

Labor quality should be a significant factor for FDI consideration. Braunerhjelm and Svensson (1996) have used a number of research scientists, engineers and technicians per 1000 of the employees to proxy labor quality. Here we think the education level of employees in the particular region is also very important. This variable could have a positive impact on FDI since it measures the relative endowment of skilled labor in each region (Sun et al, 2002). Labor cost, as often measured by wages, is generally recognized as a negative factor to FDI. However, such a measure may have some problems, because it may weaken the ability of the variable to gain the true labor cost. For instance, workers in State-owned enterprises are typically provided with housing benefits and lots of welfare while workers in the private sector get 'pure' salaries with cash bonuses. Furthermore, due to its recent fast economic development, China doesn't just attract foreign investment purely through cheap labor (Sun et al, 2002). Since lots of MNCs invest in Shanghai in the service and financial sectors, cheap labor is not the determinant reason, because MNCs are concerned more about higher labor quality. Branstetter and Feenstra (1999) argue that multinational firms in China tend to pay a wage premium for quality labor. Therefore, it makes sense that higher wages in some regions can actually attract relatively more FDI.

## METHODOLOGY

The data used in this analysis are of two basic types. One is data on foreign direct investment and another on cities and regions at the prefecture level. Different statistical yearbooks contain data about different aspects of foreign direct investment. Moreover, city and region data have been available through yearly statistics since the early 1980s. There are two major sources of information that have been used. The first is *China Urban Statistics*, 1992-2005. This includes various social and economic statistics, and the amount of yearly realized and pledged foreign direct investment in each city. The other source is the *China Statistical Yearbook* 1992-2005 and the *China Almanac of External Economic Relations and Foreign Trade* 1992-2005. These are two official sources which provide aggregate foreign direct investment data at the provincial level. Hong Kong FDI data used in this paper are available from "*China's foreign Economic Relations and Trade*" and "*China Statistical Yearbook*" which includes its annual survey of Hong Kong FDI in China across the country. Additional material is sourced from the *Foreign economic statistical yearbook of Shanghai* or the *Statistical Yearbook of Guangdong*.

## FINDINGS

An interesting observation that emerges from existing literature is that there seems no fixed definition of what constitutes the two Deltas. For instance, some researchers use the term Guangdong province and Pearl River Delta synonymously when clearly the province is far wider than just the Pearl River Delta. According to the official definition, the Pearl River Delta (PRD) region occupies the 41,698 sq km area alongside the Pearl River estuary. The zone is formed by 9 cities, namely Guangzhou (the provincial capital), Shenzhen, Foshan, Zhuhai, Jiangmen, Zhongshan, Dongguan, four districts and counties of Huizhou and four districts and counties of Zhaoqing. In recent years the term 'Greater Pearl River Delta' has often been mentioned, which refers to the whole Guangdong Province. Some have tend to include the Hong Kong Special Administrative Region (SAR) and Macao SAR in this definition. In this paper we will use the official definition of PRD. In some circumstances 'Greater River Delta', excluding Hong Kong and Macao, will be used simply for data collection and analysis.

The Yangtze River Delta (YRD) is an important economic powerhouse of the Chinese mainland, with Shanghai being China's financial and logistics centre, and Zhejiang and Jiangsu an increasingly important manufacturing base. The actual land scale of YRD region is also confused and arguable. Some researchers include 3 cities in Anhui Provinces but others do not. According to the official data, YRD refers to 16 cities in Shanghai, southern Jiangsu, eastern and northern Zhejiang, including Shanghai, Nanjing, Suzhou, Wuxi, Changzhou, Yangzhou, Zhenjiang, Nantong, Taizhou, Hangzhou, Ningbo, Huzhou, Jiaxing, Shaoxing, Zhoushan and Taizhou. Since August 2003, Taizhou has been included as part of the YRD region. We have adopted the new official definition of YRD in 2003. Hence 'Greater Yangtze River Delta' which refers to Shanghai, Jiangsu province and Zhejiang province will be discussed and compared with 'Greater Pearl River Delta' in the subsequent analysis.

## Lack of comparability

Obtaining accurate current data has been difficult. Relying on the most complete statistics for 2004, we can conclude that the total value of imports and exports for Pearl River Delta were US\$163.92bn and that of Yangtze River Delta US\$347.53bn. Furthermore, the inward FDI of the two Deltas in 2003 was respectively US\$13.05bn and US\$25.79bn, and during the same time, gross industrial output of Yangtze River Delta was US\$443.64bn while that of Pearl River Delta was only US\$224.98. These data may lead one to suggest that the foreign trade development and economic growth of Yangtze River Delta has, overall, exceeded that of Pearl River Delta. However, this needs to be considered against the fact that the Pearl River Delta only consists of 9 cities while Yangtze River Delta, consists of 16 cities, so they are not on the same level due to the large differences in administrative divisions, and the land areas. Moreover, the population scale and land area of Yangtze River Delta is respectively 3.02 and 2.65 times than that of Pearl River Delta. Hence, it is not possible to compare Yangtze River Delta with Pearl River Delta just using absolute financial indicators.

## Total inward FDI in the two Deltas

Table 1 shows the realized foreign direct investment in the two deltas and cities (1985–2002). As Table 1 indicates, the Greater PRD and the YRD together have accounted for the lion's share of China's total inward foreign investment, absorbing nearly half of the country's FDI since 1985–1992. In separate and comparative terms, the two regions have moved differently. While the PRD's share of foreign direct investment in China's total has stagnated and begun to drop, that of the YRD rose sharply after 1992 from US\$371.13 billion to US\$10,147.31 billion. With the development of YRD from 1992–2002, the amount of FDI inward to YRD nearly equals that of PRD.

**Table 1: FDI inwards by two Greater Deltas from 1985–2002**

| Greater region  | 1985–1991 average |            | 1992–2002 average |            | 1985–2002 average |            |
|-----------------|-------------------|------------|-------------------|------------|-------------------|------------|
|                 | Amount            | Percentage | Amount            | Percentage | Amount            | Percentage |
| PRD (Guangdong) | 1,073.45          | 35.86      | 10,198.70         | 26.53      | 6,650.00          | 26.97      |
| YRD             | 371.13            | 12.40      | 10,147.31         | 26.40      | 6,345.45          | 25.74      |
| Shanghai        | 206.37            | 6.89       | 3,212.32          | 8.36       | 2,043.34          | 8.29       |
| Jiangsu         | 92.40             | 3.09       | 5,467.56          | 14.22      | 3,377.22          | 13.70      |
| Zhejiang        | 72.36             | 2.42       | 1,467.43          | 3.82       | 924.89            | 3.75       |

Source: Compiled from China Foreign Economic Statistical Yearbook 1985–2002 and Intertrade, Ministry and Economic Cooperation, PRC, various issues. Unit: US\$ million & %.

Along with reform and further opening, Yangtze River Delta, which has the advantages of geographical position, industries, technologies and talent, has become a much stronger competitor of Pearl River Delta. The trend of foreign investment has initiated a change from making good use of cheap labor force to serve the domestic market. The Yangtze River Delta has 'preferential' geography for it lies in the middle of China and at the end of the Changjiang River, hence it has become a natural location for foreign investment in the new round of investment. Recently more than 180 international financial institutes have set up their administrative bodies in Yangtze River Delta and Shanghai has the highest number of international enterprises' local head offices. The strong growth of YRD region over the past decade is predominantly due to the cooperative efforts of the 15 cities within the delta (Zhu 2003). However, in comparison, the PRD region's economic growth has slowed down due to the lack of unified planning and inter-city cooperation within the PRD regions. This phenomenon is apparent when comparing the growth rate of FDI for two delta regions, which suggest a high degree of competition. As Table 1 shows, more than 30% of the foreign investment into China has gone to the PRD region since 1985. However, from the time when YRD was developed in 1992, the Foreign Direct Investment (FDI) flowing into the YRD has been rising at a faster rate than that into PRD region. One reason for this is that YRD delta region has positioned itself both as a manufacturing centre and as a potential consumer market, providing a self-contained entity.

## Hong Kong FDI in two Deltas

Since China began its open-door policy in 1979, Hong Kong has been the source of roughly 70% of total foreign investments in the Pearl River region, with at some FDI from Hong Kong more than eight times that of North America, Japan and EU combined. The investments from Hong Kong into the PRD took place in three stages. The first stage was the learning process from 1979 to the middle of 1980s by HK investors who chose to invest in their relatives' hometown in PRD. The investment was mainly in labor intensive production. During the growth stage (from mid 1980s to early 1990s), Hong Kong investor business links deepened with mainland China and took advantage of this to invest more in PRD. The third stage is from the early 1990s till now. With the opening of the service sector to HK firms, existing and new firms began to diversify their investment by moving into the service and financial industries. Although HK investments begin to move to the service and financial sectors, investments still primarily go into the export orientated manufacturing sector. The Hong Kong Centre for Economic Research estimated in 2002 that 52% of all Hong Kong manufacturing and import/export firms had manufacturing operations in China, and of these 98 % were established in Guangdong Province. In contrast to the dominance of labor-intensive industrial products in the PRD, the YRD features a more diverse set of industries of varied global connectivity and capital intensity (Chen, 2007). Apart from traditional sectors like manufacturing, high-tech areas and outsourcing have become new trends of FDI in Yangtze River Delta. With R&D centers, regional headquarters as well as the service sector increasing their respective shares of the total investment, Hong Kong FDI continues to take leading FDI position in the Yangtze River Region. Shanghai has started to shift from a dominant manufacturing to a more service-oriented centre. Since land prices in Shanghai prices have become 30-40% higher than in secondary cities in YRD (Roberts, 2006), Hong Kong investors have begun to spill into the surrounding YRD region, especially to booming secondary cities such as Suzhou and Wuxi. Despite this, Hong Kong-based FDI figures still account for 46 % of the total FDI in Shanghai, accounted by increased its investment in Shanghai's service sectors, especially in the real estate and retail sectors, banking and land development after 1992 (Tian, 1999).

## Major Determinants of Hong Kong FDI in China

In addition to Sun et al (2002) identifying the importance of market size for attracting FDI in China, Ali and Guo (2005) investigated the determinants of FDI in China and found that market size is the major factor for FDI, especially for US firms while low labor costs is the major factor for Asian firms. Furthermore, Zhang (2000) and Wei and Liu (2001) also proved the positive relationship between market size and inward FDI, and noted that both US and Hong Kong FDI are attracted by China's large market size. As Zhang (2002) argued, the correlation between market size FDI is well established. When we try to analyse the trend of Hong Kong FDI gradually moving from the Pearl River Delta to Yangtze River Delta, market demand and market size is the first and major factor to be considered. As Sun summarized (2002), GDP, GDP per capital and Retail sales are the proxy for market size and market demand. Hence, the higher GDP, GDP per capital and retail sales represent larger market size and demand. Table 3 shows the comparison of GDP, GDP per capital and retail sales of the two deltas in 2004. From the table, it can be seen that GDP of YRD and PRD is US\$347.53bn and 163.92bn respectively, i.e. the GDP of YRD is 2.12 times than that of PRD. Although GDP per capita of Pearl River Delta is US\$560 more than Yangtze River Delta, retail sales in PRD are far less than YRD. There is no doubt that the market size and market demand of YRD is much larger than that of PRD – both factors of population size and land area (Yangtze River Delta is respectively 3.02 and 2.65 times than that of Pearl River Delta. Therefore it is obvious that Yangtze River Delta has competitive advantage in terms of market size over Pearl River Delta.

**Table 2 : GDP, GDP per capital, Retail sales of Two Deltas in 2004**

|   | Pearl River Delta | Yangtze River Delta | China    |
|---|-------------------|---------------------|----------|
| GDP(US\$ billion)                         | 163.92            | 347.53              | 1,648.73 |
| GDP per capita (US\$)Official figure 2004 | 4,805             | 4,245               | 1,099    |
| Retail sales of consumer goods (US\$bn)   | 55.54             | 99.75               | 651.57   |

Source from: Statistical Yearbooks of China 2004, local jurisdictions in Guangdong, Zhejiang, and Jiangsu. China Statistics Bureau, Jiangsu Statistics Bureau, Shaoxing Statistics Bureau

### Labor quality

As Sun (2002) found, labor quality is another main factor that determines FDI in China. The higher the labor quality, the more FDI received. The number of research engineers and scientists tends to be used as the main proxy for labor quality (and indirectly the education background of employees). Historically, the Yangtze River Delta has had a strong intellectual base, with 220 branches of the Chinese Academy of Science while the Pearl River Delta only has 22. In terms of universities and colleges, YRD has 17 key Project 211 universities (4 for PRD) which are constructive projects, out of 106 universities and colleges in the 21st century set up by the government of the People's Republic of China. The project aims at cultivating high-level talents for national economic and social development strategies. When comparing education level of employed persons in different provinces, Shanghai is top, with 41.4% employed persons having a senior school education, which is far higher than 19.6% in Guangdong, 18.2% in Jiangsu and 15.2% in Zhejiang. For college education, the figures are 12.9%, 5.1%, 3.9% and 3.6% respectively. Guangdong's second place ranking is commensurate with the large amount of manufacturing enterprises in Guangdong leading to receipt of new technology, equipment, management skills and expertise which were brought in by foreign investors or partners. Young people with a good education level are willing to work in Guangdong which increases the education level of employed persons.

With more and more multinational corporations (MNCs) increasing their investment in Shanghai's capital-intensive manufacturing and service sectors, Shanghai has built up a huge and continuing supply of skilled labor which is dispersed around the rest of Yangtze River Delta. It is difficult for the Pearl River Delta region to train a labor force adequately in a short period of time (Tian, 1999). As Chen (2005) points out Pearl River Delta cities contribute land, cheap labor and some raw and semi-processed materials. While Shanghai contributes some capital, skilled labor, management expertise and provides services such as accounting, insurance or legal services other cities in YRD contribute medium-cost land and labor, manufacturing expertise and intermediate inputs. With its professional knowledge and expertise, YRD enterprises in general have a high regard for services, mainly because of their high level of professionalism, conformity with international standards and understanding of the Chinese market. At the same time, YRD governments also welcome Hong Kong service providers as they can contribute to a modern services sector that meets YRD development needs. With the larger number of research institutes and universities and the larger skilled labor force, it is clear that the Greater Yangtze River Delta has competitive advantage in labor quality over the Greater Pearl River Delta.

## **Labor costs**

Not surprisingly, Shanghai ranks first as having the highest labor costs of the two regions, followed by Zhejiang and Guangdong Provinces. The cheapest labor costs are in Jiangsu province with the average salary of only 13,509 RMB. Guangdong has already lost its cheap labor cost advantage to Jiangsu province, with labor costs having increased gradually with the rapid economic growth. Therefore it is much more difficult for foreign investors to secure cheap labor and land within the province for their mass manufacturing plants. Since 70% of Hong Kong FDI is mainly in labor-intensive industries, gradually there is a trend of moving factories to secondary cities in Yangtze River Delta which means that Suzhou and Kunshan in Jiangsu province have become the booming manufacturing centres in the YRD. Shanghai has seen a big economic growth since the development of the new Pudong area. This economic boom, however, has driven up labor costs and land cost in densely populated Shanghai. The average wages of both factory workers and technicians in Shanghai are now double those in other cities. As Table 10 shows, Shanghai has become the city with the highest labor costs between the two Deltas. Due to the high labor costs, development has begun to spill into the surrounding YRD region. Therefore, multinationals have become less willing to build new manufacturing plants in Shanghai; they prefer the secondary cities in YRD such as Suzhou, Wujiang and Jiashan due to their low labor cost (Chen, 2005). Although the high land and labor costs will slow down the location of factories, Hong Kong FDI has increased investment in Shanghai in the service sectors to take advantage of a the large amount of technical and engineering talents. The rising land and labor costs have induced the Hong Kong FDI to relocate labor-intensive manufacturing activities to secondary cities around Shanghai. To sum up, in terms of labor-intensive sectors, Hong Kong FDI has gradually shifted to secondary cities in Yangtze River Delta to make good use of cheap labor whereas it has taken advantage of high quality labor in Shanghai for the capital-intensive sectors.

## **New FDI situation in two Delta regions**

Three city clusters form the most preferred FDI destinations: the traditional Pearl Delta Region, the Yangtze Delta Region, and emerging Bohai Bay Rim, led by Beijing and Tianjin. Due to the fast growing business costs, expensive land, a shrinking base of migrant workers as well as a power shortage in the two delta regions, FDI has begun to move to the old industrial bases in north China, where they have the advantages of a preferential policy, sufficient skilled workers and relatively low-priced land. Therefore more and more multinationals have started to set up regional headquarters in the East and manufacturing bases in the west and the north of China. As a result, the governments in the Yangtze Delta Region have adjusted their strategies to attract FDI. The cities in Yangtze Delta are more selective in the types of foreign investment they wish to attract in order to increase the proportion of service industries in relation to total FDI, while at the same time lowering the proportion of low-end, labor-intensive industries because of the limited supply of land and scarce energy. According to statistical data, the service industry accounted for 37% of the total FDI in Shanghai in 2004, up from 33% in 2003, and the city expects the figure to grow 1 to 2 percentage points every year. (CGSS, 2005). In terms of Pearl River Delta, it still attracts a large amount of Hong Kong FDI, most of which are in mainly less-advanced technology and labor-intensive industries. The provincial government of Guangdong has adopted some policies in favour of big investors who invest in high-tech or capital-intensive industries in order to attract more MNCs and compete with Yangtze River Delta in the future. Foreign-invested enterprises in PRD are changing from traditional labor-intensive projects to more capital-intensive investment projects (Lan, 1999).

## KEY FINDINGS & DISCUSSION

A comparative analysis of Pearl River Delta and Yangtze River Delta shows that Yangtze River Delta has a competitive advantage over Pearl River Delta in terms of market size and market demand, labor quality and labor cost. Those three factors also determine the trend of Hong Kong FDI which has gradually changed from PRD to YRD. Compared with previous research on the determinants of Hong Kong FDI in China, the results of this research indicate that besides cheap labor costs, large market size and high quality labor there are also other major determinants for Hong Kong FDI. The evidence shows that Hong Kong businesses have mainly invested in labor-intensive industries in Pearl River Delta while investing more in capital-intensive industries in Yangtze River Delta, i.e. Hong Kong companies have different labor preferences in different regions depending on their strategic aims.

The research findings initially seem to be contradictory. It would seem that Yangtze River Delta can gain a cheap labor cost advantage and have high labor quality simultaneously. However, generally high labor quality will lead to high labor costs. In our opinion, Yangtze River Delta can have both cheap labor cost and high labor quality because the cities inside YRD have different developing levels and different functions. As the core city in YRD, Shanghai attracts lots of multinational corporations and has mainly developed the financial and service industries, that it can have the highest labor quality to attract MNCs. While some secondary cities in Zhejiang and Jiangsu province are quite new and are less developed than cities in PRD, they now mainly develop manufacturing sectors as PRD as they have comparatively cheaper labor costs. The reason that the Pearl River Delta has lost advantage to the Yangtze River Delta is because it is unable to compete with Shanghai in terms of labor quality and is not able to offer cheaper labor costs than secondary cities in YRD either. Therefore, gradually more and more FDI inflows are going to the Yangtze River Delta, providing additional business opportunities for foreign manufacturers and service providers.

The findings indicate that Hong Kong FDI has gradually moved to YRD because of the large market size, cheap labor costs and high labor quality. There are additional reasons which can explain this trend. Since PRD is the earliest developed region in China, many foreign and Hong Kong companies have already gained a foothold in the PRD, so they are ready to expand and go further a field to the YRD. Therefore, YRD seems to hold a strategic position in their national expansion plan which now attracts more varieties of FDI inwards than PRD. Lastly, the findings contradict previous research. As discussed earlier, FDI from different origins may have different labor cost requirements or sensitivities. Fung et al. (2002) investigated the locational choices of Hong Kong and U.S. direct investments in China and found that Hong Kong investment is more sensitive to local labor cost, whereas U.S. firms are more sensitive to market size for their purpose in investing in China is mainly to sell in China. The findings can explain the US firms moving to YRD because it has larger market size and higher labor quality than PRD. This is supported by many US MNCs starting to set up their headquarters in China in Shanghai. However, despite the high labor costs, Hong Kong FDI is showing large increase in Shanghai which



contradict the findings by Fung et al. (2002) that Hong Kong FDI is more sensitive to local labor costs. This is explained by HK FDI diversifying from mainly the manufacturing sector to increased flows in financial and service sector investment in YRD especially in Shanghai. Because of Hong Kong's position as a regional financial centre, Hong Kong companies can now provide services directly to mainland enterprises with a presence in the YRD which can meet the increasing needs of the YRD.

In order to keep the study within manageable limits, especially with regard to the determinants of Hong Kong FDI in China, we have confined the analysis to what appears to be the most important issues concerning Hong Kong FDI location choice. Therefore three major determinants are defined here: market size, labor cost and labor quality. However, there are clear problems and difficulties in the research process. First of all, the data collected in this paper are mainly secondary data from e-journals and official statistics. Latest data from governmental statistics are difficult and expensive to access, therefore we have had to rely on data several years out of date. We have limited our use of data from textbooks, since this is even more out-of-date. Secondly, it is problematic to identify Hong Kong FDI in China. The official data collected often differs from the real FDI received. For instance, due to the policy restrictions before 1990s, a lot of Taiwanese firms invested in mainland China through Hong Kong. Hence, Hong Kong FDI may consist of FDI from Taiwan which has not been reported in the data. Inevitably, the reliability of the official data is also questionable. While the research in this paper identifies the major determinants of Hong Kong FDI in China, further questions can be raised for future research. Identifying other determinants of Hong Kong FDI in China besides labor costs, labor quality and market size is an obvious area of further research. Furthermore, the future of YRD and PRD raised interesting issues when facing competition of the emerging Bohai region.

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# **A COMPARISON OF INFORMATION PRIVACY CONCERNS IN THE U.S., CHINA, AND TAIWAN**

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## **ABSTRACT**

*Information privacy is a high-profile public and cultural issue. This paper aims to provide an understanding of information privacy and to find differences in levels of consumers' information privacy concerns in the U.S., China, and Taiwan. 511 valid samples from the above three countries were examined to build the theoretical basis of information privacy concerns. The results showed information privacy concerns include three dimensions: (1) Unauthorized Information Sharing; (2) Errors; (3) Collection. The findings also indicate that the U.S. and Taiwan have higher levels of information privacy concerns, government involvement, and corporate policies than China. Finally, the authors argued that nationality and cultural values certainly affect individuals' information privacy concerns. Marketers should understand the different legal approaches and consumers' attitudes about information privacy in different cultures and build country-specific strategies.*

## **INTRODUCTION**

Information privacy means the ability of the individual to control his personal information (Stone, et al., 1983). As businesses have become more interested in gathering and using customer data, consumers have begun to be more concerned with how much of their personal information is contained in databases and how it is being used. They do not want computers to disclose their private information without their permission. Marketing technologies have the potential to be intrusive and influence consumers' perceptions of marketing strategy (Dolnicar & Jordaan, 2007). Consumers refuse to buy through risky channels or provide information (Dinev & Hart, 2006). This situation has created a fundamental struggle between an individual's right to privacy and an organization's legitimate business interests (Culnan, Smith, & Bies, 1994). Furthermore, cultural issues influence information privacy concerns in different countries. The U.S., China, and Taiwan differ substantially on privacy-related factors in terms of government involvement, corporate policies, and cultural values. Furthermore, because of different political systems, consumers may have different privacy concerns in China and Taiwan even though they have the same cultural origin. Different backgrounds certainly influence individuals' information privacy concerns. According to the above reasons, the objective of this study is to investigate how the cultural differences influence consumers' information privacy concerns and to find differences in levels of consumers' information privacy concerns in the U.S., China, and Taiwan.

## **THEORETICAL BACKGROUND AND HYPOTHESES**

### **Information Privacy Concern**

The issue of privacy has been regarded as one of the most important ethical issues of the information age (Smith, Milberg, & Burke, 1996). During the early 1990s, Goodwin (1991) separated privacy concerns into two parts: Control over the environment, and the disclosure of information. Information privacy means the ability of

the individual to control his personal information (Stone et al., 1983). Also, Burgoon (1982) believed information privacy is allied to psychological privacy but emphasizes legalistic and technological influence, especially in society. Regan (1995) identified that information privacy concerns is the concern about the use of personal information by information-intensive industries. For example, some industry groups argued that information privacy is a basic issue of customer service (Dowling, 1993). Furthermore, Hsu (2003) argued that privacy concerns include people's attitudes, toward certain privacy risks, their perception of the nature of privacy, and their thoughts about privacy protection. According to the definition of information privacy concerns, Smith, Milberg, and Burke (1996) developed and validated an instrument that identifies and measures the primary four dimensions (Collection, Errors, Secondary Use, and Improper Access) of individuals' concerns about organizational information privacy practices. The information privacy concern scale has been proven in terms of excellent validity, reliability, and generalizability. Most researchers use the 15-item instrument to measure the individuals' information privacy concerns. These items belonging to the four dimensions: (1) Collection: Consumers are concerned that huge quantities of their personally identifiable information are collected and applied in companies' database; (2) Errors: Consumers are concerned that accidental errors are happening when companies deal with their personal data; (3) Unauthorized secondary use: Personal information is collected from consumers for one purpose but is used for another. Companies always do not get the authorization from the consumers; (4) Improper access: Consumers are concerned that if their personal data are readily available to other people who are not properly authorized to know or work with these personal data.

## **Different Information Privacy Concerns in the U.S., China, and Taiwan**

Some researchers have found that Confucius philosophy deeply influences the issue of privacy in the Chinese society (McDougall, 2001; Moore, 1984). As compared with American culture, the close human relationship seems to be more important than individuals' privacy concerns in the Chinese society. The Chinese human relationship is derived from the origin of their country, an agricultural state with a small and closed community. The basic Chinese spirit is to work in groups for the common goal, and individualism is not allowed in the process. That is why privacy in the Chinese culture is not so highly valued as in the American culture that focuses on the individual. Pitta et al. (1999) found there are two reasons to explain the above philosophy: "First, the U.S. Constitution guarantees the rights of an individual, which is the building block of U.S. law. Second, the USA has a relatively short history; thus old styles and ways of thinking that constrain the spirit of individualism in China do not burden daily life in the USA." According to the above discussion, it is easy to understand consumers have different privacy concerns in the U.S. and China. We can find the phenomenon from the privacy data protection. For example, the U.S. already had proper regulation about privacy protection. FTC (Federal Trade Commission) and the U.S. Department of Commerce (DOC) have clear guidelines for businesses regarding the fair collection and protection of information (Luo, 2001). Conversely, there is no structural law for the data protection or self-regulation activities by the private companies in China (Hsu, 2003). This suggests:

*H1a. Consumers in the U.S. will have higher levels of information privacy concerns than consumers in Taiwan.*

Furthermore, although China and Taiwan have the similar cultural and historical background, they still have extremely different philosophy about privacy concerns (Hsu, 2003). As Westin (1967) said, "while all cultures value intimacy in some form, the lines between public and private behavior are drawn quite differently, not only in the Western and non-Western tradition but even between different subcultures from the same cultural background." Cultural values influence the operation of societal institutions, including both political and legislative structure (Hofstede, 1980, 1991). Almond and Verba (1963) also found that different political cultures are associated with various cultural values. Hsu (2003) thought that the political system of Taiwan is democratic. People have more freedom. Also, because of globalization and international trade policies, people in Taiwan have more opportunities to access the Western cultures and laws. People in Taiwan have more senses about privacy than people in China. The phenomenon also reflects on Taiwanese government's regulation about privacy and data protection. Conversely, China is a communist country. The government does not encourage people to consider privacy issues, and then it does not build clear regulations to prohibit the surveillance on people. Therefore, the Chinese government does not make the clear laws to restrict public sectors from abusing individuals' personal information (Hsu, 2003). This suggests:

*H1b. Consumers in Taiwan will have higher levels of information privacy concerns than consumers in China.*

## Government Involvement

Previous research found that the increased of information privacy concerns is related to increased levels of government involvement in organizational privacy management (Milberg et al., 1995). Different privacy protection approaches in government regulation also reflected cross-national differences in privacy concerns (Rose, 2006). Bennett (1992) integrated different approaches about government involvement and operations of companies. He argued that five levels in government involvement: (1) Self-help; (2) Voluntary control; (3) Data commissioner; (4) Registration; (5) Licensing. According to the regulatory analysis by the Bennett's model, Hsu (2003) compared the net users' privacy concerns among China, the Netherlands, Taiwan, and the U.S. He found that the Taiwanese government regulation is close to the licensing model. The U.S. government's regulation follows to voluntary control of Bennett's model. Conversely, in China, there is no obvious evidence that the Chinese government wants to protect consumers' personal information. Hsu (2003) also claimed that the government involvement in the U.S. is higher than it is in China. This suggests:

*H2. Consumers in the U.S. will perceive higher levels of government involvement than consumers in Taiwan and China.*

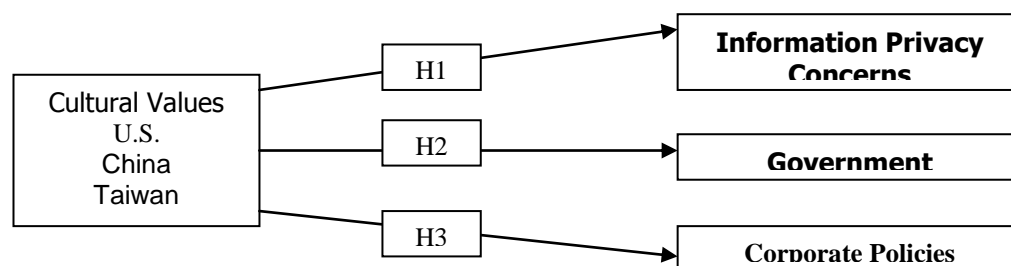
## Corporate Policies

In 1999, FTC said that the self-regulation of corporate policies will be an important component of privacy protection, and the appropriate corporate policies will drive organizations to comply with fair information practices (Milne, 2000). There are several basic important areas in companies' privacy management policies, like the level in the organization at which privacy issues are managed, official information privacy policies, the management of these policies through day-to-day practices, and the importance of privacy issues to management (Smith, 1996). A corporation's privacy policy management processes will be different according to threats from government regulation (Culnan & Armstrong, 1999). As Milberg et al. (2000) said, "Corporations in countries with higher levels of governmental involvement in corporate privacy management should react to regulation by devoting more attention to the development of adequate, explicit privacy policies and to an internal structure that ensures consistency between those policies and actual practices across the corporation." According to the above descriptions, we found companies' policies in information privacy are always following the government regulations. This suggests:

*H3. Consumers in the U.S. will perceive higher levels of corporate policies (tighter corporate policy approach) than consumers in China and Taiwan.*

## CONCEPTUAL FRAMEWORK

According the above literature review and hypotheses, researchers built the model as follows (see Figure 1):



**Figure 1: U.S., China, Taiwan in Information privacy Concerns, Government Involvement, and Corporate Policies**

## RESEARCH METHODS

The researchers constructed the conceptual framework outlined above through intensive literature review. Quantitative research methodology was adopted for the empirical testing of this conceptual framework. Survey methodology was utilized for primary data collection. To establish expert and content validity of the questionnaire items, researchers invited three experts familiar with information privacy fields to screen all the items for those that do not appear consistent with the construct and the identified dimensions. According to the expert judges, this resulted in a set of 3 items in Government Involvement, and 4 items in Corporate Policies. 15-item Information Privacy Scale by Smith, Milberg, and Burke (1996) is also in the questionnaire. After completing the original questionnaire, we used a convenient sample to select 30 respondents for pilot study. Respondents were asked to complete the survey and provide comments on the question with which they had difficulty. Furthermore, the computer software, SPSS 12.0 was used to perform the data analysis.

## RESULTS

### Sample Description

The sampling frame is a convenience sample. 700 questionnaires were distributed (250 in the U.S., 250 in Taiwan, and 200 in China). Two hundred samples from the U.S., China, and Taiwan, would participate in the survey voluntarily. 595 questionnaires were obtained (177 from the U.S., 195 from China, and 193 from Taiwan). The response rate is 85%. All respondents have the experience registering their personal information (name, address, and etc.) on at least one website to receive some services.

### Factor Analysis and Reliability for Information Privacy Concerns

Information privacy concerns are the dependent variables in our study. In order to see the priority among information privacy concerns, exploratory factor analysis with an orthogonal rotation (Varimax) was done for the samples from the U.S., China, and Taiwan. With eigenvalues of 1.00 or higher as the criterion, there were three factors found. These explained 64.426% of the variance. All factor loadings are above 0.6. The analysis of the three factors is shown in Table 1. The following explanations are the factor names and descriptions: (1) *Unauthorized Information Sharing*: There are seven questions loaded on the first factor, which explains 41.992% of the total variance. They are Q3, Q4, Q7, Q8, Q11, Q12, and Q15. In Smith's findings, Q3, Q7, Q11, and Q15 compromise "Unauthorized Secondary Use." Q4, Q8, and Q12 compromise "Improper Access." According to the description of the above two dimensions from Smith (1996), we named Factor 1 as "Unauthorized Information Sharing"; (2) *Errors*: There are four questions loaded on the second factor, which explains 12.969% of the total variance. These four questions are Q2, Q6, Q10, and Q14. They compromise "Error" subscale, which is as the same as Smith's finding; (3) *Collection*: There are four questions loaded on the third factor, which explains 9.466% of the total variance. These four questions are Q1, Q5, Q9, and Q13. They compromise "Collection" subscale, which is as the same as Smith's finding.

Based on the above results, we believe the scale of information privacy concerns from Smith (1996) is very reliable. Also, the relationships between the subscales and individuals' response patterns seem to provide additional insights into the underlying nature of the information privacy concern construct.

**Table 1: Factor Analysis of Information Privacy Concerns**

| Dimensions  | Privacy Concerns | Factor Loading |      |      |
|---|------------------|----------------|------|------|
|   | Mean             | 1              | 2    | 3    |
| <b>Unauthorized Information Sharing</b> (Alpha= .8946)  |                  |                |      |      |
| Q 8: Computer databases that contain personal information should be protected from unauthorized access- no matter how much it costs.                        | 6.45             | <b>.787</b>    | .249 | .101 |
| Q 15: Companies should never share personal information with other companies unless it has been authorized by the individuals who provided the information. | 6.53             | <b>.765</b>    | .193 | .180 |
| Q 12: Companies should take more steps to make sure that unauthorized people cannot access personal information in their computers.                         | 6.52             | <b>.747</b>    | .257 | .118 |

|   |      |             |             |             |
|---|------|-------------|-------------|-------------|
| Q 7: When people give personal information to a company for a particular reason, the company should never use the information for any other reason. | 6.42 | <b>.731</b> | .130        | .264        |
| Q 4: Companies should devote more time and effort to preventing unauthorized access to personal information.  | 6.35 | <b>.730</b> | .203        | .207        |
| Q 11: Companies should never sell the personal information in their computer databases to other companies.  | 6.60 | <b>.729</b> | .189        | .091        |
| Q 3 : Companies should not use personal information for any purpose unless it has been authorized by the individuals who provided the information.  | 6.45 | <b>.695</b> | .180        | .198        |
| <b>Errors (Alpha= .8633)</b>  |      |             |             |             |
| Q 14: Companies should devote more time and effort to verifying the accuracy of the personal information in their databases.                        | 5.71 | .214        | <b>.860</b> | .067        |
| Q 10: Companies should have better procedures to correct errors in personal information.  | 5.58 | .253        | <b>.831</b> | .105        |
| Q 6: Companies should take more steps to make sure that the personal information in their files is accurate.  | 5.78 | .297        | <b>.794</b> | .103        |
| Q 2: All the personal information in computer databases should be double-checked for accuracy- no matter how much this costs.                       | 5.41 | .184        | <b>.748</b> | .05         |
| <b>Collection (Alpha= .7700)</b>  |      |             |             |             |
| Q 9: It bothers me to give personal information to so many companies.   | 5.71 | .189        | .06         | <b>.808</b> |
| Q 1: It usually bothers me when companies ask me for personal information.  | 4.78 | .07         | .03         | <b>.760</b> |
| Q 13: I'm concerned that companies are collecting too much personal information about me.   | 5.57 | .187        | .105        | <b>.748</b> |
| Q 5: When companies ask me for personal information, I sometimes think twice before providing it.   | 5.73 | .305        | .205        | <b>.642</b> |
| <b>Variance Explain (%)</b>   |      | 41.99       | 12.969      | 9.466       |
| <b>Initial Eigenvalues</b>  |      | 6.299       | 1.945       | 1.420       |

## Hypothesis Testing

To see roughly the information privacy concerns from the respondents in the U.S., China, and Taiwan, the information privacy concerns scale by Smith was used. According to Table 2, there is a statistically significant difference ( $p < .001$ ) in "Information Privacy Concerns." The respondents in Taiwan (94.0791 on 15 items) showed the most concern, and followed by the respondents in the U.S. (91.0938). The respondents in China were the lowest (83.8625). Also, we wanted to find the differences in privacy sub-dimensions among the U.S., China, and Taiwan. The three variables are "Improper Information Sharing", "Errors", and "Collection" under the concept of the information privacy concerns. We found the respondents in Taiwan (47.1073 on 7 items) and the respondents in the U.S. (45.9877) concerned more about "Improper Information Sharing" than the respondents in China (43.0494). In "Errors", the respondents in Taiwan (24.7697 on 4 items) showed the most concerns, and followed by the respondents in the U.S. (22.0370). The respondents in China were the lowest (20.5152). In "Collection", the results showed that the respondents in the U.S. (22.9816 on 4 items) and the respondents in Taiwan (22.1966) tended to have more concerns than the respondents in China (20.2364). According to the above description, H1a is rejected but H1b is accepted in this study. Furthermore, in *Hypothesis 2*, there is a statistically significant difference in "Government Involvement" among the respondents from the U.S., China, and Taiwan ( $p < .001$ ). The respondents in the U.S. (12.2284 on 3 items) perceived stronger government involvement than the respondents in Taiwan (10.1477) and the respondents in China (9.6347) (see Table 5.11). According to the above description, H2 is accepted in this study. In *Hypothesis 3*, there is a statistically significant difference in "Corporate Policies" among the respondents from the U.S., China, and Taiwan ( $p < .01$ ). The respondents in Taiwan (17.8927 on 4 items) perceived little stronger corporate policies than the respondents in the U.S. (16.1938), and the respondents in China (17.1369) was between both the above two groups (see Table 5.11). According to the above description, H3 is rejected in the study.

**Table 2: The ANOVA Comparison in Information Privacy Concerns,**

**Government Involvement and Corporate Policies among the U.S., China, and Taiwan**

|                                     | U.S.<br>(N=163) | China<br>(N=165) | Taiwan<br>(N=178) | F<br>(.000)      | Scheffe        | Descending<br>Order |
|-------------------------------------|-----------------|------------------|-------------------|------------------|----------------|---------------------|
| <b>Information Privacy Concerns</b> | 91.0938         | 83.8625          | 94.0791           | 37.174<br>(.000) | T> U, C<br>U>C | Taiwan>U.S.>China   |
| Improper Information Sharing        | 45.9877         | 43.0494          | 47.1073           | 23.859<br>(.000) | U>C<br>T>C     | U.S., Taiwan>China  |
| Errors                              | 22.0370         | 20.5152          | 24.7697           | 39.490<br>(.000) | T>U,C<br>U>C   | Taiwan>U.S.>China   |
| Collections                         | 22.9816         | 20.2364          | 22.1966           | 17.595<br>(.000) | U>C<br>T>C     | U.S., Taiwan>China  |
| <b>Government Involvement</b>       | 12.2284         | 9.6347           | 10.1477           | 16.912<br>(.000) | U>C<br>U>T     | U.S.> Taiwan, China |
| <b>Corporate Policies</b>           | 16.1938         | 17.1369          | 17.8927           | 4.796<br>(.009)  | T>U            | Taiwan> U.S.        |

## GENERAL DISCUSSION

According to the results from Hypothesis 1, H1a is rejected but H1b is accepted. We find that consumers in the U.S. had higher levels of privacy concerns than consumers in China. However, consumers in Taiwan have higher privacy concerns than consumers in the U.S. even though consumers in Taiwan and China have similar cultural backgrounds. According to the previous literature review, a close human relationship seems to be more important than the individuals' privacy concerns in the Chinese society. This means that consumers in the U.S. should have higher privacy concerns than consumers in China and Taiwan. There are two possible explanations for our results: First, many scandals related to the information privacy issues, like unauthorized secondary use and illegal database access, happened in Taiwan in the past two years. Some white-collar criminals in Taiwan stole consumers' detailed personal information: name, address, and credit card number, from the database of some companies and sold them to other people for illegal purposes, such as fake credit cards (Libertytimes, 2004). Consumers in Taiwan begin to be strongly aware of more privacy issues and have much higher privacy concerns. Second, people in Taiwan have more opportunities to access Western culture and law. They have more awareness about privacy issues than people in China. The findings also reflect on the Taiwanese government's regulation of privacy and data protection (Hsu, 2003). Other researchers also found similar results. Hsu (2003) found the Taiwanese respondents have more concerns regarding online privacy than the U.S. respondents.

Consumers in China show the lowest concerns in "Information Privacy Concerns", "Improper Information Sharing", "Errors", and "Collection." Consumers in China do not care if their personal information is collected by companies for one purpose but is used for another, and if accidental errors occur when companies deal with their personal data. Also, they are not concerned that a large amount of their personally identifiable information is collected and used in companies' database. In other words, consumers in China lack awareness of their information privacy right. The main explanation is that China is a communist country. The government does not encourage people to consider privacy issues, and then it does not create clear regulations to prohibit the surveillance on people (Hsu, 2003). Also, the Chinese government does not make clear laws to restrict public sectors from abusing individuals' personal information. It makes consumers in China unaware of the need for privacy protection. Finally, consumers in China are not aware that some companies that will invade their personal information without their permission, and they do not take any effective strategies to protect themselves. Even though they find potential problems, they do not know how to prevent them from happening. H2 is supported by our study results. Consumers in the U.S. perceive higher levels of government involvement than consumers in the Taiwan and China. The U.S. has strong government regulation about privacy protection. For example, FTC (Federal Trade Commission) and the U.S. Department of Commerce (DOC) have clear guidelines for businesses regarding the fair collection and protection of information (Luo, 2001). Conversely, there are no structural laws for the data protection or self-regulation activities by the private companies in China (Hsu, 2003). The Chinese government does not restrict public sectors from abusing individuals' personal information because the communist country does not encourage people to consider privacy issues (Hsu, 2003). Conversely, H3 is rejected by our study results. Consumers in Taiwan perceive higher levels of corporate policies than consumers in the U.S. Most researchers argued that a corporation's privacy policy management



processes would be consistent with the government regulation (Culnan & Armstrong, 1999). However, our findings do not show the same results. The possible explanation about this gap is that the management of corporate policies has instantly reflected what is happening in the real environment rather than the government regulation.

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# THE DIMENSIONAL DEVELOPMENT OF CHINESE AESTHETIC PREFERENCES FOR PRODUCT APPEARANCE

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## ABSTRACT

*Aesthetic consumption is emphasized in both consumer and marketing fields. Therefore, the study attempts to understand Chinese consumer's aesthetic attitude, and find the key factors influencing Chinese consumer's aesthetic preferences. A series of interviews and quantitative analysis were used to find the dimensions of Chinese aesthetic preferences. Reliability and validity were also examined. The results argued that Chinese aesthetic preferences include the following seven dimensions: (1) Simplicity; (2) Originality; (3) Conformity; (4) Utility; (5) Uniqueness; (6) Appeal; (7) Westernization. Finally, the authors argue that Chinese aesthetics emerged from ethnic unique interpretation and traditional values, and they shift to the Western styles under the cultural spread.*

## INTRODUCTION

Due to the living standard improved, consumers concerned about product aesthetics gradually (Eckman & Wagner, 1995). The phenomenon that consumers prefer hedonic products in the postmodern society represents their intention to show their personalities or pursuit of exciting experiences (Lagier & Godey, 2007). The importance of product design increases in markets nowadays, since consumer behavior is driven by product appearance (Veryzer, 1995). The importance of aesthetic consumption is emphasized in consumer and marketing fields gradually (e.g. Holbrook, 1980; Veryzer, 1995). However, most researches incline to the process of product design rather than consumer psychology, which decides the ultimate value of products. Therefore, the present study emphasizes on product design with the views of consumer themselves. Also, most consumer researches about aesthetics are from the West instead of Chinese local cultural context. Finally, aesthetics was investigated from humanistic approach in the past. Theoretically, a well-constructed and developed consumer aesthetic measure is useful for further survey. Moreover, in the practical field, a measure with the sense of predication allows numerous firms to conduct product developing, manufacturing, promoting with more efficient costs. Thus, the study aims to design a measure to offer an integrated view on local consumer aesthetics. The research focuses on developing a measurement for Chinese aesthetic preferences on product design. The ranges of product designs include the forms, colors, and propositions of products, and related packages and labels. As Bloch (2003) suggested that product appearances, with strong implication on visual perception, leads other sensory directly. Therefore, the study focuses on "visual products" primarily. The objectives of the research are: firstly, the author will review the literatures on aesthetics, consumption, preferences and related in either Western or Eastern. Secondly, a series of deep interviews are conducted. Based on the theoretical foundation and Chinese consumer authentic aesthetic experiences, the definition dimensions of "Chinese consumer aesthetic preferences on product appearance" will be defined and a framework of Chinese consumer aesthetic preference will be developed. Finally, the author will construct a related scale and examine the reliability and validity in the scale.

# THEORETICAL BACKGROUND

## Aesthetics and Aesthetic Experience

According to Oxford English dictionary, the word “aesthetics” is defined as “a set of principles concerned with the nature of beauty, especially in art”, and “the branch of philosophy which deals with questions of beauty and artistic taste.” There are various disciplines have discussed “aesthetics,” such as philosophy, art history, art criticism, psychology, anthropology, and so on (Veryzer, 1995). Li (1988) indicated that the Chinese character “beauty” (Mei) refers to sensation satisfaction or social celebration. According to the above, the former represents beauty equals to human sensibility, and the latter shows social and cultural meanings convey with beautiful forms. Aesthetic experiences involve several aspects: (1) affection; (2) emotion; (3) cognition. The function of human’s perceptions is to integrate senses reflect external information (Levine, 1981; Schiffman, 1982). Senses like sight, taste, sound, odor and touch, take charge of receiving external stimulus, then bodies and affections are influenced. All of these construct aesthetic experience (Heid, 2005). Visual perception system allows us to see colors, shapes and forms (Schiffman, 1982). In other words, during the process, we can experience the variety of the world, no wonder sensing beauty would be “aesthetic” (Isaacs, 2000). The above description implies the reasons that why people like to view beautiful objects may because their emotion and affection could be satisfied, and they even catch some meanings for their life through their aesthetic experience. As we take aesthetics in consumption field, it is not difficult to understand the process of viewing product design is as a kind of aesthetic experience.

## Consumer Aesthetics

In 1995, Veryzer tracked consumer studies about aesthetics. He found that from around 30 years ago, many consumer researches had started to have interests in aesthetics, such as Holbrook (1980), Olson (1981), Sewall (1978) and so on. They were eager to figure out consumer aesthetic responses. An argument among these researches is the legitimacy of aesthetics in consumer field, since aesthetics originally was applied to works in art or cultural sense. However, most consumer scholars argued that product is qualified for discussing with aesthetic view due to its aesthetic elements. Historically, the scope of aesthetics just actually expended its initial range, which centered on the creative process, beauty preferences and taste on fine arts or natural objects, such as landscape or human body primarily. After the 19<sup>th</sup> century, aesthetic subjects took in everyday objects further (Eckman & Wagner, 1995). For instance, Mary Stokrocki (2001), the professor of art in Arizona State University, encouraged high school students to explore their aesthetic experiences in the consumption fields, such as shopping mall, because these places are full of “arts, goods, and entertainment.”

## Cultural Impact on the Aesthetic Preferences

The definitions of culture are numerous in anthropology and sociology (Keegan & Green, 2003). Kluckhohn (1951) considered “the essential core of culture consists of traditional (i.e., historically derived and selected) ideas and especially their attached values.” Herskovits (1955) regarded “culture” as artificial things made by human in an environment. Cultural impact is able to change one’s own personal preference. As Kim, and Markus (1999) argued that human’s preference is depending on his cultural background rather than “an authentic, private, and personal event.” One’s cultural context may strongly forms individual’s view. For instance, Furnham and Alibhai (1983) have indicated that people tend to confirm the social group’s view on ideal physical beauty. Also, there are differences aesthetics perspectives on artworks and fashion between American and Chinese consumers (Rowland, 1964; Sullivan, 1989).

## The Importance of Understanding Local Consumer’s Aesthetics

After reviewing the literatures in aesthetics and consumption, we cannot help but ask if the content in Chinese culture is the same as the West or not. After all, culture may change people’s aesthetic views. Blocker (2001) doubted that “whether Western aesthetics is appropriate for understanding and appreciating non-Western art.” Actually, a single vision on aesthetics is doubtful. Cultural differences should be considered in aesthetic

researches. Understanding local aesthetics is necessary in consequence, and we are able to develop advanced consumer researches based on the concepts.

## RESEARCH METHOD

To investigate and define Chinese consumer's aesthetic experiences, we conducted a chain of deep interviews, including ten participants with aesthetic taste ranging from 25 to 55 years. Up to 80% have college or above degree, and most of their occupations are related to art or design industries. The interview questions are semi-structured, aiming to figure out local consumers' aesthetic attitudes. We selected what makes aesthetic attitudes meaningful. This conversation was also audio-taped and transcribed to provide additional data.

Two researchers, one professor in marketing and one graduate student majoring in psychology read through the data together. We began to identify categories based on the research questions. These categories included context, defining and naming Chinese aesthetic attitudes on product design, function of aesthetic perceptions, relationships, and text. We transformed from recording data, purified data according to literatures, and coded. The resultant dimensions are introduced in the next section. We identified several different dimensions from participants' aesthetic attitudes. As we identified each dimension, we also wrote detailed explanations about what these dimension meant and continued adding to these explanations and previous literatures as we made our way through the interview data. The brief resultant dimensions are introduced in the following (also see *An Exploratory study of Chinese Consumer Aesthetic Attitudes on Product Design*, Lin & Lai, 2008):

**Table 1: Dimensional Relations**

| <b>Codes</b>              | <b>Definitions</b>   |
|---------------------------|--|
| Utility                   | The meanings of "functions" or "utility" may refer to quality, implying the utility rate of the goods.                   |
| Simplicity                | Styles of simplicity, representing in the product forms or elements in product appearances, such as lines, pattern, etc. |
| Conformity                | A tendency to others' point of views, especially closer interrelationship.   |
| Appeal                    | Hedonic affection  |
| Westernization            | Admiration of Western images, for the impression of advance.   |
| Uniqueness and Creativity | A tendency of pursuing rareness and differentness.   |

In short, Chinese aesthetics is a complex of traditional and modern features, the former (utilitarian, simplicity, conformity and appeal) are originated from their own culture, while the latter (westernization, uniqueness and creativity) is influenced by the West. In mentioning Chinese consumer's aesthetic view on product design, we attempt to access the authentic state rather than theoretical literatures, an empirical scale will be undertaken in the next chapter in consequence.

## DIMENSION DEVELOPMENT

The primary objective of the study is to detail the progress of steps used to develop the dimensions about Chinese consumer aesthetics. It is common practice in consumer behavior to measure consumer traits with self-report scales (e.g., Bearden et al., 1989; Bearden & Rose, 1990; Bearden, Hardesty, & Rose, 2001; Goldsmith & Hofacker, 1991; Manning et al., 1995). In this way, we aim to develop a self-report type of measure for Chinese consumer aesthetic preferences.

Based on the previous literature and a series of deep interviews, the following section intends to develop an initial scale of Chinese consumer preferences. The procedure adopts the evaluations from Gerbing and Anderson (1988), who revised the measuring idea of Churchill (1979).

The initial 132 scale items represented Chinese consumer aesthetic thoughts were six dimensions: utility (27 items), conformity (26 items), simplicity (23 items), appeal (18 items), westernization (12 items), uniqueness and creativity (26items). Three postgraduates majoring product design judged the content validity, and 31 items are reduced for the inconsistency of these dimensions. In sequence, three professions in aesthetic and consumption

fields were invited to judge the linguistic expressions of each statement. 54 items were reminded in the step. Consequently, we administered a small (n= 30) pilot sample. The items were refined according to respondents' feedback.

The purpose of developing initial scale is for purification and testing reliability. The respondents were college students, coming from convenient sample and participated voluntarily in regular classes sessions, including some part- time students in Fu-Jen University, located in Taipei County, Taiwan. Self-administered questionnaire with rating on five-point Likert scale were sent 304 pieces.

For the testing was conducted in classes, and all the respondents handed in immediately, the response rate is over 94% with the 286 copies of scales. Responses from these representative samples of consumers in Taiwan were analyzed. Descriptively, most of them are female (59.8%); ages are ranging from 18 to 24 (81.1%); education is at college (99%) ; their occupation is unrelated to art or design (97.9%) and their average personal monthly income is less than 10,000 NT Dollars, equals to 33 USD (70.3%) currently.

The first factor captured simplicity, and the sequent factors are: uniqueness and creativity, appeal, westernization, conformity, utility, and the final four items fail to materialize. These dimensions correspond to the interview data. Here, the second factor uniqueness and creativity loaded separately, as the second and seventh factor. We label the former as "originality," and the latter is "uniqueness." Table 2 represents the loading factor, Item -total correlation and Alpha if Item Deleted. The remaining items fail to materialize.

The criteria for reduction are factor loading, item- total correlations, and the interitem correlation. All items were examined by Kaiser-Meyer-Olkin (KMO) test of sampling adequacy and the Bartlett test of sphericity. First, items that failed to load significantly, below .4 on a factor are deleted. 24 items were deleted. Next, items that did not corrected item- total correlations above .70. Exploratory principal components factor analysis (varimax rotation) was performed in the following. 34 items are remained. Four items failed to exhibit simple structure on any factor and were deleted. Further, a greater of the interitem correlation is sought.

**Table 2: Initial Dimension Development**

| Scale and item   | Loading | Item- Total Correlation | Alpha if Item Deleted |
|--|---------|-------------------------|-----------------------|
| <b>Factor 1</b>  |         |                         |                       |
| 21. Product design with neat lines is more beautiful.                      | .823    | .845                    | .886                  |
| 22. Product design with simple patterns is more beautiful.                 | .820    | .842                    | .887                  |
| 19. Product design with simple lines is more beautiful.                    | .817    | .822                    | .890                  |
| 20. Modest product design is more beautiful.                               | .815    | .823                    | .890                  |
| 23. Product design with simple style is more beautiful.                    | .813    | .832                    | .888                  |
| 18. <i>Simplicity is an important indicator of the product appearance.</i> | .747    | .764                    | .899                  |
| 24. <i>Product design with few or pure colors are more beautiful.</i>      | .677    | .706                    | .910                  |
| <b>Factor 2</b>  |         |                         |                       |
| 55. A product with innovation is more beautiful.                           | .883    | .875                    | .887                  |
| 54. Creative product design is more beautiful.                             | .854    | .849                    | .893                  |
| 56. A product with new ideas is more beautiful.                            | .802    | .800                    | .901                  |
| 52. Unusual product design is more beautiful.                              | .752    | .868                    | .889                  |
| 53. <i>Novel product design brings a sense of beauty.</i>                  | .700    | .793                    | .903                  |
| 51. Unique product design is more beautiful.                               | .694    | .814                    | .900                  |
| <b>Factor 3</b>  |         |                         |                       |
| 37. A beautiful product is pleasing.                                       | .866    | .849                    | .842                  |
| 36. A beautiful product causes me want to touch.                           | .806    | .791                    | .851                  |
| 35. <i>A beautiful product is looked well.</i>                             | .741    | .723                    | .862                  |
| 39. A beautiful product gives me excitement.                               | .707    | .768                    | .857                  |
| 33. <i>A beautiful product makes me feel good.</i>                         | .700    | .704                    | .864                  |
| 34. A beautiful product speaks to me.                                      | .692    | .750                    | .861                  |
| 38. <i>A beautiful product can touch my hearts.</i>                        | .674    | .742                    | .842                  |
| <b>Factor 4</b>  |         |                         |                       |

|  |      |      |      |
|--|------|------|------|
| 44. Product design with Western thoughts is more beautiful.  | .848 | .873 | .858 |
| 45. A product imported from the Western countries is more beautiful.                               | .837 | .848 | .863 |
| 42. Most beautiful product design comes from the Western countries.                                | .798 | .817 | .871 |
| 43. <i>I think beautiful product design has Western characteristics.</i>                           | .754 | .768 | .879 |
| 41. <i>Product design that is popular in the Western countries is very good.</i>                   | .729 | .788 | .875 |
| 40. <i>I believe product design in the Western countries is more beautiful than domestic ones.</i> | .695 | .752 | .887 |
| <b>Factor 5</b>  |      |      |      |
| 15. Product design that most people value is beautiful.  | .725 | .778 | .800 |
| 12. I agree others' preferences on product appearances.  | .716 | .716 | .812 |
| 11. Product design following fashion is beautiful.   | .703 | .720 | .815 |
| 14. Product design, which most people like it, is more beautiful.                                  | .694 | .708 | .814 |
| 10. <i>I will buy the product that most people think it beautiful.</i>                             | .689 | .708 | .816 |
| 13. My consideration for product appearances depends on most people's thoughts on product design.  | .675 | .728 | .812 |
| 9. <i>I agree general preferences on product appearances.</i>                                      | .583 | .625 | .830 |
| <b>Factor 6</b>  |      |      |      |
| 2. A beautiful product has practical values.   | .836 | .830 | .782 |
| 1. A beautiful product has its functions.  | .802 | .801 | .793 |
| 4. A beautiful product makes my life more convenient.  | .775 | .808 | .794 |
| 3. A beautiful product can satisfy my needs in real life.  | .720 | .745 | .819 |
| 5. <i>A beautiful product's operation is easy.</i>   | .676 | .728 | .834 |
| <b>Factor 7</b>  |      |      |      |
| 49. Uncommon product design is beautiful.  | .786 | .878 | .762 |
| 47. Rare product design is more beautiful.   | .720 | .764 | .840 |
| 50. Exclusive product is more beautiful.   | .703 | .836 | .800 |
| 48. A limited edition product is more beautiful.   | .691 | .824 | .803 |
| Items failing to material as a factor  |      |      |      |
| <i>An easy-used product is more beautiful.</i>   | .746 |      |      |
| <i>A friendly -used product is more beautiful.</i>   | .727 |      |      |
| <i>In my opinion, utility is essential for product appearances.</i>                                | .562 |      |      |
| <i>A beautiful product usually fits the public views.</i>  | .534 |      |      |

Note: *Italics* denote items eliminated through purification.

Exploratory principal components factor analysis (Varimax rotation) was performed next on the remaining set of items, and the result as the table 3,

**Table 3: Factor Analysis Results**

| Variable                            | Chinese           | Factor Loading |             |       |       |       |      |       |
|-------------------------------------|-------------------|----------------|-------------|-------|-------|-------|------|-------|
|                                     | Visual Aesthetics |                |             |       |       |       |      |       |
| <b>Simplicity</b><br>(Alpha= .902)  | Mean              | 1              | 2           | 3     | 4     | 5     | 6    | 7     |
| S 21                                | 3.83              | <b>.844</b>    | .039        | -.052 | .106  | -.016 | .143 | .100  |
| S20                                 | 3.47              | <b>.834</b>    | .096        | .011  | .067  | .007  | .072 | .005  |
| S22                                 | 3.59              | <b>.827</b>    | .079        | .036  | .145  | -.001 | .051 | .082  |
| S19                                 | 3.60              | <b>.825</b>    | .064        | .042  | .036  | .100  | .102 | -.018 |
| S23                                 | 3.57              | <b>.824</b>    | .022        | .036  | .136  | .036  | .081 | .014  |
| <b>Originality</b><br>(Alpha= .893) |                   |                |             |       |       |       |      |       |
| S55                                 | 3.57              | .111           | <b>.894</b> | .054  | .031  | .120  | .023 | .056  |
| S54                                 | 3.53              | .002           | <b>.863</b> | .102  | .078  | .150  | .012 | .088  |
| S56                                 | 3.57              | .208           | <b>.799</b> | .093  | .025  | .120  | .027 | .023  |
| S52                                 | 3.18              | -.011          | <b>.721</b> | .101  | -.009 | .451  | .055 | .074  |
| S51                                 | 3.03              | .013           | <b>.636</b> | .144  | .042  | .455  | .049 | .023  |
| <b>Conformity</b>                   |                   |                |             |       |       |       |      |       |

|  |      |        |        |             |             |             |             |       |
|--|------|--------|--------|-------------|-------------|-------------|-------------|-------|
| (Alpha= .844)                          |      |        |        |             |             |             |             |       |
| S12                                    | 2.62 | -.001  | .081   | <b>.782</b> | .138        | .025        | -.009       | .042  |
| S13                                    | 2.65 | .011   | -.004  | <b>.769</b> | .118        | .071        | .059        | .090  |
| S15                                    | 2.67 | -.022  | .237   | <b>.760</b> | .104        | .114        | .008        | .125  |
| S14                                    | 2.98 | .093   | .041   | <b>.713</b> | .040        | -.038       | .203        | .118  |
| S11                                    | 3.01 | -.004  | .056   | <b>.704</b> | -.068       | .106        | .040        | .097  |
| <b>Utility</b><br>(Alpha= .836)        |      |        |        |             |             |             |             |       |
| S2                                     | 4.01 | .084   | -.012  | .078        | <b>.905</b> | .004        | .062        | -.009 |
| S1                                     | 4.14 | .128   | .049   | .027        | <b>.855</b> | .000        | .093        | .013  |
| S3                                     | 3.97 | .116   | -.008  | .071        | <b>.833</b> | .057        | .015        | -.040 |
| S4                                     | 3.70 | .125   | .111   | .127        | <b>.779</b> | -.012       | .064        | .028  |
| <b>Uniqueness</b><br>(Alpha= .7700)    |      |        |        |             |             |             |             |       |
| S49                                    | 3.02 | .048   | .289   | -.045       | .000        | <b>.814</b> | .024        | .112  |
| S47                                    | 2.60 | .120   | .055   | .106        | .028        | <b>.772</b> | -.138       | .098  |
| S48                                    | 2.54 | -.093  | .187   | .188        | .002        | <b>.735</b> | .021        | .171  |
| S50                                    | 3.17 | .056   | .399   | .005        | .018        | <b>.719</b> | .072        | .059  |
| <b>Appeal</b><br>(Alpha= .878)         |      |        |        |             |             |             |             |       |
| S37                                    | 4.37 | .095   | .029   | .020        | .056        | .002        | <b>.892</b> | .006  |
| S36                                    | 4.33 | .120   | -.058  | .021        | .094        | -.030       | <b>.863</b> | -.054 |
| S39                                    | 3.90 | .048   | .038   | .115        | .022        | .048        | <b>.774</b> | .099  |
| S34                                    | 4.09 | .156   | .110   | .114        | .060        | -.046       | <b>.747</b> | .068  |
| <b>Westernization</b><br>(Alpha= .835) |      |        |        |             |             |             |             |       |
| S45                                    | 2.70 | .047   | .080   | .109        | -.020       | .132        | .025        | .912  |
| S44                                    | 2.69 | .026   | .033   | .237        | -.020       | .126        | .004        | .891  |
| S42                                    | 2.85 | .094   | .098   | .131        | .027        | .141        | .098        | .839  |
| Variance Explain (%)                   |      | 21.343 | 13.732 | 9.881       | 8.464       | 7.618       | 5.940       | 4.436 |

## GENERAL DISCUSSION

According to the above description, we found that there are several categories of “Chinese aesthetics,” including self (appeal), interpersonal relationship, whether real others, imagined others (conformity), social representation (westernization), and product quality (utility, simplicity, and originality and uniqueness). The complex may reflect Chinese in Taiwan historically and geographically. As Lin and Lai (2008) indicated their background, “The Chinese inhabitants in Taiwan were immigrated historically, have been shaped their attitudes of tolerance. On the other hand, Taiwanese society is democratic and more Westernized, which allows various new ideas to present. Their aesthetic creativity and novelty are encouraged.” In this way, as Chinese appreciate products, they may follow their institution which comes from their internal feeling or traditional value “saving. In the other hand, they may pursuit of “western”, “original” or “unique” products under the Western modern cultural affection. In summary, our findings represents that Chinese consumer aesthetic preferences are deeply influenced by its unique cultural background. Since the concepts derived from different regions may be various, the dimensions of the paper offers a ground for understand Chinese consumer aesthetic preferences via rigorously tested and validated. The Coefficient alpha of the remained 30 items was .868. The result represents a good reliability. In the meanwhile, these items were evaluated by experts, they agreed that they have an excellent valid validity.

## IMPLICATION AND CONTRIBUTION

This study makes an important contribution to aesthetic literally. It provides a theoretically derived definition of a construct, Chinese consumer aesthetics, which has not been formally defined before. The



definition provides a lineage with the traditional concern on aesthetics and novel concern on consumer intention and behavior. Furthermore, the most obvious methodological contribution of this research is to provide a valid and reliable measure of Chinese aesthetics on product design. Prior to this research, no clear constructs or measurements existed to explore the Chinese visual aesthetics. The development of a measure of Chinese consumer aesthetics with excellent psychometric properties provides consumer behaviorists with an opportunity to empirically examine this important consumer characteristic, especially under the Chinese context.

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# ASSESSING NATIONAL INNOVATION POLICY: A COMPARATIVE STUDY

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## ABSTRACT

*As small island countries, both Taiwan and Ireland have been regarded as locations that have performed economic miracles. Growing from agricultural economies to major regional players, both have often been studied as examples of national development and innovation. Therefore, this study seeks to compare the innovation policy in national contexts. The comparison of respective innovation policies on supply, environmental, and demand sides with a more elaborated classification base shows that the Taiwanese government adopts a more active top-down approach, making use of substantial levels of government research funding and resources to develop target industries. In contrast to this is the bottom-up approach of the Irish government that focuses more on creating an innovation environment and lifting firm-level research and development (R&D). Policy implications and suggestions are also given based on a number of similarities and contrasts identified in this research.*

## INTRODUCTION

As small island countries<sup>1</sup>, both Taiwan and Ireland have been regarded as locations that have performed economic miracles; one, Taiwan, was part of high growth “Asian Tiger” economies that included Hong Kong, Singapore, Taiwan, and Korea. The other gained the nickname the “Celtic Tiger” as its sudden economic rise during the 1990s mirrored the growth of the Asian Tigers during the 1980s. Growing from agricultural economies to major regional players in western and oriental worlds, both have been studied as examples of national development and innovation (Preston, 1997; Hu and Mathews, 2005; Hsu, 2005; Lodge, 2005). In particular, studies have documented the remarkable progress of Taiwan and cited government innovation policies as a major factor in this success (Kraemer et al., 1992).

National innovation policies are considered especially relevant for small developing economies as part of their adjustment to the changing international, economic, and technological order as well as improvements to their own economic and technological situation (Davenport and Bibby, 1999; Pack, 1992). According to the Global Competitiveness Report 2006-2007, published by the World Economic Forum (WEF), Taiwan ranks 9th and Ireland 19th in the field of innovation among the 125 countries included in the study worldwide. In Asia, Taiwan ranks second, behind only Japan (Porter et al., 2007).

It is usually agreed that innovation is the key driver of economic performance. Innovation as a driver of growth theory is derived from the economic theory of creative destruction put forward by Joseph Schumpeter (1942) that states that in a capitalist society, long-term economic growth is generated by the creation of the new and the displacement of the old. As nations achieve higher levels of gross domestic product (GDP) per person, the main source of this change becomes innovation. Porter and Stern (2001) thus describe changes in advanced countries: “The challenges of a decade ago, were to restructure, lower costs and raise quality. Today, continued operational improvement is a given advantage must come from the ability to create and then commercialize new products and processes, shifting the technological frontier as fast as their rivals can catch up.” In addition, statistical comparisons of economic performance among countries show that the intensity of national innovative activity is correlated with higher rates of standards of living and productivity growth (Furman et al, 2002).

In 1986 the Irish GDP per capita stood at US\$9,265 and Taiwanese GDP per capita was a close US\$9,088. A decade later, strong economic growth in both countries had produced similar GDP figures of \$15,481 and \$14,092 in Ireland and Taiwan, respectively. However, by 2004, average annual working hours per employee in Ireland had dropped to almost 75% of their Taiwanese counterpart, the GDP gap had risen to nearly \$7,000 (Taiwan \$18,527 vs. Ireland \$25,540), and Taiwan had experienced a period of very slow growth (Groningen Growth and Development Centre, 2006). This is probably why the Global Competitiveness Report placed Ireland in the category of innovation-driven economies and Taiwan in the process of transitioning to one (Porter et al., 2006).

Recognizing the relationship between innovation and economic performance, we then wish to explore how actual innovation-related factors drive the competitiveness of these two small but relatively fast-growing economies separately. The research effort is devoted to the main task of assessing and analyzing the innovation policies of Taiwan and Ireland, highlighting their specific strengths, weaknesses, and effectiveness in the specific economic and institutional contexts in which they operate. The underlying hypothesis is that the benefits of each country's science, technology, and innovation policies, including specific policy instruments, cannot be adequately assessed outside the specific national context for which they are designed. It is hoped the differences and similarities observed in national innovation policy will contribute to an understanding of how the two small island countries stimulate themselves and then achieve similarly outstanding innovation performance.

The following describes the organization of this paper. Section 2 observes how Taiwan and Ireland have developed their national innovation policies respectively from an evolutionary perspective. Section 3 reviews prior research into assessment of national innovation policy through different proposed models. Section 4 describes the differences in national innovation policies between Taiwan and Ireland. This section seeks to compare innovation policy in the two countries on the supply side, environmental side, and demand side. We provide a holistic view of national innovation policy using a mixture of quantitative and qualitative evidence and indicators and demonstrate how this relates either to the current policy mix or to likely policy changes in the immediate future. The final sections are devoted to conclusions, policy implications, and suggestions.

## **INNOVATIVE DEVELOPMENT: TAIWAN AND IRELAND**

### **Taiwan**

During much of the 1950s, economic goals did not rank particularly high with the Taiwanese leadership. The government was preoccupied instead with the reconquest of mainland China. By the end of the decade, it had become clear that the communist regime on the mainland was firmly entrenched. Taiwan's party elders came to see that economic development could be a better guarantee of the party's survival (Wade, 1990). At this point, the government turned its energies to eliminating many investment-detering distortions (such as multiple exchange rates and macroeconomic instability). Taiwan was well endowed with a highly skilled labor force but was capital poor, and it had a coordination problem that inhibited growth.

A major milestone early in Taiwan's development was the Nineteen Point Reform Program instituted in 1960. This contained a range of subsidies for investment and signaled a major shift in government attitudes toward investment (Lin, 1973). The most important direct subsidies in Taiwan came in the form of tax incentives. The Statute for Encouragement of Investment (enacted in 1960 in conjunction with the nineteen-point program mentioned above) represented a "sweeping extension" (Lin, 1973) of the prevailing tax credit system for investment. Among other things, the maximum business income tax paid by enterprises was reduced and tax holidays on new investments were increased. These investment incentives were further expanded in 1965, when business income tax was reduced in all priority sectors listed in the investment law, and specified manufacturing sectors (basic metals, electrical machinery and electronics, machinery, transportation equipment, chemical fertilizers, petrochemicals, and natural gas pipelines) were given complete exemption from import duties on plant equipment.

Various policy measures have also been designed to enhance firms' innovative activities, beginning first with the establishment of Hsinchu Science-based Industrial Park (HSIP) to provide an environment conducive to the development of the island's high-tech industry. Second, innovation alliances have been organized as a means of spreading the R&D risk between firms and securing first mover advantages. Third, the scope of the government-sponsored Industrial Technology Research Institute (ITRI) has been expanded to serve as a channel for technology transfer within the private sector; the majority of the budget for National Science and Technology

Projects (NSTPs) has also been allocated to ITRI in an effort to boost the institute's innovative capacity. Fourth, tax incentives have been made available to absorb some of the R&D costs of firms and to encourage them to engage in R&D activities. Finally, a venture capital industry has been established, with the growth of this sector having already helped to speed the overall development of the high-tech sector (Tsai and Wang, 2005).

The Taiwanese government undertook a more direct role in the direction of the economy, taking steps to ensure that private entrepreneurs would invest in certain areas. The government helped establish industries, including plastics, textiles, fibers, steel, and electronics. For example, Wade (1990) provides an account of how Taiwan's plastics plant for PVC was built under government supervision and handed over to a private entrepreneur upon completion in 1957. More generally, it was common for the state to establish new upstream industries and then either hand the factories over to selected private entrepreneurs (as happened in the case of glass, plastics, steel, and cement) or run them as public enterprises (Wade, 1990).

On the other hand, a major distinction in policy regarding Taiwan's innovation development is in scale; Taiwanese production is marked by a large number of small and medium-sized firms (Park, 1990). In view of this, its capital market was at a very early stage of development little more than ten years ago; i.e., there was an inherent phenomenon of market failure (Tsai and Wang, 2005).

The Taiwanese state was instrumental in the early stages of the development of the electronics industry. In 1974, the publicly-owned Electronic Research and Service Organization (ERSO) was formed to bring in foreign technology and disseminate it to local firms. ERSO built the country's first model shop for wafer fabrication and entered a technology transfer agreement with RCA. It trained engineers who later moved to private firms. The strategy led to many private-sector offshoots that commercialized the technology developed by ERSO (Wade, 1990).

However, other strategies were not successful. For example, a 1970s push by the Taiwanese government into the automotive industry via its public enterprises failed. When new opportunities arise, market failure can constrain their fruitful exploitation and, at firm level, such failure is seen as an entry barrier. Such is also the case in segments of the semiconductor and consumer electronics industries (Mody, 1991). Under such circumstances, government innovation policy measures can, to some extent, correct market failure problems and facilitate the pace of structural transformation. One example is the share of exports from the heavy chemical and technology-intensive industries, which was just 54.9% in 1986, but had grown to 80.6% by 2002. Such overall achievements demonstrate the effectiveness of the government's innovation policy measures (Tsai and Wang, 2005).

The basic philosophy underlying the Taiwanese government strategy is that an economy will undergo certain stages of development, and at each stage there are certain key industries (such as integrated steel mills, large shipyards, and petrochemical plants) that through various linkages will bring about development of the entire economy. This strategy also assumes that government officials know what those key industries are and what policy measures should be adopted to develop them (Hou, 1988). According to Rodrik (1994b), the available evidence strongly suggests that proactive government policy was directly responsible for the "miracles" of the Asian Tiger economies of Korea and Taiwan as well as that of Singapore. The governments of these countries essentially solved a coordination problem that permitted their economies to take off. Context is important for understanding why government intervention was successful. It was the initial conditions of these countries that provided government policy with such a high payoff.

## **Ireland**

With the fastest growth rate of GDP per capita in OECD countries over the past decade, Ireland has largely caught up with leading countries in terms of productivity and, to a lesser extent, income levels (OECD, 2005). The economy of Ireland has been traditionally agricultural. Since the mid-1950s, however, the country's industrial base has expanded, and now mining, manufacturing, construction, and public utilities account for approximately 37% of the GDP and agriculture for only about 12%. Private enterprise operates in most sectors of the economy (Bradley, 2006). In Ireland nowadays, attention is often focused on the modern, high-technology sectors of computers, software, and pharmaceuticals; with the exception of the food processing sector, the remaining sectors are small and attract far less attention (Bradley, 2006).

In Ireland, for various reasons, little priority was given to the integration of scientific and technological research and industrial development until the 1980s. Yearly (1995) argues that, historically, this failure to integrate technology and industrial policy stems back to the pre-partition period. At this time, Yearly (1995) argues that scientific excellence in Ireland was "cultivated for an international audience. The work of the foremost scientists showed few signs of being significantly Irish. It dealt in abstract, would-be universal

propositions. In other words science prior to partition was primarily practiced as a form of high culture (Yearly, 1995, p.173).” Following Irish partition in 1921 and the creation of the modern Irish state, this tendency was, if anything, exacerbated by the desire to distance the country from the British legacy and a concentration of public and academic resources on cultural and linguistic rather than scientific development (Lee, 1989). One consequence of lack of applied scientific research in Ireland was a relatively low level of innovative activity among indigenous Irish companies that persisted into the 1970s.

By 1985 the nation faced inflation averaging 11% per year, unemployment of 15% and a vast national debt. Between 1981 and 1990, 200,000 people emigrated (Dorgan, 2006) and, unlike previous waves of emigration, many of these were university graduates. In order to cope with the crisis, the government introduced a radical three-year national recovery plan, government spending was slashed, and national partnership agreements were put into place between the government and employers and unions. These agreements restricted pay raises and introduced tax incentives. While government spending was reduced in many sectors, investment was made in telecommunications infrastructure in order to target the financial services and software sectors. Import substitution and tariffs were used to protect and develop Irish manufacturing. Ohmae (2005) suggests that the previous industrial failure was at this point seen as a benefit: “It meant that there was no rusting industrial plants and no unemployed workforce born and bred to heavy industry...Ireland could start from scratch.”

A reorientation of Irish industrial policy followed, toward a more balanced strategy involving the development of the export capacity of indigenous industry, alongside continued attempts to attract high-tech inward investment (National Board for Science and Technology, 1983). Implicit in the policy shift was the recognition, perhaps for the first time, that the international competitiveness of indigenous Irish industry depended on its technological development. The economy picked up, and by 1992 the concept of Ireland as the e-hub of Europe had been developed (BBC, 2006). While the economy has continued to prosper and significant FDI has been attracted, Ireland has become the European research base for a number of pharmaceutical companies; it is also the location of manufacturing plants for large international companies such as Dell and IBM. In addition, its beautiful scenery and unique history has led to the development of a strong tourist industry (Ohmae, 2005). However, large-scale inward investment has meant that 44.1% of manufacturing employment, 68.4% of net output, and 87.7% of manufacturing exports are now accounted for by foreign-owned enterprises (Ruane and Gorg, 1997). Moreover, only two Irish-owned firms appear in the list of Ireland’s top 20 electronics companies (Roper and Frenkel, 2000), and only 2% of patent applications made in Ireland are now made by Irish residents.

Even so, the bringing together of Irish industrial and technology policy with the aim of developing the competitiveness of indigenously owned firms has been strongly supported by the EU through both the Structural Funds and the Framework programs (see, for example, Massey et al., 1992; Enterprise Panel, 1996). More generally, however, the effect of this uncoordinated decentralization of technology and innovation policy has been to exacerbate the lack of coordination within Ireland’s innovation system, highlighted by Walker (1993). Although this was masked to some extent by significant flows of inward investment, particularly from the United States (e.g., O’Riain, 1997), it contributed to the development of a dual economy in Ireland: a technologically advanced, externally owned sector based largely on R&D conducted elsewhere and a technologically weaker, indigenously owned sector (Wrynn, 1997). Other continuing weaknesses cited by Walker (1993) relate to the lack of intermediate technology transfer institutions, the weakness of the Ireland skills base, and the distortionary effect of defense-related R&D. In terms of any assessment of the effectiveness of policy measures designed to increase the level of innovative activity by businesses, the central question is whether Ireland provides the most conducive environment for innovation.

## **ASSESSING NATIONAL INNOVATION POLICY**

Traditional innovation policy has often focused on promoting science and technological policies. These policy models have typically believed in the science push effect in the radical innovation process. The new innovation environment then sets new demands for regional innovation policies and strategies. Therefore, innovation cannot be seen as a property of science or of technology-based firms; it is the basis of competitiveness in all kinds of economic activities (Pekkarinen and Harmaajorpi, 2006). Besides, the nature of innovation varies significantly across sectors, and differences between countries in the sectoral composition of output and the position of domestic firms in international supply chains can lead to significant differences in national patterns of innovation (OECD, 2005). In view of these, assessing national innovation in a comprehensive mode is essential to country

competitiveness enhancement. The following portrays how national innovation policy can be evaluated by various approaches.

In 1997, OECD proposed a National Innovation Systems (NIS) approach to attempt to offer an insightful analysis tool for national innovation states. The national innovation systems approach stresses that the flows of technology and information among people, enterprises, and institutions are key to the innovative process. The measurement and assessment of national innovation systems has centered on four types of knowledge or information flows: (1) *interactions among enterprises*, primarily joint research activities and other technical collaborations; (2) *interactions among enterprises, universities, and public research institutes*, including joint research, co-patenting, co-publications, and more informal linkages; (3) *diffusion of knowledge and technology to enterprises*, including industry adoption rates for new technologies and diffusion through machinery and equipment; and (4) *personnel mobility*, focusing on the movement of technical personnel within and between the public and private sectors. Attempts to link these flows to firm performance show that high levels of technical collaboration, technology diffusion, and personnel mobility contribute to the improved innovative capacity of enterprises in terms of products, patents, and productivity (Hadjimanolis and Dickson, 2001; Porter and Stern, 2002; Hsu, 2005; Hu and Mathews, 2005). However, the main problem with the NIS approach is that it is based more on robust indicators (such as R&D expenditures, patents, production, and trade in high-technology products) than on content analysis, so policy implications are limited. The other issue is that it is difficult to compare those indicators, particularly mobility of human resources and diffusion of knowledge through publications and patents, across countries.

Another fairly similar approach is taken by Kim and Dahlman (cited in Lee, 1998), who, using the innovation process as their starting point, classify policies as technology supply, technology demand, and technology supply-demand linkage policies. This approach has been adapted by Lee, who terms technology supply-demand linkage policies as technology diffusion policies. An alternative approach to analysis of innovation policy is used by Porter (2001; 2003) in a number of his presentations, making use of the Diamond Model first developed by Porter (1990) to explain the competitive advantage of nations and applying it to innovation policy assessment. In using this framework he examines innovation policy based on its effect on each of four interlinked factors: strategy and rivalry, demand conditions, factor conditions, and supporting industries. Nevertheless, one major criticism of this framework is its greater emphasis on the role of government in interfirm competition and strategy. In many countries with open markets and minimal government interference in market processes, policies are avoided that would affect firm rivalry as this would be seen as manipulating the free market.

A somewhat more complex approach is taken by Cheng and Lin (2006), who criticize the suitability of Porter's model for innovation policy analysis. They propose a matrix based on a triple helix model of three interactive driving forces: market, institute, and technology. These forces are combined into a matrix with a four-dimensional policy structure consisting of human resources, E-infrastructure, law and regulations, and public and private partnership. Although this framework may prove insightful, it is still rather newly developed and therefore little examination has been made of its suitability.

System perspectives on innovation performance by many academics have examined the classification and role of innovation policies. One of the most comprehensive classification systems for innovation policy employment is that developed by Rothwell and Zegveld (1981), who grouped innovation policy tools into supply side, demand side, and environmental side. Supply side tools are those that provide the basic resources for innovation, such as educational institutions or universities, trained technicians, information networks, and technical advice. In addition, they include direct innovation by government-owned agencies and state industries and research directly supported by government funds such as research grants. Environmental side tools regulate the operating environment of firms and include means by which the government impacts the financial aspect of innovation. This classification also includes not only the legal environment in which firms operate but also the legal environment for innovation. Demand side tools have an effect on the stimulation of invention by the demand for new products and services created by public spending and public services. These also include the stimulation or suppression of innovation by regulation of demand from overseas and the ability of overseas competitors to operate in the national market.

In this research we will make use mainly of these policy analysis denotations originally derived from Rothwell and Zegveld (1981) as a guideline facilitating a more insightful national innovation policy assessment. The reason we chose this framework as an analysis base is that this system rests on the premise that understanding the linkages among the policy actors involved in innovation is the key to improving technology performance (Shyu and Chiu, 2002). Furthermore, it is more feasible and applicable than other indicator systems from the perspective of comparability and comprehensiveness.

However, on the other hand, based on what we have argued above, we find the policy field of promoting network and entrepreneurship on the supply side may be a missing link in the innovation policy assessment framework first proposed by Rothwell and Zegveld (1981). Frenken (2000) contends that successful innovation depends on complementary competencies in networks of producers, users, and governmental bodies, and networks have become understood as an important organizational form for coordinating the efforts of heterogeneous actors without restricting their individual goals. More specifically, technological incubators have assumed a growing role in R&D research and innovation management, and their importance has not escaped researchers' attention (Lumpkin and Ireland, 1988; Mian, 1996, 1997). Science parks, like technology incubators, are property-based initiatives designed to provide a conducive environment in which high-tech businesses can be established and develop (Roper, 2000). Venture capital funds provide not only capital but also management assistance; once the enterprise has become a success, they sell off their holding in the company to make a profit. Support of it is rather beneficial for entrepreneurship promotion (Tsai and Wang, 2005). Importantly, interfirm collaboration and interorganizational learning are central to the innovation process (Roper, 2000).

Through the above discussions, to promote network and entrepreneurship, practice examples include establishing incubators and science parks, supporting start-ups, encouraging collaborations between firms, setting up venture capital associations, establishing grant-based measures to promote entrepreneurship, and so on. The revised innovation policy assessment model of general roles for each grouping is depicted in table 1.

**Table 1: A More Complete Innovation Policy Analysis Model**

| Grouping           | Policy tools                       | Examples  |
|--------------------|------------------------------------|---|
| Supply Side        | Public enterprise                  | Innovation by publicly owned industries, setting up of new industries, pioneering use of new techniques by public corporations, participation in private enterprise                           |
|                    | Network and entrepreneurship       | Supporting start-ups, establishing science parks and incubators, encouraging collaboration between firms and institutions, venture capital associations, measures to promote entrepreneurship |
|                    | Scientific and technical Education | Research laboratories, support for research associations, learned societies, professional associations, research grants   |
|                    | Information                        | General education, universities, technical education, apprenticeship schemes, continuing and further education, retraining  |
| Environmental Side | Financial                          | Information networks and centers, libraries, advisory and constancy services, databases, liaison services   |
|                    | Taxation                           | Grants, loans, subsidies, financial sharing arrangements, provision of equipment, buildings, or services, loan guarantees, export credits, etc.   |
|                    | Legal and regulatory               | Company, personal, indirect and payroll taxation, allowances  |
|                    | Political                          | Patents, environmental and health regulations, inspectorates, monopoly regulations  |
| Demand Side        | Procurement                        | Planning, regional policies, honors or awards for innovation, encouragement of mergers or joint consortia, public consultation  |
|                    | Public services                    | Central or local government purchases and contracts, public corporations, R&D contracts, prototype purchases  |
|                    | Commercial                         | Purchases, maintenance, supervision and innovation in health services, public building, construction, transport, telecommunications   |
|                    | Overseas agent                     | Trade agreements, tariffs, currency regulations   |
|                    |                                    | Defense sales organizations   |

Source: adapted from Rothwell and Zegveld (1981), p.59.

## SUPPLY SIDES OF INNOVATION POLICY: TAIWAN AND IRELAND

There are some similarities and major differences between Taiwan and Ireland in supply side policies (see Table 2). One common aspect is the creation of technical information networks that provide access to detailed



technical information; this relatively low-cost service aids the research of companies and pools research knowledge (Advisory Science Council, 2006). Another policy utilized by both is the offering of grants to universities to undertake research (see Table 2). The Irish version of this policy is more specific in targeting advanced research, whereas Taiwanese policy is more focused on application research.

The key difference in supply-side innovation policies between Taiwan and Ireland lies in the role that universities play in their association with industry in the process of innovation development. The Global Competitiveness Report 2006-2007 published by the WEF cites Taiwan's seventh-place world ranking in "higher education and training pillar," with both quantity and quality of higher education reflecting the government's efforts to promote education and the development of elite personnel. On the other hand, while both systems try to improve links, the Irish system places a far greater emphasis on the role of industry in association with universities, with policies such as University/Firm Joint Research and University/Firm/Graduate Knowledge Transfer being driven by the needs of firms. Another indicator of the Irish focus is the setting up of industry groups for research; this policy seems to be open to failure, since it requires competitors to cooperate for the good of the group and essentially to reveal their research activities to each other. In the Taiwanese policies we can see that the role of government as a direct provider (as opposed to facilitator) is emphasized; for example, it establishes research institutes to directly conduct a range of research that then becomes available to local industry. These institutes, such as the Industrial Technology Research Institute (ITRI), Technological Information Center, and National Science Council (NSC), conduct research on a large scale and undertake studies into the feasibility of industrializing new technology. Although it tries to link universities via conferences, in effect the Taiwanese government is focused on providing the tools of innovation, i.e., technically educated students, government funded research, training, and information. One criticism of the approach by Shyu (2006), however, is that the needs of industry are not always served by the supply policy system; this is the result of the separation of education, industry, and government and to the political nature of such a government focused system.

**Table 2: Comparison of Supply-Side Policies between Taiwan and Ireland**

| Ireland  | Taiwan  |
|--|---|
| (a) University/Firm Joint Research                     | (a) Government Training                                     |
| (b) Advanced Technologies Research Grants              | (b) Development of Innovation Information Research Networks |
| (c) University/Firm/ Graduate Knowledge Transfer       | (c) Industry and Research Conferences                       |
| (d) Industry Led Collaboration Groups                  | (d) Higher Education Development                            |
| (e) The Provision of Technical Information and Support | (e) Support of University Research                          |
| (f) Support for Start-ups                              | (f) Establishment of Research Institutes                    |
| (g) Incubator Networks                                 | (g) Innovation Alliances                                    |
|  | (h) Incubator Establishment                                 |
|  | (i) Setting up of VC Associations                           |

In contrast, the Irish government is focused on linkage of existing tools, i.e., joining firms into research groups, taking trained students into firms, bringing firms into the university research lab. For its success this policy is dependent on the strength of existing tools and on the strength of the firms to which those tools are linked. This is of concern as the higher institutions that are integral to these supply policies have been criticized by the OECD for their low levels of funding, despite recent increases in funding (primarily through changes in government policy and EU funds). Unlike many universities in Taiwan (e.g., National Chiao Tung University, National Tsing Hua University), Irish universities (e.g., Trinity College Dublin, University College Dublin) have had a strong focus on the humanities (Pontikakis et al., 2006), particularly Irish history and literature. This has resulted in a lack of experienced researchers in universities and limited research facilities. The situation is now improving; "after years of neglect universities have only recently had the resources to carry out high-quality research" (OECD, 2006).

In addition, the governments of both Taiwan and Ireland have engaged in activities promoting collaboration and mutual learning between firms. In Taiwan, from the late 1980s through the early 1990s, in order to promote industrial upgrading, the government directed a considerable number of innovation alliances in the areas of notebook computers, high-definition televisions, fax and communications equipment, and so on, working through research institutions such as the ITRI. The most successful of these was the Notebook PC Joint Development Alliance (Tsai and Wang, 2005). In Ireland, national initiatives are now in place to promote collaboration in pre-competitive or basic research between firms, universities, and other research bodies. For

example, Programs in Advanced Technologies (PATs), funded through Measure 2 of the EC Support Framework, have aimed to stimulate basic research in universities and technology transfer to companies in specific areas of new technology (Roper, 2000). On the other hand, Taiwan's venture capital (VC) has made a considerable contribution to the growth of Small and Medium-Sized Enterprises (SMEs), particularly those in the emerging industries, and the government has set up many VC associations and offered financial support to help investors (Tsai and Wang, 2005). In addition, since 1996, the Small and Medium Enterprise Administration (SMEA) of Taiwan has continued to promote the establishment of incubators through the use of financial support available from the Small and Medium Enterprise Development Fund for office equipment, personnel, and related costs. After five years of continuous effort, the SMEA has promoted 63 incubators and attracted around 900 firms to move into these incubators (Tsai and Wang, 2005). As for Ireland, new export-oriented businesses can receive employment grants and R&D grants (Roper, 2000). However, in Ireland, the business incubator network is relatively limited, although most Irish universities have small innovation centers, and EU-sponsored networks of business innovation centers and innovation relay centers support the relatively sparse innovation centers in Ireland that provide incubator-type facilities (Roper, 2000).

## **ENVIRONMENTAL SIDES OF INNOVATION POLICY: TAIWAN AND IRELAND**

Strong similarities exist between the two countries with regard to the provision of grants and tax relief for R&D (see Table 3). A number of these policies have specific aims rather than general ones:

- Patent Royalty Tax Exemption (Ireland): To increase levels of Irish patenting and patent licensing (Roper, 2000).
- High Risk R&D Support Program (Ireland): To reduce the financial risks involved in undertaking high-risk research<sup>2</sup> (Roper, 2000).
- Tax Relief on Training (Taiwan): To encourage the further training of technical and managerial staff (Tsai and Wang, 2005).

More specifically, in Taiwan, companies can be exempt from import duties on instruments and equipment for experiments in R&D. Equipment for R&D with a life of longer than two years can adopt two-year accelerated depreciation. Expenditures in R&D of 15–20% can be business income tax deductible (Shyu and Chiu, 2002). On the other hand, the Ministry of Economic Affairs also took action in promoting traditional industries' technology capacity with "Rules of encouragement for the private sector's development of new products" and the "Law governing development for directive new products" (Shyu and Chiu, 2002). In addition, subsidy for R&D activities of high-tech companies located in the Science-based Industrial Park is offered by the Taiwanese government, which usually prepares an annual budget of relative expenses to support firms' research projects (Tsai and Wang, 2005). In Ireland, R&D support is offered on a discretionary basis, with a maximum grant of 50% of the eligible *non-capital* element of R&D project costs. Similar levels of support are available for feasibility studies and licensing of new manufacturing technologies (Roper, 2000). Tax relief is available in Ireland on all R&D expenditure, patenting costs, and costs of acquiring manufacturing licenses, etc., with expenditure being written off against profits in the year in which the expenditure is incurred. In addition, royalties and other income received from the use of patents are also exempt from income and corporation tax. The impact of EU support for R&D and innovation capability development has been important for Ireland. The Operational Program for Industrial Development, 1989-93, for example, provided continuing funding for capability development, which in all probability could not otherwise have taken place given the state of public finances at the time (Hewitt-Dundas and Lenihan, 2002).

Ireland's policy to attract foreign FDI from the end of the 1950s was particularly successful. Initially, job maximization was a driver in attracting FDI, with large multinational enterprises (MNEs) concentrated in traditional and labor-intensive sectors. By the late 1970s and 1980s, however, policy began to adopt a more selective approach to the FDI sought, focusing more on high-tech and higher value added firms. Over the same period, the motivation for MNEs to invest in Ireland shifted, from tax and grant incentives along with low-labor costs in the 1960s, to access to major markets in 1973 with accession to the EU, and access to a skilled labor force that the Irish government had actively tried to develop, particularly in the areas of computers and other

electronic products, pharmaceuticals, medical and scientific instruments, and software (Hewitt-Dundas and Lenihan, 2002). In Ireland, international firms have been attracted by the 10% corporation tax for all manufacturing companies that is due to continue until 2010 (Yuill et al., 1997). As for Taiwan, two main policy instruments were developed to attract FDI: direct taxation incentives and export processing zones (EPZs). To consolidate these incentives, between 1966 and 1971 a number of EPZs were established that enjoyed the benefits of simplified official procedures and duty-free imports of machinery, equipment, raw materials, and finished goods (Chen and Sewell, 1993). Currently, preferential tax measures, R&D assistance, and low-interest loans are being offered to encourage foreign investment, with the goal of further developing Taiwan as a hub of R&D and high-tech manufacturing. These measures, along with the establishment of modern science parks, have led to an increase in the amount of foreign investment dedicated to electronics and electrical appliances, a sector that now accounts for 33.45% of foreign investment (Department of Investment Services, 2006).

In Ireland, as with R&D support, capital grant support is offered on a selective basis. Capital grant support has been ubiquitous, but higher maximum grant rates have been on offer in less developed western regions (Yuill et al., 1997). However, a number of studies have suggested that capital grant support is particularly prone to deadweight and may lead to substantial distortion in the type and extent of firms' investments (Roper, 2000).

In financial support for R&D another common policy is the setting up of incubators. In Ireland, implementation has been undertaken at a national level by Enterprise Ireland (OECD, 2006) and all third-level institutes now have incubators; institutes have been in charge of establishing their own incubators and are supported by grants from the Small and Medium Enterprise Administration. While incubators in Taiwan have been successful at attracting firms, quality of support has varied, and firms coming out of the incubators have tended to be of a similar nature, with similar products and little to distinguish them in the marketplace (Tsai and Wang, 2005). In Ireland, the more centralized policy has resulted in the development of incubators specializing in a number of target industries and more consistent support levels (Advisory Science Council, 2006).

The role of the legal system in innovation is highlighted by the efforts taken by each country in addressing perceived weaknesses in their intellectual property rights (IPR) laws. For Ireland this involves the strengthening of copyright rules regarding software and the Internet. However, many small companies believe that they do not own any intellectual property because they do not recognize it, but all companies have at least one trademark—their name—even if it is not registered as a trademark. It is very much in the interests of even the smallest company or individual innovator or entrepreneur to make the best use of their intangible assets by investigating the opportunities offered by the intellectual property system (Irish Patents Office, 2007). In Taiwan's case the changes undertaken were of a more substantial nature, addressing the weaknesses in patent enforcement and prosecution (based on US government criticism). It is also interesting to note the integration of the Taiwan Intellectual Property Office into the National Innovation System (NIS) administration structure. The above Taiwanese laws and regulations include the Patent Act, Integrated Circuit Layout, Copyright Act, Trade Secrets Act, and so on. As for market competition law, Ireland has no limitation on FDI and relies on it to stimulate economic growth. However, most companies in Ireland are small and medium-size enterprises. Hence, to promote competition, Ireland's Competition Act also focuses on mergers and acquisitions from foreign investment as well as on supervision of cartel organizations and monopolies (The Competition Authority, 2002). Although most of Taiwan's companies are small and medium-sized enterprises as well, Taiwan's competition law, the Fair Trade Law, does not emphasize mergers and acquisitions. The Fair Trade Law focuses on preventing cartels, monopolies, limited competition, and other behaviors hindering fair competition (Fair Trade Commission, 2000).

The political situation with China has resulted in visa restrictions for mainland Chinese engineers and researchers. Although few visa restrictions are in place for other nationalities, the restrictions are of particular significance as the two countries share the same language (a significant number of research labs in Taiwan use Chinese as their main form of communication), China is a major recipient of Taiwanese FDI, and to some extent their cultures are similar (Wu and Huang, 2003). This restriction contrasts with the liberal visa and immigration policy that Ireland offers as part of its EU membership and its growth strategy. In a similar vein, the use of technology export restrictions against China reflects the current situation of Taiwan. These rules prevent the export of advanced technology to China and Chinese subsidies even for research purposes, and like the visa policy reduce access of Taiwanese companies to Chinese engineers. However, there is some evidence that this restriction is being circumvented.

**Table 3: Comparison of Environmental Side Policies between Taiwan and Ireland**

| Ireland | Taiwan |
|---------|--------|
|---------|--------|

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|   |   |
|---|---|
| (a) Financial Introduction Services                       | (a) R&D Equipment/Expenditure Tax Alleviation                 |
| (b) R&D Expenditure Tax Credits/Relief                    | (b) Tax Relief for Training                                   |
| (c) Equipment/ Firm Infrastructure Grants (Capital Grant) | (c) Loan Subsidies  |
| (d) Commercialization Fund                                | (d) Tax Incentives and EPZs for Attracting FDI                |
| (e) EU Support for R&D                                    | (e) Patent and Copyright Acts                                 |
| (f) EU Membership   | (f) Visa Restrictions (negative effect)                       |
| (g) Tax Incentives for Inward Investment                  | (g) Technology Export Restrictions (negative effect)          |
| (h) Grants for Incubators                                 | (h) Research Facilities                                       |
| (i) Patent Royalty Tax Exemption                          | (i) Grants for Incubators                                     |
| (j) Patent/Copyright/Trademark Law                        | (j) Subsidies for Firms Located in Science Parks              |
| (k) High Risk R&D Support Program                         | (k) Development Fund  |
| (l) Strengthening of Copyright                            | (l) Fair Trade Law Focusing on Preventing Cartel and Monopoly |
| (m) Competition Act Focusing on FDI Supervision           |   |

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## DEMAND SIDES OF INNOVATION POLICY: TAIWAN AND IRELAND

To comply with the Agreement on Government Procurement of the World Trade Organization (WTO), Taiwan's government procurement law was legislated in 1999 and aims to clarify procurement information, complete procurement evaluation, and internationalize the procurement market (Public Construction Commission, Taiwan, 1999). Since then, the most advantageous tendering method has been adopted as a major legitimate contract award mechanism instead of the lowest bid tendering method (Tzeng et al., 2006). On the other hand, Taiwan uses government procurement as one of the most important sources of technological development, especially weapons systems procurement (Tien and Yang, 2005), though it faces a predicament in weapons systems procurement. The Sixth National Science and Technology Conference, for instance, proposed a strategy to strive for industrial/military cooperation in opportunities for defense weapons systems purchasing from abroad and introducing key defensive technology (National Science Council, 2001). Such industrial cooperation policy is one of the main sources of key technologies.

In contrast to Taiwan's procurement with the objective of introducing key technologies, Ireland's public procurement law regime focuses on generating competition and promoting the free movement of goods, skills, and labor within Ireland and Europe. The regime applies to the procurement of works, services, and supplies by government departments, local authorities, and regional public sector bodies and entities financed in whole or in part by public funds and certain utilities (Arthur Cox and Davis Langdon PKS, 2003), which enlarges the market to enterprises in Ireland and EU.

The main difference on the environmental side between Taiwan and Ireland is the policy tools adopted by the two countries facilitating public services. The Taiwanese and Irish governments mainly use build-operate-transfer (BOT) and public-private partnership (PPP), respectively, in this aspect. In Taiwan, BOT is applied to lower government expenditures, share risks with contractors, and introduce advanced technologies. The Taiwan High Speed Railroad, electronic toll collection on the two freeways, and construction of Kaohsiung Mass Rapid Transit are the major BOT examples in recent years (Kang, et al., 2007). On the other hand, infrastructural investment projects in Ireland have been funded by the Exchequer or EU transfers. However, since the successful transition of the Irish economy to the standards of the core EU economies, EU transfers are unlikely to play an important role in the future financing of Irish infrastructure (Scallly, 2004). Public-private partnerships are partnerships between public sector organizations and private sector investors and businesses for designing, planning, financing, constructing, and operating of infrastructure projects. PPPs are being used increasingly in Ireland to deliver both major and minor infrastructural projects in the transport, environment, education, and health sectors that have been essential to support its economic growth and population changes (Scallly, 2004).

Regarding trade policies, both countries are striving to join international or regional trade organizations for improving their industries' competitiveness and now have become members of important economic integration organizations. Taiwan accessed the WTO at the end of 2001 after twelve years of effort (Cho, 2004). To comply with the regulations of WTO, Taiwan has to reduce tariff duties on agricultural and industrial products, remove import quotas, decrease exporting subsidies, and so on. In compliance with Taiwan's accession commitments to the WTO, there will be positive and negative influences on different industries (Huang et al., 2003; Hsu and

Chang, 2004; Weng et al., 2005; Dent and Chuang, 2005). In addition to joining the WTO, Taiwan also joined a multilateral regional trade organization, Asia-Pacific Economic Cooperation (APEC), in 1991 together with China and Hong Kong (Chou, 1999). Experts believe that enlisting a free trade area of Asia-Pacific would be a hope for Taiwan to surmount its trade barrier.

Ireland relied on trade protection to stimulate industrial development after independence in 1937. The Irish government opened up its market for free trade instead of a “block policy” at the end of the 1950s. Because of its small domestic market, export promotion is Ireland’s basic trade policy. In contrast to Taiwan’s difficult trade position, Ireland not only is a member of WTO and European Union (EU), but also signed an Anglo-Irish Free Trade Agreement in 1965 and comprehensive double taxation agreements with 44 countries. Ireland’s close trade relationship with other EU members has led to a high growth rate in medicine and information industries.

Concerning foreign exchange controls, Ireland’s policy is looser than that of Taiwan. Multinational corporations are permitted outward remittance without timing or amount limitations in Ireland, enabling the country to successfully attract FDI (Industrial Development and Investment Center, Taiwan, 2004). In contrast, companies in Taiwan have to report to the Central Bank when they to make outward currency exchanges worth more than US\$1 million (Yu, 2003).

Table 4 summarizes the above dynamics.

**Table 4: Comparison of Demand Side Policies between Ireland and Taiwan**

| Ireland  | Taiwan  |
|--|---|
| (a) National, Regional, and Local Government Procurement                                     | (a) Government Procurement and Industrial Cooperation       |
| (b) Public Private Partnership   | (b) Build-operate-transfer                                  |
| (c) Access multilateral trade organizations such as WTO                                      | (c) Access multilateral trade organization such as WTO      |
| (d) Participate in regional trade organizations such as EU                                   | (d) Participate in regional trade organization such as APEC |
| (e) Sign the FTA with England and Comprehensive Double Taxation Agreements with 44 Countries | (e) Sign the FTA with Panama and Guatemala                  |
| (f) Lessened Foreign Exchange Controls   | (f) Intensified Foreign Exchange Controls                   |

## CONCLUSIONS: POLICY IMPLICATIONS

International variation in innovation policy presents an opportunity to examine various influences on the pace of technological change. Understanding international differences in the intensity of innovation also informs public policy. While most studies of innovation are set in a given public policy environment (Griliches, 1995), policy analysis requires an evaluation of variations in innovation with country-level policy differences.

As a “higher education and training pillar”, Taiwan’s higher education reflects the government’s efforts to promote education and the development of elite personnel. Taiwanese innovation policy emphasizes the development of innovation by research institutes and through universities. The most important direct subsidies in Taiwan are in the form of tax incentives. Among other things, the maximum business income tax paid by enterprises has been reduced and tax holidays on new investments increased as time has gone by. Generally speaking, the Taiwanese government takes an active role in innovation/R&D and focuses policies on specific industries. One of the clear differences exhibited in innovation policy in Taiwan is the importance attached to policies targeting specific industries and providing financial, research, and informational support to these industries. The results of this are seen in the specializations of science parks and strong cluster formations. This contrasts with the more generalized approach taken by the Irish government, which provides general benefits for all firms wishing to innovate. The Taiwanese policy accords with the nationalist history of planned economic development and state-owned industries, which has been successful in transforming Taiwan from an agricultural to heavy manufacturing to high-tech economy. However, on the other hand, heavy dependence on the government to control the direction of Taiwanese innovation creates a number of risks:

- Political factors may affect direct investment and policies,
- The government may incorrectly judge changes in technology and market developments

- Significant support may be perceived as dumping, subsidization, or other unfair business practices to competing countries which then seek restitution or institute punitive tariffs (as happened to the Taiwanese DRAM industry in the late 1990s).

The Irish government prefers not to be involved directly in R&D or in controlling the type of innovation that firms undertake. Irish innovation policy emphasizes innovation at the firm level and the interaction between firms and universities. Funding for universities is low, as is the level of government research. In particular, public support for R&D and innovation in Ireland accounts for a lower proportion of costs. Being minimized in Ireland, levels of R&D grant support are typically lower and public assistance is given on a more selective basis. Lower grant rates also mean, however, that a higher proportion of the risk of any R&D will be borne by the private sector. Thus, the need to provide up-front evidence of the commercial validity of R&D or innovation projects to satisfy selection criteria, and the unwillingness of the Irish government to support near-market developments, is likely to reduce the contribution of Irish innovation policy to diversity. On the other hand, the fact that Ireland's policy to attract inward FDI is quite successful also implies a high level of R&D globalization for the country, helping to gain more international mobility of R&D and innovative activities. In international terms, substantial inward FDI in Ireland for the last three decades has created the potential for substantial learning by indigenously owned enterprises (Roper, 2000). However, one criticism leveled at Irish innovation is that too much focus on FDI policies results in failure to address some of the weaknesses in the indigenous technology sectors (Walker, 1993; Hewitt-Dundas and Lenihan, 2002).

The Taiwanese government emphasized use of government procurement and industrial cooperation policies in the past to acquire advanced technologies such as aerospace technology, military technology, transportation technology, etc., establishing the foundation of the high-tech industry in Taiwan (Industrial Technology Research Institute, 2005). Along with introducing key technologies by use of policy tools, the Taiwanese government also takes a role in linking customers to manufacturers by holding trade shows. However, the Irish government intends to establish an environment to attract more foreign investments.

Table 5 summarizes the main innovation policy contrasts between Taiwan and Ireland on the supply, environmental, and demand sides.

**Table 5: Summary of Major Innovation Policy Differences between Taiwan and Ireland**

|   | Ireland  |      | Taiwan  |
|---|--|------|---|
| Supply Side Policies – Both provide technical and research information.   | Emphasis on knowledge transfer between universities and firms, role of industry highlighted. (Weak university funding) |      | Emphasis on research institutes, university development, and university research  |
| Environmental Side Policies – Both have many financial incentives for firms to conduct research and incubators. | Mostly focused on the provision of finances including program to make access to private finances easier.               |      | Very strong role for science parks. Research facilities are provided and the government directly funds key companies. (Restrictions because of China situation) |
| Demand Side Policies – Both have undertaken deregulation but more efforts need to be made.                      | Limited marketing initiatives  |      | Government procurement is important. Trade shows link customers to manufactures.  |
| General Policy Observations   | General development policies benefit all industries  | V.S. | Targeted development of innovation in chosen industries   |
|   | Bottom-Up Approach to Innovation   | V.S. | Top-Down Approach to Innovation   |

Nevertheless, we also find a common shift in the nature of innovation and in response of innovation policy between these two small countries. This shift has been accompanied by a number of related changes reflected at various points in the following assessments:

- (1) *Enhancing industry-science linkages.* There is a much greater need than in the past for strong links between firms and universities/public research organizations (PROs). Our research suggests that such links depend much more on the in-house capabilities and orientation of these two groups of organizations than on the creation of the linkages themselves. Technologically sophisticated firms will usually know how to access knowledge in the public sector research base, but firms in more traditional sectors with little need for interaction with the science base in the past will find it much more difficult. Hence, we find that enhancing industry-science linkages has become a common trend of innovation promotion and development in the two nations.
- (2) *Promoting collaboration among firms.* Both Taiwan and Ireland proceed with industrial innovation from agricultural and traditional sectors. While firms tend to focus on fewer products, the number of technologies incorporated into any one product is increasing. This includes the increasing relevance of science-based technologies to more traditional sectors whose technology has hitherto been largely engineering based. Thus firms need in-house capability in or access to an increasing range of technologies. Outsourcing of technologies has increased, though even if a firm acquires a technology from elsewhere it will still require some degree of understanding of the nature of that technology and what it can do. One consequence is that government support for collaborative research and similar public/private partnerships becomes ever more important.
- (3) *Fostering small and medium-sized enterprises (SMEs) and new technology based firms (NTBFs).* In Ireland and Taiwan, outsourcing of the design and development of key components, the modulization of technology, and the difficulties of large established firms to adapt to the different business models/innovation modes required by new sectors create a much greater role for SMEs with advanced capabilities in science-based technologies. However, the framework conditions, financial institutions, and management needed to foster the creation, development, and growth of such SMEs are very vital while closely integrated in supply chains. Thus, the incubator networks or venture capital associations helping to promote entrepreneurship and SME management efficiency are rather important for Taiwan and Ireland, whose NIS was particularly well adapted for success in an SME environment.
- (4) *Rationalizing innovation policy.* Both Taiwan and Ireland are concerned about the proliferation of innovation support measures over time and the need for rationalization and simplification. Both countries have taken steps to improve the situation. For example, Taiwan is implementing a structural reform of its system of public funding of R&D. Ireland, too, could benefit from a discussion of its policy mix, which is presently characterized by an almost exclusive prevalence of non-targeted measures based on bottom-up principles.
- (5) *Innovation in services.* An increasing proportion of GDP is accounted for by service sectors, and technology/knowledge-based services have been growing rapidly. Encouraging innovation within services is therefore of increasing importance to policy makers in both nations.
- (6) *International cooperation.* Taiwan and Ireland actively participate in multilateral and regional trade organizations such as WTO, EU, and APEC. Both of them also sign the Free Trade Agreements with amicable countries. These policies help to create a more suitable and stable market, which is crucial for an emerging industry (Rothwell and Zegveld, 1981; Shyu and Chiu, 2002).

## **RECOMMENDATIONS FOR TAIWAN'S AND IRELAND'S INNOVATION POLICIES**

In the future, the innovation performance of a country is likely to be even more crucial to its economic and social progress (OECD, 2005). The following reviews and synthesizes the main findings of the study in an effort to identify key policy messages and recommendations that could inform further policy developments in Taiwan and Ireland.

### **Taiwan**

- (1) *Fundamental research, long-term economics, and technology developments should be coordinated with each other.* Taiwan's innovation performance in recent years, as mentioned above, has already become very competitive worldwide. However, why can't economic growth catch up with the speed of technology

development? We suggest that fundamental research projects should be coordinated with long-term economics and technologies. Technology forecast may be one of the feasible strategies for the Taiwanese government, given the limited R&D resources. Moreover, the focal domain of development with technology forecast should still be complemented with industrial demands so as to contribute to the entire economic environment in the future. For instance, if technological demands brought on by industries cannot be realized, product quality can hardly be improved, and in the end firms remain without market competitiveness. Under such circumstances, there will be negative effects on national economic growth in the long run. Therefore, the government should inspect the demands of technology in the context of the market itself instead of distributing resources based simply on technology. Furthermore, it is advisable for the government to establish institutions such as technological trade centers where technologies can be more efficiently exchanged and extended into the market to benefit national economic growth.

- (2) *Integrating technology resources in China.* Taiwan's economic growth performance is associated with its steady relationship with China's government in terms of politics, economics, and diplomacy. Because of increasing investments in China over the years, leveraging mainland China's technology resources and market should be a key point enabling the Taiwanese government to strengthen technological and economic developments in the future. The establishment of a "World Chinese Business Technological Research Center" can be a proper mechanism to coordinate and channel both sides' resources into innovation efforts (Shyu and Chiu, 2002).
- (3) *New aspects of intellectual property impetus.* Intellectual property protection is an important policy of the Taiwanese government in recent years. However, in practice, more emphasis can be put on intellectual property in the world of the Internet as well as on setting up a series of standards for uses of Internet compilation. On the other hand, implementing regulations such as the IC Circuit Layout Protection Law not only represents technological advancement in Taiwan but also has some impacts on domestic industries. This is what Taiwan is facing as it becomes internationalized.
- (4) *Diffusing research results and technologies.* In Taiwan, technological case projects are often administrated by public or private research institutions. As a result of the high flow rate of research elites in these institutions, technology accumulation is difficult. As a matter of fact, to accelerate information circulations, it is advisable to release intellectual properties to industries after a certain period of time. Moreover, government should establish derived companies through the technical transformation of several research projects, transferring elites to industries step by step in order to accelerate the process of diffusing techniques and strengthening the R&D power of civil firms. Finally, extending Taiwanese R&D and intellectual property activities to institutions other than research ones is the ultimate aim.
- (5) *Improving distributions of R&D human resource and managerial performance.* Although Taiwan puts heavy emphasis on training of high-tech elites such as electronic information, it is not enough. Besides enhancing relationships between universities and conventional industries, government should strengthen human resource training and evaluate workers' quality in conventional industries. The other important issue is distribution of human resources. Hsinchu Science Park is just like a black hole, attracting elites from all over. This should be viewed as a severe warning to other industries. The managerial problem is another challenge when developing human resources. Therefore, training and retaining policy elites (or technological policy research elites) in organizations is also a human resource management difficulty that needs to be seriously confronted.
- (6) *Improving investment environments.* Compared with that of Ireland, Taiwan's inward FDI is not as good as it appears. This indicates that Taiwan perhaps needs to improve its investment environment. We suggest that the primary remedies would be to provide a sound capital market, loosen foreign exchange controls, and then stabilize the political situation. As far as Taiwan's situation, remaining in ease monetary policy and a low interest rate should be the right policy trends for the government to stimulate business investments.
- (7) *Advancing build-operate-transfer mechanism.* Although Taiwan has applied build-operate-transfer to introduce advanced transport systems in recent years, some cases suffered scandals benefiting specific contractors, reflecting the fact that Taiwan's BOT mechanism is immature. To prevent a financial predicament for contractors caused by over-optimistic financial prediction, government may adopt the least-present-value-of-revenue auction proposed by the World Bank (Engel et al., 1998). This way, the crucial market provided by government for innovation can be sounder.

## Ireland



- (1) *Developing R&D capability in indigenous firms.* Ireland's FDI policy has been successful; however, the government should try to create domestic conditions that gain as much as is lost from international mobility of R&D and innovative activities. For Ireland, a key challenge is not only to encourage foreign owned MNEs to increase their investment in R&D undertaken in Ireland, but also to ensure that the social benefits arising from this are maximized. This could be accomplished through greater partnerships and collaboration between universities and the MNEs as well as through vertical supply links with local suppliers. This will develop R&D capability in indigenous firms and increase the likelihood that they will subsequently undertake R&D.
- (2) *Upgrading higher education system.* Current Irish innovation policy makes use only of general tools and fails to account for the weakness of the educational system. This problem with higher education in the innovation system needs to be addressed, either by significant investment and reorientation of the educational system or by depending less on the education system as an input. Given the importance of higher education in innovation, the former would likely be most beneficial. The Irish government may also wish to consider whether a more focused approach to innovation policy would be better suited to a country with such a small population.<sup>3</sup> Targeting the creation of industrial clusters that complement the existing MNEs based clusters would both provide ready customers for those new clusters and aid in retaining MNEs within Ireland.
- (3) *Strengthening public sector engagement with industry.* We also feel that encouraging universities to engage with business, removing legal impediments, and increasing their in-house interface with firms should be key objectives in policy for Ireland, as Ireland's publicly funded R&D seems below international good standards. In addition, encouraging mobility of researchers is a concern for Ireland as this is seen as the most effective means of knowledge transfer.
- (4) *Encouraging non-R&D active firms to invest in R&D.* In Ireland, although efforts have been made to bridge links between industry and science, a large proportion of firms receiving grant support are in sectors where R&D is established in the organizational ethos of the industry, and many of these firms are large, foreign-owned plants with well-developed R&D capability. One explanation for this is that firms are unable to participate in huge R&D programs if the underlying capability to undertake R&D does not exist. Therefore, a continued focus on encouraging non-R&D active firms to invest in R&D is to be encouraged for Ireland. However, this aim will be achieved only where a holistic approach to business support and development is adopted in building R&D capability along with the provision of R&D support. In particular, the lack of intermediate technology transfer institutions should be leveraged.
- (5) *Liberalizing regulations.* Transportation, electricity, and, to some extent, telecommunications suffer from unnecessary regulations in Ireland, including barriers to entry, price controls, and other rules limiting business operations that show up in high prices. Although liberalization of utilities has started in line with the EU agenda, our recommendation is that the Irish government pursue liberalization of network industries by ensuring that incumbents do not engage in business practices that prevent newcomers from entering the market. Ongoing regulatory reform and impact assessment should be carried out.
- (6) *Facilitating cluster development.* As noted, the Irish government's interventions promoting networks as well as cluster development seem not so successful. We recommend that development agencies be formed and act collaboratively to encourage and facilitate cluster development. The agencies should be tasked with the identification and publicizing of specific clusters, and structures should be put in place to monitor the effectiveness of such actions. It is also vital that the legislative framework makes the delivery of relevant supports for clusters as efficiently as possible. The government should be more responsive to and supportive of industry needs, in terms of the provision of infrastructure and collective assets, as well as other tools (i.e., grants offering) designed to facilitate cluster development. In addition, government and agency supports for industry should be increasingly organized around clusters and sectors, and there is a need to more closely integrate FDI with indigenous industrial development. FDI should be used more strategically to support indigenous industry and to "fertilize" indigenous industrial clusters. This may require some degree of organizational innovation as agencies adopt the necessary structures to support changing enterprise policy.

## Both Taiwan and Ireland

Both countries should look at methods by which they can expand their use of demand-based policies. Since both economies are export oriented, demand policies are particularly important with regard to customer-based innovation. In addition, as highlighted by OECD (2005), globalization has led to internationalization of demand for innovative products; this demand combined with demand-based policies such as government marketing initiatives overseas, would provide larger markets for innovative products, thus reducing the risk that research and commercialization of innovation would not produce economic returns for firms.

The other issue is that start-up SMEs (NTBFs) play an invaluable role in the economy of both Taiwan and Ireland; it is thus important for both nations to create conditions in which these SMEs can grow and prosper over the longer term. Both have had policy initiatives to make progress in this regard; however, we make the following recommendations from the perspective of the findings of this paper.

- (1) *Public procurement.* Start-up SMEs should be given full and fair opportunities to bid for public R&D contracts or contracts to buy technology-based products. The US Small Business Innovation Research (SBIR) program is one way of achieving this objective.
- (2) *Intellectual property protection.* It is usually not very expensive for a small firm to take out a patent, but having that patent properly searched costs much more. Defending a patent in the courts is usually an expensive and protracted business. Making the intellectual property right (IPR) system user friendly for small businesses is important as is making them aware of how the IPR system can help them grow and develop. Effective IPR protection is often essential to enable a firm to raise finance, access new markets, and protect existing market positions.
- (3) *Tax policy.* Start-up SMEs usually cannot afford to pay market salaries to experienced executives and can attract them only by giving them a share in the equity or profits of the growing business. Appropriate tax treatment of share options or profit-related bonuses are important if such firms are to attract the business expertise they vitally need. Favorable tax treatment of R&D can help to finance growth, particularly where tax credits are given even when the firm is not making sufficient profit to offset the value of the credits against its potential tax bill. Inability to capitalize R&D means that rapidly growing R&D-based businesses may appear to be incurring a loss when in fact they are making a profit from production and sale of current products.
- (4) *Competition regulation.* Enforcing competition laws needs plenty of manpower. Both countries should invest more professional manpower in enforcing competition regulations in order to promote market security and fairness for the SMEs.

## FUTURE RESEARCH

Additional researches can be conducted to evaluate the differences between the two nations in the production of visible innovative output and to investigate how variations in innovation policy matter to performance in small countries such as Taiwan and Ireland. Another focus of future studies should also be to explore how innovation performance directs policy as feedback. Consequently, more efficient policy implications and suggestions can be drawn from further findings.

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## ENDNOTES:

An island country is a country that is wholly confined to an island, several islands, an island group, or several island groups, and has no territory on the mainland of a continent. Forty-seven of the world's countries are island countries (2007), including most of the smallest ones. Island countries can be divided in two approximate groups: large, relatively populous nations, such as [Cuba](#) and the [United Kingdom](#), and smaller island countries such as Ireland and Taiwan. See “Island Country,” [Wikimedia Foundation, Inc.](#), [http://en.wikipedia.org/wiki/Island\\_nation](http://en.wikipedia.org/wiki/Island_nation), accessed on Nov. 19, 2007.

High-risk research is often associated with radical innovation.

Ireland's population was estimated in July 2007 at 4.1 million (CIA, *The World Factbook*, 2007).

# RELATIVE ROLE OF RELATIONSHIP INTENSITY AND CONTRACT ON FIRM PERFORMANCE

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## ABSTRACT

*International buyer-seller relationship success is a very relevant and crucial aspect of firm's performance and of international business. In a buyer-seller relationship the parties involved can deal with each other in distinct manners, namely using relationship intensity and/or contracts. Relationship intensity, composed by cooperative norms, relationship commitment and trust is a self-enforcing governance, while contract is a third-party governance. This investigation aims to study international buyer-seller relationships, using a multidimensional approach, from an international buyer point of view, and considering relevant relationship antecedents. It is expected that while relationship intensity allow firms to enforce and maintain buyer-seller relationships, contracts provide the framework in which relationship intensity can be developed. In order to get acquainted with the basis of relationship intensity, relevant antecedents, organized in international buyer-focused, dyadic and international seller-focused, are analyzed.*

## INTRODUCTION

Inter-organizational business in competitive markets has been evolving from transactional orientation towards a relational orientation (e.g. Anderson and Narus, 1990; Leonidou, Barnes and Talias, 2006). This relational orientation implies that successful buyer-seller relationships involve, more than simple trading, *cooperative interorganizational exchanges* (Skarmetas, Katsikeas and Schegelmilch, 2002, p. 758). Then, both parties involved in the relationship should have a long-term perspective, elaborate marketing activities with such viewpoint and participate in closer relationships (Cannon and Perreault, 1999). Benefits of closer relations include larger share of business for both parties; lesser organizational conflicts and lesser price sensitivity (Leonidou, Talias and Leonidou, 2008) which in turn promotes higher performance. In international markets the adoption of a relational orientation might be even more crucial as there is a more complex environmental context of relations and more dynamic in customers' needs, selling tasks and technology (Achrol, 1991; Smith and Barclay, 1997). Hence, it is not bizarre that multinational firms such as Xerox, Motorola, General Electric, Ford and Black & Decker opted by this relational orientation, reducing their supplier base and favoring closer relationships with selected suppliers (Gundlach and Murphy, 1993; Ganesan, 1994; Kalwani and Narayandas, 1995). Nevertheless, even though firms are increasingly investing in relational orientation, problems occur and many relationships fail (Anderson and Jap, 2005) as we are far from fully understanding relationships and respective contingent facilitators, particularly in international settings.

This study complements the existing literature by capturing multi-dimensions of buyer-seller relationships, organized in relationship intensity and contract. Majority of the existing studies on buyer-seller relationships, a complex multi-dimensional phenomena, tend to consider a single dimension of analysis, such as social nature. One of the few exceptions of this unidimensional focus is the work of Cannon and Perrault (1999), that considers relationship connectors. Our study intends to follow and expand Cannon and Perrault's work.

Additionally, though international marketing literature has studied export performance (e.g. Morgan, Kaleka and Katsikeas, 2004), export measurements (e.g. Katsikeas, Leonidou and Morgan, 2000), internationalization stages and processes (e.g. Beamish, Karavis, Goerzen and Lane, 1999) and strategic issues (e.g. Piercy, Kaleka and

Katsikeas, 1998), it neglected the buyer perspective (Liang and Parkhe, 1997). The analysis of the seller point of view has been dominant, being the buyer view overlooked. This disregard for the international buyer perspective, in an era in which the buyer gains importance, is a major literature gap that must be overcome.

Our research will, then, study international buyer-seller relationships, using a multidimensional approach, explicitly interaction, social and contractual dimensions. It will follow an international buyer perspective and consider three types of relationship antecedents: international buyer-focused, international seller-focused and dyadic antecedents.

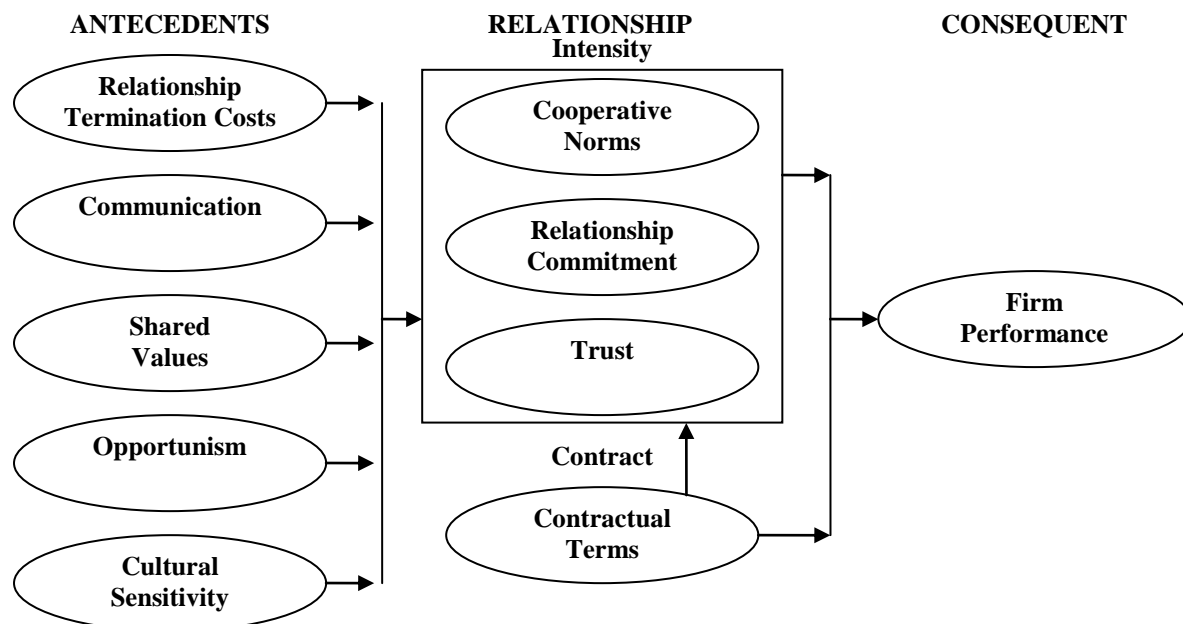
## CONCEPTUAL FRAMEWORK

Buyer-seller relationships can be characterized at buyer-seller interaction level; social level and contractual level. The first level is related to the manner as the interaction between buyer and seller occurs, the second focuses on social aspects of the relationship and the third level involves the clauses of the contract – if any – signed by the parties. By integrating these levels, relationship can be considered through relationship intensity, (composed by trust, relationship commitment and cooperative norms), and contract.

To enrich the study of international buyer-seller relationships, the antecedents of buyer-seller relationships need to be taken into account, namely relationship termination costs (Morgan and Hunt, 1994), communication (Anderson and Narus, 1990), shared values (Morgan and Hunt, 1994), opportunism (Williamson, 1975; Lancaster and Lages, 2006) and cultural sensitivity (Skarmetas, Katsikeas and Schegelmilch, 2002). Additionally, in order to have a big picture of the relationships and since firm performance is a vital consequent of successful buyer-seller relationships (Palmatier, Dant, Grewal & Evans, 2006), its inclusion on a buyer-seller relationship study is important.

Figure 1 shows our conceptual framework, organized in four blocks: antecedents of the relationship; relationship; relationship consequent and moderators of the relationship factors-relationship consequent.

**Figure 1: Conceptual Model**





## Relationship

Using a multi-dimensional perspective, relationships can be analyzed through relationship intensity, that is, cooperative norms, relationship commitment and trust, and contract.

### Relationship Intensity

Cooperative norms, defined as the *belief that both parties in a relationship must combine their efforts, or cooperate, to be successful* (Siguaw, Simpson and Baker, 1998, p. 102) involve the desire to work with the other party in order to achieve mutual gains and goals (Siguaw, Simpson and Baker, 1998), such as financial performance (e.g. Gong, Shenkar, Luo and Nyaw, 2007).

Relationship Commitment is the *enduring desire to maintain a valued relationship* (Moorman, Zaltman and Deshpande, 1992, p. 316). It is seen as the highest level of relational bond (Dwyer, Schurr and Oh, 1987), key in the development of buyer-seller relationships (Morgan and Hunt, 1994). In this direction, committed parties can assign additional resources to the relationship, and align their goals, interests and values (Dwyer, Schurr and Oh, 1987), which will result in enhanced performance, both in domestic markets (Anderson and Weitz, 1992) and internationally (Skarmas, Katsikeas and Schlegelmilch, 2002).

Trust, a willingness to *rely on an exchange partner in whom one has confidence* (Moorman, Deshpande and Zaltman, 1993, p. 82), is also seen as key for successful relationships (Morgan and Hunt, 1994). A partner that judges his supplier as more credible than others may work more diligently to enhance performance with it (Siguaw, Simpson and Baker, 1998). In international buyer-seller relationships, trust appears likewise to be a precursor of high performance (Skarmas and Katsikeas, 2001).

Proposition 1: Relationship intensity, composed by cooperative norms, relationship commitment and trust, is positively related to firm performance

### Contracts

Contractual terms are detailed and binding contractual agreements that formalize the obligations and roles of both parties in the relationship (Cannon and Perreault, 1999). They provide the protections available through the legal system should something go wrong (Beale and Dugdale, 1975), reducing contractual hazards and operational risks (Gong, Shenkar, Luo and Nyaw, 2007) and regulate the buyer-seller relationship by endowing a plan for the future (Macneil, 1980), which can lead to an improved performance (e.g. Lusch and Brown, 1996; Luo, 2002).

Proposition 2: The use of contractual terms is positively related to firm performance

## Antecedents of Relationship Intensity

An antecedent factor of a variable consists of the factor that helps to explain an endogenous variable (John, 1984).

Relationship termination costs consist of switching costs a partner has when the relationship ends and is forced to seek an alternative (Morgan and Hunt, 1994). They are all expected losses from termination and result from the perceived lack of comparable potential alternative partners, relationship dissolution expenses, and/or substantial switching costs, which enhance the commitment to the vendor (Ganesan, 1994).

Proposition 3: Relationship termination costs is positively related to relationship intensity

Communication is the formal as well as informal sharing of *meaningful and timely information between firms* (Anderson and Narus, 1990, p. 44). It can be described as the glue that holds together a channel of distribution (Mohr and Nevin, 1990, p. 36) and helps solving disputes and aligning perceptions and expectations (Etgar, 1979). So, if a buyer perceives the communication with the supplier has been of high quality, trust will be fostered (e.g. Anderson and Weitz, 1989; Anderson and Narus, 1990) and cooperative behavior (e.g. Morgan and

Hunt, 1994) and relationship commitment (e.g. Mohr and Nevin, 1990; Mohr, Fisher and Nevin, 1996) will be privileged.

Proposition 4: Communication is positively related to relationship intensity

Shared values, defined as the *extent to which partners have beliefs in common about what behaviors, goals and policies are important or unimportant, appropriate or inappropriate and right or wrong* (Morgan and Hunt, 1994, p. 25), are suggested to be direct precursors of trust and relationship commitment (Dwyer, Schurr and Oh, 1987; Morgan and Hunt, 1994). When exchange partners have similar beliefs of the appropriate practices to follow, of the right goals to achieve or of the important behaviors to develop, they will trust more in the other partner and will be more committed to the relationships developed. Shared values effect is likely to be more evident in international relationships, since potentially there are more differences between the parties.

Proposition 5: Shared values are positively related to relationship intensity

Opportunism is seen as *self-interest seeking with guile* (Williamson, 1975, p.6), and involves one party taking advantage of the other or seeking for short-term benefits. If a partner acts with opportunism, it generates ill will and incites resentment in the other firm. Therefore, opportunism undermines trust (Morgan and Hunt, 1994) and relationship commitment (e.g. Morgan and Hunt, 1994), and also appear to impact cooperative behavior (Morgan and Hunt, 1994; Lancastre and Lages, 2006). This effect is shown both at national level relationships, as well as in international relationships (Skarmeas, Katsikeas and Schegelmilch, 2002).

Proposition 6: Opportunism is negatively related to relationship intensity

In buyer-seller relationships that cross national borders, differences in cultural, national, organizational and managerial aspects between the parties suffuse the relationship (Parkhe, 1993). Cultural sensitivity, the *international seller's awareness of differences between domestic and foreign market business practices and its endeavor to address and manage these differences* (Skarmeas, Katsikeas and Schegelmilch, 2002, p. 763), emerges as vital for the endurance of a global alliance (Lane and Beamish, 1990; LaBahn and Harich, 1997). An international buyer's relationship commitment and trust cannot be cultivated without the understanding of its business culture by its partner (Skarmeas, Katsikeas and Schegelmilch, 2002).

Proposition 7: Cultural sensitivity is positively related to relationship intensity

## IMPLICATIONS

In a marketing relationship perspective, firms increasingly privilege closer buyer-seller relationships (Cannon and Perreault, 1999). Even though it seems that such collaborative relationships create value and are difficult to duplicate (Dyer and Singh, 1998), we are far from understanding them. The simultaneous analysis of multi-dimensions of the buyer-seller relationship is a valuable contribution. The contribution can be perceived by researchers, due to the distinctiveness of the approach and simultaneous consideration of the four conceptual blocks and the blocks' inclusion of different perspectives and by managers, which will benefit of a better understanding of the development of buyer-seller relationships and the factors affecting them.

Even though researchers agree with the importance of cooperation, trust and relationship commitment (Morgan and Hunt, 1994); relationships, even successful ones, are different according to its characteristics and its context. Albeit the moderator role of contingent factors such as, for example, consumer type is theoretically recognized (Palmatier, Dant, Grewal and Evans, 2006), one can identify a gap in their empirical certification. This study fills that gap by contemplating how international buyer-seller relationship influences firm performance under relevant contingency conditions (consumer type and relationship), which contributes to both researchers and managers' understanding of buyer-seller relationships.

## STRATEGIC RECOMMENDATIONS

In developing and maintaining buyer-seller relationships with international parties, firms must take into consideration some aspects, namely the existence of termination costs, shared values with the other party, timely, accurate and relevant communication and cultural sensitivity, as well as an absence of opportunistic behavior. Relationships can be supported on the presence of a strong relational base, involving trust, relationship commitment and cooperative behavior; and/or on the firming of a contract. The existence of a contract establishes the conditions in which the relationship is developed, whereas relationship intensity can provide an ongoing basis of coping with unexpected events occurring over time.

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# DOES OWNERSHIP INFLUENCE PERFORMANCE? EVIDENCE FROM EUROPE

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## ABSTRACT

*This paper provides new evidence on the impact of ownership over performance in Continental European countries. One major conclusion is that share ownership by managers is related with performance, while ownership concentration does not seem to play a significant impact.*

## INTRODUCTION

Ownership is important to determine corporate performance, especially when other mechanisms to prevent both managers and major shareholders from expropriating the firm's wealth are weak (Westphal, 1999). Indeed, several studies have been carried out to measure the impact of ownership on performance, but this relationship remains unexplored in many contexts and nations. Most studies have been carried out in the U.S., the U.K., and Japan, neglecting other regions. To help in filling this gap, we provide new evidence from a large sample of European companies. We selected 9 countries: Portugal, Spain, France, Germany, Belgium, Italy, Greece, Austria and Finland in order to capture a broad view of the European context and facilitate international comparisons.

Observing ownership data from 853 Continental European countries over the period between 2000 and 2004 we want to understand how insider ownership and ownership structure influence performance in Europe. Moreover, we pretend to verify whether differences in corporate governance across countries can explain variations in performance. We also address the endogeneity problem in order to verify the consistence of our results. Finally we expect that the study results help shareholders' choices on capital flotation and decisions about whether to sustain the firm's control or to hire professional managers.

Using the OLS regression to test the impact of insider ownership on performance we find a linear and positive relationship, confirming the results of Mehran (1995) and Morck *et al.* (2000). In fact, this internal mechanism to monitor managers' actions is effective in European countries. As suggested in Goronova *et al.* (2007) insider ownership aligns the interests of managers and shareholders, compensating for the weak power of the market for corporate control.

We also test the performance versus ownership structure, but, in contrast with other empirical studies, we could not find evidence of the monitoring nor the expropriation effect. Zhou (2001) observed that the ownership structure tends to remain stable for a large period, as the shareholders do not change it to achieve higher performance.

Furthermore we confirm, as Himmelberg *et al.* (1999), that insider ownership influences performance, while the opposite is also true, which may affect our previous inferences. Contrary to our hypothesis, replacing managers is not difficult in European countries, but it occurs when the firm's performance falls short of its owners' expectations. However, by contrast with Demsetz and Lehn (1985), Cho (1998) and Demsetz and Villalonga

(2001), we do not find the ownership structure to be an endogenous variable. Since in the majority of European firms, the ownership is concentrated in the hands of few shareholders it is difficult to convince the major shareholder to sell his shares to other investors. Likewise, independently of the firm performance, ownership inertia prevails in these companies.

This paper is organized as follows: the theoretical background is presented in section 2; section 3 documents the theory, hypotheses and model; in section 4 we describe the data and methodology; the results are shown in section 5 and the conclusions and paths for future research are evident in section 6.

## **THEORETICAL BACKGROUND**

Both managers and shareholders influence performance since they are responsible for the firm's investment and financing decisions, which in turn affect the firm's growth opportunities, efficiency and risk taking (Chaganti and Damanpour, 1991 and Bajaj *et al.*, 1998).

### **Insider Ownership and Performance**

The influence of insider ownership on performance has been further studied by many researchers in different national contexts and using diverse models. Mehran (1995) and Morck *et al.* (2000) found a positive relationship between insider ownership and firm performance. In fact, when ownership and control are separated, managers are more concerned in extracting private benefits, leading to a decrease of the firm's performance. Managerial acquisition of the firm's shares creates an incentive to avoid such practices (Albuquerque and Wang, 2008). However, other researchers found a non linear relationship. In the beginning, as alignment mechanisms increases and insider ownership raises, so the free-rider problem of monitoring is curbed. At intermediate levels the costs of the convergence effect are higher than the gains and so managers' and other shareholders' interests may diverge. Managers can also create an ineffective board or may try to preserve their job, even if they are no longer competent or qualified, leading to the entrenchment effect (Jensen and Ruback, 1983). Finally, reaching higher levels of insider ownership, the performance increases because the firm's owners exert the managerial role obtaining an incentive to avoid share-price decreasing decisions (Loderer and Martin, 1997). Morck *et al.* (1988), Cho (1998), Holderness *et al.* (1999), Short and Keasey (1999), Faccio and Lasfer (1999), and Miguel *et al.* (2004) confirmed this relationship when analyzing the U.S., the U.K, and the Spanish markets. However, they found different inflection points; to the U.S. market the inflection points found was 5-7 percent and 25-38 percent, to the U.K. market 13-20 percent and 42-54 percent, and to the Spanish market 35 percent and 70 percent. Other authors, such as Stulz (1988), McConnel and Servaes (1990), Han and Suk (1998), Mudambi and Nicosia (1998) and Kumar (2003) found a maximum at 40-50 percent of insider ownership but did not validate the alignment effect at higher insider ownership levels.

Since researchers use different models and databases, comparisons across countries may be biased, and so researchers need to extend their study to a diversity of countries to make effective comparisons. It was the case of Kaplan (1997) who analyzed the U.S., Japan and Germany, and found that while managers' poor past performance is quickly corrected in the U.S. through the market for corporate control, and in Japan through the monitoring of banks, in Germany relations attend to be stable in the long run and there is not enough effort to correct inefficiencies. Moreover, he concluded that managers from the three countries seem to be affected by similar forces.

### **Ownership Structure and Performance**

The relationship between ownership and performance has also been studied by diverse researchers in order to find if there is a satisfactory way of choosing an optimal ownership structure. Leech and Leahy (1991) and Mudambi and Nicosia (1998) focused on UK firms and found a significant negative and linear relationship between performance and ownership. In this case, as the firm's shares are concentrated in the hands of few shareholders, the market discipline has a weaker effect on controlling managers' strategies leading to lower performance. Contrary to these results, Wruck (1988), Morck *et al.* (2000), Gedajilovic and Shapiro (2002), and Martínez *et al.* (2007) found a positive and linear relationship, for the U.S., Japanese, and Chilean markets. The authors confirmed the monitoring effect that arises when there is a dominant shareholder. Finally, other authors, as Anderson and Reeb (2003), and Miguel *et al.* (2004), found a non linear relationship; as ownership

concentration increases, performance also rises due to more efficient monitoring. However, at higher levels of concentration, performance declines, suggesting a problem of expropriation of the minorities' wealth.

In order to make international comparisons Gedajlovic and Shapiro (1998) analyzed five countries: the U.S., the U.K., Germany, France and Canada. They failed to confirm that performance is affected by differences in the systems of corporate governance. Thomsen and Pedersen (2000) also used the cross-national technique to analyze large companies from 12 European nations: Austria, Belgium, Denmark, Finland, France, Germany, Great Britain, Italy, the Netherlands, Norway, Spain and Sweden, and found a nonlinear relation between ownership concentration and performance. Furthermore Claessens *et al.* (2002) analyzed the large traded corporations in 8 East Asian economies: Hong Kong, Indonesia, South Korea, Malaysia, the Philippines, Singapore, Taiwan and Thailand, and found that a firm's value increases with the cash flow ownership of the largest shareholder, due to the incentive effect. However, it falls when the control right of the largest shareholder exceeds its cash flow ownership because of the entrenchment effect. Finally, more recently, Maury (2006), that restricted his analysis to family firms from Western Europe (Austria, Belgium, Finland, France, Germany, Ireland, Italy, Norway, Portugal, Spain, Sweden, Switzerland and the U.K.), found that active family control is positively related to performance. However, he found no difference between passive family ownership and non family ownership.

## **Endogeneity**

Most studies established a significant impact of ownership structure and managerial ownership on performance, but some exceptions have to be pointed. Demsetz and Lehn (1985) found no relation between ownership and performance. A similar conclusion was drawn by Cho (1998), and Demsetz and Villalonga (2001) who suggested that ownership variables are endogenously determined in equilibrium by changes in ownership structure in order to achieve the firm's performance maximization. Himmelberg *et al.* (1999) also reached the same conclusions but analyzing the relationship between insider ownership and performance. Likewise these researchers believe that the results found by the generality of researchers can be spurious, because performance can influence ownership rather than the opposite.

The investor chooses an ownership structure when the firm is created and he can modify it by rearranging his portfolio. Although, Zhou (2001) found that ownership structure tends to remain stable over time, meaning that significant adaptation and coordination costs preclude the yearly adaptation of ownership structure. Furthermore, the firm's owner can also replace the manager in order to increase performance, but it may be complex to reach a common agreement on corporate structure modifications. Moreover, it is easier to remove a professional manager than an owner-manager (Hillier and McColgan, 2005, and Hermalin, 2005).

# **THEORY, HYPOTHESIS AND MODEL**

## **Theory and Hypotheses**

### **Insider Ownership and Performance**

Many researchers found a cubic relationship between insider ownership and performance (Morck *et al.*, 1988, Short and Keasey, 1999, Kumar, 2003 and Miguel *et al.*, 2004) and so we expect to find the same type of relationship. There is an incentive for managerial acquisition of the firm's shares in order to avoid agency conflicts between the principal and the agent and to increase the firm's performance. However, not always this internal mechanism contributes to it, since at intermediate levels of insider ownership managers may try to consume private perquisites, leading to a decrease in the performance.

*Hypothesis 1: Firm's performance increases with insider ownership at low levels, then at intermediate levels the performance decreases due to the entrenchment effect, and finally at higher levels of insider ownership firm's performance increases again because of the alignment effect.*

### **Ownership Structure and Performance**

We also anticipate the same non linear relationship between ownership structure and firm performance as Gedajlovic and Shapiro (1998, 2002), Thomsen and Pedersen (2000) and Miguel *et al.* (2004). In fact, ownership dispersion leads to some problems in communication and coordination, which may lead to lower performance.



As the ownership concentration rises, communication is easier and consequently shareholders try to increase the firm's value and their own wealth, leading to higher performance. However, at high levels of ownership concentration, the major shareholder may expropriate the minority's wealth to satisfy his own interests, leading to a decline in the firm's performance.

*Hypothesis 2: As ownership concentration increases, the firm's performance raises due to the monitoring effect, but higher levels of concentration lead to a lower performance because of the expropriation of minorities.*

## Variations across Countries

Comparing the previous studies we found diverse results which can be a consequence of the differences in the model specification and/or the differences across countries. In fact, each country provides similar environmental conditions, specific culture, institutional characteristics and a common legal system, that may influence performance. Likewise we expect to find country effects.

*Hypothesis 3: Companies from different nations enjoy different levels of performance.*

## Endogeneity

Finally we addressed the endogeneity problem in order to verify if the robustness of our results. While ownership may change in order to increase the firm's performance, it may be difficult to find an agreement to change corporate ownership and so the inertia can prevail to performance. Likewise we expect both insider ownership and ownership structure to be exogenous variables, which in turn validate our results.

*Hypothesis 4: Insider ownership is an exogenous variable.*

*Hypothesis 5: Ownership structure is an exogenous variable.*

## Model

### Insider Ownership and Performance

The first hypothesis will be tested using a cubic relationship between insider ownership and firm performance (1).

$$(1) \text{ Performance}_{it} = \alpha_1 IO_{it} + \alpha_2 IO_{it}^2 + \alpha_3 IO_{it}^3 + \gamma_1 Size_{it} + \gamma_2 Age_{it} + \gamma_3 GO_{it} + \gamma_4 Debt_{it} + \varepsilon_{it}$$

We also verify if, instead of a cubic relationship, a quadratic relationship between insider ownership and performance exists, because some studies such as Kumar (2003) and Han and Suk (1998) found only one inflection point, meaning that they did not validate the monitoring effect at higher levels of insider ownership. Finally we analyze the presence of a linear and positive relationship since Mehran (1995) and Morck *et al.* (2000) only confirm the alignment effect.

### Ownership Structure and Performance

The second hypothesis will be tested by the firms' performance running a regression of ownership concentration, as well as its square, in order to confirm the monitoring and expropriation effect.

$$(2) \text{ Performance}_{it} = \beta_1 OS_{it} + \beta_2 OS_{it}^2 + \delta_1 Size_{it} + \delta_2 Age_{it} + \delta_3 GO_{it} + \delta_4 Debt_{it} + \varepsilon_{it}$$

We also verify the presence of a linear relationship because Wruck (1988), Morck *et al.* (2000) and Gedajlovic and Shapiro (2002) only confirm the monitoring effect.

## Variations Across Countries

Equations (1) and (2) will be tested once more, but considering each country separately, in order to measure the specific impact of country of origin on performance.

## Endogeneity

Finally, to test if the variable insider ownership is endogenously determined we will test simultaneously the equation (3) and (4).

$$(3) \text{ Performance}_{it} = \alpha_1 IO_{it} + \gamma_1 Size_{it} + \gamma_2 Age_{it} + \gamma_3 GO_{it} + \gamma_4 Debt_{it} + \varepsilon_{it}$$

$$(4) IO_{it} = \rho_1 \text{Performance}_{it} + \gamma_1 Size_{it} + \gamma_2 GO_{it} + \gamma_3 Debt_{it} + \varepsilon_{it}$$

Then, in order to check whether the relationship between performance and ownership structure is a spurious one, injected by omitted variables, we will test the following 2 equations:

$$(5) \text{Performance}_{it} = \alpha_1 S3_{it} + \gamma_1 \text{Size}_{it} + \gamma_2 \text{Age}_{it} + \gamma_3 \text{GO}_{it} + \gamma_4 \text{Debt}_{it} + \varepsilon_{it}$$

$$(6) S3_{it} = \rho_1 \text{Performance}_{it} + \gamma_1 \text{Size}_{it} + \gamma_2 \text{GO}_{it} + \gamma_3 \text{Debt}_{it} + \varepsilon_{it}$$

## DATA AND METHODOLOGY

### Data Sources and Sample Selection

Our sample includes all companies included in the WorldScope database from Portugal, Spain, France, Belgium, Germany, Italy, Greece, Austria and Finland. The New European Countries were excluded due to the difficulty to secure sufficient data for the period in analysis (2000-2004).

**Table 3: Structure of the Sample**

|                            | Austria | Belgium | Finland | France | Greece | Germany | Italy  | Spain | Portugal |
|----------------------------|---------|---------|---------|--------|--------|---------|--------|-------|----------|
| Medium Number of Companies | 35      | 14      | 85      | 39     | 101    | 324     | 140    | 82    | 33       |
| Percentage of the Sample   | 4,10%   | 1,64%   | 9,96%   | 4,57%  | 11,84% | 37,98%  | 16,41% | 9,61% | 3,87%    |

### Variables

#### Ownership Variables

We measured both the presence of large shareholders and management ownership, using Reuters' database. **Insider ownership (IO)** was measured as the percentage of ownership held by the Chief Executive Officer, the Chairman and the Vice-chairman of the board and the Executive Director. **Large Ownership (3S)** was measured by the proportion of shares held by the three largest shareholders.

#### Firms' Performance Variables

To measure the performance we used both market and accounting measures, since there is no consensus about the optimal performance ratio. **Tobin's Q (Q)** was calculated dividing the market to book value plus debt by the total assets (Faccio and Lasfer, 1999:12, and Demsetz and Villalonga, 2001:219). **Return on Assets (ROA)** was obtained directly from DataStream's item of ROA (Gedajlovic and Shapiro, 1998).

#### Control Variables

We also included firm characteristics as control variables, to identify other possible determinants of performance not captured by the ownership variables.

- **Size:** We considered the firm's size as a *proxy* of the natural logarithm of the company's sales (*ln Sale*) as Leech and Leahy (1991), Himmelberg *et al.* (1999) and Kumar (2003).
- **Age:** The firm's age (*age*) was measured by the number of years between the firm's foundation and the year in analysis (Leech and Leahy, 1991, Anderson and Reeb, 2003, and Kumar, 2003).
- **Growth Opportunities:** We controlled growth opportunities (*GO*) measuring year-over-year sales, as Gedajlovic and Shapiro (1998, 2002) have done.
- **Debt Intensity:** The ratio of debt over total assets was directly taken from DataStream database and is an indicator of debt intensity (Demsetz and Villalonga, 2001, Anderson and Reeb, 2003, Kumar, 2003, and Miguel *et al.*, 2004).

## RESULTS

### Insider Ownership and Performance

The results of cross-sectional OLS regressions of the first equation are displayed in the next table.

**Table 4: OLS regressions of ROA and Tobin's Q and insider ownership**

|           | C           | IO        | Age       | Size      | GO        | Debt      | R <sup>2</sup> |
|-----------|-------------|-----------|-----------|-----------|-----------|-----------|----------------|
| ROA       | -19.994 *** | 8.377 *** | 0.163 *** | 1.451 *** | 1.621 *** | 0.036     | 63% ***        |
| Tobin's Q | -0.297 *    | -0.028    | 0.006 *   | 0.020     | -3.78E-05 | 0.011 *** | 7.84% ***      |

\*, \*\*, \*\*\* Significant at the 10%, 5% and 1% levels, respectively

63 percent (R<sup>2</sup>) of the firm's performance, measured by the ratio *ROA*, is explained by the selected explanatory variables. We fail to confirm our first hypothesis, that there is a cubic relationship between ownership and performance. Nevertheless, performance is affected positively and significantly by insider ownership, so we only confirm the alignment effect obtained by Mehran (1995) and Morck *et al.* (2000). We also confirm that the variables *age*, *size* and *growth opportunities* affect positively the performance at the 1 percent level of significance. It is possible that *other variables*, not used in our model, have a negative impact on performance, such as legal framework, the macroeconomic scenario and the industry influence.

Taking into account the ratio *Tobin's Q* to measure the performance we conclude that only 7.84 percent of the explanatory variables selected explain the variable in analysis. Likewise, *Tobin's Q* may be an inefficient ratio to measure the performance in this case.

## Ownership Structure and Performance

The results of the estimation of equation (2) are shown in the following table.

**Table 5: OLS regressions of ROA and Tobin's Q and ownership structure**

|           | C           | S3    | Age      | Size      | GO        | Debt      | R <sup>2</sup> |
|-----------|-------------|-------|----------|-----------|-----------|-----------|----------------|
| ROA       | -19.238 *** | 1.975 | 0.132 ** | 1.425 *** | 1.629 *** | 0.039     | 62.28% ***     |
| Tobin's Q | -0.337 **   | 0.066 | 0.006    | 0.021     | -0.000    | 0.011 *** | 7.90% ***      |

\*, \*\*, \*\*\* Significant at the 10%, 5% and 1% levels, respectively

Using the ratio *ROA* we have a model which explains 62.18 percent (R<sup>2</sup>) of the firm performance. Unlike most previous studies, we fail to confirm the influence of ownership structure on *ROA*, suggesting that the performance is not affected by the level of ownership concentration in European countries. This idea confirms that the ownership structure remains stable over the years and the shareholders do not change it to achieve higher performance (Zhou, 2001). Moreover, since the firm can gain from economies of scale and knowledge, *age* and *size* are positively related with performance. Additionally, a company with *growth opportunities* has many investment opportunities that lead to higher performance. Finally, *other variables* as the macroeconomic scenario, legal environment and culture can also influence the performance.

Once again we verify that the *Tobin's Q* ratio is not a good estimator of the firm's performance because only 7.90 percent of the explanatory variables selected explain the performance.

## Country Effect

To verify our hypothesis 3, which states that companies from different nations enjoy different levels of performance, we test equations (1) and (2) by country. The results are presented in the tables 4 and 5.

**Table 6: OLS regressions of ROA and insider ownership by country**

|         | C         | IO        | IO <sup>2</sup> | Age      | Size   | GO        | Debt      | R <sup>2</sup> |
|---------|-----------|-----------|-----------------|----------|--------|-----------|-----------|----------------|
| Austria | 0.568     | 7.362 **  |                 | 0.214 ** | 0.137  | 0.336 *** | -0.032    | 58.35% ***     |
| Belgium | 17.115 ** | 86.475 ** | -158.387 ***    | -0.030   | -0.775 | 8.146     | -0.110 ** | 74.06% *       |
| Finland | -11.128   | 13.589    |                 | 0.105    | 1.165  | -1.260    | 0.032     | 10.99%         |

|          |                |               |               |               |              |              |               |               |
|----------|----------------|---------------|---------------|---------------|--------------|--------------|---------------|---------------|
|          |                | **            |               |               | *            |              |               | *             |
| France   | -18.622        | 10.798        |               | 0.056         | 1.458        | 2.437        | -0.008        | 9.98%         |
| Germany  | -33.500<br>*** | 9.322<br>**   |               | 0.279<br>**   | 2.244<br>*** | 1.286<br>**  | 0.080         | 14.52%<br>*** |
| Greece   | -0.937         | 3.087<br>*    |               | -0.291<br>*** | 0.808<br>*** | 1.706<br>*** | -0.113<br>*** | 99.25%<br>*** |
| Italy    | -17.834<br>**  | 11.280<br>*** |               | 0.097         | 1.089<br>**  | 0.583<br>**  | 0.054         | 15.43%<br>*** |
| Spain    | 1.230          | 16.090<br>**  | -19.658<br>** | 0.049         | 0.184        | 9.555<br>*** | -0.048        | 39.97%<br>*** |
| Portugal | -14.326        | 2.948         |               | 0.463         | 1.235        | -7.356       | -0.122        | 14.56%        |

\*, \*\*, \*\*\* Significant at the 10%, 5% and 1% levels, respectively

Analysing the relationship between insider ownership and performance for each country (table 4) we locate country-effects, confirming our hypothesis number 3. In Belgium, we find a non-linear relationship: the *ROA* increases until the manager owns more or less 27.30 percent of the firm's shares, and decreases after that level, but we can not confirm the alignment effect at higher levels of insider ownership. Moreover *debt intensity* is negatively related to performance at the 5 percent level of significance, and there are *other variables* not included that positively influence it. In Spain, we also establish a quadratic relationship between performance and insider ownership, meaning that performance increases till insider ownership reaches 40.93 percent and decreases after that. Additionally, the variable *growth opportunities* is positively related to performance. Our results are different from the ones found to Miguel et al. (2004) due to variations in the model. In Greece, Germany and Italy we confirm a positive and linear relationship between insider ownership and firm performance, as a result of the alignment effect. In Austria and Finland we faced some problems of normality and so the results are not to significant. Finally, we do not find any consistent conclusion for France and Portugal, may be due to the fewer data for these countries. Moreover, we find divergence among the probability of the t-statistic and the F-statistic, which shows problems of normality of the residuals.

**Table 7: OLS regressions of ROA and ownership structure by country**

|          | C               | S3             | Age            | Size          | GO            | Debt           | R <sup>2</sup> |
|----------|-----------------|----------------|----------------|---------------|---------------|----------------|----------------|
| Austria  | -1.8678         | 4.3479<br>*    | 0.1572<br>**   | 0.1924        | 0.3705<br>*** | -0.0124        | 57.77%<br>***  |
| Belgium  | 8.583           | 5.650          | -0.019         | -0.341        | -4.992        | -0.039         | 20.96%         |
| Finland  | -5.1406         | -3.0832        | 0.1229         | 0.8393        | -1.1975       | 0.0232         | 6.10%          |
| France   | -14.8124        | 1.9306         | 0.1348         | 1.2023        | 3.2139        | -0.0377        | 6.81%          |
| Germany  | -32.9656<br>*** | 1.3528         | 0.2452<br>**   | 2.2449<br>*** | 1.2346<br>**  | 0.0898<br>*    | 13.29%<br>***  |
| Greece   | -0.3716         | 0.7126         | -0.3014<br>*** | 0.7898<br>**  | 1.7094<br>*** | -0.1124<br>*** | 99.23%<br>***  |
| Italy    | -23.5119<br>*** | 13.7699<br>*** | 0.0497         | 1.1722<br>*** | 0.5162<br>*** | 0.0579         | 15.30%<br>***  |
| Spain    | 3.7399          | -0.5649        | 0.0321         | 0.0858        | 9.3111<br>*** | -0.0483        | 35.26%<br>***  |
| Portugal | -15.622         | 1.3948         | 0.4753         | 1.2613        | -7.8753       | -0.1071        | 14.18%         |

\*, \*\*, \*\*\* Significant at the 10%, 5% and 1% levels, respectively

Observing table 5 we also confirm our 3<sup>rd</sup> hypothesis, meaning that there are differences on the relationship between ownership structure and performance across countries. We conclude that for Belgium, Finland, France, Germany, Greece and Portugal there is no evidence that ownership structure influences performance. Furthermore, the model used to analyse the relationship in Belgium, Finland, France and Portugal is not significant as there are other variables which together can explain performance. Finally, the model applied to Austria and Italy explains 57.70 and 15.30 percent of performance, respectively. We find that the ownership structure positively influences performance, confirming the monitoring effect. Moreover, *age* and *growth opportunities* are also positively related to performance.

## Endogeneity

Lastly to test the robustness of our results we apply the 2SLS in order to verify if the dependent variable ROA is correlated with the independent variable insider ownership and/or ownership structure. Moreover, with this model we can observe if there is more than one dependent variable.

The results obtained when testing the equations 3 and 4 simultaneously are shown in table 6.

**Table 8: 2SLS regressions of ROA and insider ownership**

|    | C         | ROA       | Age        | Size      | GO        | Debt     | R <sup>2</sup> |
|----|-----------|-----------|------------|-----------|-----------|----------|----------------|
| IO | 0.257 *** | 0.003 *** | -0.003 *** | -0.009 ** | -0.003 ** | 9.40E-05 | 3,74% ***      |

Instrument list: ROA, IO, age, size, GO, debt

\*, \*\*, \*\*\* Significant at the 10%, 5% and 1% levels, respectively

The variable insider ownership is explained by the variable *ROA* at 1% of level of significance, which means that we fail our hypothesis number 4. Consequently our previous results can be affected, because insider ownership can change in order to achieve a better performance. Moreover, the variables *firm's age*, *size* and *growth opportunities* also influence insider ownership in a negative way. Smaller and younger firms are more concerned with the replacement of managers when the firm's performance does not meet the owners' expectations. As the firm increases and consolidates its presence in the market, the firm's owners can be more reluctant to replace managers leading to structural inertia.

Finally, in table 7 we present the results of simultaneous testing of equations 5 and 6.

**Table 9: 2SLS regressions of ROA and ownership structure**

|    | C         | ROA   | Age       | Size      | GO     | Debt   | R <sup>2</sup> |
|----|-----------|-------|-----------|-----------|--------|--------|----------------|
| S3 | 0.533 *** | 0.001 | 0.005 *** | -0.011 ** | -0.000 | -0.001 | 1.89% ***      |

Instrument list: ROA, S3, age, size, GO, debt

\*, \*\*, \*\*\* Significant at the 10%, 5% and 1% levels, respectively

We find that the variable *three major shareholders* is not explained by the performance measured by *ROA*, which confirms our hypothesis 5 stating that ownership structure is an exogenous variable. In fact, it is easier to change the ownership structure when the firms are widely held, which is less common in Continental Europe. Likewise, we can affirm that the previous results are robust.

## CONCLUSION

Our results illustrate that, in Continental Europe, insider ownership positively influences performance, due to the alignment effect of the interests of both shareholders and managers. The eventual family links and networking may also facilitate deals and enhance the firm's value. Hence, the owner-manager has a better performance than a professional manager, not only because agency costs between the principal and the agent are avoided or at least reduced but also because they make an effort to pass the firm onto the next generation. Less pressure for exhibiting short term profits which plague the managers of listed companies, may lead to long term value creating strategies. These results are observed in most of the Continental European countries analyzed, where the market for corporate control is weak, comparing with the so called Anglo Saxon nations. Furthermore our findings suggest that the organizational mode predominant in Continental Europe is efficient, as insider ownership unambiguously leads to higher performance. However, the results can be affected since insider ownership can change in ways consistent with the firm performance maximization. Even if in European countries the firm's owner normally sustains its control, when the results obtained diverge from his expectations, he may decide to choose another internal shareholder to manage the firm or even to contract a professional manager for the job in order to correct inefficiencies.

Additionally, contrary to our expectations, we could not find a significant relationship between ownership structure and performance, showing that the level of ownership concentration does not influence corporate performance in European countries. Therefore we can not conclude that ownership concentration leads to better performance than dispersed ownership, but the results suggest that each individual chooses the ownership

structure that maximizes the cost-benefit relationship, according with his self strategy. Moreover, we confirmed that ownership is an exogenous variable, and it remains relatively stable over time. In Continental Europe, most firms' capital is concentrated in the hands of few shareholders and dominant shareholders may be share the goal of passing the firm onto the next generation, even sacrificing short term results. Likewise, the ownership's inertia prevails and so this variable is not important to explain the firm performance as it is in countries with more developed capital markets such as the U.S. and the U.K.

Furthermore, we confirm country effects in the relationship between insider ownership-firm performance and ownership structure-firm performance. In fact, the country legal system, macroeconomic scenario and specific culture are important to explain the differences in results (Albuquerque and Wang, 2008).

These results suggest that investors in Continental European firms may find capital concentration an efficient mode to avoid agency conflicts between the principal and the agent, and consequently to maximize the firm performance. Moreover, when the manager under skilled for his task or if he consumes private perquisites, he may be replaced. Finally, the ownership structure does not have a significant impact on performance and so investors may choose the one that coincides with their strategy.

This study had some limitations. Since there is restricted information about the firms' ownership, we could not use all firms from the Worldscope database, as we originally intended, and so the final sample was substantially reduced to match the ownership information from Reuters Database.

Future research should analyze whether ownership concentration is associated to family firms, because in our case the major shareholder can be another firm, the State, a financial institution or an individual. Due to identification problem we can not conclude that family firms perform better than non family firms, as Anderson and Reeb (2003) found, although there is evidence of a similar result.

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## ENDNOTES

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# **STRATEGIC ALLIANCES IN THE OIL UPSTREAM SECTOR: CASE OF ROYAL DUTCH SHELL PLC**

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## **ABSTRACT**

*The objective of this article is to contribute to research on management of firms in alliances and networks. The study is part of a much wider investigation conducted by one of the authors that intends to make evident the importance, for strategic planning and management, of taking into account the implications of alliances and networks for firm conduct and performance. To this end, the article shares the results of an assessment of the appropriateness of the strategy of Royal Dutch Shell, a leading firm in the oil and gas industry, by way of both relational, i.e. pertinent to relationships, namely alliances and networks formed by these, and traditional (non-relational) analyses. Comparing the results of these two analyses shows clearly that the relational one complements the other and provides new insights that would not be captured from the traditional one alone; namely the fact that there are relational opportunities that neutralize or minimize threats identified in the traditional analysis. The case study method was used and data collected by way of documental and telematic investigations. The tools developed by one of the authors for the analyses constitute an example of frameworks and methodology for performing analyses from a relational perspective, with a view to enhancing the effectiveness of strategic alliance management.*

## **INTRODUCTION**

In the current business scenario, characterized by increasing globalization, ceaseless change and huge complexity, it is impossible for firms to survive in the market on their own. They are thus driven to enter into strategic alliances with various industry actors to sustain competitive advantage. This is necessary not only for those firms that act locally, but mainly for those organizations with a global presence.

In the energy industry, especially oil and gas firms, the consolidation that has taken place worldwide during the last decade, mainly through mergers and acquisitions such as in the cases of *Exxon-Mobil*, *Chevron Texaco*, *Total Fina-Elf*, *BP Amoco*, *Repsol YPF*, is an eloquent example of this trend.

These energy firms' quest for alliances is generally justified by the following factors: i) they operate vertically, from the extraction of oil to sales to the end consumer, which requires a varied assortment of resources and significant investments in physical assets; ii) they need specific technical knowledge to exploit new sources of energy and make large investments in research and development (R&D); iii) they operate at a global level and in different areas in the vast energy sector.

The aim of this article is to share results of an in-depth analysis of the main and most recent strategic alliances of a leading multinational energy firm in the oil upstream sector, *Royal Dutch Shell plc*, henceforth referred to as "Shell".

With the support of the SNA – *Strategic Network Analysis* (Macedo-Soares, 2002), conceptual model, the firm's strategic fit was assessed from a relational perspective, that is, pertinent to relationships, notably its

alliances, and the networks formed by them. The strategic alliances focused at Shell were those established in the scope of global projects in force in 2007 in the areas of oil, gas, GTL and chemicals.

The study sought to confront the results of the relational analysis with those derived from traditional analysis (that does not take into account the strategic implications of relationships), based on Macedo-Soares' (2000) Generic Integrative model.

The objective of this study was indeed to make evident the importance for the firm's strategic planning and management of taking into account the strategic implications of alliances and networks, given their characteristics. Note that it is part of a much wider investigation in which various sectors and firms were investigated with the same objective. It thus attempts to confirm, in the case of Shell, what was revealed already during the investigation of more than 50 firms, that is, the need to adopt a relational model of strategic analysis for the case of firms that take part in networks and alliances, as traditional analysis may provide an incomplete or even distorted picture of the opportunities and threats that exist in the firm's industrial and relational context (Macedo-Soares, Tauhata, and Freitas, 2004; Macedo-Soares, Tauhata, and Lima, 2005; Macedo-Soares and Figueira, 2007).

Given that for most multinational and global firms, including those in the energy sector, alliances are even more frequent and necessary than in the case of domestic ones, the strategists of these firms should take particular care to assure that their strategies are consistent with established or potential alliances.

There are still many gaps in the research on alliances and networks, especially regarding the actual strategic management of alliances and networks in firms with global operations, and the development and application of appropriate analytical tools.

Besides this introduction, the article is divided into five parts. The first and second parts present its theoretical references and explain the method adopted for the case study. The third introduces Shell, the object of the study, and provides relevant background information. The fourth presents the results of the seven steps of the strategic analysis undertaken, including a comparison between the results of traditional and relational analyses in terms of the threats and opportunities generated. In the last part some final considerations are made regarding Shell's strategic fit, highlighting the contributions of the relational analysis and the study itself. Suggestions are also made for further research.

## THEORETICAL REFERENCES

### Central Concepts

First of all it is important to provide some definitions. In the research at issue in this article, strategy is defined as a unifying proposition that gives coherence to the actions and decisions of an organization, especially for leveraging and allocating the necessary resources for improving or sustaining its performance in keeping with its vision, and considering environmental conditions (Macedo-Soares, 2002; Grant, 1999).

To identify the type of strategy adopted by the firm, Mintzberg's (1998) generic strategies typology was used. It contemplates two dimensions: differentiation and scope of products and services. Five kinds of differentiation are considered: price, image, support, quality and design, besides the strategic option of non-differentiation. The scope may be broader or narrow, referring to various possibilities, ranging from non-segmentation to niches and customization.

As to the adequateness or appropriateness of the strategy, i.e. *strategic fit*, we drew on Grant (1998). Fit implies and refers to consistency between the firm's strategy – goals and values, its resources / competencies as well as its ability to manage them, and its external environment. In the case of firms that operate in alliances and networks, we assume that there is strategic fit when the strategy, given its characteristics, enables it to capitalize on the strengths constituted not only by the firm's own resources, but also by those of partners and relationships, in order to exploit opportunities created both by contextual, structural and relational factors, attenuating the threats pertaining to all of them (Macedo-Soares, 2002). It is an evolution of Barney's (1996) definition of "good" (adequate or appropriate) strategy, in that it considers relational factors.

Alliances are defined according to Gulati (1998) as *voluntary arrangements between firms – involving exchange, sharing or co-development of products, technologies or services*. They can assume various forms and cross the firm's vertical, horizontal and geographic boundaries. They are strategic when their objective is to enhance the firm's competitive advantage (Macedo-Soares, 2002).

## Tools for Traditional Analysis

For the traditional analysis the research used the Generic Integrative-GI model (Macedo-Soares, 2000; Macedo-Soares et al., 2005) that analyzes critical organizational factors from a resource-based view and their interaction with environmental variables. In this model the organization is presented as a balanced system in order to emphasize the importance of the congruence of the variables at play for the success of the strategy, in accordance with the principle of strategic fit.

These variables are divided into two categories: main and secondary. The main variables may be independent or dependent. The former are controllable and are subdivided into five categories of factors: people, physical, financial, organizational and technological. Their strategic implications appear in the form of strengths and weaknesses. The dependent variable is the performance that results from the management of the independent variables.

The secondary variables influence the performance of the main ones by constituting actual and potential opportunities and threats to be levered or neutralized. Drawing on Austin (1990), these variables have to do with economic, political, socio-cultural and demographic macro-environmental factors. Examples of these will be discussed below in the case of the firm studied.

The GI model also considers strategically significant actors in their respective roles as customers, suppliers, competitors, new entrants and substitutes, in accordance with Porter's (1980) constructs, besides the figure of the *complementor*. Note that, according to Brandenburger and Nalebuff (1997), a strategic actor is a *complementor* (and possible partner) if consumers value its product more when they have another actor's product than when they only have its product. These actors constitute opportunities and threats that are affected by, and affect those presented by macro-environmental factors.

In this article the traditional analysis focuses on this set of strategic implications.

## Tools for Relational Analysis

The relational analysis was performed using the Strategic Network Analysis-SNA model (Macedo-Soares, 2002). This model has a methodology to assess fit, complementing the traditional assessment. As in the case of the GI model, it possesses categories and constructs for this analysis that can be made at both firm and industry levels. The categories are network structure, network composition, tie modality and network management and are detailed below.

The network structure category analyzes these relationships in terms of their density (quantity of ties), relationship scope (whether global, broad or plentiful), position and centrality of the organization in the network (whether the firm performs a central role in ties with other firms or possesses a low centrality or a similar position to the others). The network composition category analyses the members of the network. The constructs used in this analysis are the identity of the focal firm, which is the main object of analysis, status of the focal firm, identity of the partners, status of partners, access to the focal firm's resources and access to partners' resources. The tie modality category analyzes the institutional rules that govern the alliances. The constructs are the strength of connections (strong or weak) and the nature of ties (collaborative or opportunistic).

The network management category that is pertinent for analysis at firm level refers to the management of the network of relationships considering the following constructs: use of governance mechanisms (to analyze whether they are appropriate), development of knowledge-sharing routines between firms (to determine the stage of their development), undertaking of specific investments in the relationship (to assess whether they are adequate), development of network change-management capacities and processes (to analyze whether they are strong or weak), experience with multiple alliances, processes and competencies regarding the management of conflicts between multiple partners, dynamic fit with multiple partners, and the development of processes and competencies that assure this fit's sustainability (to determine whether partners possess compatibility and complementarity).

The strategic implications of the network characteristics may take the shape of strengths and weaknesses (actual or potential) at the level of the firm and as opportunities and threats (actual or potential) at the level of the industry.

## RESEARCH METHODS

The main method used for the research itself was the case study (Yin, 1994), deemed to be the most appropriate for research into the strategic management of alliances between firms (Halinen and Törnroos, 2005).

The data relevant for the case study was collected through a documental and telematic investigation of public domain databases, respecting their confidentiality. Direct observation on the part of one of the authors that worked at the firm at the time of the study also contributed to assessing the pertinence of the data collected.

By definition, it is not possible to generalize to other firms the conclusions of a case study, but only to generalize analytically (Eisenhardt, 1989). This was not considered to be a limiting factor. Indeed, the objective of the study was precisely that of contributing to the development of analytical constructs and to the theory of alliance management, by illustrating the pertinence of the results of other case studies in the context of a wider investigation into the importance of adopting a relational perspective in strategic analyses of firms that take part in alliances and networks.

Drawing upon the SNA methodology for strategic analysis, in the case at issue here of Shell, we followed the following steps:

1. Characterization of strategy using Mintzberg's (1988) typology and a greater detailing of the specific aspects of the Shell case.
2. Identification of key strategic actors and analysis of their strategic implications, in terms of actual and potential opportunities and threats.
3. Analysis of the strategic implications of interacting macro-environmental factors of the world energy industry.
4. Identification and classification of the alliances that constitute the firm's network, known as the *ego-net*.
5. Selection of the main strategic alliances in force (largest projects).
6. Identification of the characteristics of the ego net and analysis of the implications at industry level, in terms of constituting opportunities and threats.
7. Confrontation of the results of the traditional analysis, in accordance with the Generic Integrative-GI model (Macedo-Soares, 2000) with those of the relational analysis, in accordance with the SNA model (Macedo-Soares, 2002);
8. Assessment of strategic fit based on the traditional and relational analyses' results.

## THE CASE OF ROYAL DUTCH SHELL PLC.

### Background information and Strategy Characterization – Step 1

Shell is a global group of petrochemical and energy companies that is actively present in more than 130 countries and has around 108.000 employees. Its strategic aim is to satisfy global demand for energy while behaving responsibly towards the environment and society. Its vision is to operate in an efficient, responsible and profitable way in the oil, oil products, gas and chemical products businesses and other businesses in the sector, and seek out and develop other sources of energy to meet its customers' needs and the world's growing demand for energy. It also has interests in other segments of the industry, such as renewables, hydrogen and CO<sub>2</sub>.

The Shell group is divided into an upstream business that includes oil exploration and production and a downstream business that covers refining and the distribution of products to consumers. Its business strategy according to an interview conceded by its CEO, Jeroen van der Veer (available at <http://www.shell.com>; accessed on 20 February 2008), is "more upstream and profitable downstream", that is, more exploration and production to search for and exploit more oil and gas, while at the same time refining and distributing products to consumers in a profitable and sustainable fashion. This strategy enables Shell to take part in the "energy challenge", that is, to meet the growing demand for energy, by assuring its supply and reducing the social and environmental impacts caused by the production and use of energy.

According to the documental investigation, and based on Mintzberg's (1988) typology, Shell's strategy was characterized as being one of differentiation in terms of quality and image, oriented towards the customer. This strategy involves the development of unique products and services, based on loyalty to the brand and the customer. Shell is recognized for its use of scenarios in its planning processes. As a documental source for this study the research used the public domain report "Shell Global Scenarios to 2025". Note that this report takes into account a series of recent facts that have impacted the course of world events, notably the 9/11 attack on the WTC that led to tougher anti-terrorist policies and the Enron case that highlighted the need for greater transparency on the part of large corporations. The report identified three major forces that will condition future

action: i) coercion and regulation aimed at providing greater security; ii) market incentives to achieve greater efficiency; iii) the community that demands greater social cohesion and justice.

In order to construct these scenarios the trends are superimposed in a context in which generally two forces win and one loses. Unlike utopias, these scenarios envision a plausible equilibrium. Thus, three possible scenarios are considered.

“The first of these “possible futures” is called Low Trust Globalization. This is a legalistic world where the emphasis is on security and efficiency, even if at the expense of social cohesion. The second, Open Doors, is a pragmatic world that emphasizes social cohesion and efficiency, with the market providing “built-in” solutions to the crises of security and trust. The third, called Flags, is a dogmatic world where security and community values are emphasized at the expense of efficiency” (www.shell.com).

Shell measures its performance using a series of key indicators that assess its overall performance according to financial, efficiency, social and sustainable development perspectives. These constitute the Overall Performance Scorecard. Besides these four main indicators, the company uses additional financial indicators to assess performance. By way of comparison, indicators of a global competitor, Chevron Texaco were consulted (available at <http://www.chevron.com>; accessed in May 2007). Analyzing the conjunction of these indicators, our study concluded that they can be considered satisfactory, despite the small decline in 2006's values compared to 2005's. Financially Shell's result is positive, especially when they are assessed in the light of competitors' indicators.

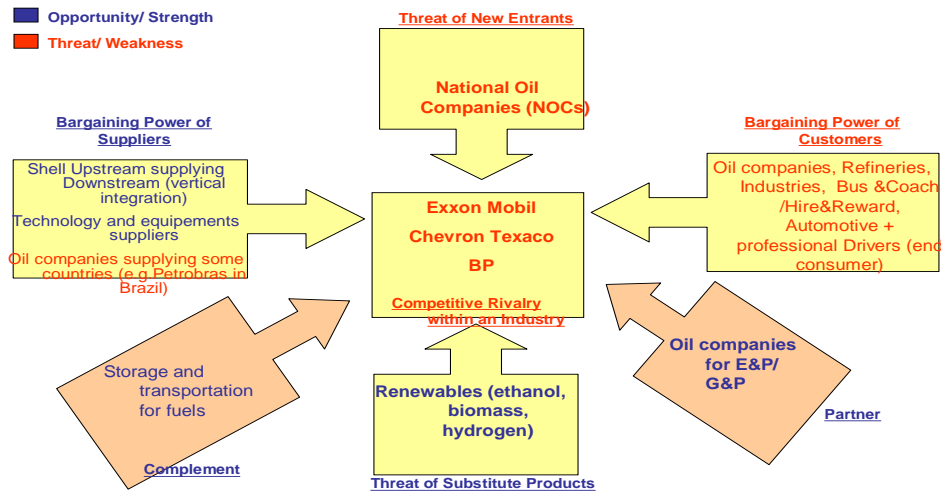
A strong point that should be highlighted is that the Shell brand comes first in global brand preference. Besides denoting a competitive advantage, this result is in line with Shell's focus on image and the customer. Shell is in first place not only in lubricants but also in differentiated fuels that have a better performance or are cleaner. Shell's leadership in these markets is consistent with its focus on quality. Other qualitative indicators of the Shell's performance are the worldwide launching of its Code of Conduct, showing an effective concern with its stakeholders and emphasizing its customer-oriented strategy. Similarly, Shell's attitude towards people and its environmental responsibility policy are organizational competencies that have a positive impact on performance. One should also mention that Shell's investments in corporate social responsibility are congruent with its focus on reputation.

## **Traditional Analysis – GI Model: Key Strategic Actors – Step 2**

In accordance with the second step of the strategic analysis methodology adopted, based on the SNA model, the research analyzed the key strategic actors in Shell's competitive environment. Thus, in accordance with the help of Porter's (1980) constructs, suppliers, customers, rivals, new entrants and substitutes were identified and their strategic implications assessed in terms of opportunities and threats, while *complementors* were analyzed following Brandenburger and Nalebuff (1997) (see Figure 1).

Oil industry rivals identified at world level are Exxon Mobil, Chevron Texaco, British Petroleum, Total-Fina Elf, Repsol YPF and state companies such as Petrobrás and PDVSA, that are strong players in their domestic markets. Considering that the first three firms are large global corporations, whose actions affect the industry directly, they can be seen as a major threat to Shell. Another actual threat is constituted by new entrants constituted by national oil companies. These have had a greater impact and often claim to be preferred by consumers, besides not incurring global logistics costs (actual threats are in bold type in Figure 1). Other possible threats were considered to be potential ones. Constituting a threat due to its bargaining power with suppliers, Petrobras stands out as an example of an oil company that monopolizes its domestic market. In a hypothetical oil purchase negotiation, Shell would be at a disadvantage. Finally the clients identified at world level are other oil companies, refineries, industries, bus and transport companies, automotive companies and car-hire firms and professional drivers (end consumer), that exercise a continuous and growing pressure on Shell, demanding less polluting energy, and also representing a potential threat.

**Figure 1 – Strategic Actors in the World Oil Industry**



Regarding substitute products, it should be noted that thanks to its heavy investments in research and development, Shell already uses alternative sources of energy, such as eolic and solar energy, ethanol, biomass and hydrogen. Thus these renewable energy sources represent a real opportunity for the company if the industry comes under pressure from public opinion and environmental legislation.

In the case of suppliers, Shell has great bargaining power. As it is vertically integrated, that is, engaged in oil extraction, refining and distribution, it possesses a competitive advantage in relation to its rivals.

In the scope of the study, the oil storage and transportation companies were identified as Shell *complementors*. They provide a strategically important service that can enhance competitive advantage. As Shell possesses significant bargaining power in its relation with these firms, it demands a better quality of service, in accordance with its focus on quality. Thus, these actors constitute a potential opportunity.

In accordance with the conceptual model used for strategic analysis, the behavior of actors is directly influenced by the macro-environmental factors examined below.

### Traditional Analysis– GI Model: Environmental Factors – Step 3

The implications for Shell’s performance of economic, political, socio-cultural and demographic macro-environmental factors were assessed based on the “Low Trust Globalization” scenario which was considered the most adequate for this purpose, in that it reflects a moderate view of the globalization phenomenon. The results of this analysis are presented in Table 1.

One of the most pertinent economic factors identified in the analysis was the 3.1% growth in GDP projected for developing nations, leading to a greater demand for energy and thus generating a real opportunity for Shell. Higher oil prices, providing a real opportunity to increase revenues, also represent a potential threat in the shape of a strengthening of authoritarian Middle East countries. The demand of regulatory agencies such as SEC (US Securities & Exchange Commission) for greater transparency on the part of firms, has transformed the investor relations area into an essential competency for corporate finances in general. Shell’s recent investments in the development of this competency thus represent a potential opportunity. However the reason that led Shell to make this investment, that is, the episode involving unproven oil reserves that occurred in 2003, may result in a potential threat, given that more cautious investors demand greater returns.

China’s growth is also a major economic factor and, together with above world average economic growth in developing nations, may create potential opportunities. In Africa, for example, Shell has the potential opportunity of exploiting oil reserves, albeit facing the potential threats posed by its bankrupt and corrupt governments.

**Table 1 – Strategic Implications of Macro- Environmental Factors**

| Environmental Factors                                  | Opportunities(Actual/Potential)                                     | Threats (Actual/Potential)   |
|--|---|--|
| <b>Economic</b>  |   |  |
| GPD growth: 3.1%                                       | Increase in energy demand due to growth in developing countries (P) |  |
| Higher oil prices                                      | Income increase, "more upstream" (A)                                | Strong regimes in Middle East (P)  |
| Required transparency (ex. SEC)                        | Investors relations as core competency for corporate finance (P)    | Cautious investors demand higher return as there is a higher risk (event of nonproved reserves of oil) (A) |
| China as manufacturing hub                             | Participate in China's economic growth (A)                          |  |
| Countries in development growing above world average   | Access to resources in Africa (P)                                   | Fight against corruption and deal with failed states (P)   |
| <b>Political</b>                                       |   |  |
| Nation states ->Market states                          | Market States maximize opportunities for companies (P)              |  |
| Civil lawsuits monitor markets                         |   | New laws: CEO+CFO take personal responsibility (A)   |
| New (vigorous) regulatory actors                       |   | Knowledge dissemination is hampered by legal and security considerations (A)                               |
| Overlapping national and provincial rules              |   | Intrusive checks and controls (A)  |
| <b>Socio-cultural</b>                                  |   |  |
| Media covers scandals and performance with disclaimers |   | Recent past not rated positively by stockholders investors (A)   |
| Increase of renewable energy - diversity of supply     | Indigenous sources encourages (A)                                   |  |
| Kyoto Protocol explicit                                | Expand present alternatives: Aeolian, Solar, Hydrogen (A)           | Regulation for unconventional energy: energy-and-carbon industry (A)<br>Biodiversity policies (P)          |
| <b>Demographic</b>                                     |   |  |
| Restricted Immigration: to what labour market needs    |   | Innovation restricted (P)  |

In terms of political factors with a significant impact on Shell's strategy, the study identified the change in the profile of States from Nation State to Market State as one of the most important. This transformation means that States are now arbiters in the global area, maximizing potential opportunities for firms. However, in compensation, the superimposition of national, regional and local government rules and laws represent an actual threat of controls, imposing greater restrictions on economic transactions. Similarly, the appearance of new regulatory agencies may hinder the dissemination of knowledge. For a global company that shares investments in R&D amongst its offices throughout the world, this would represent an actual threat. The last, but no less important, political factor involves the new laws drawn up to monitor the market that threaten CEOs and CFOs with litigation by making them personally liable for corporate actions.

The strategic implications of socio-cultural and demographic factors were also considered important for the strategic analysis of Shell. This is due to various factors, including i) its presence in various countries through its network of gas stations, thus making its brand highly visible to end consumers; ii) a vast number of direct and indirect employees all over the world; iii) the significant effect of its operations on environmental and social issues; iv) the fact that Royal Dutch Shell plc. is a public company with individual shareholders. Lately, the debate regarding the impact of Shell's business on the environment and the valorization of its image and reputation, as a distinct competency, has increased this importance.

Some recent socio-cultural and demographic changes in the world scenario may directly affect oil consumption. On the demographic front, the increasing restrictions on immigration will hinder the movement of people in response to labor market demands, and are thus a potential threat to innovation that depends on international cooperation between researchers and academic staff. In the socio-cultural sphere one should highlight the implementation of ecologically favorable actions in compliance with the Kyoto Protocol. This represents a potential opportunity for Shell with the expansion of alternatives such as eolic, solar and hydrogen-based energy. Moreover, this could neutralize the actual threat of regulation that favors non-conventional energy, and is detrimental to the carbon-based energy industry. A related potential threat comes from the adoption of tougher policies to protect biodiversity, which is one of the areas where the oil industry is vulnerable. Society



itself will also demand more diverse energy sources, focusing on renewable forms of energy. Here, Shell can exploit an opportunity by developing local sources. Finally the last factor analyzed was the media's coverage of corporate scandals and performance. This factor was found to really threaten Shell, for episodes have already occurred in which investors did not assess the company's performance positively, especially in the case of the unconfirmed oil reserves.

## **Relational Analysis – SNA Model: Classification of Alliances – Step 4**

In accordance with Step 4 of the strategic analysis methodology, the research identified and classified the main alliances established by Shell with its strategic actors in the scope of the projects focused in the study. It was verified that Shell had alliances with all types of strategic actors (playing various roles), as explained below.

Notably, it was observed that alliances with customers, such as gas stations or even a B2B customer, such as a large mining company, were of the following types: joint ventures, franchises and agreements/contracts, with the latter being the most common.

In the case of suppliers, there were joint R&D agreements, or agreements/contracts, with contracts also being the most common type. There was a great array of suppliers, including, amongst others, IT firms, engineering firms, consulting firms and equipment manufacturers of all kinds. Regarding new entrants, such as new oil companies, there was also the possibility of establishing joint ventures to exploit future opportunities.

In the case of substitutes, the authors identified as main partners, research institutes, universities or even private-sector firms that were engaged in developing new sources of less-polluting energy. It was evident that Shell formed alliances in order to exploit the generation of new knowledge, mainly through joint ventures, minority shareholdings and joint R&D.

In the case of *complementors*, the alliances established by Shell are of the agreement and contract type and involve mainly firms that transport and store oil for Shell. Also in this category, one of the most important partnerships for Shell's image with its end consumers is the one it established with Ferrari, the renowned sport car manufacturer that takes part in the F-1 championship, the world's premiere automobile competition. With its sponsorship and joint R&D, as well as marketing contract, this alliance is strategically significant for Shell's image.

The alliances that Shell maintains with its competitors ("coopetition") in various parts of the world, mainly in the upstream business (exploration and production) should also be highlighted. These alliances are established mainly in the form of joint ventures, mergers and acquisitions (considered extreme forms of alliances).

In the following section the research presents the results of step 5 of the analysis that deals with some of the main alliances entered into by Shell to undertake its largest current worldwide energy investments.

## **Relational Analysis – Largest "Co-opetition" Projects – Step 5**

Shell's biggest projects are examples of its technological prowess and knowledge, and have been made possible mainly by the strategic alliances underpinning them.

- Athabasca Oil Sands Project (AOSP)

This project is aligned with Shell's strategy, producing oil from non-conventional sources and providing an outstanding return for shareholders. Moreover, it has strengthened Shell's position in North America, a key area for the company, and is very close to the USA, its main consumer market in 2007.

Owners: Shell Canada Limited (60%), Chevron Canada Limited (20%) e Western Oil Sands L.P. (20%).

Location: Alberta, Canada.

- Pearl Gas to Liquids (GTL) Project

This project represents a strategic movement for Shell towards forming its coveted portfolio, including gas as a source of energy, providing an opportunity to use innovative technology to tap more environmentally correct sources.

Owners: Qatar Petroleum (QP) and Royal Dutch Shell.

Location: Ras Laffan, on the northeast coast of Qatar, 70km north of Doha.

- Groningen gas field

Through a joint venture with Exxon-Mobil, it has been possible to modernize and resuscitate the Groningen gas field, which is considered by Shell as decisive for its strategy to deliver long-term value to its shareholders.

Partners: 50-50 partnership between Shell and Exxon-Mobil.

Location: Northeast of Holland, 180 km from Amsterdam.



- **Bonga Deepwater Project**

This project is a key part of Shell's vision to expand the energy sector in Nigeria, increasing oil production capacity in Nigeria by 10% and oil production by 25%.

Partners: Shell Nigeria (55%) in a joint venture with Esso (20%), Elf (12,5%) and Agip (12,5%). Location: 120km of the coast in Nigeria Delta.

- **Na Kika, Gulf of Mexico**

This exploration and production project uses cutting-edge technology and is very close to the USA, an important consumer market where Shell aims to increase its share.

Partners: Joint-venture (50-50) between Shell and BP.

Location: Gulf of Mexico, 144 miles southeast of New Orleans.

- **Nanhai Petrochemicals Complex**

Shell Chemical's largest investment to date, this project aims at producing greater value for Shell and its shareholders, besides consolidating its position as a supplier of petrochemicals.

Partners: Shell Nanhai BV (50%) and CNOOC Petrochemicals Investment Limited (50%).

Location: Daya Bay, 80km northeast of Hong Kong, China.

- **Sakhalin II**

This multi-billion project will produce 8% of world Liquid Natural Gas - LNG capacity and will make it possible to build a leading position in the development and marketing of LNG. Its location in Russia's east will also help in its relations with Asia (mainly Japan and Korea).

Partners constituting a consortium: Gazprom (50%+1), Shell (27,5%), Mitsui (12,5%) and Mitsubishi (10%).

Location: Sakhalin Island of Russia's east coast.

## **Relational Analysis – Strategic Implications of Alliances/Networks – Step 6**

Table 2 summarizes the strategic implications, in terms of opportunities and threats, of its main alliance network, i.e. Shell's ego-net.

We perceived that Shell's ego-net created far more opportunities than threats due to its structure, as well as the strength of its connections. The strength of its network's connections, its high density and the difficult access to the focal firm's resources constituted real opportunities that enabled it to optimize its performance in its quest to create more value and achieve higher returns. These strong ties increased Shell's bargaining power with customers and suppliers and inhibited the entry of new participants to the industry, thus reducing their threat. All things indicated, moreover, that the fact that the alliances generally had a global geographical scope, specifically in the case of exploration and production, contributed to increasing these opportunities.

The collaborative nature of ties also permitted the reduction of transaction costs between network partners in the context of the industry.

**Table 2 – Strategic Implications of Shell's Ego-Net at Industry-Level**

| Categories                   | Constructs                                    | Indicators                           | Strategic Implications  |
|------------------------------|---|--------------------------------------|---|
| <b>1-Network Structure</b>   | <b>1.1 Density</b>                            | <b>High</b>                          | Real opportunity: strong ties enable higher returns to be obtained and reduce the threat of new entrants in exploration and production                                  |
|                              | <b>1.2 Scope</b>                              | <b>Global/Wide-Ranging/Plentiful</b> | Actual opportunity: global partners in exploration and production   |
|                              | <b>1.3 Position in network</b>                | <b>Central</b><br>High centrality    | Actual opportunity: high centrality enables the firm to better exploit inter-firm resources.  |
| <b>2- Network Membership</b> | <b>2.1 Identity of the focal industry</b>     | <b>Strong/High/Favorable</b>         | Potential opportunity: the strong and favorable identity of partners can be exploited enabling new projects to be developed.  |
|                              | <b>2.2 Status of the focal industry</b>       | <b>Strong/High/Favorable</b>         | Actual opportunity: the main partners have been successful in relationships with firms at level of the industry constituting a real opportunity to lever profitability. |
|                              | <b>2.3 Access to focal industry resources</b> | <b>Difficult</b>                     | Potential opportunity: the difficulty in accessing the resources of the focal industry hinders the entry of new competitors.  |
| <b>3- Tie Modalities</b>     | <b>3.1 Strength of ties</b>                   | <b>Strong</b>                        | Actual opportunity: the strength of ties creates an opportunity for generating higher value in the alliance.  |
|                              | <b>3.2 Nature of ties</b>                     | <b>Collaborative</b>                 | Potential opportunity: the collaborative ties between industries may reduce transaction costs.  |

## Confrontation of Traditional and Relational Analyses – Step 7

This section shares the results of the seventh step of the strategic analysis of Shell. One should remember that in this step the data captured by the traditional analysis is compared with that obtained using a relational perspective. The aim is to highlight the contribution of alliances/networks to Shell's strategy and how important it is for firms operating in alliances/ networks to adopt a relational perspective in their analyses.

Confronting the main results of the two types of analysis clearly showed that by establishing strategic alliances the company was able to mitigate the main threats identified by way of the traditional analysis, transforming them into opportunities and also creating new ones or enhancing those that already existed. We now comment the most important findings presented in Table 3.

We saw that the threat of new entrants, such as national oil companies operating in their respective countries, can be mitigated by establishing ties with partners in the industry. This high tie density creates a very strong barrier to entry, for new entrants need considerable resources to enter and survive in this environment.

Establishing a network of alliances with high density and global scope with some of its strongest global competitors attenuates the real threat constituted by its strong rivalry with its three main competitors (Exxon Mobil, Chevron Texaco, British Petroleum).

The increase in the price of oil has strengthened the governments of countries with large oil reserves such as those in the Middle East. This situation represents a threat for Shell as it reduces its bargaining power. Shell has sought to establish alliances with national oil companies in the Middle East as illustrated by the agreement signed with Qatar Petroleum and Qatar's government, an initiative that is attenuating this threat.

The regulation in favor of non-conventional forms of energy constituted a strong threat for Shell, as it stimulated the entrance of substitutes for its main product – oil. As a response to this threat, Shell established relationships aimed at increasing its production capacity in non-oil projects, such as the Gas to Liquid alliance in Qatar - Pearl GTL.

Due to the increasing concern expressed by public opinion with environment-related issues, the possibility of developing clean energy sources has become an actual opportunity for Shell. According to a representative of Global Compact, a United Nations initiative aimed at encouraging corporate responsibility, firms have begun to pay more attention to these issues, realizing the effect they can have on their reputations, brands and employee productivity, amongst other aspects, (see: <http://www.gfmag.com/index.php?idPage=421>; accessed on 05

February 2008). Thus a potential opportunity exists for Shell that can be exploited by establishing alliances with advanced research centers such as universities and other organizations to engage in joint research.

**Table 3 – Confrontation of Strategic Implications - Relational versus Traditional Analysis**

| <b>Traditional Analysis (GI)</b>   | <b>Relational Analysis(SNA)</b>   |
|--|---|
| <b>Potential threat</b> of new entrants such as the national oil companies in their respective countries.  | <b>Actual opportunity</b> provided by the high density of ties with industry partners that raise barriers to entry.   |
| <b>Actual threat</b> posed by the high level of rivalry in the industry with three strong global competitors.                                    | <b>Actual opportunity</b> represented by the establishment of an alliance network with high density and global scope with some of its biggest global competitors.   |
| <b>Potential threat</b> represented by the Middle East's authoritarian governments.  | <b>Actual opportunity:</b> the alliance with national oil company Qatar Petroleum, through an agreement signed with the government of Qatar in the Middle East  |
| <b>Actual threat</b> of regulation favoring non-conventional energy.   | <b>Actual opportunity</b> provided by the creation of a new GTL project , the Pearl GTL (Qatar-Shell) alliance, in order to serve the Asian, European and USA markets.  |
| <b>Actual opportunity:</b> expand alternative sources of energy: eolic, solar, hyfrogen and biofuels.  | <b>Potential opportunity:</b> partnerships with universities/organizations for joint research to develop new cleaner technologies.  |
| <b>Actual threat</b> posed by cautious investors who demand a higher return to compensate for a higher risk (the vent of the unproven reserves). | <b>Actual opportunity</b> provided by alliances (including joint-ventures) with big industry actors endorsing Shell asa trustworthy organization that honors its commitments.   |
| <b>Actual opportunity</b> of participating in China's economic growth. .   | <b>Actual opportunity:</b> the Nanhai Petrochemicals Complex project in na indirect alliance with Chian's national oil company.   |
| <b>Actual threat</b> represented by fighting against corruption and dealing with bankrupt states in developing countries.                        | <b>Actual opportunity</b> represented by alliances with governments and national oil companies to neutralize this threat (Pearl GTL - Qatar, Sakhalin II - Russia, Nanhai Petrochemicals - China, Bonga Deepwater - Nigeria). |

After what happened in 2003, when Shell confirmed the existence of unproven oil reserves, distrustful investors became an actual threat as they began to demand a greater return on their capital. The establishment of alliances with important industry actors endorses Shell as a trustworthy organization that honors its commitments, thus attenuating the cited threat.

As for the exploitation of the opportunities identified, one must mention China's growth. Due to its growth prospects, entering this new market constitutes an actual opportunity for Shell. With this objective in mind, Shell in an indirect alliance with the National Company of China, has developed the Nanhai Petrochemicals Complex project, thus guaranteeing its presence in this prosperous region.

As already mentioned in the traditional analysis, one can expect above world average growth on the part of developing countries, generating a greater demand for energy. Despite constituting an actual opportunity, many developing countries have bankrupt or corrupt governments that end up representing an actual threat. In order to neutralize these threats, Shell has established alliances with governments and national oil companies, thus assuring a sustainable presence in these markets. As examples one may cite projects such as the Pearl GTL in Qatar; Sakhalin II in Russia; Nahhai Petrochemicals in China and Bonga Deepwater in Nigeria.

## FINAL CONSIDERATIONS

After completing the eighth step of the strategic analysis in accordance with the methodology adopted, we were able to conclude that Shell's strategy is appropriate from a relational perspective. Indeed, the results strongly suggest that, given its three characteristics of differentiation in terms of image, customer focus and quality, with an emphasis on establishing alliances, the latter helped it to neutralize threats and exploit the main

opportunities that existed. Aligned with its focus on image and preserving its distinctive competence of reputation management, we saw that Shell has entered into alliances with important strategic actors in its industry. It is a well-known fact that in forming these alliances the member firms demonstrate that they trust each other, thus reinforcing their credibility with customers.

As an eloquent example of the appropriateness of its strategy from a relational perspective, one should highlight the alliances established by Shell to develop new technologies related to non-polluting sources of energy. This initiative was a response to the public's growing concern with environment-related issues and strengthened Shell's positioning regarding its focus on customers and other stakeholders. Besides those already cited, we saw that Shell also formed collaborative alliances with a view to developing innovative technologies that could make its competitive advantage in exploration and production (upstream) more sustainable. These alliances also reflected Shell's concern with focus on quality.

Thus, this case study of Shell's alliances and networks, performed with the help of the *Strategic Network Analysis* framework, attained its objective, namely to confirm what had been evidenced in various other sectors studied in the wider investigation of which it is a part: strategic analysis from a relational perspective reveals relational aspects that are significant for the strategic management and planning of the firm that cannot be detected by traditional analyses, as the latter do not take into account the relationships between firms that operate in the same environment. At the same time, the study made it clear that the two analyses should be performed together as their results complement each other. A confrontation of the analyses shows how the threats posed by structural factors of the industry can be attenuated or reinforced through the creation of relationships and networks formed by them, enabling member firms to lever their performance.

The main lesson to be drawn from this study is that it is important to undertake strategic analyses from both the traditional and relational viewpoints. Moreover, the study also contributes to strategic practice by showing how to do this, using the conceptual tools developed and tested in the wider investigation.

An interesting finding revealed by the study that could be explored in other studies of global firms in this sector, is that Shell has a much larger number of strategic relational opportunities than non-global firms investigated in other studies. A suggestion for future research would be to study at greater depth the significance for firms that operate globally to establish alliances and networks, in terms of creating more opportunities and attenuating potential threats.

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# **THE DILEMMA IN MEASURING ETHICAL THINKING LEADS TO A DILEMMA IN MANAGEMENT**

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## **ABSTRACT**

*Research in the measurement of ethics and ethical thinking is varied and fraught with dilemmas. In an effort to consider what any kind of psychological measurement involves, the author reviews recent literature in the field of ethics measurement and questions how the results could have any value. The many factors which play a part in ethical thinking have an influence on how people think and what values they possess. The subjects' value system, culture, national origin and ethnic background have a direct effect on how they respond to problematical situations. A question in the mind of the manager with such diverse worker populations globally leads to a call for further education for the manager in understanding the underpinnings of ethical thinking amongst the workers*

## **INTRODUCTION**

A survey of the research currently written in the field of measurement of ethical or moral thinking, indicates that a vast amount of factors have an effect on any cognitive functioning such as this. These factors are so varied in kind and intensity that they elude any objective measure. There are no parameters, no guidelines to sort out a "g" factor in ethical thinking. The very attempt in measuring any behavior, according to psychologists points to inadequacies in regard to validity and the reliability of the instrument. The results of any measure of behavior are a relative measure and not an objective measure. We can use questionnaires, interviews and even observations, but we cannot really measure ethical thinking. So many tests show different results based on mood changes, timing, climate, understanding and following instructions, and various different behavior characteristics of the test-taker. Many subjects are disenchanted when they realize that they are taking a test which offers little or no incentive other than to satisfy the examiner. Psychologists are well aware that the test-taking attitude of the subject is not always positive and notations have to be made to verify this when weighing the results of the test.

Today the most popular measures of moral judgment are based on Kohlberg's theory of moral development (1969). His theory emphasizes the framework of the cognitive processes of an individual, the reasoning processes that an individual uses to arrive at and justify an ethical decision. According to Kohlberg, an individual arrives at a decision based on what kind of education he has had and the socialization processes that he has gone through

## **A REVIEW OF THE LITERATURE.**

There have many attempts to measure values and ethics of subjects of all ages i.e. adult workers, graduate students, undergraduates and the general population. An interesting thesis is seen in a study which attempts to reveal that ethical values are related to attitudes towards society and job satisfaction (Alas, 2005). The researcher indicated that she believed that in capitalist countries, values were influenced by attitudes toward society but in socialist countries, facets of job satisfaction better predicted the ethical values of employees.

Following this study, another research endeavor which surveyed the ethical policies of 2700 firms in 24 countries indicated that there was a variance in the ethical policies of firms headquartered in different countries. Culture was seen as a factor. The general conclusion was “on the basis of the data set, it is not possible to assess the ethical performance or the ‘true’ ethical behavior of the firms. Our findings suggest that firms’ non-financial conduct is shaped by a combination of firm specific, industry specific, country specific and global factors. Each firm’s unique set of characteristics is seen to shape the responses of the firm to specific challenges.”(Scholtens, Dam 2007) It seems as if the ethical orientation depends on the corporate culture.

Aside from attitudes, and corporate culture being cited as influencing the kind of ethical thinking that is accepted in various organizations, there are studies that maintain different emphases on just what ethical thinking is all about. One such study cites environmental influences on ethical decision making. The hypothesis was that career experiences had an influence on ethical behavior. The investigators tested 102 doctoral students who were asked to respond with their decisions concerning environmental experiences and climate perceptions. The experimenters factored out five dimensions: professional leadership, poor coping, and lack of rewards, limited competitive pressure and poor career direction. All of these were better predictors on the ethical decision task one would perform as compared to “climate factors”, i.e. equity, interpersonal conflict, occupational engagement and work commitment. (Mumford, Murphy and Connolly, 2007)

Not content with attempting to measure ethical thinking, two investigators took a very novel approach to studying the measure of cognitive processes that occur when ethical decisions are made. Chen and Ping (2006) conducted research with psychology and business undergraduate students. They attempted to measure the students’ attitude towards unethical behavior and their propensity to engage in unethical behavior. Four weeks later they used a 15 item Unethical Behavior measure with five factors, i.e. Abuse Resources, Not Whistle Blowing, Theft, Corruption and Deception. The experimenters factored these items, mindful of the fact that they wanted to single out factors which were indicative of “deliberate and unethical behaviors in the financial domain that are related to some of the scandals and corruptions reported in the media, or white collar crime.” (Chen and Ping, p.79). The interesting aspect of this study was that the investigators found a gender difference in the results, which is supported by other similar studies (Malinowski and Berger, 1996). In Chen and Ping’s study, male students tended to consider theft, corruption and deception more ethical than females. They also tended to have a higher propensity to engage in four types of unethical behavior (Not Whistle blowing, Theft, Corruption and Deception) as compared to females.

Summarizing the research leads the author to emphasize the different methodologies and assessment instruments that have been used to measure ethical thinking and values of various subjects such as college age students, graduate students and adults.

## ASSESSMENTS

Assessment of human behavior is an onerous task, given the fact that human subjects respond differently at different times to the same measures. A prime example several years ago involved a child of seven who had been brought to a psychologist to be tested. It was quite obvious that the child was very resistant to any kind of testing. In order to ease the situation, the examiner gave the child some paper and crayons and requested the child to draw a figure. This procedure is used with children to test intelligence. . The child selected a black crayon and proceeded to draw a gingerbread man. When the examiner asked the child to talk about his figure, he responded “It’s a burnt gingerbread man!” The examiner knew enough to suspend the testing as the child was not ready to be tested.

In attempting to test people’s cognitive ability to make ethical decisions, one wonders about the objectivity reliability and validity of such measurement. First of all, there is a vast range of intelligence amongst all people. The higher the intelligence, usually the better the cognitive abilities. Are we to assume then that a higher degree of cognitive ability is correlated with better ethical thinking? We know that some of the top executives in our corporate world exhibited a high degree of intelligence and failed in good ethical judgment. Examples are seen in the behavior of leaders in Enron, Tyco, MCI and other scandals in American corporations. Situational ethical thinking needs to be measured.

Despite this, most of the attempts to measure ethical thinking have been relegated to testing college and graduate students, some adults and few managers. For over twenty years there have been several and very different approaches to testing ethical thinking. Kohlberg (1969) initially tried to understand the development of moral thinking from childhood to adulthood. He actually developed a developmental stage approach which involved six stages which he and his associates modeled after much research. His main thesis was that as one

progresses through life stages, the individual develops in moral reasoning. The last stage represents the “universal ethical principle orientation” Here “right” is what the decision-maker’s conscience leads one to decide, in agreement with whatever the individual chooses as his ethical principles.

Rest (1979,1983) followed up with the idea of developmental aspects of moral judgment. He maintained that unlike Kohlberg’s theory that justice exists in the individual, Rest felt that during the developmental stages, justice was really based on concepts of social cooperation. It is interesting to note that during all these explorations of moral development there was little or no reference to the element of the free-will of the individual.

The Moral Judgment Interview (MJl) was the direct outcome of putting into operation, Kohlberg’s theory. The subject is presented with a series of situations which involve moral conflict. After responses are made the subject is questioned in regard to his moral reasoning in selecting his resolution to the conflict. The purpose of this type of investigation is to concentrate on the stages of moral reasoning used in solving moral dilemmas.

Rest in 1979 developed The Defining Issues Test (DIT). This test does not involve any interview techniques, but rather attempts to measure one’s moral reasoning. The test comprises six hypothetical dilemmas. These dilemmas involve a series of social moral issues where the subject is asked to respond to the situations and rank the importance of several statements which are based on different stages of moral reasoning. There is a built in check for random responses so that consistency of response is noted.

Research on the DIT verifies validity and reliability (Davidson, 1979). Both the DIT and MJl have established validity and reliability for what they do, i.e. measure moral reasoning. There is a problem however when these instruments are used in a business context. Further study in the applicability of these tests to business needs to be done. Hypothetical situations are just that, hypothetical. The applicability of using these tests for measure in a business community leads to several questions. “Several researchers have suggested that managers seem to use different reasoning when the problem is related to business than they do when the problem involves a broader, societal issue” (Elm and Weber, 1994).

Jackall (1988) suggested that corporate managers in business utilize a different moral code at times. What is morally accepted at work is not necessarily acceptable at home or elsewhere. Whatever the bureaucratic rule is at work seems to set the parameters for managers’ behavior. In actuality, there are researchers who feel that ethical decision-making is really issue dependent.

Given the most popular measuring instruments that are used today to measure moral reasoning, it is doubtful whether or not they can be utilized when measuring managers’ moral reasoning. There is a tremendous gap between reasoning and behavior. Today the corporation exists, not in a vacuum but in a global environment externally and a diverse workforce internally. Each of these factors leads to a myriad number and variety of decisions which the manager must make. His decisions are based on his own experience, education, social status and basic moral grounding. The data base utilizing measurement of moral reasoning of managers would be enormous and onerous, and therefore a dilemma in trying to design a perfect profile for management in recruiting managers.

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# HARMONIOUS DEVELOPMENT OF LITHUANIA ECONOMY AND MARKET TODAY: THEORY AND PRACTICE

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## ABSTRACT

*The paper analyzes the national economic factors of the development of the Lithuania state in the European Union (EU). The place of the national state is shown under globalization in the common EU space where under the conditions of a free market complicated tasks are being formed: for development of progress, promotion of democracy in the territory of the Lithuania, and activation of the public activity. Problems of the Lithuania state and public development as well as ways of their solution are described. Analysis is given of the opportunities of the modernization of the organization on the national market and the common EU space, factors for optimization of human labour are determined and presented, and methods are foreseen for solving the future political, economic and social problems in period 1997-2006 years under the conditions of globalization.*

## INTRODUCTION

The most important features of the national state in the 21<sup>st</sup> century society are distinguished and characterized by:

- *the special system of institutions, which is intended for performance of government functions;*
- *the right to perform government functions strictly according to the normative system of acts (“NSA”) of the state;*
- *the state territory, which is limited by the borders and where the government functions are implemented for the development of progress and democracy of the organizations according to their normative system of acts (“nsa”). [www]*

Analysis is given of the opportunities of the modernization of the organization on the national market in period 1997-2006 years and the common EU space, factors for optimization of human labour are determined and presented, and methods are foreseen for solving the future political, economic and social problems under the conditions of globalization [Makštutis].

**The scientific and practical problem of the work** is to explore the factors of globalization, which impact the EU political, economic and social system under the conditions of the global market, to identify the place of the harmonious development the state and society. The sphere of existence and activities of people, society and state is characterized by the variety of different fields, the main being political, social, economic, military, informational, judicial, cultural etc. In each of these fields there exist dangers of different kinds which have a certain character and content. The degree of their concentration and influence is not permanent. The time and place also change. To provide security in each of these fields it is necessary to take adequate measures to timely react to different types of dangers. This allows to claim that there exist separate, but interconnected and interrelated types of security, such as political security, economic security, social security, military security, informational security, judicial security, cultural security etc. They all constitute national security [*Constitution*].

The National Security Concept is presented under circumstances of global economy and market while Lithuania's integration into EU structures is in process. The guarantee of national security is rapid development

of national economy and market which is guaranteed by creating of national product, by production and realization in the national market in period 1997-2006 years, by decreasing of import flows and increasing of export volume. In order to reach this goal it is necessary to work out a project of harmonious development of national economy and market, which would guarantee project implementation in Lithuania and would serve as a guarantor to strengthen national security in the EU space [Impact].

**The objective of research** is the harmonious development of national economy and market, as a new system of the 21st century in the geopolitical environment of Lithuania in period 1997-2006 years.

**Research tasks** are to specify the human activity optimization trends, to calculate the rational use of natural and material resources, to prepare the optimum model of management and self-management for the improvement of the environment in the organizations by applying quantitative and qualitative evaluation criteria of the personnel, to develop a model of the system for the creation and implementation of the national product, to present its implementation stages for the rapid development of national economy and market in period 1997-2006 years under the conditions of globalization.

**Research object** is the system of the harmonious development of national economy and market in period 1997-2006 years under the conditions of globalization.

**Research results** are the preparation of a model for the improvement of the system for the qualitative and quantitative evaluation of national, natural, material, financial and human resources, description of its implementation stages, creation and presentation of the models of the separate stages of a model for optimization of the activity of Lithuanian organizations, for forecast of national economy and market under the conditions of global economy and market, generalization of the results correlation of the factors in period 1997-2006 years, formulation and presentation of the conclusions.

## THE ESSENCE AND TYPES OF DANGERS IN THE SPHERES OF HUMAN ACTIVITY, STATE AND SOCIETY

A danger is a complex of conditions and actions which hinder the normal development of a person, society and state. To reveal the content of dangers it is necessary to know the conditions and factors of the social environment that determine them. Factors of the social environment in which people, society and state exist and act are basic for appearance of dangers of different kinds [Steger].

Dangers can appear in any sphere of human activity: political, economic, social, military, informational, judicial, cultural etc. The degree of their concentration and influence is not permanent. The time and place also change. Taking certain measures to provide security in each of the above mentioned spheres allows to claim that there exist separate but interconnected and interrelated concepts such as political security, economic security, social security, military security, informational security, judicial security, cultural security etc., which are types of national security and constitute the content of national security. The influential structure of a danger can be examined in two aspects: static and dynamic. The static aspect envisages: a source of danger (subject); an object of influence; means of influence of a source of danger on an object of danger. The dynamic aspect envisages: aims which a source of danger follows; the process of influence on an object; the result of this influence [Warren].

A timely liquidation of social threats demands: to determine in time the transition of a danger into a threat; to carry out long-term forecasting in order to envisage preventive measures to provide social security; to carry out the policy of protection of the vital values and human rights, society and state; to determine the degree of responsibility of the society and state in the sphere of social security; to provide the protection of the feeble and to give an opportunity to the strong to fulfill their plans; to coordinate actions of all branches of the power (legislative, executive and legal). To carry out these tasks is possible on the base of estimation of relations of factors of social environment and their influence on the social security. It is possible to do it on the base of the factual indexes of the main factors of the social environment [Kotabe].

Demographic problems. One of the groups of inner threats to the national security of Lithuania is connected with demographic problems. These are the demographic situation, migration processes, processes of depopulation and problems of national minorities. The demographic situation is worsening.

As to the result of impact all dangers can be classified according to the damage inflicted to the object: acceptable danger when the damage can be restored; unacceptable (disastrous) danger when the damage can't be restored and the object should be destroyed [Bouckaert].

Migration Processes. Emigration abroad is acquiring a mass character. Especially alarming is the emigration of the most active and creative part of the population – young people and qualified specialists. The

“brain drain” decreases scientific and technological potency of the country, its intellectual potential, sharpens the problem of depopulation, lack of qualified labour force and social protection of relatives and children left in Lithuania.

Dangers exist in all types of national security. Their impact can be treated objectively and subjectively; their content is different. In social-psychological aspect the basis of the security constitutes the theory of social conflicts: global, geopolitical, international, internal, political, organizational, personal. Besides, there occur mutual influences of types of national security. To eliminate subjective treatment and to be able to make predictions a mathematical method with the use of real values can be implemented in order to get correlation matrixes and be able to make precise conclusions about transition of a danger into a threat [Baron].

## **THE ESSENCE OF APPLICATION OF A MATHEMATICAL METHOD OF THE HARMONIOUS DEVELOPMENT OF THE STATE AND SOCIETY**

In each factor in a chosen period of time (in our case from 1997 till 2006) there occur certain changes. Having current (statistic) and standard data it is possible to calculate the quotients of a particular factor of each year and carry out a comparative analysis with the quotients of all chosen factors of the social environment, which will allow to determine their quotients of correlation. With the use of the program of forecasting there has been carried out a complex analysis of interrelations of the factors of the social environment and their interconnection with types of security. For the program of forecasting we prepared data per each factor of the social environment. To do this all the factors were grouped and their level under the task was determined. The complex solution of tasks was carried out in a certain step sequel (from the 1<sup>st</sup> till the 10<sup>th</sup> step). A step regressive method is used [Account]:

$$\bar{y} = \bar{b}_0 + \bar{b}_1 \bar{x}_1 + \bar{b}_2 \bar{x}_2 + \dots + \bar{b}_n \bar{x}_n,$$

where  $\bar{y}$  – relation (one factor is determined through other factors of the system);  $\bar{b}_0$  – free number (quotient);  $\bar{b}_1, \dots, \bar{b}_n$  – determined quotient of factors;  $\bar{x}_1, \dots, \bar{x}_n$  – factors of the social environment.

## **RESULTS OF THE HARMONIOUS DEVELOPMENT OF THE STATE AND SOCIETY**

A timely liquidation of social threats demands: to determine in time the transition of a danger into a threat; to carry out long-term forecasting in order to envisage preventive measures to provide social security; to carry out the policy of protection of the vital values and human rights, society and state; to determine the degree of responsibility of the society and state in the sphere of social security; to provide the protection of the feeble and to give an opportunity to the strong to fulfill their plans; to coordinate actions of all branches of the power (legislative, executive and legal). To carry out these tasks is possible on the base of estimation of relations of factors of social, economic, political environment and their influence on the social security. It is possible to do it on the base of the factual indexes of the main factors of the social environment. [www]

The real results of scientific research work: „Research of Regional Cooperation with Lithuania’s Integration into NATO and European Union“ (in our case from 2003 till 2007) of the calculations is shown [Account]:

in Table 1 “The Matrix of the Correlation Links of the Factors of the Social Environment”

(in our case from 1999 till 2006);

in Table 2 “The Matrix of the Correlation Links of the Factors of the Economic Environment”

(in our case from 1997 till 2006);

in Table 3 “The Matrix of the Correlation Links of the Factors of the Political Environment”

(in our case from 2001 till 2005).

### **Factors of the Social Environment in Table 1:**

- x1 – The number of the population at the beginning of the year (thousands);
- x2 – Employed population (thousands of people);
- x3 – rate of birth;
- x4 – rate of death;
- x5 – Average monthly gross salary of the employed population in the economy of the state (Litas);
- x6 – Average monthly net salary of the employed population in the economy of the state (Litas);
- x7 – Average retirement pension (Litas);
- x8 – Registered crimes;
- x9 – Registered crimes (connected with narcotics);
- x10 – International migration (arrival);
- x11 – International migration (departure);
- x12 – Financing of the Department of the State Defense (per cent of the GDP);
- x13 – Expenses for the personnel of the Department of State Defense (per cent of all expenses);
- x14 – Expenses of the Department of State Defense for purchasing (per cent of all expenses).

**Table 1: The Matrix of the Correlation Links of the Factors of the Social Environment  
(in our case from 1999 till 2006)**

|     | x1  | x2    | x3   | x4    | x5    | x6    | x7    | x8     | x9    | x10   | x11   | x12   | x13   | x14   |
|-----|-----|-------|------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|
| x1  | 1.0 | -0.50 | 0.73 | -0.93 | -0.90 | -0.88 | -0.92 | -0.033 | -0.83 | -0.93 | 0.41  | -0.26 | 0.97  | -0.61 |
| x2  |     | 1.0   | 0.04 | 0.66  | 0.72  | 0.75  | 0.70  | -0.089 | 0.063 | 0.46  | 0.36  | -0.47 | -0.43 | -0.23 |
| x3  |     |       | 1.0  | -0.50 | -0.38 | -0.35 | -0.41 | 0.021  | -0.8  | -0.7  | 0.84  | -0.79 | 0.66  | -0.82 |
| x4  |     |       |      | 1.0   | 0.95  | 0.95  | 0.96  | -0.17  | 0.62  | 0.95  | -0.27 | -0.07 | -0.89 | 0.46  |
| x5  |     |       |      |       | 1.0   | 1.0   | 1.0   | -0.065 | 0.59  | 0.84  | -0.11 | -0.14 | -0.88 | 0.36  |
| x6  |     |       |      |       |       | 1.0   | 0.99  | -0.11  | 0.53  | 0.83  | -0.10 | -0.17 | -0.86 | 0.35  |
| x7  |     |       |      |       |       |       | 1.0   | -0.006 | 0.65  | 0.85  | -0.11 | -0.11 | -0.91 | 0.36  |
| x8  |     |       |      |       |       |       |       | 1.0    | 0.38  | -0.18 | 0.40  | 0.20  | -0.16 | -0.26 |
| x9  |     |       |      |       |       |       |       |        | 1.0   | 0.67  | -0.40 | 0.51  | -0.88 | 0.57  |
| x10 |     |       |      |       |       |       |       |        |       | 1.0   | -0.55 | 0.19  | -0.86 | 0.67  |
| x11 |     |       |      |       |       |       |       |        |       |       | 1.0   | -0.69 | 0.32  | -0.93 |
| x12 |     |       |      |       |       |       |       |        |       |       |       | 1.0   | -0.25 | 0.67  |
| x13 |     |       |      |       |       |       |       |        |       |       |       |       | 1.0   | -0.56 |
| x14 |     |       |      |       |       |       |       |        |       |       |       |       |       | 1.0   |

Source: Account in 2007 years.

**Factors of the Economic Environment in Table 2 [Vijeikis]:**

- x1 – The number of the population at the beginning of the year (thousand);
- x2 – Employed population (thousands of people);
- x3 – The level of unemployment;
- x4 – Average monthly gross salary of the employed population in the economy of the state (Litas);
- x5 – Average monthly income of households for one member (Litas);
- x6 – Average retirement pension (Litas);

x7 – The total agricultural production in current prices (thousands of Litas per one person);  
x8 – Sold production of the whole economy in current prices (thousands of Litas per one person);  
x9 – Completed construction work by local constructors (thousand of Litas per one person);  
x10 – The output of the retail sales excluding sales of transport (thousand of Litas per one person);  
x11 – The dynamics of international trade (millions of Litas);  
x12 – Transportation of goods by all transport means (millions of Litas);  
x13 – Direct foreign investments per one person (of the year, Litas);  
x14 – Average GDP per one person (in current prices, Litas).

### Factors of the Political Environment in Table 3:

x1– Management of the State [The Republic of Lithuania];  
x2 – Management of the institutions subordinate to the Seimas of the Lithuanian;  
x3 – Management of the departments (institutions) subordinate to the Government of the Lithuanian;  
x4 – Management of the Departments;  
x5 – Management of the Counties;  
x6 – Management of the Municipalities;  
x7 – Management of the house-manager's offices;  
x8 – Self-management of the parties;  
x9 – Self-management of the society.

**Table 2: The Matrix of the Correlation Links of the Factors of the Economic Environment  
(in our case from 1997 till 2006)**

|            | <i>x1</i> | <i>x2</i> | <i>x3</i> | <i>x4</i> | <i>x5</i> | <i>x6</i> | <i>x7</i> | <i>x8</i> | <i>x9</i> | <i>x10</i> | <i>x11</i> | <i>x12</i> | <i>x13</i> | <i>x14</i> |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|
| <i>x1</i>  | 1.0       | 0.35      | 0.69      | -0.92     | -0.85     | -0.94     | 0.90      | -0.89     | -0.84     | -0.94      | -0.9       | -0.76      | -0.89      | -0.94      |
| <i>x2</i>  |           | 1.0       | -0.40     | -0.09     | 0.084     | -0.13     | 0.62      | -0.27     | 0.17      | -0.8       | 0.015      | 0.14       | 0.048      | -0.04      |
| <i>x3</i>  |           |           | 1.0       | -0.86     | -0.92     | -0.84     | 0.40      | -0.63     | -0.96     | -0.85      | -0.89      | -0.79      | -0.90      | -0.89      |
| <i>x4</i>  |           |           |           | 1.0       | 0.98      | 1.0       | -0.8      | 0.75      | 0.92      | 0.92       | 0.95       | 0.70       | 0.96       | 0.98       |
| <i>x5</i>  |           |           |           |           | 1.0       | 0.97      | -0.6      | 0.69      | 0.95      | 0.91       | 0.95       | 0.72       | 0.98       | 0.97       |
| <i>x6</i>  |           |           |           |           |           | 1.0       | -0.8      | 0.77      | 0.92      | 0.94       | 0.95       | 0.71       | 0.97       | 0.98       |
| <i>x7</i>  |           |           |           |           |           |           | 1.0       | -0.68     | -0.55     | -0.71      | -0.7       | -0.41      | -0.68      | -0.73      |
| <i>x8</i>  |           |           |           |           |           |           |           | 1.0       | 0.79      | 0.88       | 0.82       | 0.88       | 0.74       | 0.83       |
| <i>x9</i>  |           |           |           |           |           |           |           |           | 1.0       | 0.95       | 0.95       | 0.86       | 0.94       | 0.96       |
| <i>x10</i> |           |           |           |           |           |           |           |           |           | 1.0        | 0.97       | 0.88       | 0.94       | 0.97       |
| <i>x11</i> |           |           |           |           |           |           |           |           |           |            | 1.0        | 0.86       | 0.98       | 0.99       |
| <i>x12</i> |           |           |           |           |           |           |           |           |           |            |            | 1.0        | 0.79       | 0.82       |
| <i>x13</i> |           |           |           |           |           |           |           |           |           |            |            |            | 1.0        | 0.98       |
| <i>x14</i> |           |           |           |           |           |           |           |           |           |            |            |            |            | 1.0        |

Source: Vijeikis; Account in 2007 years.

**Table 3: The Matrix of the Correlation Links of the Factors of the Political Environment  
(in our case from 2001 till 2005)**

|    | x1 | x2   | x3   | x4   | x5   | x6   | x7   | x8   | x9   |
|----|----|------|------|------|------|------|------|------|------|
| x1 | 1  | 0.56 | 0.79 | 0.99 | 0.74 | 0.77 | 0.92 | 0.34 | 0.94 |
| x2 |    | 1    | 0.76 | 0.87 | 0.53 | 0.35 | 0.83 | 0.35 | 0.67 |
| x3 |    |      | 1    | 0.57 | 0.67 | 0.57 | 0.67 | 0.63 | 0.73 |
| x4 |    |      |      | 1    | 0.74 | 0.46 | 0.50 | 0.82 | 0.83 |
| x5 |    |      |      |      | 1    | 0.58 | 0.94 | 0.87 | 0.68 |
| x6 |    |      |      |      |      | 1    | 0.48 | 0.45 | 0.33 |
| x7 |    |      |      |      |      |      | 1    | 0.34 | 0.65 |
| x8 |    |      |      |      |      |      |      | 1    | 0.51 |
| x9 |    |      |      |      |      |      |      |      | 1    |

Source: Account in 2006 yars.

## CONCLUSIONS

1. The carried out analysis shows that factors of social, economic and political environment are closely interconnected and considerably influence national security. The suggested order of the analysis allows to determine the most dangerous spheres of the social, economic and political environment which play a great role in provision of social, economic and political security.
2. It is possible to carry out a complex and systematic analysis of any system which consists of components. They can be characterized by both statistic data and the data of expert evaluation.
3. It is the harmonization of the development of political, economic and social factors that will assure the harmonious development of the state and society under conditions of Lithuania's integration into the EU.
4. Integration into the EU creates positive conditions for strengthening national cooperation in time and space (in Lithuania, the EU and in the world).
5. The national business organizations should search other economic methods and ways for their integration into the activities of international corporations under the conditions of global economy.
6. The national state model conditions foresee:  
to restructure the state management system and attribute to this system the society and state development strategy, programmes, progress, and democracy;  
to restructure the self-management system of the organization and attribute to this system human labour, optimization of the activity of the organization;  
21<sup>st</sup> century action prospects only for modern organizations, therefore their activity is specified by objectives, programmes, tasks, evaluation criteria, resources, normatives, planned and real labour results.
7. State national budget is aimed at ensuring the development of political, economic and social factors for the balanced development of the society and the national state and development of progress, therefore its optimum balance shall be equal to zero.

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# DISTRIBUTING THE INCREASE OF A PHENOMENON AMONG FACTORS AND CONSTRUCTING OF FACTOR INDICES

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## ABSTRACT

*The Producer Price Indices (PPI), the Consumer Price Indices (CPI) and the export and import price indices are the principal price indices in the system of economic statistics. They are well known and closely watched indicators of macroeconomic performance. They are direct indicators of the purchasing power of money in various types of transactions. They are used to deflate nominal measures of goods and services produced, consumed, and traded to provide measures of volumes. These indices are important tools in the design and conduct of the monetary and fiscal policy of the government.*

*The theory of indices is one of the youngest branches of statistics. The theory of aggregate indices, which is presently widely used in statistics, was developed by Etienne Laspeyres (1871), professor at the University of Tartu and Hermann Paasche (1874), German economist, a professor at Aachen University of Technology from 1879. From then on indices have been widely used in economic analyses and the fundamentals of their construction have remained unchanged: the factors included in aggregate fall into qualitative and quantitative ones and the period (last or base period) used in the formula of index of invariable factor is determined considering the character of the variable factor. Such a fixed order of the change of factors is of course not substantiated scientifically; however, otherwise it would not be possible to make the cost, price and physical quantity form a system.*

*This creates another problem: division of absolute increases. If we have to divide cost increase between the change in price and quantity, the change of price ( qualitative factor) will get a larger than the actual portion and quantity (a quantitative factor), a smaller portion. Several methods have been suggested for overcoming this problem but these have not been applied in practice.*

## BACKGROUND AND HISTORY OF PRICE INDICES

Price Indices are used for a variety of different purposes. There is a general public interest in knowing the extent to which the price of goods and services have risen. Also, it has long been customary in many countries to adjust levels of wages, pensions and payments in long term contracts in proportion to changes in relevant prices, a procedure known as index linking or contract escalation. Price indices have a long history for this reason (PPI Manual, 2004).

No clear consensus has emerged on who created the first price index. The earliest reported research in this area came from Englishman Rice Vaughan who examined price level change in his 1675 book "A Discourse of Coin and Coinage". Vaughan wanted to separate the inflationary impact of the influx of precious metals brought by Spain from the New World from the effect due to currency debasement. Vaughan compared labor statutes from his own time to similar statutes dating back to Edward III. These statutes set wages for certain tasks and provided a good record of the change in wage levels. Rice reasoned that the market for basic labor did not fluctuate much with time and that a basic laborer's salary would probably buy the same amount of goods in different time periods, so that a laborer's salary acted as a basket of goods. Vaughan's analysis indicated that price levels in England had risen six to eight fold over the preceding century (Chance, 1966).

While Vaughan can be considered a forerunner of price index research, his analysis did not actually involve calculating an index. In 1707 Vaughan's fellow Englishman William Fleetwood probably created the first true price index. An Oxford student asked Fleetwood to help show how prices had changed. The student stood to lose his fellowship since a fifteenth century stipulation barred students with annual incomes over five pounds from receiving a fellowship. Fleetwood, who already had an interest in price change, had collected a large amount of price data going back hundreds of years. Fleetwood proposed an index consisting of averaged price relatives and used his methods to show that the value of five pounds had changed greatly over the course of 260 years. He argued on behalf of the Oxford students and published his findings anonymously in a volume entitled *Chronicon Preciosum* (Chance, 1966).

## LIST OF PRICE INDEX FORMULAS

A number of different formulas, at least hundreds, have been proposed as means of calculating price indexes. While price index formulas all use price and quantity data, they amalgamate this data in different ways. A price index generally aggregate using various combinations of base period prices ( $p_0$ ), later period prices ( $p_t$ ), base period quantities ( $q_0$ ), and later period quantities ( $q_t$ ). Price index formulas can be framed as comparing expenditures (An expenditure is a price times a quantity) or taking a weighted average of price relatives ( $p_t / p_0$ ).

### Unweighted indexes

Unweighted price indexes or elementary price indexes only compare prices between two periods. They do not make any use of quantities or expenditure weights. These indexes are called “elementary” because they are often used at lower levels of aggregation for more comprehensive price indexes (PPI Manual, 2004). At these lower levels, weights do not matter since only one type of good is being aggregated.

#### Carli

Developed in 1764 by Carli, an Italian economist, this formula is the arithmetic average of the price relative between a period  $t$  and a base period 0.

$$(1) \quad P_C = \frac{1}{n} \sum \left( \frac{p_t}{p_0} \right)$$

#### Dutot

In 1738 French economist Dutot proposed using an index calculated by dividing the average price in period  $t$  by the average price in period 0.

$$(2) \quad P_D = \frac{\frac{1}{n} \sum (p_t)}{\frac{1}{n} \sum (p_0)}$$

#### Jevons

English economist Jevons proposed taking the geometric average of the price relative of period  $t$  and base period 0 (PPI Manual, 2004). When used as an elementary aggregate, the Jevons index is considered a constant elasticity of substitution index since it allows for product substitution between time periods (PPI Manual, 2004).

$$(3) \quad P_J = \prod \left( \frac{p_t}{p_0} \right)^{1/n}$$

### Harmonic mean of price relative

The harmonic average counterpart to the Carli index. The index was proposed by Jevons in 1865 and by Coggeshall in 1887 (PPI Manual, 2004).

$$(4) \quad P_{HR} = \frac{1}{\frac{1}{n} \sum \left( \frac{p_0}{p_t} \right)}$$

**Carruthers, Sellwood, Ward, Dalén index**

Is the geometric mean of the Carli and the harmonic price indexes. In the 1922 Fisher wrote that this and the Jevons were the two best unweighted indexes based on Fisher's test approach to index number theory (PPI Manual, 2004).

$$(5) \quad P_{CSWD} = \sqrt{P_C \times P_{HR}}$$

**Ratio of harmonic means**

The ratio of harmonic means or "Harmonic means" price index is the harmonic average counterpart to the Dutot index (PPI Manual, 2004).

$$(6) \quad P_{RH} = \frac{\sum \frac{n}{p_0}}{\sum \frac{n}{p_t}}$$

**Formulas used in Statistical Departments today****Laspeyres index**

The most commonly used index formula is the Laspeyres index which measures the change in cost of purchasing the same basket of goods and services in the current period as was purchased in a specified base period. The prices are weighted by quantities in the base period.

$$(7) \quad Index = \frac{\sum (P_{it} Q_{i0})}{\sum (P_{i0} Q_{i0})} \times 1,000$$

Where

$P_{it}$  = Price of item i (i=1,...,m) in period t

$P_{i0}$  = Price of item i (i=1,...,m) in the base period

$Q_{i0}$  = Quantity of item i purchased in the base period

**Laspeyres price relative index**

$$(8) \quad Index = \frac{\sum E_{i0} \frac{P_{it}}{P_{i0}}}{\sum E_{i0}} \times 1,000$$

Where

$P_{it}$  = Price of item i (i=1,...,m) in period t

$P_{i0}$  = Price of item i (i=1,...,m) in the base period

$E_{i0}$  = Expenditure on item i purchased in the base period (SNZ Glossary Term).

**Paasche index**

The Paasche index compares the cost of purchasing the current basket of goods and services with the cost of purchasing the same basket in an earlier period. The prices are weighted by the quantities of the current period. This means that each time the index is calculated, the weights are different. Formulae with changing weights, such as the Paasche Index, involve the collection of substantial additional data, since information on current expenditure patterns, as well as prices, must be obtained continuously. Usually, the time taken to process current expenditure data and to derive revised weights precludes the preparation of a timely Paasche index. Because of the difference in the weightings used for the Laspeyres and Paasche indexes (Laspeyres uses base period weights, Paasche uses current period weights), the two indexes will produce different results for the same period. Paasche index will tend to produce a lower estimate of inflation than a Laspeyres index when prices are increasing and a higher estimate when prices are decreasing. In practice, Laspeyres and Paasche indexes usually give similar results, provided the periods being compared are not too far apart. The greater the length of time between the two periods being compared, the more opportunity there is for differential price and quantity movements and hence differences between the two indexes.

$$(9) \quad Index = \frac{\sum (P_{it} Q_{it})}{\sum (P_{i0} Q_{it})} \times 1,000$$

Where

$P_{it}$  = Price of item i (i=1,...,m) in period t

$P_{i0}$  = Price of item i (i=1,...,m) in the base period

$Q_{it}$  = Quantity of item i purchased in period t (SNZ Glossary Term).

### Fisher Ideal index

The Fisher 'Ideal' index is the geometric mean of the Laspeyres and Paasche indexes. It requires the same data as a Paasche index, so it is generally impracticable to use if a timely indicator of price change is required. Statistics New Zealand uses a form of the Fisher 'Ideal' formula for its external trade indexes, because timely data on total import and export volumes for a given period are available at the same time as value information is provided by the Customs Department.

$$(10) \quad Index = \sqrt{Laspeyres.index \times Paasche.index} \quad (SNZ Glossary Term).$$

## A NEW METHOD

Traditionally first index equations are constructed and only then increase is distributed.

Let  $p$  – price  
 $q$  – quantity  
 $pq$  – cost

The cost index is

$$(11) \quad I_{pq} = \frac{\sum p_1 q_1}{\sum p_0 q_0}$$

and it characterises the relative change in costs during the periods compared. The difference between the numerator and denominator of equation (11)

$$(12) \quad \Delta \sum pq = \sum p_1 q_1 - \sum p_0 q_0$$

shows the change in the absolute value of cost.

The factor index of price

$$(13) \quad I_p = \frac{\sum p_1 q_1}{\sum p_0 q_1}$$

and the factor index of quantity

$$(14) \quad I_q = \frac{\sum p_0 q_1}{\sum p_0 q_0}$$

are related to the cost index as follows:

$$(15) \quad I_{pq} = I_p \times I_q$$

Now we can set the question: how much of change in cost is due to changes of various prices and how much is due to the changes in quantities?

The answer is found by calculating the difference between the numerator and the denominator in the equations of factor indices of cost and price:

$$(16) \quad \Delta(q) \sum pq = \sum p_0 q_1 - \sum p_0 q_0$$

$$(17) \quad \Delta(p) \sum pq = \sum p_1 q_1 - \sum p_0 q_1$$

That is all.

If we assume the only factor changes and the others remain at the level of the base period, we can find the isolated increase due to factor:

$$(18) \quad \Delta(p) pq = p_1 q_0 - p_0 q_0$$

$$(19) \quad \Delta(q) pq = p_0 q_1 - p_0 q_0$$

The total increase is:

$$(20) \quad \Delta pq = p_1 q_1 - p_0 q_0 = q_0 \Delta p + p_0 \Delta q + \Delta p \Delta q$$

The variable  $\Delta p \Delta q$  characterizes the additional increase due to simultaneous change of both factors. Several methods have been suggested for calculating the division of the additional increase; however the problem has not been solved and that is why it is called indivisible part of total increase.

Let us formulate the problem of dividing total increase in a different way: how should the total increase be divided without the formation of an indivisible part?

Let us treat cost as function of two variables:

$$(21) \quad z = f(p, q) = pq$$

Calculation of logarithm of function (21) will yield the following linear form of the function:

$$(22) \quad \ln z = \ln p + \ln q.$$

The increase of function (22) is

$$(23) \quad \begin{aligned} \Delta \ln z &= \ln z_1 - \ln z_0 = \ln p_1 - \ln p_0 + \ln q_1 - \ln q_0 = \\ &= \ln \left( \frac{p_1}{p_0} \right) + \ln \left( \frac{q_1}{q_0} \right) \end{aligned}$$

where  $\frac{p_1}{p_0} = i_p$  is individual index of price, and

$\frac{q_1}{q_0} = i_q$  - is individual index of quantity.

The logarithm of cost increase is equal to sum of the logarithms of individual indices of the factors. As the values of arguments and logarithms are proportional, the absolute increase of function (21) can be divided between the arguments proportionally to the logarithms of their individual indices.

$$(24) \quad \Delta(p)z = \frac{\ln i_p \times \Delta pq}{\ln i_p + \ln i_q}$$

$$(25) \quad \Delta(q)z = \frac{\ln i_q \times \Delta pq}{\ln i_p + \ln i_q}$$

In practical calculations  $\sum pq$  consists of the sum of some number of aggregates  $pq$  :

$$(26) \quad \sum pq = p^1 q^1 + p^2 q^2 + \dots + p^n q^n$$

Now, equations (24) and (25) should be applied separately to each product (aggregate) and the results should be summarized:

$$(27) \quad \Delta(p) \sum pq = \Delta(p^1) p^1 q^1 + \Delta(p^2) p^2 q^2 + \dots + \Delta(p^n) p^n q^n$$

$$(28) \quad \Delta(q) \sum pq = \Delta(q^1) p^1 q^1 + \Delta(q^2) p^2 q^2 + \dots + \Delta(q^n) p^n q^n$$

The equations (27) and (28) could be exposit subsequently:

$$(29) \quad \Delta(p) \sum pq = \sum \frac{\ln i_p \times \Delta pq}{\ln i_p + \ln i_q}$$

$$(30) \quad \Delta(q) \sum pq = \sum \frac{\ln i_q \times \Delta pq}{\ln i_p + \ln i_q}$$

As the increase of cost (or some other factor) is now divided between factors, the formulas of factor indicies can now be presented as follows:

$$(31) \quad I_p = \frac{\sum p_0 q_0 + \Delta(p) \sum pq}{\sum p_0 q_0} = 1 + \frac{\Delta(p) \sum pq}{\sum p_0 q_0}$$

$$(32) \quad I_q = \frac{\sum p_0 q_0 + \Delta(q) \sum pq}{\sum p_0 q_0} = 1 + \frac{\Delta(q) \sum pq}{\sum p_0 q_0}$$

The values of indices (13), (14) and (31), (32) are different and this is natural as the principles of constructing these indices are totally different. Index (13) includes both isolated increase due to one factor and increase due to both factors (indivisible part). Index (14) includes only the isolated increase due to factor. Consequently, indices (13) and (14) do not reflect the actual changes correctly.

In traditional approaches factor indices are treated in two ways. It is general meaning a factor index shows the mean change of the variable factor while it is analytical meaning it shows the influence of the variable factor on the change of the aggregate.

How should indices (31) and (32) be interpreted?

The numerator of index equation (31) is the sum of cost increases due to changes in the initial level of cost and in individual prices, the dominator is the initial level of cost. Consequently, the analytical meaning is still there as the index shows the change in cost due to changes in prices. At the same time also analogy to the individual index of price is still present.

$$(33) \quad i_p = \frac{p_1}{p_0} = \frac{p_0 + \Delta p}{p_0} = 1 + \frac{\Delta p}{p_0}$$

Thus, index (32) can be regarded also as an index what shows the mean change in prices, and that is generalised meaning of the index.

The form of the cost index is analogues to indicies (31), (32) and (33) also in traditional approaches:

$$(34) \quad I_{pq} = \frac{\sum p_1 q_1}{\sum p_0 q_0} = \frac{\sum p_0 q_0 + \Delta \sum pq}{\sum p_0 q_0} = 1 + \frac{\Delta \sum pq}{\sum p_0 q_0}$$

where

$$(35) \quad \Delta \sum pq = \Delta(p) \sum pq + \Delta(q) \sum pq$$

Indices (31), (32) and (34) form the following system:

$$(36) \quad I_{pq} = I_p + I_q - 1$$

The authors have an opinion that indices constructed using a methodology that differs from the one used up to now reflect changes in the factors analysed more exactly than the traditional Paasche and Laspeyres indices.

## Example

Let's compile a price index for National Post services. We have one enterprise and 9 price quotations. The observation period is two months (November and December 2006). The data is following:

|    |                                     | 11/06<br>q | 11/06 p | 11/06<br>qp     | 12/06<br>q | 12/06 p | 12/06 qp        |
|----|-------------------------------------|------------|---------|-----------------|------------|---------|-----------------|
| No | Standard letters as regular mail    |            |         |                 |            |         |                 |
| 1  | Up to 50 g                          | 1683721    | 4,40    | 7408372         | 2363074    | 5,50    | 12996907        |
| 2  | Over 50-100g                        | 707825     | 5,20    | 3680690         | 1023240    | 6,50    | 6651060         |
| 3  | Over 100-250 g                      | 490035     | 6,40    | 3136224         | 708397     | 8,00    | 5667176         |
|    | Standard letters as registered mail |            |         |                 |            |         |                 |
| 4  | Up to 50 g                          | 123893     | 9,60    | 1189373         | 170810     | 23,50   | 4014035         |
| 5  | Over 50-100 g                       | 53360      | 10,80   | 576288          | 58255      | 24,50   | 1427248         |
|    | Maxi-letters as regular mail        |            |         |                 |            |         |                 |
| 6  | Up to 250 g                         | 197208     | 10,00   | 1972080         | 285086     | 10,00   | 2850860         |
| 7  | Over 250-500 g                      | 83202      | 15,00   | 1248030         | 85220      | 15,00   | 1278300         |
|    | Maxi-letters as registered mail     |            |         |                 |            |         |                 |
| 8  | Up to 250 g                         | 12389      | 28,00   | 346892          | 17084      | 28,00   | 478352          |
| 9  | Over 250-500 g                      | 11323      | 33,00   | 373659          | 16081      | 33,00   | 530673          |
|    |                                     |            |         | <b>19931608</b> |            |         | <b>35894611</b> |

| No | I <sub>q</sub> | I <sub>p</sub> | Δpq      | Ln <sub>iq</sub> | ln <sub>ip</sub> | ln <sub>iq</sub> +ln <sub>ip</sub> | ln <sub>iq</sub> Δpq |
|----|----------------|----------------|----------|------------------|------------------|------------------------------------|----------------------|
| 1  | 1,403483       | 1,25           | 5588535  | 0,338957         | 0,223144         | 0,562101                           | 1894273              |
| 2  | 1,445612       | 1,25           | 2970370  | 0,368532         | 0,223144         | 0,591676                           | 1094678              |
| 3  | 1,445605       | 1,25           | 2530952  | 0,368528         | 0,223144         | 0,591671                           | 932726,3             |
| 4  | 1,37869        | 2,447917       | 2824662  | 0,321134         | 0,895237         | 1,216371                           | 907093,8             |
| 5  | 1,091735       | 2,268519       | 850959,5 | 0,087769         | 0,819127         | 0,906896                           | 74687,46             |
| 6  | 1,445611       | 1              | 878780   | 0,368532         | 0                | 0,368532                           | 323858,4             |
| 7  | 1,024254       | 1              | 30270    | 0,023965         | 0                | 0,023965                           | 725,4133             |

|   |          |   |                 |          |   |          |          |
|---|----------|---|-----------------|----------|---|----------|----------|
| 8 | 1,378965 | 1 | 131460          | 0,321333 | 0 | 0,321333 | 42242,48 |
| 9 | 1,420207 | 1 | 157014          | 0,350802 | 0 | 0,350802 | 55080,89 |
|   |          |   | <b>15963003</b> |          |   |          |          |

| No | $\Delta(q)pq$  | $\ln p \Delta p q$ | $\Delta(p)pq$  | $P_0 q_1$       |
|----|----------------|--------------------|----------------|-----------------|
| 1  | 3369990        | 1247045,5          | 2218545        | 10397526        |
| 2  | 1850130        | 662818,9           | 1120240        | 5320848         |
| 3  | 1576426        | 564765,6           | 954526         | 4533741         |
| 4  | 745738         | 2528743            | 2078924        | 1639776         |
| 5  | 82355          | 697043,9           | 768604         | 629154          |
| 6  | 878780         | 0                  | 0              | 2850860         |
| 7  | 30270          | 0                  | 0              | 1278300         |
| 8  | 131460         | 0                  | 0              | 478352          |
| 9  | 157014         | 0                  | 0              | 530673          |
|    | <b>8822163</b> |                    | <b>7140839</b> | <b>27659229</b> |

The new method, formulas (29), (30), (31), (32) and (36), gives us:

|                    |         |                       |                 |
|--------------------|---------|-----------------------|-----------------|
| $\Delta(q)\sum pq$ | 8822163 | <b>I<sub>q</sub></b>  | <b>1,442622</b> |
| $\Delta(p)\sum pq$ | 7140839 | <b>I<sub>p</sub></b>  | <b>1,358267</b> |
|                    |         | <b>I<sub>pq</sub></b> | <b>1,800889</b> |

but by the traditional method, formulas (13), (14), (15), (16) and (17), we get:

|                    |         |                       |                 |
|--------------------|---------|-----------------------|-----------------|
| $\Delta(q)\sum pq$ | 7727621 | <b>I<sub>q</sub></b>  | <b>1,387707</b> |
| $\Delta(p)\sum pq$ | 8235381 | <b>I<sub>p</sub></b>  | <b>1,297744</b> |
|                    |         | <b>I<sub>pq</sub></b> | <b>1,800889</b> |

Our example is trying to present an ordinary business situation, where the prices and quantities can be changed, but not necessarily for all goods in the same period. As can be seen the values of indices calculated according to the traditional and the new method are distinctive because of dividing total increase between qualitative and quantitative factor in a different way.

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SNZ Glossary Term, Statistics New Zealand

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# THE COMPANY AS AN INTEGRATED MARKETING SYSTEM: A SHARED APPROACH OF KNOWLEDGE, COMPETENCES AND GOALS

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## ABSTRACT

*Among the moments characterizing firms' activities we can mention marketing planning and organization, together with knowledge sharing (knowledge transfer), which represent complicated issues and worthy topics. In a firm, the term 'organization' is often considered a mere synonymous of duty and business assigned to the workers. This view has then generated a "hermetical compartment approach" in corporate management, without energizing strategies, ideas or information sharing. A wider angle and interesting view (of organisational concept) allows the integration of not only operational but also strategic dimensions. Process thinking means to consider the company as an integrated system of knowledge, competencies (at any structural level), considering (corporate) actions cohesive and coordinated towards a common business goal. A basic hypothesis of this paper relies on the consideration that the organizational structure doesn't take care of the knowledge impact and the information transfer on corporate performance. The objective of the present paper is therefore a company rethinking according to a logic of efficiency and optimisation of its organisational structure. The authors will take inspiration from the sailing world, in which strategies for sharing value and information melt in group dynamics considered effective and efficient means able to yield higher performance and exiting individualistic logics.*

## INTRODUCTION

"The absence of rules or the lack of clarity of the existing rules is the worst fate that can happen to a man carrying out the tasks that life reserves"; this is the assumption of Bauman (2000) from which the present paper starts.

While it seems obvious that the organizational moment, implicit in the previous assumption, represents a milestone in the life of an enterprise, the other less obvious aspect may be the role played by communication in that moment.

The concept of organization is closely linked to that of communication, especially if the latter is defined as the process by which an individual (the one communicating) broadcasts stimuli (usually verbal symbols) to transfer information, then knowledge, in order to change the behaviour of other individuals (Hovland, 2003).

Confirming its importance, the art of communication is one of the few metrics used in different scenarios: from a military and political one, where it becomes a true function of propaganda, to an enterprise one, where it holds an informative and/or an exhortative function in order to reach company goals (which, according to a systemic approach is not only profit but also an increase in value), to "social" contexts such as families, schools, etc., where communication plays a purely educational role.

It is the multiple use and the many functions connected to communication items that create the need to further investigate this issue, particularly if enterprise-located.

A basic hypothesis of this paper relies on the consideration that the organizational structure does not consider the knowledge impact and the information transfer on corporate performance.

The objective of the present paper is then a company rethinking according to a logic of efficiency and optimization of its structure, dwelling on issues related to the organization and, in particular, to the management

and transfer of information (knowledge) and on how that affects the communication process, overcoming the Tayloristic logic of labour division.

The importance of internal communication is supported by the assumption that the company doing its business also performs processes of creation and dissemination of knowledge (Rullani, 1994), thanks to the importance attributable to intangible resources (Vicari, 1998).

## **The organization as a process**

The term organization is considered a synonymous of tasks and activities assigned to individuals (human resources). This distinction can often generate "watertight compartments" approaches in the business management, without stimulating exchange and sharing relations between the parties involved in the assignments. This imposes a different way of thinking in terms of process, that is, operating according to a logical sequence of choices, reports and integrations that allow the company to set up (if new) or reinforce (if already present) synergies to which everyone contributes with their expertise to the same distinctive and unique business goal: value creation. Furthermore, the process using non-coercive means, leads one or more teams to pursue the same objective, influencing the behaviours of the people involved, thanks to personal, organizational and cultural mechanisms, and above all, thanks to the power held by him or to those who promote it (the leaders).

In fact, this perspective believes in the "the organized sum of activities and inter-functional decisions which end is to predispose outputs having a deep impact on the company's competitive capabilities" (Oriani, 1995).

This means a rethinking of the company according to a more complete systemic logic.

In order to better understand this choice we can take into consideration the so-called General Theory of Systems (Von Bertalanffy, 1951), rooted in the existence of a strong interdependency among the elements that are part of the social, economic and cultural reality in which we are immersed, according to which it is then possible to study an organisation as an ensemble.

The term system has specific implications such as a precise objective planning, a pre-established order, the existence of interactions among the elements of the system, organised/collective objectives more important than individual ones, and a precise division of functions.

According to this systemic perspective, we can define a company as "an adaptive system of physical personal and social components that are held together by a network of interpersonal communications and by the will of its members to cooperate in order to achieve a common goal" (Simon, 1947). In addition to the previously mentioned concepts, we can add further dimensions that allow the company to achieve, enhance and maintain the value and distinctive skills such as transversality, integration, interrelationship and horizontal strategy. Those dimensions can be compared to synapses if the firm was portrayed as a brain and the various business units as cerebral cells.

In addition, talking about company divisions rather than business unit, should not be considered a mix of organizational approaches (the first being divisional and the second being functional) as the objective of the present paper is not the pre-existing organizational structure, but the one linked to the degree of dependency and integration between the different sections composing the company system. In fact, for 'functional organization' we mean the presence of a structure with similar characteristics (purchases office, sales, etc.), while for the term 'divisional organization' we focus on specific business or geographical areas.

According to Bartezzaghi, Spina and Vergani (1999), the management of the company according to a process logic precludes the presence of nine guiding principles (Azzariti, 2002), among which appear:

- The "culture of process" spread: once the many processes related to the business are determined it is important to evaluate the contributions that the single processes have on the total value creation;
- The restoration of fragmented activity: it is necessary to create integrated reports between the various activities of the company, thus creating synergies (not related to the simple and superficial logic of downsizing costs).

The importance of understanding the company according to a process logic is motivated and justified by a study on the company and market. In fact, the company itself is representative of the market in which it operates, or would like to operate.

The presence of characteristic components of the markets served (and more desirable to the company), leads to stress the need to turn the attention to the processes of internal exchange, and to highlight the growing importance of the internal marketing as strategic item for the dissemination of business goals in the whole business process. It is in fact the objective of the internal marketing to research and analyse the techniques, tools

and methods necessary to make improvements to the above-mentioned processes.

Companies identifying process management and organisation as useful aspects to achieve excellence must also transfer "power" and "authority" to their employees in order to encourage their creativity and inventiveness. Individuals must act with a strong spirit of entrepreneurship (empowerment) but this also implies a strong sense of responsibility. These are the elements providing company flexibility, large innovation capacity and creativity. In process logic, all activities, without exception, must be analysed and managed in order to be improved. Flexibility can, in fact, be defined as "the ability to effectively respond to changing circumstances". An effective analysis of the activities and the identification of critical aspects to monitor can only occur with the help of those who actually carry out such activities and, therefore, know them very well. According to the previous considerations, if the top management "intends to increasingly rely on the empowerment of employees, in order to produce new ideas and a competitive advantage, all members of the organisation must understand as clearly as possible what are the company's objectives and the line to follow" (Simons, 1995).

Research has shown that the link between medium to long term strategic decisions and short-term actions can be facilitated through the establishment of a matrix of "balanced" measures, able to explain the performance of the organisation in reference to the objectives and priorities that the company has identified in order to create its own strategy (Kaplan and Norton, 1992).

The emphasis on the organisational process dimension should not, however, neglect the role played by information in directing the individual behaviour. The objectives of communication/sharing, for example, besides being an organizational condition for obtaining consensus and influencing the "motivation to participate", directs individual and group activities. In fact, because relational aspects are most critical during the diffusion of "localized" knowledge, it will be necessary to create a common back-ground guaranteeing the unity of the organizational activities and the convergence towards business goals. then, The dual nature of internal communication becomes then evident: on the one hand, it is the glue of the organisation, helping to create a functional system of values in the pursuit of internal efficiency; on the other hand, it must stimulate the generation of new innovative knowledge and behaviour. This trade-off requires a situation of "balance" between the different organisational needs and an attentive management of communication dynamics, generating a long lasting competitive advantage, based on knowledge of relevant variables of the organizational context.

## **Collaboration within one organization**

Integration, cooperation and marketing inter-organizational relationship have often been associated with the collaboration between two or more companies. Interfirm marketing collaborations imply the creation of a new company (coentity) in order to reach a particular objective. Firms form coentity for several reasons, such as the development of new products (Rindfleisch and Moorman, 2001), the strengthening of the supply chains (Wathne and Heide, 2004), the reduction of the operational costs, the search for new markets, the search for industry standards or the ability to better serve specific customers (Fang, Palmatier, Scheer and Li, 2008). Hence firms create collaborative entities to generate value and achieve goals, which are otherwise impossible to reach on their own.

Fang et al. (2008) identify in the lack of trust as the main reason for collaboration failure (Inkpen and Beamish, 1997) and explore the effects of trust at three different organizational levels in marketing collaboration:

- inter-organizational trust, (i.e. trust between the firms that decide to form a coentity);
- agency trust, (i.e. a firm's trust in its own employees assigned to a specific entity);
- intra-entity trust, (i.e. a firm's trust in its own representatives, when working with colleagues of the collaborating company) (see figure 1).

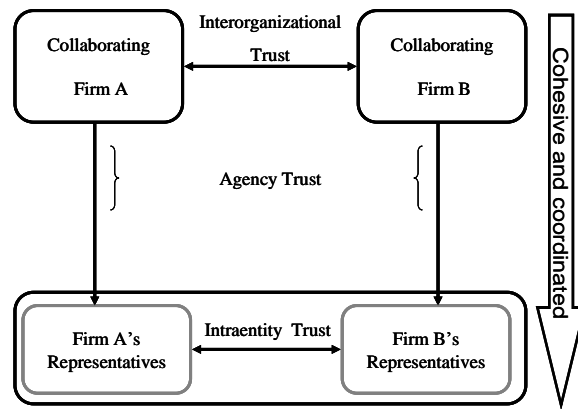
We think that "intraentity trust", together with the role of firm's representatives and the coentity environment represent key factors leading to the success of a coentity. In fact, "as a boundary spanners, these representatives face a mixed-motive situation: as agents of the firm assigned to the coentity, they must represent the interests of their own collaborating firm, but to ensure the coentity's success, they must become colleagues and form strong working relationship with their counterparts representing the other firm" (Fang et al. 2008).

A formal and independent coentity created by a marketing collaboration presents the same characteristics of any other company. Hence, in the same manner, it is important to analyze the trust and confidence level between the different departments of the same organization (intra-business unit trust).

The attitude of the leader, his approach in order to integrate and reinforce the relation between the different business units, and his thinking about the company as an integrated system of knowledge and competencies (at any level of company's structure), can increase the trust and confidence level between business units and lead

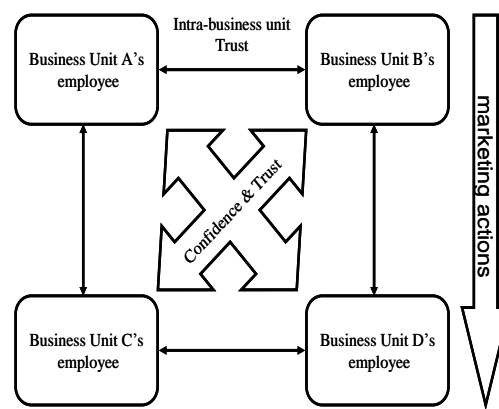
them (and the whole firm) towards a common business goal thanks to cohesive and coordinated actions. In order to reach this difficult goal, an attentive leadership practice must rest on a coordination of employee marketing aspects and on an internal communication.. The following picture (figure 2) integrates the previous one:

**Figure 1 – Trust at multiple levels within a collaborative entity (coentity)**



Source: Fang et al. (2008)

**Figure 2 – Trust and confidence within intra-business units**



Source: personal elaboration

The leader has to understand and manage the company as a integrated marketing system, stimulating exchange relations and sharing information between departments. Each employee should feel as an important element of the company. Furthermore, the leader has to develop the organizational structure in a way that permits the information concerning knowledge, corporate strategy and goals, stated performance, distinctive competencies and so on, to reach the whole firm, avoiding an hermetical compartment approach. In order to maintain those goals, the leader must allow the integration of not only operational, but also strategic dimensions, including in the previous perspective of the marketing organization theme also the concepts of process management, horizontal interrelationship (based on communication) and information transfer.

## The benefits concerning the horizontal communication

Vertical organization (a traditional vertically-integrated firm), has several implications for the development of resource sharing. This organization is designed to transfer resources from one unit to another. However, because this is generally a one-directional (vertical) transfer of resources, this firm may not be equipped to identify and coordinate the mutual sharing of resources.

A firm with a horizontal organization has the structure and mechanism to encourage the successful development of interrelationships. It will be able to coordinate activities, encourage resource sharing, and establish interrelationship/interdependence. Porter (1985) indicates that the characteristics of a horizontal organization can help a firm achieve competitive advantage.

An understanding of the horizontal organization helps emphasize the fact that organizational structure and processes are very important in developing interrelationship, with the potential to achieve the goals of synergy and competitive advantage. Horizontal strategy is designed to coordinate activities and functions of different units.

A diversified firm has a number of advantages, because it is a multi-business/multi-product organization. One of these advantages is the potential to develop interrelationship because of the different businesses or products that exist in the firm (Porter 1985). He reports that one way to achieve competitive advantage is to coordinate activities between units. This is similar to the advantage available to the multinational firm based on managing activities in geographically dispersed units as, for example, a coordinated multinational network (Kogut, 1983). In both cases, coordination is an option available to the firm because it is diversified or multinational. Ansoff (1965; 1988) described the combined effect available to a diversified firm as synergy. He viewed synergy as “one of the major components of the firm’s product-market strategy. It is concerned with the desired

characteristics of fit between the firms and its new product-market entries” (Ansoff, 1965). This view suggests that synergy is a fit between units (Ensign, 1998).

Chakravarthy and Lorange (1991) see the adaptation strategy process to the context of the organization as an important management task. This includes nurturing strategic thinking and promoting intrafirm cooperation. According to the authors, synergy describes how each cooperating entity strengthens their competitive positions by sharing capabilities. Such efforts may be seen as “co-managed strategies”, resulting in a “systemic solution”. Because desired synergy may not be achieved (Nayyar, 1992), it is important for managers to have a better understanding of interrelationship in order to increase the probability of achieving synergy and the use of employee implication.

Employee implication has been associated with a strong cultural change and the awareness of human resources constraints. It is strictly connected with the cleverness of the firm to broadcast the importance, at all structural levels, of managing the change in accordance with a systematic approach and through a process of acquiring knowledge. If a manager is able to reach that goal, the firm will own “practiced” personnel in the correct “forma mentis”, always in time to use the acquired competences to test new solutions. It is assumed that without learning, firms and single individuals repeat old procedures. The change stops on the top of the organizational pyramid and improvements are casual and of short term length (Garvin, 1944).

A corporate goal should be the accomplishment of a learning organization, i.e. the ability to transform firm in a place where people increase their competences, energize new thoughts, and keep on learning all together (Senge, 1990).

## THE CASE STUDY

The boats’ internal organization is an extraordinary metaphor for corporate life. Being located in a limited space, good skills of adaptation and self-control, planning the route and the strategy for winning races, facing contingencies and coordinating the team considering the roles required by navigation, can be considered common aspects. More precisely:

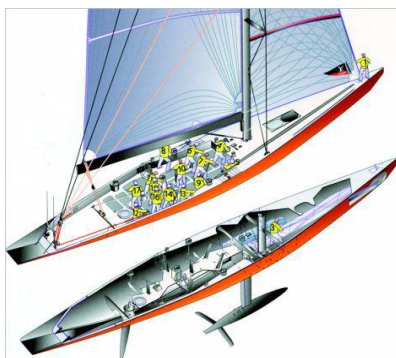
1. from a *relational point of view* the actions are based on participation, in order to create a shared mission, sense of belonging and objectives, improving communication, the ability to listen, and pay attention to the group signals and work environment, represent *condition sinequa non*;
2. from a *team point of view* the ability to work in team (team working), to plan the task activities, as well as the comprehension and acceptance of the different styles of leadership and problem solving must be developed;
3. from a *personal point of view* the ability to develop self-control and stress management, adaptability, flexibility and responsiveness.

The first value of a winning group is to be a group.

The boat metaphor is really adherent to our daily reality as the unpredictability of the sea and the weather is comparable to the competitive market one.

Similarities can be found between boats and companies:

- a. *variables*: on board there is the need to face and manage difficult situations that changing continuously can not only rely on previous experiences (the market changes every time the way we work);
- b. *teamwork*: the success of an enterprise *ceteris paribus* is achieved only if there is a real teamwork;
- c. *leader*: on board, like in a company, the leader’s abilities (the skipper) to keep the group cohesive and active are fundamental.



According to our opinion, the “system” is composed as follows: actors (boat/company), internal factors (crew/company organization), external factors (wind/market variables) and environment (sea/market).

Here above a parallelism of the most important crew roles with the typical business tasks is proposed (figure 3).

**Figure 3 – Longitudinal ship section (the crew organizational structure)**

- 1 Bowman: deals with sails bow, inform the helmsman – MEMBER OF THE BOARD (BoD)
- 4 Pitman: manoeuvres and adjusts the halyards and the riding boom; hoists and strikes the sails – MEMBER OF THE BOARD (BoD)
- 8/9 Left Tailer/Right Tailer: regulate the sails bow - MEMBER OF THE BOARD (BoD)
- 10 Mainsail trimmer: provides the energy needed to adjust the mainsail - COUNSELOR

(BoD)

11 *Traveler*: adjusts the mainsail - MEMBER OF THE BOARD (BoD)

14 *Runner strategy*: leads the boat; CHAIRMAN OF THE BOARD

15 *Navigator*: positions the boat on the race and check the position of the opponents – OPERATIVE MARKETING DIRECTOR AND CONTROLLER

16 *Weather*: manages situations in the short term implementing final strategies – STRATEGIC MARKETING MANAGER, RESPONSIBLE FOR CONTROL AND BUDGET;

18 *Guest VIP*: the guest can not take part in the sponsor manoeuvres (basic function for political, economical, social and technological sponsorship – PEST analysis)

34 Crews with 300 sailors from the UniCredit Bank Group got together for the first UniCredit Sailing Meeting, held off the coast of Trieste (Italy). The crews came from Poland, Croatia, Austria, Hungary and, of course, Italy. The meeting was a contest in which teams from different offices compete. The event comprised 3 days of short inshore races on an Olympic course on Friday, Saturday and Sunday (from the 5<sup>th</sup>-7<sup>th</sup> October). Weather conditions permitting, each team sailed three races and the third day was the final one to determine the winner. The second day of race the strong wind called “Bora” blew and the organizational committee decided to cancel the races of that day: perfect occasion to meet colleagues.

Even if the most important thing (in accordance with Unicredit Bank point of view) was to fortify the relationship among offices coming from different countries, ISAF 2005-2008 yacht racing rules was applied in order to stress the relevance of the race. Because of capital markets has no territorial barriers (and nowadays financial management holds an active role in every company), each bank branch is required to connect itself with business units from different countries. This is why having strong relationships is an important value asset for competitiveness. An aspect to stress is that the programme did not include official workshop meetings. This can be justified because trust and confidence among different business units relies on shared and common experiences and values, not necessarily connected to usual work activities (figure 2). This is why sailing experience for the above mentioned item proposed in the previous paragraph, can be considered the optimal instrument for strengthening relationship at any level.

An interesting consideration pertains to a relevant double perspective: from one side the seriousness of the objective to reach (relationships, instruments used, rules to follow, winning the competition/race) and on the other side the business units approach (i.e. playful) to the competition (race). Such an example can be found in the names of the nautical teams of the different bank branches participating: the Italian “Drink Team” and “Tortellino Bolognese”, the German “Pirates of Munich”.

Further analysis post meeting showed a consistent increasing (not quantifiable yet) in built business relationships (national and international) within the different business units (bank branches) participating to the sailing meeting. The bank group (Unicredit Group) also benefits of those new/strengthened contacts for its international development (in terms of increased foreign contacts able to generate potential opportunities).

## CONCLUSIONS AND MANAGERIAL IMPLICATIONS

It is the personal vision and the leader’s attitude that influence the organizational structure.

In the last years, many studies were carried out in order to investigate the phenomenon of employees’ resistance to organizational change and other factors that influence the daily work context. These factors can be considered fundamental to pursue corporate goals. Empirical studies show that employee’s resistance is mediated by three change process characteristics (i.e. information, participation and trust in management). It means that the role played by a leader through information can be considered the “heart beat” of the Corporate. Even if employees can be considered the main asset owed by a company, if the leader doesn’t have a magnetic personality the asset is underestimated. This is why at a strategic/managerial level, companies (national and international) invest huge resources in employee marketing (together with talents research), and at an organisational/operational level, leaders must be able to re-organize corporate process, renovating and restructuring in order to optimize the firm’s processes.

We often fear what we do not know. It is therefore important that the leader informs all the personnel about the corporate direction and the future of the company. The lack of involvement, as expressly stated above, may generate negative outcomes because staff members could consider themselves excluded from the future programmes and schedules. Obviously, involvement and knowledge are just two of the qualitative/emotional factors that may affect the performance of the enterprise. Trust is considered important in process change, too (Bordia et al., 2004; Oreg, 2006) and research was carried out in order to demonstrate the effects of trust on employee behaviours as well as organizational citizenship behaviour and performance (Dirks and Ferrin, 2002).

Resistance to change can delay or inhibit change process (Miller, Johnson and Grau, 1994; Piderit, 2000) because is strictly connected with everything new and unknown. Hence, resistance has been associated with negative outcomes such as decreased satisfaction and productivity, decreased psychological well-being and increased theft, absenteeism, and turnover.

Sharing information and knowledge transfer can then reduce this perceived resistance. Environmental characteristics, such as leadership and organizational climate, are likely to impact on change, especially on how employees react to changes (Van Dam et al., 2008).

If workers were informed about events as well as their roles and the future to come, they would reduce and manage uncertainty, doubts and anxiety. This status has been associated with positive outcome, such as satisfaction, trust, productivity and can help management increase worker openness towards change (Stanley et al., 2005). Similarly, empirical research proves that the employee presence and their implication in change planning increases change acceptance (Coch and French, 1948; Sagie and Koslowki, 1996). Involvement offers several benefits, such as the comprehension of the circumstances that make necessary the change (Armenakis et al., 1993), the creation of a pleasant working environment, the confidence in management's reliability and integrity, and the acceptance in the management's vision for change efforts to succeed (Li, 2005)

The topics treated in the present paper play a primary role in the business internal management both for small and for larger firms as they allow them to appeal to the factors influencing the achievement of business goals, and in particular:

- a) The personnel in charge that must be seen as an asset and as the main resource of any enterprise;
- b) The involvement of all personnel at any level of the company is the best way to reach goals, whether short- or medium/long term;
- c) The psychological dimension, especially in case of little challenging works, heavily influence the staff's work. Therefore internal communication must be considered the main instrument, along with those previously mentioned, to fulfil this need.

The problems generated by the lack of internal communication and lack of cohesion or shared objectives are mainly perceived by large companies because, as previously mentioned, a clear separation is often established inside of them, almost a kind of antagonism, among the different compartments. The so-called "watertight compartments management" will be the only attitude of the management or of the leader capable of taking down these barriers and creating conditions in which everyone feels as a (integral) member of a (integrated) group.

International and multinational companies and are not exempted from the above-mentioned issues. The need to involve structures and people pertaining to different companies, cultures or sources is a current theme for large companies. In order to penetrate foreign markets, they must integrate with different situations from a cultural, political, economical, social, and technological (PEST) point of view. In this scenario interrelationship functions can be considered the best strategic way to entry foreign markets and to access to (financial and non) rebates otherwise not available. According to the presented logic, using the parallelism ship-company, this role/opportunity refers to guest vips considered as strategic partner (position number 18 in the above presented boat structure – figure 3). Hence, to be able to access markets such as China, Brazil, India etc., the best solution is to create closeness through partnerships, joint ventures, etc. with local organizations.

The present paper tried to stress the importance of intangible assets, especially human ones, in order to underline how the logics related to people management and organization are often as important as productive or commercial activities. The human component, free will and the management of creativity, if properly channelled and organized, can surely make an enterprise a successful one.

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# AN ESSAY ON THE CHALLENGE OF INNOVATION IN THE SOFTWARE INDUSTRY

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## ABSTRACT

*A large part of America's competitive position in the world depends on innovation in the software industry. Patents and copyrights that are designed to protect proprietary programs may no longer be the best way to encourage innovation as old economy industries such as iron and steel manufacturing are displaced by new economy industries such as the manufacturing of microprocessors. U.S. antitrust policies that attempt to maintain competition within the static industries of the old economy are no longer appropriate for dynamic industries of the new economy. Current patent and copyright law supports a proprietary model of innovation. The law should be changed so that it can accommodate an alternative model of innovation that is based on nonmarket, commons based information production. Innovation was a core issue addressed by the Court of First Instance in its Decision and Judgment re the Microsoft antitrust case. While Schumpeter's theories of creative destruction should lessen our concerns about the negative consequences of dominance by a firm that wins the competitive struggle, winning firms like Microsoft can use their dominance to prevent innovation and competition and thus perpetuate their dominance. Current patent and copyright laws can be used by the dominant firm to perpetuate their dominance. My paper consists of four parts: Patent and Copyright Law, Static v Dynamic Competition, the Microsoft Decision and Judgment and Reform of Patents & Copyrights.*

## INTRODUCTION

I was motivated to write this paper by a question posed by a student in one of my classes. He asked how high wage countries like America could compete with low wage countries like China. My off the cuff answer was that we could compete by working smarter. What this means is that America must keep one step ahead of the competition by innovating. This answer raises two additional questions. What motivates innovators? Does the existing patent and copyright regime encourage or discourage innovation? I've tried to answer these questions by examining the software industry and the recent Microsoft Decision and Judgment of the Court of First Instance (Grand Chamber) which I believe is the most important case in the area of Intellectual Property and antitrust law of the 21<sup>st</sup> century.

## PATENT & COPYRIGHT LAW

The traditional model of innovation in the software industry has been a proprietary one in which a firm patents or copyrights innovations and then earns economics profits through the sale of a program that contains that innovation. American patent and copyright law is contained in Title 35 and 17 of the United States Code (U.S.C.). A distinction must be drawn between 35 U.S.C., patent law, and 17 U.S.C., copyright law. The former provides protection for the process or method performed by a computer program while the latter protects the creative expression of that process or method. 17 U.S.C. Sec. 101 defines a "computer program" as "a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result." While Title 35 protects any novel, non-obvious, and useful process, Title 17 protects a multitude of expressions that implement that process. The key distinction is that patents protect ideas and copyrights protect the expression of ideas. Patents do not protect abstract ideas such as the laws of nature and natural phenomena. Ideas can not be copyrighted. Facts can be copyrighted if they contain some minimal degree of creativity. Phone numbers can not be copyrighted but a compilation of phone numbers can be copyrighted because the

author chooses which numbers to include, the order of their placement and how to arrange them so that they can be used effectively. If there is only one way to express a fact, the fact and its expression are said to have merged and the expression will not be protected. A novel method or process is one that does not already exist in the accumulated prior art. A nonobvious method or process is one that would not be obvious to a person with ordinary skill in the art of the invention at the time the invention was made. The distinction between patents and copyrights is illustrated by the following example. A programmer who wants to write a program that calculates how much social security tax is to be withheld from an employee's pay check must go through two steps. First, he must decide the basic steps that the computer will have to go through to make the calculations. The programmer might decide that the computer will read each individual's pay card number, his cumulative social security taxes paid for the year, his weekly pay, determine if further social security tax is owed and, if so how much, and lastly print out the amount of tax and the remaining weekly pay. The basic steps are the program's algorithm or abstract idea which can be patented provided it has been reduced to a set of instructions that can be read by the computer. The algorithm can be graphically represented by a flow chart. The program must produce a concrete and tangible result. Factual aspects of the patented work are not protected. [1] Second, the algorithm must be translated into object code which can be read by the computer and then into source code which can be read by the programmer and other humans. The source code is the expression of the abstract idea which can be copyrighted. The copyright holder can prohibit the unauthorized copying or commercialization of that code. The distinction drawn between an idea and its expression is very difficult to apply in practice. Object code consists of bit streams that are nothing but large numbers. It is very difficult to look at a number that is 100 million digits long and separate its idea from its expression. Patents are granted "to encourage invention by rewarding the inventor with the right, limited to a term of years fixed by the patent, to exclude others from the use of his invention." *Sears, Roebuck & Co. v Stiffel Co.*, 376 U.S. 225, 229 (1964), "The disclosure required of the Patent Act is the *quid pro quo* of the right to exclude." *J. E. M. Ag Supply, Inc. v Pioneer Hi-Bred International, Inc.*, 534 U.S. 124, 142 (2001) (internal quotations omitted). Disclosure adds to the accumulated prior art. A patent gives the patentee an exclusive right to use the patent and to exclude others from using the patent. "In the absence of any indication of illegal tying, fraud in the Patent and Trademark Office, or sham litigation, the patent holder may enforce the statutory right to exclude others from making, using or selling the claimed invention free from liability under the antitrust laws." *In re Independent Service Organizations Antitrust Litigation v Xerox Corp.*, 203 F. 3d 1322, 1327 (2000). Copyrighted works are not required to be disclosed and the owners of the copyright are not required to license the work. [2] The IP holder will license its property to another firm only when it is profitable to do so. Licensing will be profitable when the combined profit of both firms exceeds the monopoly profits the IP holder can obtain without licensing. While licensing will create more total value, competition can dissipate a share of this value to consumers which will lower the combined profits of both firms. Licensing of IP is likely to be suboptimal. [3]

Nondisclosure is contrary to the primary objective of copyright law. "[ T ] he primary objective of copyright is not to reward the labor of authors, but '[ t ] o promote the Progress of Science and useful Arts' " (quoting U.S. Const. art. 1, Sec. 8, cl. 8), *Feist Publications, Inc. v Rural Tel. Service Co.*, 499 U.S. 340, 348. Compulsory licensing would create an intellectual commons without the possibility of overuse or under investment. A commons exists when all can use the resource and no one can exclude others from using the resource. A grassy field in the absence of property rights would be overgrazed because none of the users would take into account the cost that her use imposed on the other users by making their cattle spend more time grazing to obtain the same amount of food. Users would under invest in the grassy field because no one user would wish to invest in the resource so long as another user could appropriate the return. Overuse and under investment might not occur if the use of the commons was regulated by custom as was the case with the medieval commons. [4] An intellectual commons can never be overused because IP can not be destroyed or even diminished by use. Investment in IP is not stifled because a firm can gain a competitive advantage over rivals by being the first to adopt an innovation.

The decisions of the European Commission and the Court of First Instance have treated refusals to license patents and copyrights by dominant undertakings as contrary to the general obligation owed by such undertakings under Article 82 of the Treaty of Rome to supply a competitor in a second market. An undertaking has been defined as "a single organization of personal, tangible and intangible elements attached to an autonomous legal entity and pursuing a given long-term economic aim." *Mannesman v High Authority* Case 19/61 [1962] ECR, 371. Dominance has been defined as "a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by giving

it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of consumers.” [5] “[D]ominance is said to exist only when the situation of substantial market share together with pricing above cost is expected to be sustained over a period of time during which the incumbents and entrants cannot be expected to bid away the dominant firm’s market share through lower pricing and superior quality products.” [6] This definition is similar to the U.S. concept of monopoly power. Monopoly power can be defined as the ability to “profitably raise prices substantially above the competitive level.” U.S. v Microsoft Corp., 253 F. 3d 34, 50 (D.C. Cir. 2001). A market share of over 50% creates a strong prima facie evidence of dominance. A refusal to license which excludes a competitor from a second market is incompatible with the principles of the common market and constitutes an abuse of the undertaking’s dominance. The obligation is intended to protect consumers. [7]

17 U.S.C. Sec. 102(b) limits the scope of copyright protection by providing that “[I]n no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation...regardless of the form in which it is described, explained, illustrated, or embodied.” The section codifies one of copyright law’s basic principles-copyright protection extends to an “author’s original expression and not to the ideas embodied in that expression.” Gates Rubber Co. v Bando Chem. Indus., Ltd., 9 F.3d 823, 836 (10<sup>th</sup> Cir. 1993). “[I]f other programs can be written or created which perform the same function as the copyrighted program, then that program is an expression of the idea and hence copyrightable.” E. F. Johnson Co. v Uniden Corp. of America, 623 F. Supp. 1485, 1502 (D. Minn. 1985). The distinction between ideas and original expression tries to achieve a difficult balance between the public interest in the form of access to ideas and the IP rights that copyright holders have in their investments in expression. The public interest is served by the greater availability of compatible and interoperable software. A computer program is a “set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result.” 17 U.S.C. Sec. 101. A program can be patented or copyrighted depending on whether it is an idea or the expression of an idea.

When software is run or executed on a computer it is in the form of binary code (also called object or machine code) which means that it is in the form of “0”s and “1”s. Code in this form is virtually unreadable by humans. Software is written using a human readable programming language such as JAVA or XML to write source code which is then compiled or translated into object code that can be read and executed on a given computer. The file is stored on the computer’s hard drive and it is copied by the computer’s RAM (Random Access Memory) when executed. It is this copying that subjects the software to the provisions of the copyright act. See Sega Enterprises Ltd. v Accolade, Inc., 977 F. 2d 1510, 1519 (9<sup>th</sup> Cir. 1993). While a skilled programmer can read and understand small sections of object code, it is nearly impossible for a programmer to develop a working understanding of a program by examining only its object code. As a result, most commercial programs are sold only in object code form and can be run only as is by the ordinary user. Different software programs do not always interoperate with each other. Interoperability can be defined as the ability to exchange information and mutually use the information which has been exchanged. Software products can be divided into Operating Systems (OSs) such as Windows and applications such as MS (Microsoft) Word. The OS controls the hardware of the computer and sends instructions to the hardware on behalf of applications. Interfaces or protocols used by applications to interoperate with the OS are called Application Programming Interfaces (APIs). An application must be designed to communicate with the specific protocols and interface specifications of the underlying OS. An application written to run on OS A will not run on OS B unless it is modified. When the application has been so modified it is capable of being ported. A protocol is a set of rules of interconnection and interaction between a server OS and a personal computer (PC). An interface specification is a description of what a software product must achieve. The implementation of that specification is the object code that can be executed on the computer. Software vendors like MS do not systematically publish the specifications of their products’ interfaces. A software developer decompiles or translates the available object code of the specification into source code which can then be used by the developer to write his own specification-compliant third party applications. Decompilation is the process of disassembling the object code and attempting to recreate the original source code. The new program is written in source code and then translated into object code using a computer program called a compiler. It is then imprinted or embedded onto a silicon chip for commercial distribution.

The practice of deriving an interface specification from reconstructed source code is called reverse engineering. The Copyright Act permits an individual who has licensed a copyrighted work to reverse engineer the work in order to understand its ideas, processes, and methods of operation. It is a fair use. 17 U.S.C. Sec. 107.

“...Where disassembly is the only way to gain access to the ideas and functional elements embodied in a copyrighted computer program and where there is a legitimate reason for seeking such access, disassembly is a fair use of the copyrighted work, as a matter of law.” *Sega Enters Ltd. V. Accolade, Inc.*, 977 F2d 1510, 1527-28 (9<sup>th</sup> Cir. 1992). “...The fact that computer programs are distributed for public use in object code form often precludes public access to the ideas and functional concepts contained in those programs, and thus confers on the copyright owner *de facto* monopoly over those ideas and functional concepts. That result defeats the fundamental purpose of the Copyright Act—to encourage the production of original works by protecting the expressive elements of those works while leaving the ideas, facts, and functional concepts in the public domain for others to build on.” *Id.* at 1527. Reverse engineering is therefore a fair use that promotes the fundamental purpose of the Copyright Act. The practice could be deemed an unfair use if it diminishes potential sales interferes with the marketability or usurps the market for the copyrighted work. *Id.* at 1523.

The Digital Millennium Copyright Act (DMCA), 17 U.S.C. Sec. 1201(f)(3), exempts the reverse engineering of a program to gain access to the specifications needed to achieve the interoperability of an independently created computer program such as an application with another programs such as an OS from its proscriptions against circumventing copyright protection systems. The reconstructed code can then be used to write third party applications that are new expressions of the copyrighted programs unprotected ideas. The copyright holder is likely to regard the new expression of its copyrighted program as an unfair clone of its intellectual property. It has become common practice for holders of IP rights to attempt to limit reverse engineering by requiring licensees to sign an end-user license agreement (EULA) that includes a no-reverse engineering clause. [8]

While reverse engineering is legal, it is expensive, time-consuming and sometimes technically impossible. [9] The process is made more difficult as the bulk of the information contained in programs consists of non-functional comments which are designed to allow programmers to debug problems. Fair use eliminates the costs of negotiating a license to gain access and thus reduces transactions costs. These costs could be prohibitive for a software writer wishing to use a few lines of code taken from a copyrighted program.

MS copyrights its programs because full disclosure is not required. At this point the distinction between an idea and the expression of the idea becomes significant. A licensee of the program can make full use of any fact or idea acquired, but the licensee can not use the expression of the idea. Many courts use the three step abstraction-filtration-comparison test as first stated in *Computer Associates International, Inc. v Altai, Inc.*, 982 F2d 693 (2d Cir. 1992) to separate the expression of the idea (protected by copyright) from the idea (not protected by copyright).

The abstraction step requires courts to dissect the allegedly copied program’s structure and isolate each level of abstraction contained within it. This step enables courts to identify the appropriate frame work within which to separate protectable expression from unprotected ideas. Second, courts apply a filtration step in which they examine the structural components at each level of abstraction to determine whether their particular inclusion at that level was idea or was dictated by considerations of efficiency, so as to be necessarily incidental to that idea; required by factors external to the program itself; or taken from the public domain. Finally, courts compare the protected elements of the allegedly infringing work (i.e., those that survived the filtration screening) to the corresponding elements of the allegedly infringing work to determine whether there was sufficient copying of protected material to constitute infringement. [10]

The Computer Associates decision explicitly recognized that specific protocols, interface specifications, de facto industry standards, and accepted programming practices are not protected under copyright law.

European Union (EU) copyright law includes many of the principles found in U.S. copyright law. However, there is a fundamental difference between EU and U.S. patent law in regard to computer implemented inventions. Article 9 of the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) extends copyright protection to the expression of ideas, procedures, methods of operation and mathematical concepts. Article 10 states that computer programs, whether in source or object code, are protected as literary works under the Berne Convention. Article 2, Paragraph 2 of the Berne Convention states that works shall not be protected unless they have been “fixed in some material form”. Programs become fixed when they are embedded on a microprocessor or copied onto the computer’s hard drive or memory. Article 11 gives copyright

holders the right to refuse to license. Article 5 of The World Intellectual Property Organization Copyright Treaty (WIPO), grants copyright protection to “compilations of data or other materials, in any form, which by reason of the selection or arrangement of their contents constitute intellectual creation....” The protection “does not extend to the data or the material itself....” Article 11 prohibits circumvention of technological measures for the protection of protected works. Reverse engineering of protected works to achieve interoperability is legal under current law. The DMCA implements the WIPO in the U.S.

Article 27 of TRIPS states that patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application. Given that that invention and industrial are not defined, the agreement leaves it to the member states to determine what constitutes a patentable invention, and whether or not that includes patents on computer-implemented inventions. The member states of the EU have limited the number of software patents that are recognized in their jurisdictions by invoking the legal concept of “technology”. An algorithm is inherently non-technical and can not be patented. Nevertheless, software using an algorithm might be patentable provided that the algorithm is used to solve a technical problem. The processing, handling, and presentation of information does not belong to a technical field, even where technical devices are employed for such purposes. Amazon’s “One-Click” U.S. patent is a computer-implemented invention and wouldn’t be valid in the member states. Article 52 of the European Patent Convention (EPC) states that patents shall be granted for any inventions which are susceptible of industrial application, which are new and which involve an inventive step. Article 52, like Article 27 of TRIPS, denies patents for computer programs unless they are susceptible of industrial application. A patent application for a computer program that operates a cell phone would be granted because it is an industrial application. The European Patent Office (EPO) does not grant patents for business methods because they make no contribution to the technical arts. A patent granted by the EPO is a bundle or collection of national patents which must be enforced and recognized by the national courts of each member of the EPO. There is no single, centrally enforceable, EU-wide patent. This is a very costly and complicated state of affairs for a patent holder seeking to bring a suit against an infringer. Switzerland, Liechtenstein, Turkey, Monaco, Iceland, Norway and Croatia are contracting members of the EPO but they are not members of the EU. A 2003 draft Directive of the European Parliament that would have extended patents to computer-implement inventions was voted down and is not likely to be revived in the foreseeable future.

## STATIC V DYNAMIC COMPETITION

Competition in new economy industries is fundamentally different from competition in old economy industries. Software would be an example of a new economy industry while steel manufacturing would be an example of an old economy industry. The former industries experience decreasing or diminishing returns to scale while the latter industries experience increasing returns to scale. Decreasing returns mean that the marginal costs (MCs) of old economy industries increase with expanding output and equilibrium occurs with numerous firms in the industry because costs per unit rise as output is expanded. Increasing returns mean that the MCs of new economy industries decrease with expanding output and equilibrium occurs with a dominant firm or a monopoly in the industry because unit costs decrease as output is expanded. It is a Schumpeterian world in which monopoly power becomes a motivating force in the innovative process. Monopoly power doesn’t mean that the monopolist will be free to earn economic rent because there may be competition for the market. If there are no barriers to entry, competition for the market forces the incumbent monopolist to price at average cost in order to prevent the market from being taken over by a competitor. The market for software products are characterized by large initial investments (fixed costs) and low costs to reproduce individual items (variable costs). Development costs are amortized over the number of copies made and the copies can be distributed for almost nothing over the internet. In a competitive market, the price of the software will be bid down to the MC of copying. The existence of a patent or a copyright creates static inefficiency because the IP holders can charge a price that exceeds the MC of copying. Given the cumulative nature of innovation in the software industry, the cost of innovation will increase because existing innovations are inputs for subsequent innovations. First mover or first to market advantage can be an alternative means to reward the innovator. The monopolist can sell the first units of the software at a high price to those consumers who value it the most, and then she can sell additional units of the software at lower prices to those who value it less. Over time, prices will fall until they reach MC. Price will be based upon the elasticity of demand of each user rather than upon the fixed costs of developing the software. The Coase Conjecture suggests that the monopolists will be forced to lower its price

very rapidly and to sell at close to MC almost instantaneously [11]. Empirical evidence suggests that getting to market first in other highly innovative industries has substantial value to first movers. [12] Increasing returns are a supply-side characteristic of the software industry. Some old economy industries may experience increasing returns because of the specialization of tasks made possible by the division of labor.

Static theory assumes that software writers will innovate only if they have the prospect of an appropriate financial return. It must be sufficient to compensate for the risk of failure and the cost of creating the work. Patents and copyrights give the holder the right to exclude others from using their IP unless they are licensed. They are necessary to motivate the software writer and to allow the writer to recover an appropriate return. While an abstract idea can not be patented or copyrighted, advocates of the existing patent and copyright regime claim that some of the welfare created by an innovator's abstract idea that is embodied in a process or expression of that process can be captured. Innovation would otherwise be less than optimal because ideas are non-rivalrous and therefore the innovator can not exclude others from using them. The innovator could not charge for the use of his idea without the existing patent and copyright regime. Innovation creates a benefit for society that otherwise could not be internalized by the innovator. Spillover effects would be positive for the economy and negative for the innovator. Ideas create welfare and it is only fair that the innovator be rewarded for the welfare that she creates for society.

The existing patent and copyright regime has created an IP thicket, an overlapping set of rights, which requires an innovator to obtain licenses from multiple IP holders. The innovator must negotiate bargains with the IP holders to gain a license in return for the payment of a reasonable fee. Bargaining is a transaction cost that is associated with defining and enforcing property and contract rights. Such costs are a necessary incident of organizing any activity on a market model. In a Coasian world with zero transactions cost, IP entitlements will be transferred to the persons who value them most highly and the use of the IP property will be unaffected by the initial distribution of entitlements. Courts could encourage bargaining by imposing property rules rather than liability rules. [13] However, "...those who have considered the application of the Coase theorem to IP rights have noted the pervasive presence of transactions cost." [14] Unsuccessful bargaining can result in the creation of an anticommons. IP will be underutilized when the many exclusive rights in the IP resource held by disparate right holders can not be assembled to create a single useful product. The tragedy of the anticommons is that promising new technology will remain undeveloped and innovation will be stifled. [15] Compulsory licensing is not the answer because Congress would need to legislate liability rules and the courts would have to interpret the terms and conditions on which licenses would be granted. The record of Congress and the courts in this area leaves much to be desired. [16] Privately established collective rights organizations such as ASCAP and BMI and patent pools are alternatives to compulsory licensing. The latter are encouraged by Section 2.3 of the U. S. Department of Justice 1995 Antitrust Guidelines for the Licensing of Intellectual Property because of their competition enhancing effects.

A second characteristic of the software industry are direct network effects. Such effects occur when each individual's demand for a particular company's product depends not just on the nature of the product itself, but also on its widespread use by others. A user of MS Word benefits when others use the program because it is easier for each user to share files. A third characteristic are indirect network effects. A consumer is more likely to purchase a computer and a particular OS if he knows that more compatible software products are presently available and will be available in the future for his system. If consumers expect a seller to become dominant, then consumers will be willing to pay more for the firm's product, and it will, in fact, become dominant.

Network externalities push dynamic markets toward technical standardization. Consumers prefer software that gives them access to a large user network and abundant compatible software products and services. Because of these benefits, programmers have a strong incentive to create products that provide these benefits. The dynamic ensures that the dominate technology does in fact become the technical standard. The market tips in favor of the dominate technology. Once a technological standard has been adopted, rival technologies will not be able to compete unless they are compatible with that standard. The level of technological compatibility is likely to be sub-optimal because a firm that controls access will have insufficient incentives to make their products compatible with those of other firms. Such a firm can use that control to gain monopoly power and earn economic rents. *Intergraph v. Intel*, 3 F. Supp. 1255, 1266 (Dist. Ct. N.D. Alabama, 1998) (Decision for plaintiff, over ruled on other grounds). Innovation will be stifled. [17] The dominant firm will not have an

incentive to undertake the risks of innovation and rival firms will be unable to develop compatible products. U.S. v. Microsoft Corp., 87 F. Supp. 2d. 30, 44 (D.C. Cir. 2001)

The OS and the applications that access its APIs are called a platform. The number of applications or complementary software written for a particular OS is the applications barrier to entry. The greater the number of applications written for the platform, the higher will be the barrier to entry because a potential challenger of the dominant firm will not have access to the dominant firm's applications. A potential challenger that wants to offer the consumer an alternate OS will find it difficult to leap the applications barrier to entry unless it can concurrently offer the consumer a library of applications that are similar in scope and size to the ones available for the dominant OS. However, an alternate OS that was significantly better than the currently dominant OS, could still succeed in the market place despite the network and applications barrier to entry. A successful challenger would be following in the footsteps of MS when its Windows OS replaced DOS as the dominant OS. Network effects and the applications barrier to entry are demand side characteristics that are typical of the software industry.

A consumer can become locked into a particular OS because of the cost of switching to an alternative OS. Typically, a consumer purchases a particular OS and its applications. If a consumer switches, she will lose her investment that is specific to the seller. Current applications may not fully interoperable with the new OS. In that case, the consumer will have to purchase new applications and invest time in learning the new OS and its applications. The fact that the consumer bears the cost of switching suggests that the consumer's demand for the dominant OS is relatively inelastic and is consistent with the very high gross margins of most proprietary software. The costs of switching can lock consumers into a less than optimal technology. The adoption of the QWERTY typewriter keyboard instead of the superior Dvorak alternative illustrates this phenomenon in a static industry.

Consumers demand a particular OS because of its ability to run the applications that they want. Independent Software Vendors (ISVs) encounter substantial sunk costs when they write applications. They are thus motivated to write first to the OS with the largest installed base. The current number of compatible applications is likely to depend directly on the past and current market share of the OS. Network effects, the applications barrier to entry and switching costs ensure that any software monopoly once established will be hard to dislodge. Users will not adopt an alternative OS unless it is substantially superior to the established OS.

Increasing returns mean that marginal costs are virtual zero when large quantities of software are produced. It is rational for software firms to give away their product at no cost in order to grow their installed base and gain the benefits of the network effects and the applications barrier to entry. It would be rational for a dominant firm to pay a rival to exit the market. However, the payment would be *per se* illegal under the Sherman Act. In re Cardizem CD Antitrust Litigation, et. al., 2003 FED App. 0195P, 5 (6<sup>th</sup> Cir.). Given high barriers to entry, inelastic consumer demand and market dominance, losses can be recouped by raising prices above marginal costs. Below cost pricing can be characterized as predatory and can provide the intent that is needed to find liability for a violation of the Sherman Act. [18]

Competition within new economy industries takes place between firms outside of the market to capture the market rather than by firms within the market competing to capture market share. An example of the former type of competition occurred during the mid-1960s when rival firms sought to capture the mainframe segment of the computer market. The IBM/360 dominated the segment with a single platform. Rival firms sought to compete by making plug compatible hardware such as monitors, tape and disk drives, controllers, card-readers and central processing units (CPUs) and software. [19] Firms competing in the software industry engage in a winner take all race to obtain dominance of a category such as word processing, spreadsheets or OSs that is of a size sufficient to tip the market in their favor. Firms try to gain dominance of a category, at least in part, by integrating previously separate features into their software products. The races are sequential and the competitive process is similar to that described by Schumpeter's theory of creative destruction. Tipping occurs when each consumer believes that every other consumer believes that other consumers will purchase only from firm X, and then the market will tip in favor of firm X. Each consumer's demand for firm X's products will become inelastic because each consumer will hope to benefit from the network effects enjoyed by firm X's products and the large number of present and future applications that will be written for firm X's products. [20]



A fundamental assumption of antitrust law is that monopolies are socially undesirable because they raise prices and restrict output. Consumer choice is restricted and consumer welfare is reduced. [21] This assumption may not be correct for an industry with weak barriers to entry because an incumbent monopolist may forego economic rents and price at or below average cost in order to discourage entry by a potential competitor. *U.S. v. Alcoa*, 148 F. 2d. 416, 426 (1945) Monopolies in new economy industries may be socially desirable because they foster innovation and their negative consequences are mitigated by their transitory existence. A monopoly has both the means and the incentive to foster innovation. It earns and accumulates economic rents until a rival firm can introduce a substantially superior product which can overcome the protection from competition enjoyed by the monopoly because of network effects, the applications barrier to entry and the costs of switching. The monopolist has the incentive to continue to innovate because it can delay or forestall the introduction of a rival's product and thereby continue to earn economic rents. Economic rents enable the monopolist to invest in research and development (R&D). "The opportunity to charge monopoly prices—at least for a short period—is what attracts business acumen in the first place; it induces risk taking that produces innovation and economic growth." *Verizon v. Trinko*, 540 U.S. 398, 407 (2004) (internal quotations omitted). The returns to investment in new economy industries are different from the returns earned in old economy industries. Returns are highly skewed because only one or a few firms can win the winner take-all race. High returns are necessary for innovation because it is very difficult for venture capitalists to pick the winner of a race and they will therefore insist on a high rate of return before investing. If investors are denied the prospect of earning rents they will be reluctant to invest. [22] Competitive industries are likely to have a slower rate of innovation because rival firms will quickly emulate any successful innovation and thereby dissipate the economic rent earned by the innovator. A monopolist is unlikely to protect its market power by building up a portfolio of patents and copyrights. As I explain in the last section of my paper, it is difficult for a firm to appropriate the value of an innovation by protecting it with a patent or a copyright.

## THE MICROSOFT DECISION AND JUDGMENT

The Decision and Judgment is significant from the point of view of dynamic competition because MS used its market dominance to prevent competition in an important segment of the software industry. MS's ability to earn economic profits was thus unrestrained by rivals. The Decision and Judgment's most important finding was that innovation by rivals was stifled. The case is recounted because of the light that it sheds on the process of innovation in a segment of the software industry long dominated by MS and because the case highlights the differences between American and European copyright and patent law in this important legal area.

An application for the annulment of the Commission Decision 2007/53EC of 24 March 2004 was made before the Court of First Instance (Grand Chamber) and it was denied except for the remedy of appointing an independent monitoring trustee. The Judgment, 2007/09/17, Case T-125/04, made reference to *U.S. v. M.S.*, 87 F. Supp. 2d 30 (D.C. Cir. 2001). The analysis used by the Court of First Instance was based upon the assumption that MS's long run average cost curve exhibited decreasing returns to scale. Three software product markets were identified. The first was the client PC OS. The OS controls the basic functions of a computer and permits the user to operate the computer and run applications on it. MS was found to have a 90% market share. Network effects and the applications barrier to entry protect MS's dominant share of the market. The second was the work group server (WGS) OS which was defined as "the basic network infrastructure services used by office workers in their day-to-day work for three sets of distinct services, namely sharing files stored on servers, sharing printers, and the administration of the manner in which users and groups of users can access network services." Case T-201/04 R, *Microsoft*, (the Order, recital 10). MS was found to have a 60% market share. Numerous barriers to entry and "particular links to the client PC OS market," *Id.* at recital 18, protected MS's dominant share of the market. The third was the streaming media player market. A media player reads sound and image content in digital format, i.e. it decodes data which can be taken from the internet and translates that data into instructions for hardware such as loudspeakers and a screen. A streaming media player in contrast to a non-streaming player allows the user to listen or view content as it is being downloaded. A non-streaming media player allows the consumer to listen or view content only after the content has been completely downloaded. Strong interdependencies exist between the three software product markets because users need to use numerous devices and programs together and to exchange information between them. Additional interdependencies exist because users need to connect various types of computing devices and software in a network. The geographic market is world-wide.

The Decision found that MS had committed two acts of abusive conduct. Abuse is an objective concept that refers “...to behavior by an undertaking in a dominant position which is in a position to influence the structure of a market where, as a result of the very presence of the undertaking in question, the degree of competition is already weakened and which, through recourse to methods different from those governing normal competition in products or services on the basis of the transactions of commercial operators, has the effect of hindering the maintenance of the degree of competition still existing in the market or the growth of that competition.” *Id.* recital 398. The concept of an undertaking abusing its dominant position in a product market does not exist in U.S. law. MS's first act of abusive conduct was its refusal to supply its competitors with interoperability information and to allow that information to be used by competitors for the purpose of developing and distributing products that competed with its own products in the WGS OS market. Interoperability is the ability to exchange information and to mutually use that information. “...The Decision emphasizes...that the refusal in issue does not relate to elements of MS's source code but solely to specifications for the protocols in question....” *Id.* at recital 20. A specification is defined as a “detailed description of what the software in question must achieve, in contrast to the implementations, consisting in the implementation of the code on the computer” (the Judgment, paragraph 40). A specification is the algorithm or abstract idea that is embodied in the object code. Protocols are defined as a set of rules of interconnection and interaction between various instances of Windows work group server operating systems and Window client PC operating systems running on different computers in a Windows work group network. MS's refusal created the risk that competition would be eliminated and that innovation would be stifled.

The Decision threatens MS's business model because it has been MS's practice to extend the Windows OS to other devices such as telephones, entertainment centers and personal digit assistants (PDAs). MS regards the practice as a natural extension of network computing. [23] The Decision found that MS leveraged its near monopoly in the client PC OS market into the markets for WGS OSs and for streaming media players. Unlike U.S. law, EU law only requires that the leveraging give the dominant firm a competitive advantage in the second market and not dominance in that market. MS's refusal to supply interoperability information prevented rival products from connecting effectively to Client PCs and thereby limited the ability of rivals to compete in the WGS OS and streaming media player markets.

With the possible exception of *Image Technical Services v. Kodak*, 125 F3d 1195 (9<sup>th</sup> Cir. 1997), antitrust decisions in the U.S. have not found liability for failure to license in the liability phase of a case. Compulsory licensing has been ordered in the remedy phase of a case. This is a significant difference between U.S. and European Union law.

MS's second act of abusive conduct was its refusal to license the Windows Client PC OS unless the licensee simultaneously acquired the Windows Media Player (WMP). Rival players, i.e., the Real Networks Player, were foreclosed from competing in a substantial portion of the streaming media player market. WMP and its Windows Media Formats (WMF) have achieved near ubiquity and have begun to benefit from the network effects and the applications barrier to entry. The market was in danger of tipping in MS's favor. The RealNetworks Player is middleware which exposes its own APIs and can provide an alternative platform upon which applications can be developed and run, and hence has the potential of breaching the applications barrier to entry. To the extent that WMP achieves ubiquity, WMP's proprietary formats will replace open formats and this will put MS in a position to control market standards. Competing streaming media players and their formats will be excluded from the market no matter what their merits. Competing streaming media players still in the market will be unable to read or duplicate WMP's formats which mean that those players will lack the ability to fully interoperate with the client PC OS and the WGS OS. The performance of competing streaming media players will be diminished. Technical innovation within the streaming media market and by MS itself, are stifled. See Order at recital 223.

The Decision contained the following principle remedies. First, MS shall “make interoperability information [communications protocols] available to any undertaking [third party] having an interest in developing and distributing WGS OS products [applications]...on reasonable and non-discriminating terms....” *Id.* at recital 28. The remedy requires the licensing of protocols for use in WGS OSs and server OSs. “...This includes both direct interconnection and interaction between a Windows WGS and a Windows Client PC that is indirect and passes through another Windows WGS.” Order at recital 230 (internal quotations omitted). The order to license should make it possible for MS's competitors to develop third party programs that are fully compatible with the

protocols implemented in the Windows Client PC OS and in the Windows WGS OS and used by the Windows Client PC and by the Windows WGSs. The remedy should ensure that third party programs can compete on a level playing field with similar programs developed by MS. Second, MS "...shall...offer a full-functioning version of the Windows Client PC OS which does not incorporate WMP [and its codes]. MS...retains the right to offer a bundle of the Windows Client PC OS and WMP." *Id.* at recital 30. Third, MS was ordered to end its abusive conduct. Fourth, MS was fined EUR 497 196 304.

MS argued that its communications protocols were protected by copyright under Article 2 of the Berne Convention and that it had the exclusive right to authorize their publication. MS argued that compulsory licensing would be unfair because its protocols "...are the fruit of many years of very expensive R & D. Significant efforts were expended in designing communications protocols that provide useful functionality and enhance the speed, reliability security and efficiency of interactions between Windows OSs." *Id.* at recital 114. "...Compulsory licensing undermines the fundamental rationale of intellectual property (IP), which affords the creator of inventive and original works the exclusive right to exploit such works." *Id.* at recital 113 (internal quotations omitted). Compulsory licensing could put MS at a competitive disadvantage because its rivals will be able to study the protocols and obtain detailed knowledge of their inner workings and then use that knowledge in their own third party products. Important aspects of the design of the Windows server OSs will be revealed. Competitors will be able to reproduce within their server OSs the range of functionality that MS has developed through its R&D efforts. "The compulsory licensing of its communications protocols would definitively compromise its [MS's] freedom to decide how to develop its products. The future improvement of those protocols and, ultimately, MS's capacity to innovate would be affected." *Id.* recital 143. MS's arguments were supported by the U.S. *Antitrust Guidelines for the Licensing of Intellectual Property*. "IP law bestows on the owners of IP certain rights to exclude others. These rights help the owners to profit from the use of their property." [24] MS also argued that by requiring it to license its communications protocols the Order violated Articles 13 and 31 of the TRIPS Agreement. Both arguments were rejected. The Order stated that implementation of MS's communication protocols in an OS doesn't constitute copying but leads to a clearly distinct work and doesn't constitute a form of exploitation prohibited by copyright. *Id.* at recitals 168 & 169. The Judgment stated that Articles 13 and 31 of the TRIPS Agreement were not relevant because MS asked the court to interpret not a provision of the EC Treaty but a secondary Community law. "It is settled case-law that...WTO agreements are not in principle among the rules in the light of which the Community judicature is to review the legality of measures adopted by Community Institutions." Paragraph 801.

MS appealed to the President of the Court of First Instance to suspend enforcement of the Decision's remedies claiming that otherwise it would suffer serious and irreparable harm. The President's Order rejected MS's arguments and ordered the immediate enforcement of the Decision's remedies. The Order drew a distinction similar to the one drawn in American copyright law between an idea and its expression. Protocols and interface specifications are not protected while the source code which implements the protocols and specifications are protected. "A competitor wishing to write a server OS that understands MS's protocols will have to write code in its product that implements the specifications. Two programmers implementing the same protocols specifications will not write the same source code and the performance of their programs will be different. ...The protocols may be compared with a language whose syntax and vocabulary are the specifications, since the mere fact that two persons learn the syntax and the vocabulary of the same language does not mean that they will use it in the same way." *Id.* at recital 165. Cloning is not allowed. "...The use of the protocols is permitted only for the purposes of interoperability and that, consequently, their use for other purposes is not allowed." *Id.* at recital 289.

Even if MS's protocols were protected by copyright, a dominant undertaking, i.e. MS, can be ordered to license an essential element of its intellectual property (IP), see Case C-418/01 *IMS Health v. NDC Health* [2003]. The refusal of an owner of copyrighted IP to license that property, i.e. its protocols, can be considered an abuse by a dominant undertaking where there are no objective justifications for such refusal, where such a refusal is preventing the emergence of a new product for which there is potential consumer demand and where such a refusal would ultimately eliminate all competition in a secondary market. The Decision and the Order found that MS's refusal to license violated Article 82 EC. MS did not deny that it had a dominant share of the Client PC OS market and the WGS OS market, but it did deny that its refusal to license was an abuse. The Order found that MS abused its dominance because its reasons for refusing to license were purely economic and therefore of no weight. Competition was stifled because MS adopted preexisting protocols and then altered them with the aim

of preventing or prohibiting interoperability. "...There are significant possibilities for product differentiation which would enhance competition but which...are neutralized by MS's conduct." *Microsoft*, (Order) at recital 191.

The remedy of compulsory licensing can be criticized because the creation of interoperability problems for rival software vendors can be expected from firms in markets that are characterized by dynamic competition. This is another means by which such undertakings can increase their installed base and tip the market in their favor and obtain the advantages of the network effects and the applications barrier to entry. The court should have asked whether MS's conduct made sense apart from their tendency to lessen competition.

The Judgment found that MS had abused its dominance in the market by tying or bundling its WMP to its Windows Client PC OS and that such conduct had violated Article 82 EC because rivals were foreclosed from competing in the market for third party media players. The finding strikes at the heart of MS's business model because it has bundled applications that were offered as separate products by other companies in the past and is likely to continue the practice in the future. The Judgment directly challenges MS's freedom to integrate new functions into its Windows OS. Once MS bundles an application with its OS, rival companies lose the ability to compete by providing alternatives to the bundled applications. Existing competitors cease investing in competing applications and potential new competitors refrain from entering the market for the bundled application. There is a loss of consumer choice because consumers are forced to buy the bundled application as part of their PC's OS and they do not have the opportunity to choose an alternative product from another vendor. "The reduction, by tying, of the applications and content available for other manufacturers' media players is ultimately harmful to consumers as it reduces innovation in those products, irrespective of their intrinsic merits." *Id.* at recital 382 [25]

MS was ordered to release a version of the Windows Client PC OS without the WMP and its codes. The purpose of the remedy was to remove the incentive of software developers to write for the largest installed base and to offer the consumer more choice. The unanswered question in regard to the remedy is whether the consumer will regard the stripped down OS as offering less value, and not more value for the price. MS has harshly criticized the remedy. "We believe that the code removal remedy, obligating MS to release a degraded version of the Windows OS, will be harmful to consumers and competition and undermines the technology integration that has been the backbone of the IT revolution of the past three decades." [26] [27]

The Order observed that this was not a classic case of tying because consumers could readily download rival players, sometimes free of charge. Consequently, MS's bundling was not regarded as a per se violation; rather, the bundling was evaluated using the rule of reason. The tying product was the Windows Client PC OS and the tied product was the WMP. "...The existence of independent manufacturers specializing in the manufacture of the tied product...indicates a separate consumer demand and therefore a separate market for the tied product. [This] approach is...consistent with U.S. case-law." *Id.* at recital 384. [28] The approach can be criticized because the consumer's demand for separate products as distinct from the consumer's demand for the combined product reflects the demand for existing products which could disappear once the consumer gets use to the additional functionality of the combined product. The Order and Judgment did not rule on the ultimate issue of the legality of the bundling.

The remedy of offering a full-functioning version of the Windows Client PC OS which does not incorporate the WMP is a fundamental threat to MS's monopoly of the desktop and the underlying Windows Client PC OS. The Decision makes the assumption that the purchaser of a PC will install a streaming media player of his or her own choice. Some of those players will be made by rivals of MS. A streaming media player is middleware which exposes its own APIs. Programs that are written to these APIs instead of the APIs exposed by the Windows Client PC OS will be portable and they will run on any client PC OS where the rival streaming media player is installed. The purchaser of a PC will be indifferent to the underlying client PC OS. Potential rivals to MS with competing third party programs will be able to break through the applications barrier to entry.

The reader of the court's Decision & Judgment can only speculate on what the outcome would have been if the court's analysis had been based upon the assumption of increasing returns to scale rather than decreasing returns to scale. MS's conduct should not be considered abusive if it in fact, competes in an industry characterized by increasing returns to scale. While U.S. case law has the concept of a dominant firm, it does not impose a duty on the dominant firm to help a rival. In *Aspen Skiing Co. v Aspen Highlands Skiing Corp.*, 472 U.S. 585 (1985), it

was held that there are certain circumstances when a refusal to cooperate with a rival can be regarded as anticompetitive conduct and constitute a violation of the Sherman Act, Sec. 2. Subsequent cases have stated that *Aspen* was an exception to the rule that a dominant firm has no duty to aid rivals. *Aspen* and its progeny may explain the different outcomes between the U.S. and the EU Microsoft cases in which many of the facts and the issues were the same.

The Decision and Judgment have apparently brought about an important strategic shift in MS's policy. On 2/21/08 MS announced that it will document all communication protocols and external APIs that are used by MS products. MS has web published 30,000 pages of detailed specifications of client and server protocols and external APIs that were previously available only under a secret license. The specifications are available free of charge. "...Today's action represents a significant expansion toward ever greater transparency and interoperability." The shift in policy is partly a response to MS's "unique legal situation" and an effort to adapt "to the opportunity and risks of a connected, more service-oriented world." The published code will allow 3<sup>rd</sup> parties to provide services such as online word processing that work with MS programs. [29]

## REFORM OF PATENTS & COPYRIGHTS

The software industry began in the mid-1960s when IBM decided to unbundled its proprietary software from its hardware products. Computers at that time were not sold through retail channels of distribution and business and main frame computers dominated the market. The innovations contained in the hardware were adequately protected by patents. The market was transformed with the introduction of the IBM P.C. and its clones in the mid 1970s. The market for software expanded from service and custom programming for business and main frame computers to the development and retail marketing of software products that could be installed off the shelf into a P.C. Today the software industry is composed of more than 40,000 firms and it is very competitive. Copyrights initially provided robust protection for computer programs until the courts narrowed that protection. In *Computer Associates v. Altai, Inc.*, 982 F.2d 963 (1992), the court adopted a hard-look framework that made it difficult to obtain copyright protection for the broader structural features of a program. Protection was limited to expression. In *Apple Computer, Inc.*, 35 F.3d 1435 (1994), the court refused to protect Apple's graphic user interface (GUI) from appropriation by MS. In *Lotus Development Corp. v. Borland International, Inc.*, 49 F.3d 807 (1995), the court held that the menu command hierarchy for a computer spreadsheet program was an uncopyrightable method of operation because 17 U.S.C. Sec. 102 (b) denied copyright protection to a method of operation. Lotus claimed copyright infringement because Borland had copied the menu command hierarchy of the Lotus 1-2-3 spreadsheet program. Patent protection for computer software was uncommon in the 1960s because it was not needed when copyright protection was robust. IBM was the leading computer manufacturer and it opposed the patenting of software. Cross-licensing of patents was common between competitors in the 1960s and 1970s. *Gottschalk v. Benson*, 409 U.S. 63 (1972) created a significant impediment to the patenting of computer software. The Supreme Court held that an algorithm without substantial practical application except in connection with a digital computer was not a patentable process within the meaning of the Patent Act.

Under current U.S. copyright law, nothing is required to secure copyright protection for a work beyond fixing it in a tangible medium of expression. 17 U.S.C. Sec. 102 (a) Before the Copyright Act of 1976, both publication and registration were required. Patents require the filing and examination of an application, and provide no protection until the examination has been completed and the patent is granted. The validity of a patent must be established by clear and convincing evidence. 35 U.S.C. Sections 101-103. Patent protection requires that the invention be both novel, meaning it doesn't already exist in the prior art (35 U.S.C. Sec. 102) and nonobvious, meaning that it is different from prior art in a way that would not be obvious to a person with ordinary skills in the art of the invention at the time the invention was made. 35 U.S.C. Sec. 103 An important part of the patent application to third parties is its disclosure of the prior art used to examine the application.

The barriers to patenting software began to fall with the organization of the Federal Circuit Court for patent appeals in 1983 and a series of court decisions which extended patent protection to many software ideas. In *Diamond v. Diehr*, 450 U.S. 175, (1981), the court held: "although by itself a mathematical formula is not subject to patent protection, when a claim containing such formula implements or applies it in a structure or process which considered as a whole is performing a function designed to be protected by the patent laws the claim constitutes patentable subject matter." "Structure or process" is equivalent to the European legal concept

of “technology” which has been previously discussed. In *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F. 3d 1368 (1998), the court held that: a computerized accounting system used to manage a mutual fund investment portfolio based on an algorithm was patentable because it was a practical application that produced a useful, concrete and tangible result. *State Street* dropped *Diehr*’s requirement of a structure or process and opened the door to business method patents. The Patent Office became more liberal in the granting of broad patents. These changes have made it much easier for patent holders to sue infringers and win. There has been an increase in the number of patents granted. Once a patent is issued by the U.S. Patent Office (PTO) it’s presumed valid under 35 U.S.C. Sec. 282. An accused infringer must prove patent invalidity with clear and convincing evidence. *Metabolite Laboratories v. Laboratory Corp. of America Holdings*, 370 F3d 1354, 1365 (2004). Critics of the new legal regime claim that patents are granted too easily for inventions that are not novel and obvious. The Patent Office simply lacks the resources to determine whether a claimed innovation is novel and nonobvious in light of the prior art. Patents that are granted for business methods have drawn the most criticism. Patents can stifle innovation because innovators fear suits that claim their innovations violate a broad patent. [30]

The fundamental problem with patents is that it is difficult for the patent holding software firm to appropriate the value of its invention. Competitors can usually, without infringing a patent, implement most aspects of a patented software product because there are many solutions to any particular problem. It is difficult to build a defensible barrier of patents around a product because any particular product is likely to include dozens if not hundreds of separate ideas. Another problem for the software firm is that technology tends to develop so rapidly that by the time a patent is issued, the technology protected by the patent may be obsolete. Litigation itself is time consuming and the patent owner will likely be forced to challenge the technology of a subsequent generation of software to which the application of the contested patent may be less clear. Another practical problem faced by the patent owner is that it is very difficult to be sure that a competing product infringes. Instead of building a defensive barrier of patents around an invention, a software firm would be better advised to obtain market power by exploiting its lead time or its first mover advantage. It will take time for competitors to copy its invention and during that time the software firm can earn above normal profits. The software firm should be able to maintain its advantage for years so long as it keeps improving its technology as quickly as its competitors. [31]

Patent trolls stifle innovation. These are small nonoperating companies that amass portfolios of patents with no intention of employing or licensing the technology they describe. An innovative firm has no legal right to use patented technology even when the patent holder is not using that technology. Trolls make money by extracting monopoly profits from would be licensees and by suing companies that inadvertently violate a patent in the troll’s portfolio. They force the infringer to settle by threatening to obtain an injunction to shut down the infringer’s business. In *eBay v. MercExchange*, 126 S.Ct.1837 (2006) the court weakened the hand of trolls by holding that the decision of whether to grant or deny the traditional remedy of permanent injunctive relief to patent holder rests within the equitable discretion of the district courts. Those courts now have the option to fine infringers. Only time will tell if the option is popular. A recent example of a troll using the power of an injunction to extract a settlement from an infringer was the payment of \$612.5 million by Research in Motion (RIM) to NTP. RIM settled despite the fact that the NTP’s patents had been tentatively invalidated by the U.S. Patent Office. [32]

Two recent U.S. Supreme Court decisions may have opened the door to the weakening patent of protection. In *KSR International Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007), the court adopted a flexible standard that will make it easier for patents to be denied or challenged on the grounds that the invention at issue is too obvious to deserve patent protection. The technology underlying the patent claim involved adjustable automobile pedal assemblies with an electronic pedal position sensor attached to the pedal assembly’s support member. Attachment of the position sensor to the support member allowed the sensor to remain in a fixed position while the driver adjusted the pedal. It was undisputed that various combinations of references in the prior art disclosed all of the elements of the claim at issue. The Federal Circuit upheld the patent, but the Supreme Court reversed explaining that “[G]ranting patent protection to advances that would occur in the ordinary course without real innovation retards progress and may, in the case of patents combining previously known elements, deprive prior inventions of their value or utility.” *Id.*, at 1732. “And as progress beginning from higher levels of achievement is expected in the normal course, the results of ordinary innovation are not the subject of exclusive rights under the patent laws. Were it otherwise patents might stifle, rather than promote, the progress of useful arts.” *Id.* at

1746. In *MedImmune, Inc. v. Genentech, Inc.*, 127 S.Ct. 764 (2007), the court held that a patent licensee does not give up his right to file an action for a declaratory judgment that a patent is invalid even if he continues to pay royalties under the license agreement. Prior Federal Circuit cases held that the patent licensee had to stop paying royalties, thereby breaching the licensing agreement, before challenging the validity of the patent held by the licensor patentee in order to satisfy the case and controversy requirement of Article III of the Constitution. If the patent licensee breaches the licensing agreement by not paying royalties, the licensor patentee can terminate the license, exposing the patent licensee to a patent infringement suit, with a threat of treble damages, attorney's fees and an injunction. Challengers will no longer be exposed to liability and have to bet the firm if they seek to test the validity of the patent held by the licensor patentee.

The extension of patent protection to software did not generate a relative increase in R&D spending and "there is no evidence of any underlying increase in productivity that is commensurate with the increase in patents". Bessen and Maskin, *op. cit.* at 9. Innovation in the software industry is both sequential and complementary. The former means that each successive invention builds on the preceding one and that the latter means each potential innovator takes a somewhat different research line and thereby enhances the overall probability that a particular goal is reached within a given time. "A firm that patents its product in a world of sequential and complementary innovation can prevent its competitors from using that product (or sufficiently similar ideas) to develop further innovations. And because these competitors may have valuable ideas not available to the original firm about how to achieve such innovations, the patent may therefore slow down the pace of inventions." *Id.* at 3. The finding is consistent with the historic record of early industrial America. Innovation was not a function of the number of patents issued; instead it was a function of the size and geographic extent of the market. [33].

Software creation is a highly collaborative effort. Ideas are shared and they are widely disseminated. If an innovator must seek a license from and pay numerous patent holders, an anticommons can be created. Navigating a patent thicket to assemble the rights that are needed to exploit the existing protected IP could involve prohibitive transactions costs. The existing protected IP is likely to be underutilized. Innovation can be stifled. Patents confer monopoly power on producers and they reduce consumer welfare. In a proprietary system creators gain a competitive advantage by concealing their ideas from one another and revealing them only at a point in time and in a form in which they can charge a fee.

In 1980, Congress passed the Bayh-Dole Act (35 U.S.C. Sections 200-212) in the belief that innovation was being discouraged because university scientists doing basic research under government contracts had no ownership rights to their innovations and no incentive to commercialize the innovations that they created with the aid of federal money. The Act gave ownership rights to the university which would allow the patent system to be used for the transfer of technology to private enterprises for commercial application. The Act has had its greatest impact on basic academic biomedical research. Sponsors of the Act intended to promote collaboration between university scientists and commercial biotechnology firms; instead it has undermined the norms of reciprocal collaboration among university scientists themselves because the sharing of research findings can prevent a university from patenting those findings. The publication of research results are being delayed to allow private enterprises to obtain patents. Before the Act's passage, the government sponsored upstream research and encouraged dissemination of the results in the public domain. Unpatented biomedical discoveries were freely incorporated in downstream products for diagnosing and treating disease. Another unintended consequence of the Act has been the proliferation of IP rights upstream in the hands of different owners which are stifling innovation in downstream product development. [34]

The price of computer hardware has fallen dramatically. Whereas previously, computer hardware was costly and accessible only to large firms, now it is cheap and within the reach of most individuals. In the old economy the opportunity to make things was constrained by the cost of the physical capital required to make them. Individual P.C.s can be networked and they can communicate with other P.C.s located in distant places via the internet. Their combined computing power can exceed that of the largest mainframe computer. Individuals can collaborate over networks of computers and compete with large firms on an equal footing in the process of innovating. Networks of computers permit peer production within a commons. Peer production is based on individual action that is self-selected and decentralized. In decentralized peer production the actions of many individuals coalesce and are effective despite the lack of central direction. Production can take place outside of the market. Innovation can be driven by consumers and end users, rather than by manufacturers. End user driven innovation occurs because most products that are developed by manufactures are designed to satisfy the widest

possible need which leaves out end users that face problems that the majority of consumers do not. Such end users have no choice but to develop their own modifications to existing products or entirely new products to satisfy their needs. The innovations contained in the modifications to existing products and new products are freely revealed to manufactures in hopes of having them produced for the market. [35] MS's Windows Vista was produced using a hierarchical system while the Linux OS was peer produced. The proprietary business model as represented by the present copyright and patent system can restrain the process of innovation.

Open Source Software (OSS) is an example of software that is peer produced and end user driven. In OSS projects participants can read, modify, and redistribute the source code. OSS is developed by a loosely-knit community of programmers spread all over the world who voluntarily contribute to a software project via the internet without face-to-face contact. OSS is a public good that is the product of a large scale cooperative effort in which creative effort is shared among the participants. A public good can be consumed by one person without diminishing its availability for others and no one can be prevented from consuming the good. OSS projects require rapid feedback, mid-course corrections to designs and redesign. It is a simultaneous model of innovation. Open source programmers have produced industrial strength software that is recognized as a viable alternative to proprietary software in several product markets, including OSs, i.e. Linux, web-server software, i.e. Apache, and browsers, i.e. Firefox. End user innovation is clearly different from the traditional serial model innovation which is linear and proceeds from research to development, design, production, marketing, sales and service.

Most OSS is protected with a GNU General Public License (GPL). The GNU GPL is a copyright that is issued by the Free Software Foundation. A licensee has access to the program's source code and the freedom to run the program for any purpose, modify it, redistribute copies, either gratis or for a modest fee, and distribute modified versions of the program so that the open source community can benefit from user improvements. The program is said to be "copylefted" which means that users can not add restrictions that abridge the freedoms of subsequent users of modified versions of the program. Anything added to or combined with a copylefted program is also free and copylefted. Selling services related to the program is not a violation of the GNU GPL. The Linux OS was licensed under the GNU GPL in 1992.

What motivates thousands of programmers to contribute to the development of an OSS project? Linus Torvalds', the main writer and the leader of the community that developed the Linux kernel, opines that his original motivation can be best described as a mixture of dissatisfaction with existing software solutions and the pursuit of the joy which is derived from writing programs. [36] Eric Raymond, author and open source software advocate, opines that developers are motivated by the desire to scratch a personal itch and to belong to a gift community where status depends upon what a participant gives away. He likens the development process to a bazaar, where everyone can join and contribute, creating an inspiring, creative and democratic atmosphere. Raymond contrasts this style of development with a hierarchical cathedral style which dominates commercial software development. In the bazaar model, the democratic discussion of changes in a software program assures that only the best solutions are accepted for the source code. Public scrutiny avoids bugs in the program more effectively than the hierarchical cathedral model because every user is also a potential developer. [37] Richard Stallman opines that proprietary software is antisocial because you are not allowed to change it. It is unethical and simply wrong because proprietary software is based on dividing the public and keeping users helpless. "...Copyright is not a natural right, but an artificial government imposed monopoly that limits the users' natural right to copy." [38] Torvalds, Raymond and Stallman are motivated by a desire to participate in a social movement whose goal is the achievement of more autonomy in modifying software according to their personal needs and the protection of diversity of software solutions against the dominance of large proprietary software firms.

The FLOSS (Free/Libre/Open Source Software) survey found that the most important motivation for a programmer to join and continue in an OSS community was to learn and develop new skills. [39] Achieving a high rank within the merit-based ranking system of the Apache open source community is positively correlated with higher wages. Employers regard high rank as a credible signal of the programmer's greater productive capacity. [40].

Can the peer production and the traditional serial model of producing software coexist? Hopefully, the answer is yes. Sun Microsystems, IBM and a handful of other commercial firms sponsor and pay programmers to



participate in OSS projects. Typically, commercial firms that sponsor OSS projects give their OSS away for free and then make money by selling support services. Can the two methods of producing software exist in separate silos? SCO claims that Linux is an unauthorized derivative work of the UNIX OS. Through a series of mergers and acquisitions, SCO has acquired the ownership of the copyrights and the core technology associated with the UNIX OS. SCO is threatening to sue end users of Linux unless they obtain a license to use the UNIX source code that has been transferred to Linux. The validity of its claims are yet to be tested in the courts.

As already stated, patent reform in the EU is unlikely in the near future. The proposed Patent Reform Act of 2007 (H.R. 1908) represents an attempt to reform patent law in the U. S. The Act introduces a number of reforms and squarely addresses the issue of innovation in the software industry.

The Committee [of the Judiciary] believes that the ability to have a quality check on issued patents is important to the integrity of the patent system. Patents of questionable validity may stifle innovation, especially in fast-moving technology industries. Some patent holders have developed strategic methods to game the system based on poor quality patents, building business plans around leveraging monetary value from patent portfolios. [41]

The Act amends Chapters 30, 31 and 32 of 35 U.S.C. to improve the quality of patents that are issued and to make it easier to challenge patents that have been issued. Prospects for the passage of H.R. 1908 are uncertain in 110<sup>th</sup> Congress. EU and U.S. patent law is unlikely to be harmonized in the near future.

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2004. A recent review found that it was a top-notch product and a step up in technology as compared to McAfee AntiSpyware and other anti-spyware programs on the market. MS plans to bundle the Giant software with Vista, its next generation of Windows, without additional cost to the consumer. While consumers are likely to welcome the bundling as providing additional functionality without additional cost, regulators are unlikely to adopt the same attitude. See generally, Mary Landesman, "Spyware Stoppers," *PC World*, April 2005, at pp.68-76.
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# **AN EXPLORATORY STUDY OF THE INFLUENCE OF ETHNOCENTRISM, SELF-EFFICACY, AND INVOLVEMENT ON PERCEIVED RELIABILITY OF TECHNOLOGY**

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## **ABSTRACT**

*Differences were found between how Mexican and Italian MBA students ranked the reliability of hypothetical high technology products made in Mexico and made in Italy. These differences are attributed to positive nationalism (ethnocentrism) of the Italians and negative nationalism (malinchismo) of the Mexican students.*

## **INTRODUCTION**

Considerable research has focused on product quality as signaled by a product's country of origin (COO), which in turn has been defined as a combination of Country of Production (COP) and Country of Assembly (COA). These factors appear to be particularly relevant to quality perceptions among individuals who score high on ethnocentrism (Agbonifoh et al., 1999; Ahmed et al., 1996; Beverland et al., 2002; Chen et al., 1999; Dinnie, 2002; Jo et al., 2003; Kleppe et al. 2002; Kotler et al., 2002; Nebenzahl et al., 1996; O'Shaughnessy et al., 2000; Papadopoulos et al. 2002; Peterson et al., 1995; and Tse, 1999).

In line with Chao (1993); Insch, (1995); Insch et al. (1998); Insch et al (2003); Tse et al., (1993); and Tse, (1999); treating COP and COA as product features, this research examined the effects of COP (country where 80% or more of the components or parts are manufactured) and COA (country where the product is assembled) relative to other factors known to affect the perception of the reliability of a product. The study also linked nationalism (expressed as consumer ethnocentrism) to the relative contribution of these co-branding factors on the perception of the reliability of a product.

Thus, the overarching purpose of the research by Marelli (2006) was to show that the relative importance of product attributes including COP and COA affecting the perception of reliability varies based on the ethnocentrism and nationalities of the decision-makers.

A meta-analysis conducted by Peterson et al. (1995) examined the literature on COO published from 1965 to 1995, concluding that the effects of COO on consumer perceptions of products can only be generalized to a small degree. For example, COO influences perception only when the respondent's nationality corresponds to the product's COO. This effect appeared more consistently when the dependent variable was the reliability of the product rather than purchase intention (Peterson et al., 1995). This inability to generalize appears related to the ambiguous definition of COO. Insch (2003), dividing COO into three different components: (COD) country of design, (COA) country of assembly, and (COP) country of production; found that COP to have the most consistent influence on consumer evaluation of the product's manufacturing quality and the overall product quality.

Kleppe et al. (2002) found that consumer responses triggered by COO and brand are similar. However, whereas a brand is a controllable unitary image, O'Shaughnessy et al. (2002) and Papadopolous (2002) concluded that the image triggered by a COO is contextual, i.e., influenced by times, cultural levels, and

audience characteristics. However, COO differs from brand in a number of respects. Preference for domestic versus foreign products has been associated with the COO, the product category and the interaction of COO and the specific product category (Balabonis et al., 2004). Supphellen et al., (2001) suggested that when rational choice appears to favor the foreign brand, consumer ethnocentrism seems associated with positive perception of the domestic brand and has little or no effect on the perception of the foreign brands.

We explored how ethnocentrism and nationalism influence the role of the COO on consumer judgments of the reliability of Personal Computers, as a specific product category. The study differed from most existing research by using subjects from Mexico and from Italy, rather than focusing on US subjects. Italian brands have achieved popularity in automobiles and typewriters. On the other hand, Mexican brands have been associated with economy rather than quality. Therefore, choosing these countries allowed an exploratory test of brand quality stereotype, nationality, and ethnocentrism in assessing the quality of personal computers.

The hypotheses we tested were:

H1: PC Brand, Microprocessor Brand, Operating System Brand, Country of Assembly, and Country of Production differ in importance in determining Perceived Product Reliability.

H2: Perceptions of product reliability are influenced by the ethnocentrism of the respondents.

H3: Perceptions of product reliability are influenced by the nationality of the respondents.

## METHODOLOGY

As is shown in Figure 1, we asked respondents to rate the reliability of imaginary PCs where the attributes of the PCs were systematically varied. The imaginary PCs were combinations of five attributes: brand name, micro processor (MP), operating system (OS), country in which over 80% of the components were made (COP) and the country where the PC were been (hypothetically) assembled (COA). A factorial design was used to reduce the number of combinations to 27.

|              |                          |
|--------------|--------------------------|
| Brand names: | IBM®, Olivetti®, Lenovo® |
| MP:          | Intel®, AMD®             |
| OS:          | Linux®, Microsoft®       |
| COP:         | Mexico, Italy, China     |
| COA:         | Mexico, Italy            |

The product stimuli were presented to the respondents, in random order. Due to the exploratory nature of the study, convenience samples of graduate students in Mexico and in Italy were utilized

The reduced version of the CETSCALE (Shimp, T. & Sharma, S., 1987) was used to measure ethnocentrism.

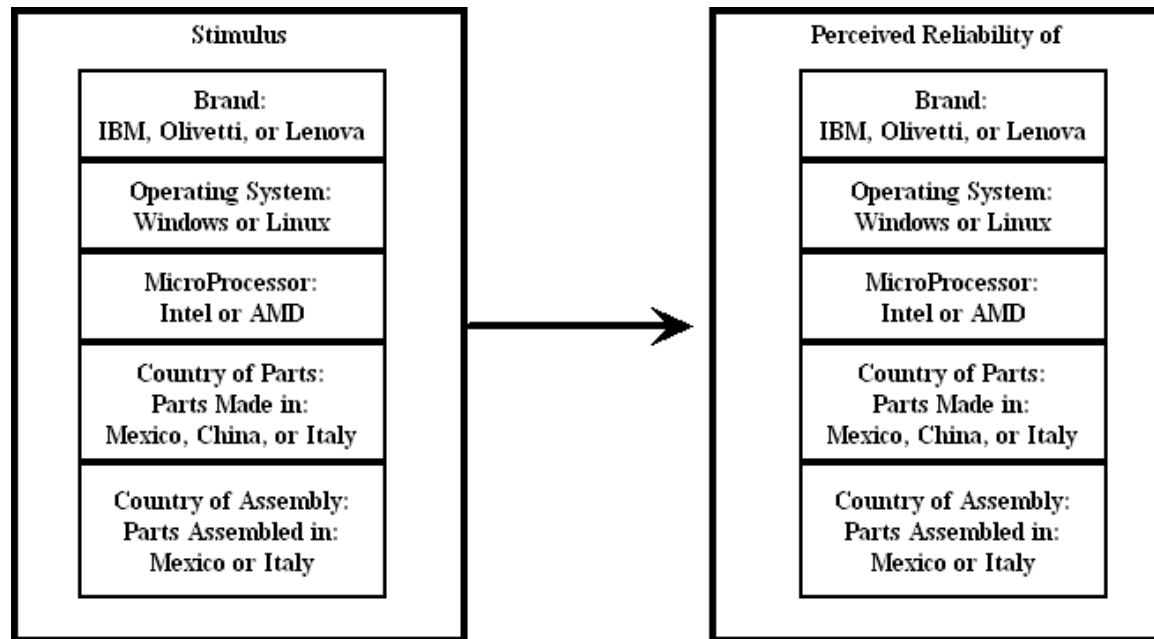
A translation of the questionnaires from English into Italian and into Spanish was performed along with back translations to assure the consistency with the English, Italian and Spanish versions. Construct and 'face' validity tests were performed.

## RESULTS

Using ANCOVA, for each respondent we decomposed the overall perceived product reliabilities (attitudes toward the products) into the intensity of the belief each person had about the various attributes of the products and the weighting (or evaluation) of those beliefs (Lingren and al. 1980).

**FIGURE 1**

**Respondents rated the stimuli in terms of their reliability**



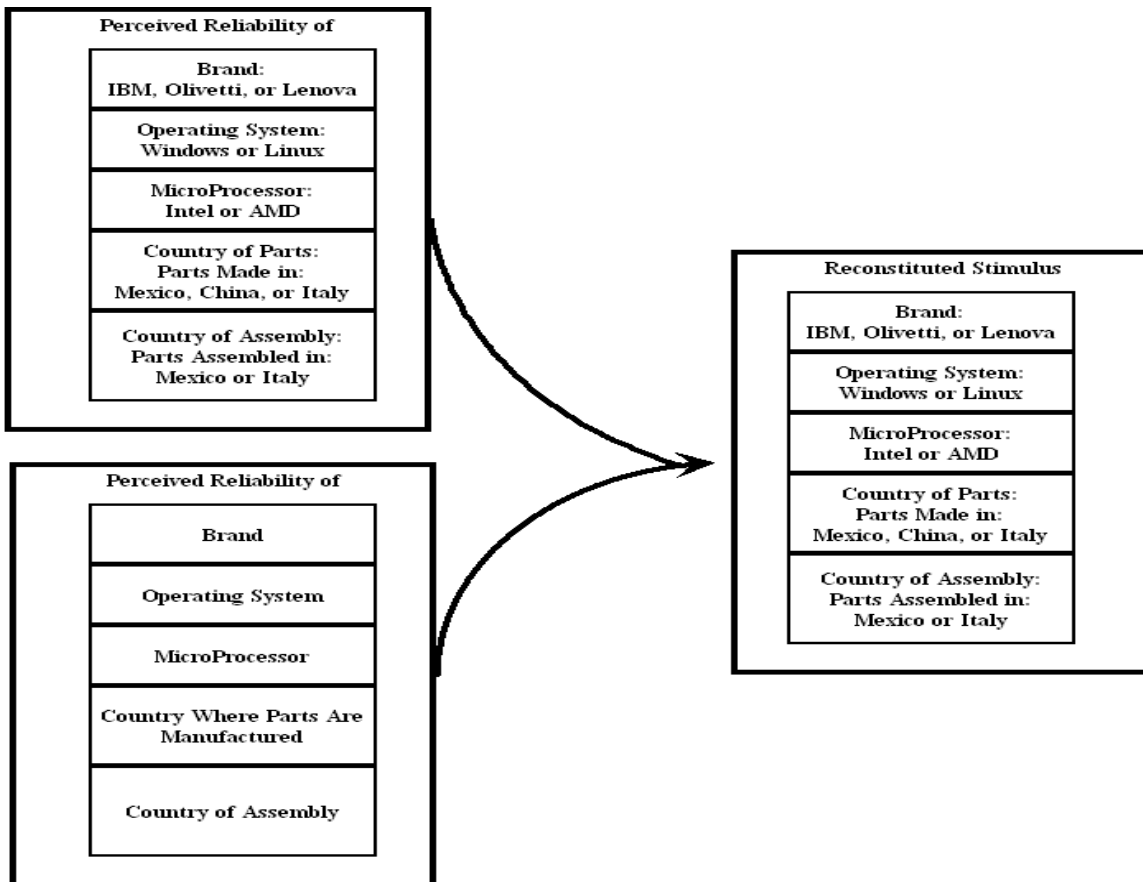
We first examined the differences in perceived reliability of the products (that is, we examined the intensity of the beliefs about the product/attributes) **without** regard to ethnocentrism or nationality. IBM was viewed as the most reliable PC brand (6.8 on a scale of 1 to 10), with Olivetti a close second (6.4) and Lenovo least (6.1). These differences were significant ( $p < .01$ ). Perceived reliability between Linux and Windows Operating Systems did not significantly differ (6.4 vs. 6.6). Perceived reliability did not differ significantly between Intel and AMD Microprocessors (6.6 vs. 6.3). Perceived reliability did not differ significantly between Italian-assembled brands and Mexican-assembled brands (6.6 vs. 6.3). Italian-produced component parts were viewed as more reliable (6.8) than Mexican or Chinese (6.3 and 6.3 respectively) ( $p < .01$ ).

Hypothesis 1 was tested using a repeated measure ANOVA comparing the importance of the brand (that is the B's obtained through decomposition of the product evaluations with the importance of the other factors in determining perceived product reliability. Country of Assembly was most important in assessing reliability, followed by Operating System. Brand, Microprocessor, and Country of Production (Wilks Lambda 0.804,  $p < .001$ ). Therefore Hypothesis 1 was supported.

As is shown in Figure 2, we then used the evaluations of the components and the weighting of those components to reconstitute the stimuli. As is shown in Figure 3, for each stimulus, we calculated correlation coefficients based the perceived reliabilities of the original stimuli and the perceived reliabilities of the reconstituted stimuli. We then converted the correlation coefficients to z scores and computed a t value for the z scores over all 27 products. We found the correlation between the based the perceived reliabilities of the original stimuli and the perceived reliabilities of the reconstituted stimuli to be significant ( $p < .0005$ )

**FIGURE 2**

**Products Were Reconstituted Based on the Perceived Reliabilities of the Attributes and Relative Importance of the Attributes**



Hypotheses 2 and 3: As is also shown in Figure 3, the influence of ethnocentrism and nationality on the importance of the brand, co-brands, COA, and COP in determining perceived product reliability was tested using Multiple Regression. We found that ethnocentrism had a moderate influence on the perception of reliability, supporting H2 ( $p < .01$ ). However, while Mexican subjects were highly influenced by ethnocentrism, they perceived products as more reliable if the COP and COA of those products were NOT Mexico ( $p < .01$ ). Italians were also influenced by ethnocentrism preferring products when COP and COP were Italy ( $p < .01$ ). Excepting Country of Production, the relative ranked position of the factors was the same for the Mexicans and the Italians; leading us to conclude that the Italians did not differ from the Mexicans in ranking the Brand names (IBM®, Olivetti®, Lenovo®), Operating Systems (Linux®, Microsoft®), Microprocessors (Intel®, AMD®), and Countries of Assembly (Mexico, Italy). The Italians differed from the Mexicans in terms of ranking the Countries of Production (Mexico, Italy, China) ( $p < .01$ )

## CONCLUSIONS

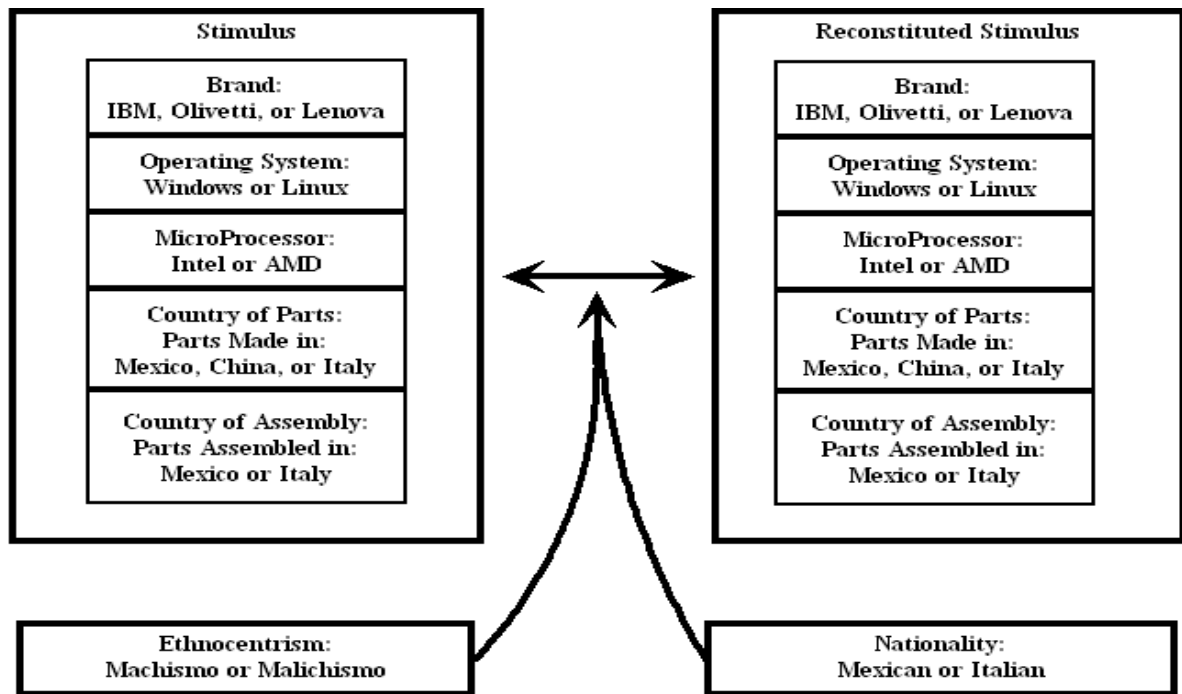
This study clearly identifies the importance of ethnocentrism in understanding the influence of COO on product choice. We support previous research that COO influence is country-specific. Additionally, if Italy is classed as a developed nation and Mexico is classed as a developing nation, this research suggests a need for additional exploration of developing vs. developed countries. There is a need to explore preferences for foreign rather than locally produced products and a need to tease out the relationship between a popular brand and brands that are recognized globally as superior regardless of country of origin, i.e., IBM for computers and Toyota for cars. Future research might compare a technologically based product, such as PCs with (a) products that are purchased based on style rather than function and (b) products that normally are purchased by buyers without specialized knowledge, such as cars and clothing.

The study was unique to a particular point in time. At the time of the study, Lenovo and IBM were separate brands. With Lenovo achieving widespread distribution as a PC manufacturer, researchers will have the



opportunity to study the influence of COP and COA on the brand's reputation, because Lenovo (in purchasing the PC division of IBM) continues IBM's ThinkPad brand while producing and assembling the product in China. This topic holds particular relevance as firms increasingly turn to developing countries to save production and assembly costs.

**FIGURE 3**  
**Testing the Moderating Effects of Nationality and Ethnocentrism on the Relationship Between the Perceived Reliabilities of the Original Stimuli and Perceived Reliabilities of the Reconstituted Stimuli**



## LIMITATIONS

Mexican and Italian subjects did not differ in levels of ethnocentrism (both 3.6 out of 5). However, Italian ethnocentrism was positively associated with products made in Italy; while Mexican ethnocentrism was positively associated with products NOT made in Mexico. Interpreting these results requires additional study. Bailey, W. et al. (1997) define malinchismo as a preference for purchasing products that originate in countries that are foreign to the Mexican buyer, based on Mexican folklore. If so, it is possible that these results are specific to the countries addressed in this study and should not be used to extrapolate to differences between more and less developed countries. If Italian-produced products are viewed as more reliable than Mexican-produced products on a global scale; then the Mexicans might be justified in their quality perceptions.

Additionally, it was difficult to find 100% comparable samples. The Mexican sample was chosen from students who immediately stepped into graduate coursework following completion of their undergraduate degrees; while Italians were executives pursuing graduate work. These differences might reflect perspectives based on education and experience.

Furthermore, sampling should have taken place in more than two countries. Since China was considered as one of the possible choices for place of manufacturing and one of three brands, it would have been interesting to compare the answers of Chinese students with those of their Mexican and Italian counterparts. In addition, since the strongest brand, all the co-brands, and the largest PC market are American but no American sub-sample was considered; we suggest improvement of our work by choosing random samples in Mexico, Italy, China and the United States.

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# **THE ROLE OF THE INTERNET IN SURVEY RESEARCH: GUIDELINES FOR RESEARCHERS AND EXPERTS**

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## **ABSTRACT**

*The paper examines the relationship between web-based surveys and more traditional survey methods. The author examines issues related to: sample quality, response rates, sample panels, and the use of incentives in a web-based environment. The author also discusses web-based survey design issues and provides guidelines for effective utilization of web-based surveys in litigation and research contexts. The author identifies effective implementation techniques, including use of devices to assure the quality of the resulting data.*

## **INTRODUCTION**

The role of the Internet as a vehicle for communications is no longer questioned. Within the US, estimates of Internet usage range from 69% (Pew Research 2007) to 75% (Fadner and Mandise 2004) and over 40% worldwide, with growth in European and Asian markets growing at double-digit rates (Roster 2004). Moreover, while studies have shown lower coverage levels for Hispanics and residents of rural areas, these differences are diminishing with every passing year (Zang 2000). Additionally, as noted by Cambiar (2006) “online research continues its headlong march to become one of the most dominant (if not the most dominant) data collection methodology worldwide.” Evidence that the Internet has become the vehicle of choice for many survey research organizations is found throughout the literature. For example, Internet research now represents 10-30% of customized research for AC Neilson and almost 47% of Harris Interactive’s polling research (Einhart 2003). In fact, estimates are that 87% of research companies use online methodologies (Cambier 2006), with an estimate that over 35% of data collected in 2006 was on-line. (Bradley 2006).

Importantly, web-based survey methodologies have begun to move outside the corporate world into the domain of the court system, with judges across the U.S. being asked to consider web-based surveys as part of deceptive advertising and trademark litigation. As a consequence, lawyers and experts are being asked to defend and justify web-based research much like when telephone surveys were introduced in the 1960’s and mall-based studies entered the courtroom in the 1980’s.

Research evaluating on-line survey methodologies has also begun to emerge, with studies comparing differences in response rates and data quality between mail and/or phone surveys and Internet or web-based methods. Studies have also examined the impact of incentives, types of contacts or invitations used in web-based studies, and question format on data quality and willingness to respond.

The question is, what guidelines should a researcher or expert consider when deciding to utilize a web-based survey. This paper sets out those factors which are most likely to be raised when evaluating online research, either as part of an organization’s corporate strategy or by judges and attorneys being asked to consider online research results as part of a litigation strategy.

# TRADITIONAL RESEARCH METHODS

## Telephone

The traditional telephone survey was, throughout most of the latter part of the Twentieth Century, the method of choice for survey research, including in support of litigation. The telephone offered the advantage of providing results projectible to the population because of random digit dialing. Additionally, telephone research offered firms and organizations a relatively low-cost way of obtaining open and closed-end attitude and opinion data about companies, products, and/or, importantly, political candidates and in surveys targeting difficult-to-reach respondents.

The major disadvantages of the telephone are its cost and (estimated in one study at \$22.75 per completed interview compared to \$6.50 for an Internet study (Braunsberger et al 2007), and is its obvious inability to convey graphics, be it ads, packages, or products. Moreover, since the 1990's, the telephone methodology has faced a world of declining land-lines as consumers switch to cell-phones as their primary mode of communication, with an estimate of over 10% of the US households being cellular-only. (Hesser 2008). Add to this the advent of Caller-ID, call-blocking systems, and the Do-Not-Call list which, while not directly affecting telephone surveys, indicates the direction consumers are going to restrict unwanted calls (Hesser 2008). These factors have led to a 50% decline in participation in telephone surveys, particularly among adults 18-35 from 2000 to 2006 (Pew Research 2007).

## Mall-Intercept

Starting in the early 1980's, mall-intercept studies became common, particularly in advertising-related research, both for development by marketing firms and their ad agencies, and for litigation. The obvious advantage of a mall-based methodology is the ability to show respondents print or broadcast ads and/or packages and assess their reaction to them. It also allows researchers to probe for additional information from respondents. Additionally, mall-intercept methodologies make it possible to complete elaborate advertising studies in short periods of time. The researcher simply increases the number of malls utilized.

The obvious disadvantage of the mall-intercept methodology is the fact that the results of a mall-based study cannot be projected beyond the individuals who happen to be in the selected mall on the particular days and times when the study is executed. Additionally, mall shoppers tend to be skewed toward one particular set of demographics and may not represent a good cross section of respondents. Also, it is frequently difficult to get mall shoppers to participate, particularly those with small children. Finally, mall-based studies are expensive and the data quality is always subject to any bias that may be introduced by the interviewer, a disadvantage that may be controlled but not eliminated by the quality and training of the mall-intercept firm personnel who actually execute the survey.

# WEB-BASED OR INTERNET SURVEYS

Beginning in the mid-1990's, web-based surveys entered the survey-research lexicon and, with advances in broadband technology, Internet and web speeds have grown exponentially, enabling researchers (and all who communicate via the web) faster telecommunication speed. This has made it possible for marketing researchers using Internet survey platforms to utilize far more elaborate methodologies in surveys. However, as noted by Couper in 2000, "we stand on the threshold of a new era for survey research, but how this will play out is not yet clear."

## Web-Survey Basics

Before discussing specific issues related to Internet research methods, it is useful to note some basic advantages and disadvantages of the method. The primary advantages are the ability to introduce sophisticated questionnaires and realistic images and audio files. Additionally, Internet surveys are much faster than either

phone or mail studies and, generally, are lower cost, particularly if the research firm has a targeted sample with email addresses (Bransberger et al 2007).

Internet surveys are not without disadvantages. Foremost is the question of the representativeness of the sample and, therefore, the projectability of the results to the population, even of a targeted population, as, for example, in Business to Business studies. However, even in a B2B environment, while firms may have email addresses of current customers, many have had difficulty obtaining representative samples of potential respondent/customer email addresses. Moreover, questions have been raised about whether the quality of data derived in an Internet survey is sacrificed because of the speed with which the data are collected. Finally, while the total number of responses can be increased simply by increasing the Internet survey sample, questions have been raised about actual response rates for Internet surveys (Couper 2000).

## **Internet Availability**

In 2007 approximately 71% of the U.S. population used the Internet, with 91% sending or receiving e-mail (Pew Research 2007). Importantly, a growing percent of those with Internet service have high-speed broadband technology, i.e., DSL or cable, making it possible for faster downloading of file containing audio and/or video images. The data also show there is no difference between men and women on Internet usage (Couper 2000). However, significantly fewer individuals over 65 use the Internet (32%) compared to those 18-49 (85%) and those 50-64 (65%). Finally, while there is little difference between White and Hispanic consumers on Internet use (73-78%), Blacks use of the Internet is somewhat lower (62%) (Pew Research 2007). Finally, research in 2006 has shown that two-thirds (68%) of those with incomes over \$50,000 have broadband connections in their homes (Pew Research 2007). On the other hand, in the case of many lower income consumers, access to a computer may be limited to access through their public library.

For the marketing researcher considering an Internet survey, these data suggest the need to be assured that the target population for the survey research is one where a sufficient percentage had Internet access and, if the survey instrument includes graphics, that they have access to broadband technology for faster downloading.

## **Interactive v Scrolling Surveys**

There are two basic types of Internet surveys, interactive and scrolling. With interactive Internet surveys, respondents complete one screen at a time which is then transmitted to the server before the respondent “moves” to the next screen. This permits item-by-item real-time tracking of responses. With scrolling Internet surveys, respondents complete individual screens, then moves to the next screen (Dillman 2000, Couper et al 2001). The data are not transmitted to the server until the respondent has completed the entire survey (Peytchev et al 2006).

The benefit asserted for the interactive survey is that, once the respondent has finished a screen and the data transmitted, the respondent can’t “go back,” i.e., refer back to a prior question or response before answering a later question. It also gives the researcher greater control over skips and branching (Couper et al 2001). On the other hand, some have suggested that the interactive survey may take slightly longer to complete, depending on the download speed of their Internet connection, since the respondent has to wait for each response to download before proceeding. It has also been suggested that interactive surveys permit analysis of partial responses and permit respondents to leave the survey and come back at a later time and resume (Couper 2000). The criticism of the scrolling technology is that respondents can refer back to a prior question or response and that the researcher can’t track partial responses.

The reality is that there really isn’t any advantage, one way or the other for either methodology since, with the scrolling survey, the research designer has the option of limiting respondents’ ability to refer back to a previous response when answering a subsequent question, even though the survey will not be transmitted until it is completed. Additionally, there really isn’t much advantage to item-by-item real-time tracking over tracking completed questionnaires. Moreover, even with scrolling surveys, most Internet survey platforms permit analysis of partially completed surveys.

## **SAMPLE ISSUES**

There are a number of sampling issues that have been discussed relative to Internet surveys that a researcher considering an Internet survey methodology needs to be aware of. Among these are: response rates of Internet surveys compared to other, more traditional, methodologies, representativeness and coverage issues, and control and tracking questions.

### **Response Rates**

There has been more written in the academic press on the issue of response rates for Internet surveys than any other issue. Studies have compared Internet response rates to both telephone and mail surveys, with mixed findings. In general, mail surveys have had response rates at 40 – 50% and as high as 55% (Baruch 1999). Phone response rates, on the other hand, average about 20-30% of those contacted (Hesser 2008). However, while Roster et al (2004) found a 40.5% response rate for a telephone survey, when the total number of attempts (i.e., calls made) is used in determining response rate, the number drops to 11%.

Numerous studies have examined response rates for Internet surveys. These studies have found widely varying results. For example, Manfreda and Vehovar (2002), in an analysis of over 100 Internet surveys, found that the percentage of undelivered e-mail invitations ranged from 1 – 20% and that the percentage of respondents who received the e-mail invitation but did not access the questionnaire ranged from 1 – 96%. Also, Hesser (2008) reports average response rates of those invited to participate in online surveys to be between 5 -10%. On the other hand, Roster et al (2004) found, in a study that directly compared phone and Internet response rate, that the Internet response rate was 27.9% (measured as a percent of those invited to participate) compared to 11% of those contacted in the phone survey.

One reason for the wide variation in response rates on Internet surveys is because of the use of varying methods to contact and encourage response to Internet surveys, with varying degrees of success. For example, Cook et al (2000), who found an average response rate in a meta-analysis of 68 Internet surveys of 39.6%, noted that "...the number of contacts, personalized contacts, and pre-contacts were the factors "most associated with higher response rates in the Web studies we analyzed" Similarly, Kittleson (1997) found that typical response rates of 25-30% can be expected without any follow-up and that follow-up reminders will "approximately double the response rate for e-mail surveys." On the other hand, Porter and Whitcomb (2003) report that, in an Internet survey with high school students, that neither personalized greetings, personal e-mail addresses, or identification of the survey sponsor had much impact on response rates.

As noted by Couper (2000), other reasons for lower response rates on Internet surveys compared to mail surveys are the fact that some traditional motivating tools like personalized signatures and letterhead are not generally available on the Internet. Additionally, technical factors such as slow modem speeds, and unreliable connections, may also inhibit completion of Internet surveys, especially from home computers. However, since the cost of a follow-up contact on an Internet survey is almost not-existent (it's simply another e-mail invitation sent to the same sample), researchers concerned about overall response rate should, at a minimum, have one follow-up contact since it is likely to substantially enhance overall response. Caution should be exercised, however, not to overwhelm the respondents since, as noted by Cook (2000), response rates actually declined among respondents receiving the largest number of reminders.

### **Quality of the Data**

An issue closely associated with response rates is the quality of the data resulting from an Internet sample. The basic question is whether the quality of the data decreases as response rate increases. As noted by Couper (2000), survey quality is a function of sampling error (i.e., people missing from the sampling frame), coverage (i.e., mismatch between the target population and the sampling frame population), non-response (i.e., the difference between respondents and non-respondents on a variable of interest), and measurement errors (the deviation of respondents' answers from their true values on a measure). Factors that have been used to assess the quality of Internet-based survey data have included follow-up telephone surveys comparing Internet and



phone respondents (Couper 2000), analysis of “don’t know/no opinion” responses for signs of “satisficing” “acquiescence” or “straight lining” responses (Fricker et al 2005), and utilization of different formatting techniques such as radio buttons as opposed to open-ended response options (Couper et al 2001). Other authors have examined data quality in terms of percent of negative and neutral responses. For example, Roster et al (2004), in a study comparing telephone and web responses, found that web surveys generated more negative and neutral responses and more extreme concerns than did their telephone survey. They also found there was no difference in the predictive validity between telephone and web-based surveys. Similarly, in a study of 3,238 respondents, the American Association for Public Opinion (AAPOR) and Harris Interactive found, “...high levels of reliability and validity that gives us much greater confidence that data collected from web-based surveys can be at least as good as data obtained in other research modalities, if not better” (AAPOR 2000).

## **Sample Control**

Another issue that has been raised related to Internet surveys is sample control, i.e., the ability to assure that the “right” individual responded and that multiple responses from the same respondent are eliminated (Couper 2000). While the issue of assuring the individual who actually completes the survey cannot be eliminated in Web survey any more than it could in mail studies, control questions may be possible to alert the researcher to questionable respondents. In the case of multiple responses from the same computer, this is rarely an issue with most Web surveys since most Internet survey platforms permit the researcher to restrict responses by limiting responses to one particular computer. This is done through the Machine Address Code, the unique identifier of each computer. Thus, once a response has been submitted from a particular computer, subsequent responses from that particular Machine Address Code or IP address are blocked (Frost and Sullivan 2007). On the other hand, there may be situations where multiple responses from the same computer is desirable as, for example, where a computer is set-up in a kiosk at a conference and attendees are asked to complete the on-line survey.

Another aspect of the sample control issue is the ability to track individual e-mail addresses of respondents. Most Internet survey platforms have e-mail address tracking as an option. However, while the option of tracking respondents may be desirable in mail surveys in order to reduce the cost of subsequent follow-up reminders and/or questionnaires, there is no real cost of following up in Internet surveys. It’s simply a matter of sending out a second e-mail invitation. Thus, there really isn’t a justification for tracking e-mail addresses of respondents, particularly when confidentiality is promised.

## **Incentives**

One significant difference between mail surveys and Internet surveys is the role of incentives. Numerous studies have shown that incentives, including cash and non-cash incentives, pre-payment and promises of payment, have resulted in higher response rates and higher quality results in mail surveys (Church 1993, Collins et al 2000). As noted above, many of the incentives that have traditionally been utilized to enhance response rates are not possible with Internet surveys. Thus, alternatives must be utilized. For example, Ray et al (2001), found in a study of Internet-based surveys that in 57% of the surveys respondents were promised survey results, while in 36% of the Internet surveys studied, the incentive that was a promised was inclusion in a draw/raffle. In another case, Cobanoglu and Cobanoglu (2003) found that offering a luggage tag to every respondent who completed an Internet survey resulted in a 31.4% response rate, compared to 23.9% for those in a control group who were not promised any incentive for participating.

## **Panels**

The final sample-related issue with Internet surveys is the use of pre-recruited panels as a sampling frame. Evidence suggests that firms are moving more toward the use of Internet panels for their surveys. For example, Cambiar (2006) found, in a survey of marketing research firms, that 66% were using outside panel companies for about a third (32%) of their research. Importantly, Black, CEO of Harris Interactive has said that their Harris Online Poll of 6.5 million members yields results that are no different from those derived from the traditional Harris telephone polls results. Moreover, since some of the Internet panels contain or the Internet survey firms have access to upwards of 2.5 million e-mail addresses (Zoomerang.com, Greenfield Online), their utilization permits pre-identification and selection of samples to fit desired demographics.

One estimate is that in 2000 there were over 80 market research companies on the Web who were willing to pay respondents for their opinions (Couper 2000). One criticism of Internet panels is, therefore, the fact that, given the large number of opportunities open to respondents to be paid for their opinions, they become “professional respondents,” since they are often on multiple panels and called upon to answer multiple surveys. While this criticism has validity, a control is the fact that many of the firms maintaining large Internet panels limit the number of times during a month a particular panel member can be contacted and invited to participate. Further, as noted by Cambiar (2006), there are a number of strategies that different panel firms use to assure the quality of the data. These include regularly “cleaning” the panel of unproductive panel members and those who regularly provide questionable results as determined by imbedded “speed bumps” (see below). Additionally, some panel firms have systems in place to assure that the panel is representative of the population it claims to represent. Cambiar (2006) also recommends researcher considering an Internet panel firm consider whether it is a true panel (as opposed to just e-mail lists) and whether the incentives offered to panel members guarantee response rates high enough to yield credible results.

## **DESIGN ISSUES**

As noted by Dahlberg (2007). “...it seems as it is the perceptions of the effort required to complete the survey that may be decisive in terms of whether a respondent chooses to participate or not.” Thus, the design or layout of the survey, often dictated by the Internet survey platform, is critical. There are six issues that relate to Internet survey designs. Each must be considered when deciding on an Internet research supplier and when designing an Internet survey. The factors are: whether to have single question per page or multiple related questions on a page, whether to have questions with mandatory responses and/or to rotate or randomize response options, whether the Internet survey platform permits random assignment of respondents to treatments in experimental studies, whether to employ piping or branching in questionnaire design, and whether to have a progress indicator.

### **Single v Multiple Questions Per Page**

There are two basic Internet survey platforms (Peytchev et al 2006). In a “paging” design, each single question is on a single questionnaire page. The respondent “submits” their response before moving to the next question. This survey platform does not permit or allow the respondent to scroll back to the previous question before answering a subsequent question. In that sense, the design is similar to a telephone or in-person study. In a “scrolling” design, multiple common or related questions on a single topic are presented together. The respondent can scroll back to one or more of the previous questions before moving to the next question or series of questions. The design that presents multiple common questions together has been found to result in higher item-total correlation and significantly reduce the time to complete the survey (Couper 2001). However, there is a fundamental difference between the two design approaches that may be important in determining the Internet research design. Studies where the respondent is asked to view a stimulus and then respond to questions about it, e.g., advertising or packaging studies, while viewing the stimulus is called a “reading test” whereas studies where the respondent views a stimuli (i.e., ad or package image) and then the stimuli is removed, is called a “memory test” (McCarthy 2000?). As noted by Swann (2005), a “reading test” generates higher levels of attention but may be inappropriate if the issue being examined is recall or consumer confusion with advertising or package claims.

### **Mandatory Questions/Rotated Responses**

An important factor to consider when developing an Internet survey is whether to include mandatory questions. All Internet survey platforms permit designation of questions as required or mandatory, meaning that the respondent must provide an answer before moving to the next question. Having mandatory/required questions not only assures that the respondent has answered the question before moving to the next question, it also can serve as a “speed bump” to assure that the respondent isn’t “racing through the survey” without actually reading the questions (see discussion below).

Similarly, virtually all Internet survey platforms include an option of rotating response categories in multiple response questions. This assures that order bias is eliminated in the study (Burns and Bush 2006). However, care must be taken when deciding on an Internet survey platform since some, but not all, permit holding one or more categories, such as “don’t know” and “other” constant in the rotation or randomization.

## **Random Assignment of Respondents to Treatments**

One issue that frequently comes up is whether the Internet survey platform permits random assignment of respondents to treatments. This can be important in experimental studies, where one group of respondents is to see one exhibit (e.g., ad or package) and another isn’t, i.e., a control condition. While it is an important technology, its availability isn’t critical since alternatives are available. One is to ask respondents, at the critical branching point in the Internet survey, to indicate the last digit of their phone number (i.e., a random number). The research design then directs respondents to each branch based on their response.

## **Branching and Piping**

All telephone and face-to-face surveys include branching with “skip patterns.” Similar technology is available with Internet surveys. While this permits more efficient survey designs, it may be a problem if multiple questions are asked together. This is because most Internet survey platforms only initiate branching upon completion of all the questions on a page. Thus, if there are multiple questions on the page, branching off of different questions on the page isn’t usually available (Peytchev et al 2006). The obvious solution to the problem is to have each question where branching is needed be desired on a separate page. However, as noted above, having related questions grouped together results in higher item-total correlation and reduces the total time needed to complete the Internet survey (Couper et al 2001).

A second issue important in designing Internet surveys is the availability of piping. This is technology built into some Internet survey platforms that permits taking a response to a question and inserting it into the next question. For example, a question could ask “which style of car do you prefer,” with the options that might include: coupe, sedan, convertible, SUV, etc. The respondent says “coupe.” The next question asks “Why do you prefer a coupe? (i.e., the response “coupe” from the previous question inserted in the subsequent question). Internet survey platforms that do not permit piping would necessitate a less-artful follow-up question along the lines of “...why do you prefer the style car mentions above?” or something like it. Clearly, piping, while not necessary, makes for a “cleaner” questionnaire and is consistent with studies that have shown that design factors influence response rates (Claycomb, et al 2000 ).

## **Images**

The fifth Internet survey design issue is the extent to which images such as ads, pictures of packages, or websites, can be inserted into the survey and what limitations exist on their inclusion. Some authors say that graphics should be used sparingly. For example, Schonlau et al (2002) note that “...graphics can significantly slow the downloading of a web page, especially if users are likely to connect to the Internet using a modem as opposed to broadband, DSL, or some other high-speed connection.” Similarly, Dillman et al (1998) found that a “plain survey” (i.e., without graphics) resulted in slightly higher response rates than a “fancy survey.” On the other hand, numerous situations exist where the purpose of the survey is to test a graphic image. Examples include assessing consumer preference for or confusion with claims in advertising copy or on a package.

When considering inclusion of an image, four factors need to be considered. First, what limit exists on the Internet survey platform as to the size of image that can be included? Second, to what extent does the inclusion of an image slow the download of the survey and/or the responses? Third, can the image be scrolled on the Internet survey platform or is it static? Fourth, can questions related to the image included with the image (e.g., an open-ended question about the meaning of an ad or claim in an ad)?

If the inclusion of the image slows the download of the survey, it is likely to have a significant impact on completion rates (Couper, et al 2001). If the limit on image size is too low, a bias may be introduced since the image may not approximate what the consumer sees in the marketplace. If, on the other hand, the image is static

(i.e., can't be scrolled) then material in the image may not be examined by the respondent. This is particularly important when the image is from a webpage. Of course, the counter-argument is that only a very small percentage of visitors to a webpage scroll at all. As noted by Nielsen and Loranger (2000) "...most users (on the Internet) don't scroll, and when they do, they don't scroll very much." In fact, the authors found that 65% of respondents in their study did not scroll beyond the fold (what's on the screen without scrolling). The authors advise webpage designers, "If you are designing Web pages, you must make sure to present enough information above the fold to make them want to see what's below it." Finally, if questions can't be included while the image is in view, the research design becomes, by default, a memory test rather than a reading test (Swann 2000, McCarthy 2006).

## **Progress Indicator**

The sixth Internet survey design issue is whether to include a progress indicator. Progress indicators continuously inform respondents on their progress through the questionnaire. The rationale for progress indicators is that it is likely to be a motivator for the respondent to complete the survey. However, Couper et al (2001) found no significant difference in completion rates between treatment groups with and without a progress indicator. They also found, however, that the time to complete the questionnaire was significantly greater when a progress indicator was used. The authors hypothesized that this may have been due to the increase in download time caused by the graphic progress indicator in their interactive Internet study (i.e., responses were downloaded after each question). Similarly, Haeley et al (2005) found no difference in completion rate by page when a progress indicator was found, except that completion rates for the page with personal demographic data was significantly lower where a progress indicator was provided.

Another aspect of a decision regarding progress indicators is the fact that actual progress on an instrument is a function of individual respondents' answers to particular questions and "skip patterns" built into the questionnaire. Thus, progress meters might not be an accurate measure of actual time to complete the questionnaire. However, as noted by Schonlau (2002), this problem can be overcome by providing respondents an indication of their progress at various times during the survey, as opposed to a continuous indicator.

# **IMPLEMENTATION ISSUES**

The third area where issues arise in Internet surveys is the implementation process. Issues here involve the most effective way to contact potential respondents and get them to participate and steps that can be taken to enhance the likelihood of quality data.

## **Invitations**

Numerous studies have suggested ways of improving the likelihood that potential respondents to an Internet survey will actually respond. The suggested strategies are similar to those proposed in mail surveys, namely pre-notification, personalized appeals, and promises of rewards for completing the surveys. The obvious advantage of Internet-based invitations is that, unlike mail surveys that might be misplaced, they "stay on the potential respondent's computer" until consciously deleted. The disadvantage, of course, is that the invitations may be "lost in the in-box" of the potential respondent (Cook et al 2000). As noted above related to response rates, studies have generally found positive benefits on response rates with pre-notification and personalized contacts (Cook et al 2000). Other authors have examined the issue more in-depth. For example, Shafer and Dillman (1998) found that e-mail pre-notices were more effective than surface mail pre-notifications in their Internet survey experiment. Similarly, as noted above, follow-up contacts have enhanced response rates. However, authors have cautioned that too many follow-up contacts may actually diminish overall willingness to participate (Cook et al 2000).

## **Quality of Data**

The second issue relative to implementation is assuring the quality of the data being provided by respondents. The issues involve respondents not reading the questions, simply "straight-lining responses" or "satisficing" (i.e.,

answering the same way on all scaled questions) and racing through the questionnaire (Flicker et al 2005). Strategies that can be used to improve the quality include employing “traps” and/or “speed bumps.”

“Traps” are pass/fail directions that assure the respondent is reading the questions carefully (Balden 2008). For example, in the middle of the survey the respondent is directed to give a particular response, e.g., “mark ‘somewhat disagree’ on the following scale.” If the respondent doesn’t respond correctly, they are immediately skipped to the end and dropped from the survey. Another vehicle to enhance the quality of the data that can be used is a “speed trap.” Here the researcher determines a range of time to complete a series of scaled questions and, if the Internet survey platform permits it, builds a timer for the question into the survey. If the respondent takes less time than the “minimum likely time to complete” he/she is dropped from the study. A third “trap” that can be used is an analysis of the overall time taken to complete an Internet survey. Since many Internet survey platforms include the time it took to complete the survey as part of the resulting data, speed traps can also be used, ex-post facto, to determine whether the respondent completed the survey in a reasonable period or, alternatively, so quickly that the quality of the data is questionable.

“Speed bumps” are Internet survey design methods which are intended to slow the respondent down during the survey. Speed bumps include reversing response options or scales, using questions with open-ended responses, and having questions with mandatory responses. In addition, ex-post facto analysis of responses can be used to determine whether a particular respondent “straight-lined” responses (Flicker et al 2005).

## Issues Related to Results

The final issues related to Internet surveys relate to the extent to which the researcher and/or other stakeholders have access to the data both in real-time, i.e., during the survey and in a research-accessible format. As noted above, most Internet survey platforms permit real-time tracking of results, either as each question is submitted (i.e., the interactive survey design) or upon completion of the whole survey (i.e., the scrolling survey design). Some Internet firms also permit other stakeholders, i.e., colleagues or clients, to track the data. If that option isn’t available with a particular Internet firm, then the only way stakeholders can share the data in real-time is by being provided access to the researcher’s confidential ID and passwords. This, of course, may compromise the confidentiality of other studies.

Finally, a critical component in any Internet survey platform is the ability to download the data for analysis with commonly used software packages. Most Internet survey platforms provide limited cross-tabulations through “filters” placed on particular questions. Many also permit downloading of raw data into “comma delimited” or ASCII format, thus permitting analysis using powerful software programs such as SAS and SPSS.

## CONCLUSION

While there are a number of factors to consider when deciding on an Internet survey platform, the summary presented here provides a guide that can be used by academic researchers as well as experts considering an Internet survey. What is obvious is that Internet surveys are here to stay and will represent an ever increasing percent of survey research in the Twenty-first Century. Moreover, as Internet survey technology increases, more creative ways to utilize this research will be developed, only adding to the power of this important new tool available to researchers. Thus, from a managerial perspective, additional opportunities will develop for researchers and experts to assist managers in assessing attitudes, opinions, and desires of their organizations’ stakeholders and to help managers more effectively tailor their products and services to meet the needs of those individuals.

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# THE CHALLENGES AND DILEMMAS EMBEDDED IN THE EXPATRIATE VOTE: THE CASE STUDY OF ITALIANS OVERSEAS

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## ABSTRACT

*The Italian expatriate vote provides an excellent test case for studying one country's implementation of full voting rights and parliamentary representation to expatriates residing abroad. This paper seeks to highlight the challenges and dilemmas embedded in the Italian expatriate vote, which regards the overseas electorate relationships with homeland politics. Over the last few years, the Italian expatriate vote has been facing procedural, normative, and political issues. What may have been initially seen as a democratic right may well be cast aside in the near future.*

## INTRODUCTION

The 2006 Italian parliamentary elections marked the first ever election of diaspora members of parliament in Italy. Eighteen overseas-based parliamentarians (twelve in the Chamber of Deputies and six in the Senate) represented Italian nationals abroad from the offshore electorate, which comprises four vast voting districts outside of Italy's borders: (i) Europe, including the Russian Federation and Turkey, (ii) South America, (iii) North and Central America, and (iv) Africa-Asia-Oceania-Antarctica. Due to new legislation introduced between 2000 and 2003, the Italian elections held on 9-10 April 2006 allowed 2.7 million of Italian nationals overseas to cast their ballots by correspondence (or absentee ballot). The participation and impact of the expatriate vote was noteworthy. Firstly, the turnout of 38.9% of eligible overseas voters was seen by many quarters as unprecedented, given the very low turnouts by overseas voters before 2003. Secondly, the electoral weight of the expatriate vote helped provide the slender majority in the Senate for the successful centre-left coalition of Romano Prodi, which won four of the available six overseas seats. In the end, this gave the Prodi led coalition a total of 158 over 156 seats over centre-right Silvio Berlusconi's coalition. The significant participation of Italians overseas at the 2006 polls and the first ever elections of overseas based representatives in the national parliament was an historic feat for the Italian expatriate lobby. Former Italian President Carlo Azeglio Ciampi saw in the election of MPs from overseas, 'a desire by the expatriate community to contribute to the democratic life of Italy' and 'a historic turn for the country' (Cottone 2006).

Election results notwithstanding, the implementation of the new legislation (absentee ballots and overseas parliamentarians) presented procedural and political challenges. Since the 2003 referendums – the first time ever that eligible overseas voters cast their ballots by mail – issues have emerged such as the difficulty of drafting a single electoral roll of eligible voters out of the two existing lists of Italians resident abroad, which are maintained by the two different ministerial departments. Moreover, the allegations of electoral fraud and manipulation, especially in occasion of the 2006 elections, or even disappearance of ballot papers in some electoral colleges, and the several irregularities exposed by Claudio Fancelli, chairman of the Central Office for the Offshore Electorate, in the counting operations and assignation of preferences in Castelnuovo di Porto, where the overseas ballot papers were eventually collected and counted (Tarli Barbieri 2007, pp. 151-57). It has been speculated that normative challenges and political concerns, which all became evident during the 2006 (and to a



lesser degree 2008) elections, may bring about a radical rethink of the new legislation governing the expatriate vote to Italians overseas (Tarli Barbieri 2007, p. 158).

This article analyses the challenges and dilemmas embedded within the Italian expatriate vote. It argues that what may have initially been viewed in terms of a democratic right (to facilitate the largest participation of overseas Italian citizens in the Italian political process as well as to grant them parliamentary representation) may be cast aside in favour of a more balanced relationship between national and diasporic political interests.

## **SIGNIFICANT CHANGES TO THE ITALIAN EXPATRIATE VOTE**

Although never deprived of their voting rights in their native country, overseas Italians, before 2003, could vote in Italy on the condition that they would return to and vote in their electoral college on polling day(s). Such a condition strongly discouraged Italians who emigrated overseas from exercising their voting rights. Yet, their immigrant status did not alienate their right to vote. For the Italian Constitution voting rights and citizenship rights are intrinsically linked, irrespective of the residence status (La Mesa, 1980). So, whether one lives permanently outside of Italy's territory, his or her voting rights as Italian citizen are not restricted, provided of course they would retain their Italian citizenship. *De facto* the exercise of those voting rights was hampered by the tyranny of distance and travelling costs; the more distance one is from Italy, the less likely he or she would make the trip to Italy in time for voting.

Recent changes to voting procedures affecting Italian citizens overseas have however transformed the very nature of the Italian expatriate vote. The law no 459 which was passed on 27 December 2001 by a bipartisan majority under the Berlusconi government provided Italian citizens overseas with the option of a postal vote (absentee ballot) *and* with their own parliamentary representation. The law (459) radically reformed the exercise of voting for overseas Italian citizens in two ways, as previously mentioned. Firstly, it granted overseas Italian citizens the option to vote by postal ballot, hence allowing larger numbers of voters to participate in parliamentary elections and referendums. Secondly, it gave them some measure of political representation, namely twelve members in the Chamber of Deputies, and six in the Senate.

Yet, challenges and dilemmas embedded in the rules governing the voting of Italian voters overseas which were emphasised in the outcome of the 2006 election, as explained in later sections of this paper, led Tarli Barbieri to suggest that the overseas voting system had not been thought through in a detailed manner (2007, pp. 157-58), even though before and after the legislation was amended, the electoral rules for the offshore constituency were a source of intense debate, both within and outside of Italian politics (Sartori 1999; Fusaro 2002; Vigevari 2002; Grosso 2002; Romano 2006; Troncino 2007). Yet, the long-standing debate surrounding the question of the expatriate vote had centred on voting procedures and hardly ever on voting rights (La Mesa 1980, p. 69; Grosso 2001, pp. 130, 150). For decades, lawmakers and politicians have speculated on which legislative measures and best voting system could guarantee Italian citizens abroad the vote, regardless of their residence status and regardless whether they would ever return to Italy. There is no such thing as 'two types of Italian citizenship' (Lanchester 1988, p. 37) but only a universal reading of the notion of citizenship as inclusive of loose ties to the motherland, or even non-existent ties (as in the case of Italians naturalised by means of ancestry citizenship).

## **THE OVERSEAS FACTOR: ITALIAN REFERENDUMS AND ELECTIONS SINCE 2003**

New voting procedures were first put to the test for the 15 June 2003 Italian referendums. Just over one fifth (21.8%) of the total eligible Italian voters overseas (2.3 million) participated in the vote. The referendums' turnout and results overseas were not surprising: the overseas voter turnout was close to the number of voters in Italy (25.6%), while the results differed noticeably—69.2% and 86.2% of the votes cast respectively overseas and in Italy were in favour ('yes' votes) of the proposed amendments on matters pertaining to unfair dismissal and environmental laws. What the consultation highlighted was the difficulty in implementing the postal vote

and the alleged inaccuracy of the overseas electoral roll. Allegedly, more than 800,000 eligible voters were denied the option to vote in the referendums because the overseas electoral roll had failed to register the enrolments of thousands of overseas citizens. The number of overseas Italians, according to the MAE and AIRE databases, as of March 2002, was respectively: 3,990,000 and 2,891,416 (Tirabassi 2003). The issue originates from the methodology used in the creation of the list of residents permanently abroad (residing abroad for a period of twelve months or more), which would by default be enrolled in the overseas electoral roll. Data was taken from two separate databases: the Ministry of Foreign Affairs (MAE) database, managed by the Italian consular network overseas, and the Ministry of the Interior (AIRE, Registry of Italian Citizens Resident Abroad) database, which in turn refers to the AIRE databases of each *comune* ('municipality') in Italy.

According to many observers, the first 'real' test of the new voting procedures was expected for the scheduled 2006 parliamentary elections, where higher political interests were at stake. The most innovative element of the new legislation – the first ever election of diaspora parliamentarians – was due to be implemented. In the tightest vote in the history of post-war Italy, the expatriate vote was to be determined for the election results. Excluding the Region of Valle d'Aosta and the offshore electorate constituencies, the centre-left coalition, *L'Unione*, and the centre-right coalition, *La Casa delle Libertà*, received respectively 49.8% and 49.7% of the votes for the Chamber of Deputies. Thanks to the majority prize introduced in 2005 by amendments to the national electoral law, the thin margin which separated the two coalitions proved to be enough for the centre-left *L'Unione*, which was awarded 55.1% or 340 seats of the available 630 seats. *L'Unione* obtained eight further seats: one assigned to the Italian Region of Valle d'Aosta and seven from the offshore constituency (out of twelve). In the Chamber of Deputies, the centre-left coalition secured a comfortable majority of 348, which left to the opposition parties the remaining 282 seats of the centre-right coalition. In the Senate, *L'Unione* and *La Casa delle Libertà* received respectively 49.1% and 49.9% of the votes. Due to the different electoral rules that apply to the Senate and thanks to the majority of overseas seats won by the centre-left coalition (four out of six), *L'Unione* secured the majority of seats in the upper house. Prodi's coalition could count on a total of 158 over 156 seats to Berlusconi's coalition.

In the lead up to the 2006 elections, there was widespread conviction that the overseas vote was going to be in favour of the Italian centre-right, which was flagged up as the long-standing campaigner of legislative change in the policy area of the expatriate vote. A few years prior, soon after winning the elections in 2001, Berlusconi had even added the portfolio of the Ministry for Italian Citizens Abroad to his cabinet. Following the belief that the Italian citizens overseas would provide electoral favour to his government, the champion of the reformed vote to overseas Italians *par excellence*, Mirko Tremaglia had been put in charge of the newly created Ministry. Five years later, the centre-right coalition led by Berlusconi thought it could politically capitalize on Italy's expatriate community when he went to the polls in April 2006 (Pasquino 2006, p. 150). The overseas seats are assigned according to a proportional system which uses the natural number quotient and highest remainders method (Tarli Barbieri 2007, p. 143). Voters can cast one or two preference votes only, depending on the number of seats available in that electoral division, respectively for one or two seats. Due to the limited number of seats allocated in each of the four electoral divisions that comprise the offshore constituency (at least one deputy and one senator are elected in each division, while the remaining seats are distributed among the sectors in proportion to the number of residents), the effect of such a system is more reminiscent of 'first-past-the-post' than the proportional representation system (Tarantino 2007, p. 9). Consequently, it disadvantages coalition parties that run independently. This was precisely what happened to the centre-right coalition parties at the 2006 election. In each of the four electoral divisions overseas, the coalition parties of the outgoing Berlusconi government failed to gather under one banner, and thus failed to take full advantage of the electoral system; this in turn marred their chances of winning (Di Virgilio 2007, pp. 235-36). The centre-right votes fragmented in no less than six (Chamber of Deputies) and five (Senate) parties. *L'Unione* received the majority of the votes in all the electoral divisions and in both chambers, with the exception of South America, where an independent list elected one MP and one senator. Had the centre-right run under one banner, the election results in the offshore constituency (particularly in the Senate) could have differed significantly, as highlighted in the simulation results elaborated by Di Virgilio (2007, p. 237).

## **CHALLENGES AND DILEMMAS IN THE ITALIAN EXPATRIATE VOTE**

Alastair Davidson saw an important political innovation in the Italian-made model of electoral participation and representation by overseas voters: 'Italy [...] has reacted to the novelty of a globalised world, where unprecedented mass migration has led to significant proportions of many national populations living far from the countries where they were born' (2006). 'The notion of a homesick diaspora' – continued Davidson – 'is being replaced by dreams of a world citizenship' (2006). Italian Senator Nino Randazzo, elected from the Africa-Asia-Oceania-Antarctica electoral division, also sought to explain the novelty of the vote to Italian citizens overseas as the creation of some form of 'global citizenship' (ABC 2006). There is a growing number of democratic countries which have relaxed or abandoned restrictions to citizenship and voting rights for citizens who live permanently abroad, with some countries such as France, Portugal, and Columbia also reserving parliamentary seats (Bauböck 2005, p. 683). Such a trend 'is symptomatic for a broader transformation of the territorial and membership boundaries that circumscribe democratic citizenship' (*ibid.*). In Italy, a bipartisan majority endorsed the important changes to the legislation, which paved the way for the extraordinary model of Italian overseas voters' political participation and representation—a model of diasporic political engagement with homeland politics that is both unique and unprecedented in Italian history. The bipartisan approval of the law no. 459 of 2001, which was only opposed by the Northern League and the Communist Refoundation Party, epitomises the general consensus that was needed across the Italian political spectrum for the new legislation to come about and the will to politically engage with Italians overseas in an innovative way.

However, in the 2006 and 2008 elections, the overseas electoral machine was, once again, put to the test. It had to face several challenges and solve a number of issues, such as the currency and accuracy of the overseas electoral roll, the delivery of postal ballot papers by means of different postal services around the world, the allegations of electoral irregularities, and the wrongdoings denounced by Fancelli in the final counting of votes in 2006 in the Castelnuovo di Porto electoral facilities.

The challenge to the authorities to keep the overseas electoral roll accurate and up-to-date had a big impact on overseas voters, due to exclusion factors that prevented thousands of potential overseas Italians from voting. This issue had remained long unresolved. As previously mentioned, two databases helped to formulate the voters' lists in each electoral division overseas: the MAE (managed by the Ministry of Foreign Affairs) and AIRE (managed by the Ministry of the Interior). The former was arguably more accurate than the latter as the average overseas resident might be more involved in dealings with consular officials than with officials of his or her former municipality in Italy (Tarantino 2007, p. 11). The accuracy of the roll was compromised by discrepancies found in cross-matching the MAE and AIRE databases. In Argentina, for instance, the MAE database recorded 640,418 overseas Italian citizens resident in the country, whereas the AIRE database recorded 454,039 (-186,379), as of July 2005 (*ibid.*, pp. 11, 13). According to the 2003 Presidential decree (D.P.R. no. 104 of 2 April 2003), eligible voters are those whose details can be found in both the MAE and AIRE databases. The so-called *posizioni non allineate* (literally 'non-aligned positions') – potential eligible voters who were present in either the MAE or AIRE databases but not in both – translated into the exclusion from the overseas electoral roll. The study carried out by Tarantino focused on the difficulties in implementing the vote to Italians overseas in Argentina from 2003 onwards, revealing the effect of this problem in a particularly large Italian community overseas; Argentina has the biggest Italian consular network in the world (Buenos Aires has 345,483 citizens enrolled) (*ibid.*, p. 12). For the 2003 referendums, 301,944 and a staggering 2.8 million voters were in a *posizioni non allineate* in Argentina and worldwide respectively (*ibid.*, p. 20). The failed accuracy of the overseas electoral roll and the on-going effort to keep it up-to-date in turn affected the number of eligible voters. In Argentina, for the 2006 elections, only 37% of the 'non-aligned positions' (128,148), which corresponded to as many voters, were successfully included in the electoral roll.

The turnout of the overseas voters depended, first and foremost, on the mailing procedures used to distribute the ballot papers. According to the 2006 official data of the Ministry of Foreign Affairs, 42.1% of the ballot papers posted by the consular networks around the world were received. The electoral division of South America recorded the highest number of ballot papers returned (51.8%), while the Central and North America had the lowest (37.3%). Surprisingly, only 38.4% of ballot papers posted in Europe were returned to the consulates. However, 9.2% (or 247,978) of ballot papers of the total number of 2,699,421 posted failed to be delivered to the addressees and were returned to the local Italian Consular offices for various reasons (Tarli Barbieri 2007, p. 152). In Argentina, for example, where the posting of the ballot papers was contracted to private couriers, 19.4% of the overall ballot papers posted were returned back to the local Italian authorities; mainly because of 'errors and imprecise data on the electors' (68.9%) and 'causes pertaining to failure or refusal

to counter-sign for the collection of ballot delivery' (30.5%) (Tarantino 2007, p. 41). The actual turnout of overseas voters should thus be calculated according to the number of ballot papers effectively delivered to the address indicated by the voters+. In this case, Argentina's turnout would be 70.7% instead of 56.1% (*ibid.*, p. 37).

The way in which the counting of overseas votes, which took place in Castelnuovo di Porto, was conducted attracted criticism (Tarli Barbieri 2007, p. 153). The vote counting procedures were complicated by side operations conducted by vote-counters, including opening the envelopes which contained the voter's coupon of identification and also the inside envelope containing the ballot papers. Telling is one deposition made to the Election Committee of the Senate in November 2006: 'Amid voted ballots, informal ballots, annulled ballots, and pre-annulled ballots those poor [vote counting] officers lost it and in the end their final counting was approximate' (*ibid.*, p. 154). In the end, nine electoral booths were excluded from the final results as a consequence of unresolvable inconsistencies in vote counting procedures.

Other challenges seem even harder to overcome. Performing constituency service for the offshore-elected MPs and senators is, for example, an extraordinary challenge; no extra resources have been allocated for this cohort of representatives by the Italian parliament. The idea of representation and the relationship between elected and electors is also put to the test, as the offshore electoral colleges (i.e. Africa-Asia-Oceania-Antarctica) cover numerous countries, vast distances, several continents and different realities in which Italian voters and communities live. Unlike the Italy-based representatives, offshore-elected MPs and senators may find themselves confronting work and family commitments, which imply long periods spent in Rome and swift visits to their constituencies and home, thus adding pressure to their duties as public figures and private citizens. For the abovementioned reasons, for instance, Morocco in 1993, suppressed its quota of five MPs which had been reserved for overseas Moroccans (Pastore 2004, p. 36).

Have Italian citizens abroad the right to claim full political rights in their former country of residence? Since Italians overseas have been granted full voting rights, the issue of whether they are really part of the Italian polity is becoming a source of debate. The 2,7 million eligible Italian voters who reside overseas are just a fraction of a bigger Italian overseas 'community', which unfolded over a century of emigration from the homeland. In the one hundred years of Italian emigration, conventionally set in the period 1876-1976, some 27 million Italians emigrated overseas (Favero and Tassello 1978, p. 64). An estimate of how many Italians make up the Italian expatriate community in the world today is not known and seems difficult to calculate. It is argued that millions worldwide may lay claim to be the descendents of Italian immigrants, especially in the American continent. In 1994, Italy's Ministry of Foreign Affairs argued that as many as 60 million worldwide could claim some Italian heritage one way or another (Gallo and Tintori, 2006, p. 132). According to Gallo and Tintori, some 30 million are believed to be potential 'Italians' overseas, should they resume their rights to Italian citizenship via ancestry (2006, p. 131). The uncertainty surrounding the exact number of Italian nationals and Italian-background people live overseas does not undermine the fact that a sizeable Italian expatriate community is present outside of Italy's borders. Most importantly, it does not undermine the fact that close to three million of overseas Italian citizens are enrolled in the electoral roll and are eligible to vote by post in Italy's general elections and referendums since 2003.

Furthermore, a traditional notion of citizenship 'refers to the rights and responsibilities that become attached to people by virtue of their having been born as, or having become, recognised or certified members of a state community' (Renshon 2005, p. 7). Voting also 'reflects and gives voice to an individual's stake in the community, while at the same time symbolizing his or her membership in it' (*ibid.*, p. 9). The participation and representation of expatriate communities in the homeland country undoubtedly raises questions concerning citizenship rights and responsibilities. Dual votes do not necessarily translate into dual responsibilities. Renshon reminds us that it is the homeland community – not the foreign voters – which ultimately bears (and must live with) the consequences of the foreign votes (*ibid.*, p. 14).

Access to and the transmission of Italian citizenship did anything but encourage the concession of full voting rights to Italian emigrants and their descendents overseas. Law no. 91 of 1992, which amended the previous citizenship law, also reinforced the key concept of transmission of citizenship by recognizable blood ties (*jus sanguinis*) among generations of Italians, irrespective of whether such ties grow and replicate outside Italy's borders. The law also recognised dual or multi citizenship. Since the 1990s, there have been a growing

number of Italians applying for citizenship based on the right of ancestry. These recent changes to Italian citizenship laws have assisted many current and former Italian nationals, along with their descendents, to retain or resume, as well as to transmit their citizenship rights to their offspring (Gallo & Tintori 2006, pp. 126-33). It is important to underscore the total number of citizenship certificates issued between 1998 and 2004 by Italy's consular offices around the world and to observe the reasons behind their issuing. Of around 570,000 citizenship certificates granted, the overwhelming majority (94.3%) concerned foreign-born people who lawfully claimed to be the descendents of an Italian ancestor (*ibid.*, p. 128). Many, especially in South America, have been seeking to obtain Italian citizenship for reasons which seem more related to their condition of socio-economic hardship and a desire to seek better opportunities elsewhere than anything else. In addition, more than 160,000 former Italian citizens reclaimed their citizenship between 1992 and 1997.

Many overseas Italian dual citizenship holders who acquired their Italian citizenship via ancestry or marriage had hardly ever engaged with contemporary Italian politics and society, nor had they ever set foot in the country. It goes without saying that they engage in Italian politics and society in a fashion hardly comparable to those residing in Italy, even though cheap air fares along with improved and modern communication mediums grant overseas Italians a better level of contact and greater access to information with their country of origin than decades ago.

Arguments by those who were opposed to giving Italian voters abroad the postal vote and/or parliamentary representations such as whether he or she would ever return to or ever set foot in (in the case of migrants' descendents) Italy, or the very legitimacy of an offshore constituency seem never to have been strong enough. The left, which, for years opposed any policy change to the overseas voting system, dropped its scepticism in the course of the 1980s and 1990s. It came to sacrifice principles, such as the confidentiality of the vote for expediency and not wanting to risk alienating a potentially significant electoral force. The left-wing parties' support in amending the overseas voting system in the early 2000s was a key development. But calls to revise the law no. 459 of 2001 and related legislation have increased, especially in light of the alleged electoral deceit which occurred during the 2006 elections—allegations of voting fraud in Argentina and Australia highlighted the fact that the overseas voting rules are potentially far from being immune from electoral manoeuvring (Telese 2006, O'Grady & Guerrera 2007). The so called 'bozza Bianco', a bill proposal for a new set of electoral rules named after the Chair of the Constitutional Affairs Commission, Enzo Bianco, has been discussed in parliament, while a legislative referendum which seeks to abrogate in part the law no. 270 of 2005 may be held in 2009.

Changes to the existing legislation regulating the emigrant vote seem, however, difficult in terms of attracting the same bipartisan majority of the period 2000-2003. The past Prodi centre-left coalition government, which maintained the majority in the Senate until the vote of no confidence of January 2008, faced a catch 22 dilemma. Among others, it was supported by the centre-left senators elected overseas, including the crucial vote of the independent senator Pallaro from Argentina. The centre-right coalition, now in office, seems quite unlikely to revise legislation that is strongly supported by Tremaglia and its party, the National Alliance (AN). Then pressures from local (overseas) and national (Italian) politics concerning the offshore elected may also play a part in a possible revision of the overseas electoral rules, as proved to be the case on the occasion of the so called 'Pallaro amendment' in the 2007 budget (€52 million allocated to multi-purpose activities for the Italian communities overseas for the years 2007-2009) and the emphasis placed on the *politiche degli italiani nel mondo* ('policies for Italians resident abroad') which was the first of the twelve point agenda that resolved the government crisis of February 2007 (Tarli Barbieri 2007, pp. 158-59).

On whether emigrants should formally belong to and vote in their country of origin, Bauböck suggests that, as a general rule, extra-territorial voting rights should expire with the first generation, and the transmission of formal membership itself should be stopped in the third generation' (Bauböck 2003, p. 714). In the Italian case, neither rule applies. They have, as Lopez-Guerra points out (2005), "having an interest at stake" but do not have a state of "being subject to" – in short a state of rights and responsibilities. The dilemma is that Italian expatriates and the new, overseas-born generations are no longer part of the living process of the affairs of their home country (or never were) and are not subject to its laws and consequences. Yet they have the vote in which to decide the outcome of the laws and consequences in the homeland. On the other hand these expatriates might argue that their vote is a right earned, a constitutional right, and have contributed economically to their home

country with which they still have tight links. This contrast raises the very core of the two opposing arguments which is embodied in the act of Italian expatriate voting.

## CONCLUSION

The amendments made to the electoral rules concerning overseas Italian voters have marked a turning point in Italian politics, and in the process by which Italian overseas voters engage in national and local Italian community politics. Eventually, the ‘emigrant vote’ validates, with its novelty and impact, a traditional view of political community as one in which legal citizenship – and not physical attachment and engagement with the polity as is the case of non-citizen residents living in Italy – defines the boundaries of what constitutes the Italian community. Diasporic identity processes that stretch across territorial boundaries and transnational political practices (e.g. external voting rights and dual citizenship) among certain immigrant populations pose, as highlighted by Bauböck (2003, pp. 711-18), a set of normative challenges and concerns. In the case of the Italian model of diasporic political participation and parliamentary representation, what may have passed by without fanfare in the past – the creation of an offshore constituency and the bestowing of full voting right to overseas Italians – will not do so in the future.

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# **THE CAPACITY OF CITY OF TSHWANE METROPOLITAN MUNICIPALITY IN ADDRESSING UNEMPLOYMENT**

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## **ABSTRACT**

*The paper investigates the role of City of Tshwane Metropolitan Municipality (CTMM) in alleviating unemployment, particularly in Tshwane Municipality. The paper focuses on the unemployment levels in different local authorities around Tshwane; CTMM economic profile; Tshwane City Strategy and Policy on unemployment; Community projects initiatives; Access to funding and challenges faced by the CTMM. The research design employed was a quantitative research survey administrated to fifty councilors. The study revealed that currently the CTMM lacks the labour absorption capacity in keeping pace with the number of job seekers*

## **INTRODUCTION**

The high level of unemployment has economic and social implications. From an economic point of view, the overall unemployment rate remains one of the key measures of an economy's performance. The unemployment rate is not only of economic significance, but of social significance as well since it is also a key variable in alleviating poverty.

The unemployment (joblessness) rate in South Africa is exceptionally high and arguably the most pressing concern that faces policymakers. According to official published statistics, the Gauteng Province (one of the nine South Africa's provinces) the unemployment rate was estimated at 23.3% in March 2006 compared to 22.7% in March 2005 (Gauteng News, 2006). High and rising unemployment is of concern for a number of reasons: Unemployment reduces output and waste productive power; it erodes human capital owing to the depreciation of unused skills; it leads to social exclusion, a deprivation that goes well beyond the fall in income associated with unemployment; unemployment can cause suffering, deterioration in family life and in social values; unemployment can induce discouragement, resignation, and loss of morale.

## **OBJECTIVES OF THE PAPER**

This paper investigates and determines the capacity of City of Tshwane Metropolitan Municipality (CTMM) in alleviating unemployment by analyzing:

- Councilors awareness of the Strategy and the Community projects initiatives;
- Impact of possible projects intended to alleviate poverty;
- Absorption capacity of the municipality; and
- Challenges faced by the council.

## **SCOPE OF THE PAPER**



In order to achieve the objectives of the paper, the following issues will be discussed:

- Background of City of Tshwane Metropolitan Municipality
  - Geographical, Demographical profiles and the Vision of CTMM
  - Unemployment levels
  - CTMM economic profile
  - Tshwane Metropolitan strategy
  - Community projects
- Research Procedure
- Findings
- Limitations of the Study
- Conclusions and Recommendations

## **BACKGROUND OF CITY OF TSHWANE METROPOLITAN MUNICIPALITY (CTMM)**

In this section, the general background of CTMM will be explained.

### **Geographical, Demographical profiles and the Vision of CTMM**

The City of Tshwane Metropolitan Municipality was formed at the end of the year 2000. Sixteen local authorities were amalgamated to form the new municipality, CTMM (Geomatics, CTMM, 2004). The City of Tshwane is the administrative capital of South Africa. It is located in the north-western corner of Gauteng Province, covering approximately 13% of the Province's surface. It is centrally positioned right on two major arteries in the Southern African region. Tshwane is the only Metropolitan City that extends over cross Provincial borders namely; Mpumalanga and North West provinces. In 2006 the metropolitan area hosted an estimated population of 2.2 million (Tshwane IDP, 2006).

The Metropolitan council aspires through its vision to be “*the leading international African Capital of excellence that empowers the community to prosper in a safe and healthy environment.*” This vision also underpins and also provides the motivation for conducting this research. To realize the vision the executive mayor of Tshwane outlined five key areas which would help the Metropolitan council to realize its vision: (A City at work, 2006).

- The provision of access to quality basic services and infrastructure throughout the city;
- Accelerating the pace of local economic growth and development;
- Fighting poverty and ensuring clean, health safe, secure and sustainable communities;
- Fostering participatory democracy and applying Batho Pele (People First) principle; and
- Ensuring the good governance and financial viability of the municipality.

Another mayoral initiative is to engage the private sector and other levels of government in reducing unemployment and poverty. The target is to see unemployment being 50% less than it is presently by the year 2014 (A City at work, 2006).

### **Unemployment levels**

Unemployment is potentially a matter of serious concern – for its effects on economic welfare, production, erosion of human capital, social exclusion, crime and social instability. Tshwane Municipality views the level of unemployment and its rise as the most serious threat facing South African society. In 2002, the economically active population (EAP) of the CTMM totaled 47.2% of the total population (the economically active population includes working persons as well as those who are actively looking for work). This figure is higher than the national average of 38.3%, but lower than Gauteng's average of 52.7%. In all areas of the CTMM, the EAP increased between 1996 and 2002. This implies that more people are entering the labour force than the jobs created or that are available in the CTMM. The resulting effect is higher unemployment in CTMM. The gap

between the economically active population and formal job opportunities is widening. From 1996 to 2002 the EAP increased by approximately 220 000, while job opportunities increased by only 180 000 resulting to oversupply of additional 40 000 EAP. For the same time period, the informal employment doubled from more than 43 000 in 1996 to approximately 98 000 in 2002 (Labour Force Survey, 2004).

It can therefore be concluded that despite the increased number of people employed, the labour absorption capacity of the CTMM could not accommodate the number of job seekers and as a result, the level of unemployment is continuously increasing. This is most notable in Tembisa and Soshanguve where unemployment has increased by 6.7% and 6% respectively. Both Wonderboom and Pretoria's unemployment rates have increased by 3% and 4% respectively, which is a lower rate than the average for CTMM (South African Cities Network Report, 2004).

The per capita income in CTMM has since the year 2000 excelled above that of the whole Gauteng and according to the forecasts, the income gap will widen over the next few years. The per capita income in CTMM is also far above that of the national economy (R27 000 in CTMM in 2002 compared to only R14 000 for the national economy in the same year) (Business Enterprises, 2003).

The question therefore arises why unemployment is increasing in an area where income levels are high compared to other regions in South Africa

## **CTMM economic profile**

From an economic perspective, the broad economic objectives of the CTMM are in line with that of the national economy namely, balanced export-led economic growth that will ensure increased welfare, employment opportunities, economic and social stability; a positive trade balance and reducing the unequal distribution of income in the CTMM. Although economic growth is above the national average, it differs largely between the different areas that make up the municipality. A major problem is that the labour absorption capacity of the CTMM economy is not keeping pace with economic growth and the number of job seekers. A positive development has been the improvement in export performance, especially the export of motor vehicles. CTMM is a net exporter to Asian countries, North America and Southern African countries, while it is a net importer from Europe and South America. In general, it is evident that the export sector is one of the main drivers of the economy of the CTMM and as such has a positive impact on employment (Business Enterprises, 2003).

## **Tshwane Metropolitan strategy**

The outcome of the economic objectives of CTMM, as translated in the economic policy, is to improve the material welfare and the quality of life of the population of a Tshwane. A sure way of achieving this objective is through high quality economic growth which ensures that an increasing number of workers are gainfully employed.

The Tshwane Metropolitan Strategy is a bold initiative by the CTMM to influence the development path of the city over the next 20 years. The City Strategy (CS) proposes a substantial programme of public-led investment to develop new patterns of housing, transport links and business opportunities in the northern part of the municipality. This concentration on the North will be associated with linked programmes in the six other focus areas. The CS aims to provide the basis for a social compact and a process of sustainable growth that will offer new opportunities for the unemployed and the marginalized communities. The CS also introduces important implicit policy and emphasis shifts. These are required to shape an action agenda that has full impact on urban efficiency and the quality of life – especially targeting the poor and the unemployed. Some of the most important shifts are:

- From unfocused, low-impact public expenditure to focused high-impact public investment
- From unsustainable patterns of infrastructure investment to an approach that balances growth and maintenance
- From unproductive investments to investments with a multiplier effect (Economic Analysis of the Tshwane Metropolitan Municipality Report, 2003).

The Tshwane Metropolitan Strategy also outlines a course requiring bold leadership from the state and the public sector, through local government; prioritizes real opportunity, not need; recognizes the right of the poor to dignity and community respect; and provides a basis to involve the municipality and all stakeholders in a social compact; and expresses confidence in the future of Tshwane and its people (Economic Analysis of the Tshwane Metropolitan Municipality Report, 2003).

## Community projects

South Africa has committed itself towards the achievement of the Copenhagen Commitments declared at the World Summit for Social Development in 1995. Commitment 3 requires countries that signed the declaration to promote the goal of full employment as a basic priority of their economic and social policies in order to ensure that all men and women attain secure and sustainable livelihoods through freely chosen productive employment and work by 2014. The South African government, through Cabinet Lekgotla, initiated and agreed in July 2002 that a 'massively expanded' public works' programme would form a key component of a comprehensive employment strategy – hence the establishment of the Extended Public Works Programme (EPWP). Cabinet Lekgotla also noted the importance of assisting people in the Second Economy with information on how to access social and economic opportunities, and another job creating programme, the Community Development Workers' Programme (CDWP) was formed (Development Report, 2005). These two programmes must be implemented nationally and provincially. Tshwane which is in Gauteng province is no exception.

The Expanded Public Works Programme aims to develop skills of workers while on the job so as to increase their employment capacity when they exit from the programme. It is expected of the EPWP to employ local people to ensure that as they work, they simultaneously acquire basic training and skills. The programme has following objectives:

- Creating work opportunities for the unemployed
- Capacity building through Learnerships to create the opportunity for participants to learn and receive accredited training that will lead to a qualification
- Creating exit opportunities for candidates to enter into gainful employment or take up entrepreneurial opportunities on completion (Development Report, 2005).

The Community Development Workers' Programme is implemented at local municipality level and the Community Development Workers (CDWs) are responsible to the South African Local Government Association (SALGA) and local government. CDWs work with and assist communities by collaborating with all government departments who are responsible for the implementation of projects and programmes at local level. The departments involved are:

- Public Works (Expanded Public Works Programme)
- Transport (road infrastructure programmes)
- Social Development (poverty alleviation programmes)
- Provincial and Local Government (LED programmes, MIG, FBS, ISRDP and URDP)
- Agricultural and Land Affairs (agricultural and land reform programmes)
- Housing (provision of houses and subsidies)
- Health (primary health care facilities, Community Health Workers and HIV and AIDS programmes)
- Water Affairs and Forestry (water and sanitation)
- Trade and Industry (SMME support programmes) (HSRC Report, 2005).

The programme has the following objectives:

- Empowering and enabling those who are traditionally deprived of power and control over their common affairs
- Promote active and representative citizen participation so that community members can meaningfully influence decisions that affect their lives
- Engage community members in problem diagnosis so that those affected may adequately understand the causes of their situations
- Assist community members in designing and implementing a plan to solve agreed-upon problems by emphasizing shared leadership and active citizen participation in that process

- Disengage in any effort that is likely to adversely affect the disadvantaged segments of a community
- Actively work to increase leadership capacity (skills, confidence and aspirations) in the community (A Community Development Handbook in South Africa, 2006).

The Smart City Project – an initiative by City of Tshwane is targeting unemployed tertiary graduates. The Innovation Hub is training these graduates to use their skills for the benefit of the City of Tshwane. The training also focuses on project management, entrepreneurship and the development of technical skills with emphasis on SMS technology. The ultimate goal of the project is to establish a company that can apply SMS technology to provide the Tshwane Municipality with messaging services and billing alerts, which will greatly enhance its ability to communicate with residents regarding issues that affect them and ultimately creating employment (Gauteng News, 2006).

## RESEARCH PROCEDURE

A survey design was followed to compile data to determine the capacity of CTMM in reducing unemployment in the region. For this reason, a self administrated structured questionnaire was designed using a 5-point semantic differential scale. The number one on the scale was indicative of a total agreement with a formulated statement whilst an evaluation of five was indicative of total disagreement. In analyzing the data, the 5-point scale on all items was transformed into a 3-point scale indicating Agreement- Uncertainty- Disagreement as presented in table I and table 2. The reason for the transformation was that the researchers were of the opinion that a tri-polar dimensional approach of Agree-Uncertain-Disagree will provide stronger, yet simpler explanations of the opinions of respondents. The questionnaire consisted of 23 questions. The first 12 questions were intended to measure the perceived awareness of the respondents on the level of unemployment in the Tshwane region. The remaining 11 questions focused on evaluating prospects and challenges in addressing unemployment in the Tshwane region.

Sampling respondents were selected using the convenient sampling approach. Mayor offices in Tshwane councils were randomly selected based upon proximity convenience to the researchers. The office holders were requested to distribute the questionnaires to the councilors in the respective Municipalities. The purpose of the questionnaire and how it should be completed was explained. A total of fifty questionnaires were distributed to four of the sixteen councils of Tshwane namely, Centurion, Mabopane, Mamelodi and Pretoria City Council over a period of three months in 2008 and in the end only 39 usable questionnaires were returned.

Due to the small sample size, only descriptive and non parametric data analysis procedures were employed. For the purpose of this paper, data will only be presented in percentages.

## LIMITATIONS OF THE STUDY

As the study included only four of the sixteen local city councils of Tshwane Metropolitan region, and due to the small size of the final sample, the caution should be taken not to generalize to the whole of CTMM. The results however are applicable to the specific four councils mentioned in the report. The researchers are however of the opinion that the finding are at least partially applicable to the region as a whole and could be used as baseline information for further studies. Due to lack of funding and other lack of resources a more comprehensive study could not have been conducted.

## EMPIRICAL FINDINGS

Of the 50 questionnaires issued 39 were returned. This made a response rate of 78%. The respondents consist of 49% (n = 19) males and 51% (n = 20) females. More participation of female respondents is not a surprise because the South African government stress that more females be introduced to government and the Executive Mayor of CTMM presently is a female. 49% of the respondents are between the ages 21-30. It is good for CTMM to have young people participating in government activities. Due to the fact that the survey was

conducted in Tshwane where Blacks (Africans) form the majority of the population, only 8% of Coloureds, 5% of Indians and 5% of Whites participated in the survey and the rest were Africans accounting for 82%.

**Table 1: Statements relating to awareness of respondents to level of unemployment**

| <b>Question/statement</b>  | <b>Agree (%)</b> | <b>Uncertain (%)</b> | <b>Disagree (%)</b> |
|--|------------------|----------------------|---------------------|
| 1. The rate of unemployment is bit high due to <b>lack of skills</b> from the community members.   | <b>76.9</b>      | <b>5.1</b>           | <b>17.9</b>         |
| 2. In some cases, unemployment is high as a result of <b>lack of opportunities</b> in the labour market.   | <b>76.9</b>      | <b>0</b>             | <b>23.1</b>         |
| 3. The Municipality is taking efforts to address unemployment through <b>community projects</b> .  | <b>56.4</b>      | <b>25.6</b>          | <b>17.9</b>         |
| 4. Most of the projects supported by Municipality are <b>sustainable</b> .   | <b>43.6</b>      | <b>30.8</b>          | <b>25.6</b>         |
| 5. Through collaboration with other state departments, people in the Municipality are exposed to different <b>training</b> programmes to gain some skills. | <b>53.8</b>      | <b>23.1</b>          | <b>23.1</b>         |
| 6. The labour absorption <b>capacity</b> of the Municipality is not keeping pace with the number of job seekers.   | <b>76.9</b>      | <b>15.4</b>          | <b>7.7</b>          |
| 7. There are many job opportunities available, but most of people lack the <b>required qualifications</b> .  | <b>79.5</b>      | <b>5.1</b>           | <b>15.4</b>         |
| 8. Unemployment has impact on <b>crime levels</b> in the Municipality.   | <b>79.5</b>      | <b>7.7</b>           | <b>12.8</b>         |
| 9. The fast growing economic development in the Municipality is creating job opportunity mostly for <b>unskilled and semi-skilled</b> workers.             | <b>51.3</b>      | <b>17.9</b>          | <b>30.8</b>         |
| 10. The <b>Expanded Public Works Programme</b> is playing a vital role in addressing unemployment.   | <b>66.7</b>      | <b>17.9</b>          | <b>15.4</b>         |
| 11. Learnerships are essential interventions in addressing unemployment.   | <b>79.5</b>      | <b>10.3</b>          | <b>10.3</b>         |
| 12. The Municipality is trying through its initiatives to address <b>poverty</b> .   | <b>51.3</b>      | <b>35.9</b>          | <b>12.8</b>         |

**Table 1 (above) indicates the awareness of the respondents discussed as follows:**

76.9% of the respondents agree that unemployment is a bit high because community members lack skills, lack opportunities and the labour capacity of the Municipality is not keeping pace with the number of job seekers. It is only 56.4% of the respondents who agree that the Municipality is taking efforts to address unemployment through community projects, 25.6% is uncertain if it is the case and 17.9% disagrees. It emerged from the findings that 43.6% feel that these projects are sustainable in terms of creating continued employment and skills development. The findings further revealed that 66.7% of the respondents agreed that the Expanded Public Works Programme is playing a vital role in addressing unemployment.

53.8% believe that people in the Municipality are exposed to different training programmes to gain some skills and 23.1% does not. Most respondents (79.5%) agree that job opportunities are available, but people lack required qualifications to fill those available jobs. The majority of the respondents (79.5%) believe that unemployment has an impact on crime levels in the Municipality because when people are not working they could engage in robbing with the view of making a living. These respondents also believe that Learnerships are essential interventions in addressing unemployment. 51.3% believe that the Municipality is creating jobs for unskilled and semi-skilled workers and addresses poverty as well.

**Table 2: Statements relating to Prospects and challenges**

| <b>As a result of possible prospects, unemployment will be dealt with accordingly as a result of ....</b> | <b>Agree (%)</b> | <b>Uncertain (%)</b> | <b>Disagree (%)</b> |
|---|------------------|----------------------|---------------------|
| 1. Boom in the construction field.  | <b>76.9</b>      | <b>17.9</b>          | <b>5.1</b>          |
| 2. Many people being exposed to skills training programmes.   | <b>89.7</b>      | <b>2.6</b>           | <b>7.7</b>          |
| 3. Encourage people to start their own businesses.  | <b>89.7</b>      | <b>2.6</b>           | <b>7.7</b>          |
| 4. Participation in the community projects.   | <b>87.2</b>      | <b>7.7</b>           | <b>5.1</b>          |
| 5. Taking part in the smart city project.   | <b>76.9</b>      | <b>20.6</b>          | <b>2.6</b>          |
| 6. Capacity building through Learnerships.  | <b>82.1</b>      | <b>10.3</b>          | <b>7.7</b>          |
| <b>As a result of the following challenges, unemployment will be dealt with slowly because of ....</b>    |                  |                      |                     |
| 7. Lack of skills required to do certain jobs.  | <b>87.2</b>      | <b>0</b>             | <b>12.8</b>         |
| 8. Lack of job opportunities in certain job categories.   | <b>76.9</b>      | <b>10.3</b>          | <b>12.8</b>         |
| 9. Unsustainable projects.  | <b>51.3</b>      | <b>28.2</b>          | <b>20.5</b>         |
| 10. Lack of funds to facilitate Learnerships.   | <b>66.7</b>      | <b>12.8</b>          | <b>20.5</b>         |
| 11. Recession.  | <b>48.7</b>      | <b>28.2</b>          | <b>23.1</b>         |

**Table 2 above reflects the findings as discussed below:**

The majority of the respondents (89.7%) feel that people must be exposed to skills training programmes and be encouraged to start their own businesses, whilst 76.9% feel that people be motivated to join the construction field and take part in the Smart City Project. 87.2% and 82.1% believe that people must participate in community projects and that there should be exposed to capacity building through Learnership programmes respectively.

It is evident that there are challenges facing the respondents, and that these challenges implicate the high level of unemployment. Of the 39 respondents, 87.2% agree that lack of skills to do certain jobs is a major challenge for CTMM to absorb those who need employment. The majority of the respondents (76.9%) state that lack of job opportunities in certain job categories continues to increase unemployment due to the fact that people have no required skills. 51.3% still feel that some projects are unsustainable and as such projects collapse and unemployment rate might further increase. Lack of funds to facilitate Learnership programmes is another challenge as indicated by about 66.7% of the respondents. Only 48.7% believe that recession can become a problem in dealing with unemployment because during recession economic prospects could decline.

## **CONCLUSIONS AND RECOMENDATIONS**

Based on the survey findings, it can be concluded that unemployment is still high because; firstly, the community lack the relevant skills and qualifications to be able to take part in certain jobs. Secondly, the Municipality lacks funds to facilitate Learnership programmes. Thirdly, the lack of opportunities in the labour market makes it difficult for people to get employment. Fourthly, the labour absorption capacity of the Municipality is not keeping pace with the number of job seekers. Recession also makes it difficult for the labour market to provide more jobs.

Although the Municipality is taking effort to address unemployment through Community Projects like the Expanded Public Works Programme, the Community Development Workers' Programme, the Smart City Project and Learnerships, the results reveal that some of these projects seem to be unsustainable. It is also concluded that the high unemployment rate has an impact on crime levels and contributes to poverty as well.

The researchers recommend that the CTMM should develop mechanisms to support projects and to embrace its sustainability. In this regard, the establishment of business parks, incubation centers in which business training, business skills development and development of preferential tax zones may be considered. The latter may contribute to draw the informal business sector of the CTMM into the formal economic sector. Lastly, as the

Tshwane region is endowed with many further education and higher education institutions, these institutions could be approached to become involved in academic entrepreneurial programmes, sharpen and develop the skills of programmes and to develop business models appropriate to the products and services provided by business people in the region. By improving business models, enhancing human and social capital and by creating conducive business environment, unemployment in the Tshwane region can be radically reduced

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# REFLECTION IN ACTIVE LEARNING: DOES THE OPEN REFLECTION REALLY WORK?

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## ABSTRACT

*Reflection can enhance learning through analyzing and acting on past experience. Recently, the foundational research on reflection in learning initiated by Dewey (1964), Kolb (1984), Schon (1983, 1987) has been continued by Pennebaker (1990) and Dunlap (2006) who favor guided reflection. This article sets the stage for investigative inquiry into the practice of open reflection and opportunities of guided reflection. Twenty Documentation of Learning reports from two distinct university student samples were analyzed for reflective themes, including specific examples and references to prior learning and course-related content. The analysis resulted in a conclusion that favors a recommendation to introduce guided prompts that target learning outcomes to facilitate metacognitive and problem solving skills and professional growth.*

## INTRODUCTION

Reflection on learning or a process of witnessing and learning from the experiences can provide a number of benefits. Reflection enables learners to understand what they are about and “converts action that is merely appetitive, blind and impulsive into intelligent action” (Dewey, 1964, p. 211). Revans’ (1983, 1998) action learning model describes learning as a merger of acquired knowledge and questioning insight, where the latter is the reflection on what is learned (programmed knowledge) and the learning process. Reflection-on-action (Euraut, 1995; Schon, 1987) is the process of making sense of an action after it has occurred and learning from this past experience. Posing a reflective task for learners at the end of the learning cycles pushes them to analyze personal actions and their mental and behavioral activities as if looking into an inner mirror (Milter & Matveev, 2006; Stinson, 2003). Critical reflection stimulates the questioning of assumptions or the “taken-for-granted,” facilitates learning, develops critical thinking skills, and promotes individual growth (Carson & Fisher, 2006; Reynolds, 1998).

Recent literature illustrates well multiple challenges and benefits of reflective learning in management education (Ecclestone, 1996; Smyth, 1989; Yost, Sentner, & Florlenza-Bailey, 2000). However, only limited literature on instructional guides and categories of reflection exists (Clift, Houston, & Pugach, 1990; Fisher, 2003). The examples of an exception to the above are Brown and McCartney’s (1998) overview of the meaning and categories of reflection, Cunliffe’s (2004) study on writing critically reflective journals by management students, and Cooper and Dunlap (1989) and Dunlap (2006) reports on using journaling to increase student learning and develop reflective students as well as managers.

This article is aimed at strengthening the stream of research on the practice of open reflection and opportunities of guided reflection. We briefly review the literature on reflection as a constructivist learning approach and reflective journaling as a guided learning aid. We then report on our analysis of student Documentation of



Learning reports as examples of open reflection (Revans, 1998; Schon, 1987) and provide a description of strengths and weaknesses of these reports. Finally, we develop recommendations on enhancing the value of critical reflection through journaling and designing constructed journal prompts linked to the targeted learning outcomes of a learning module.

## **REFLECTION: A SCHOLARLY UPDATE**

Reflection as a fundamental element in learning and professional practice has gained considerable importance in recent years. The word reflection, originating from Latin “reflectere” means to bend or fold back. In optics this term describes casting of light against a smooth surface (Brown & McCartney, 1999). Reflective learning promotes critical self-awareness and improves both individual and team performance among group members. Teamwork may be very stressful for team leaders and members since there can be conflicts around completing the tasks on time and performance standards, as well as limited resources. All of these factors can influence the performance of team members both in academia and the workplace.

Reflection in learning integrates well with constructivist teaching models. The constructivist approach is built on the assumption that “effective teaching recognizes that meaning is personal and unique and that students’ understandings are based on their own unique experiences” (Caine & Caine, 1991, p. 81). Constructivist theories related to learning are based on recent research about the human brain and what is known about how learning occurs. Instruction based on theories of brain-based learning emphasizes learning in teams and fostering real-world experiences over a lecture-based approach. As for assessment, students need to understand their own styles and preferences which in turn assist students in monitoring progress and enhancing learning (Caine & Caine, 81). Questioning approaches can be effective assessment tools for reflective learning (Bourner, 2003).

Dewey (1933), a psychologist and educational reformer, one of the founders of the philosophical school of pragmatism, is the first American philosopher to introduce educators to the term “reflection.” Dewey (1993) defined reflection as a theory of experience consisting of two elements: the active relations subsisting between a human being and his natural and social surroundings. Dewey (1993) states that the use of the term “experience” started to emerge in the 17<sup>th</sup> and 18<sup>th</sup> centuries where principals of reform, progress, enlightenment, and breaking through dogmas and limitations imposed by authorities created an environment, “social medium,” where one is able to construct ideas, express observations and explore in the building up of a common experience. Therefore, existence of an “anticipated nature” is important for individuals to reflect their experiences. Dewey (1933) describes reflection as an active and careful consideration of a belief or a form of knowledge that stimulates further thinking and action. Dewey (1933) argues that reflective thinking is an intentional and cognitive process that includes the following steps: the sense of a problem, the observation of conditions, the formation and rational elaboration of a suggested conclusion, and the active experimental testing. For Dewey (1933), reflection is habitual in terms of thinking as an act, but it is learned the way thinking action is framed. Reflection is a crucial part of learning, which is a result of critical and reflective thinking about the experience attained.

Building on Dewey, Kolb (1984) has had considerable impact bringing experiential learning theory into management classrooms. Kolb (1984) created his learning style model out of four elements: concrete experience, observation and reflection, the formation of abstract concepts, and testing in new situations. Schon (1983, 1987) introduced the process of reflection in action as a process of knowledge creation. According to Schon (1983), reflection is a rapid and intuitive process unlike Dewey’s description of prolonged, deliberate, and critical questioning (Brown & McCartney, 1997), Schon’s work areas include his concept of inquiry as reflection-in- action, constructing a learning dialectic in organizations, and the practice of learning. He also developed an educational paradigm, which involves teaching practitioners how to reflect-in-action. According to Schon (1983, 1987), knowledge can be acquired in direct action. Schon’s concept of inquiry involves thoughtful practice, grounded often in uncertainty. Schon (1987) significantly contributed to critical reflection in the development of professional knowledge and clinical expertise.

### **Reflective Journaling**

Reflective journaling can provide a variety of benefits to an organization through an improvement in knowledge exchange and acquiring new skills in training programs (Cyboran, 2005). Reflective journaling aids the individuals in addressing the way they examine and explore issues of concern by promoting analysis of the learning experience (Natale & Ricci, 2006). Recent studies demonstrated the use of journaling to increase student learning and develop reflective employees and managers (Cooper & Dunlap, 1989; Dunlap, 2006) and assist in problem solving and stress management (Adams, 1990; Pennebaker, 1990). Students who use journaling with specific and guided prompts designed by the instructor develop skills in the areas of lifelong learning skills, metacognitive awareness, and application of concepts (Dunlap, 2006). In both Adams' (1990) and Pennebaker's (1990) work, benefits of journaling such as maximizing time and business efficiency, stress reduction, and overcoming blocks in personal and professional life are researched.

Adams (1990) suggests some benefits that business people find in keeping journal recordings of work-related issues and events: Many businesspeople who write journals about their corporate or career lives swear by the value of keeping a record of peak and slump times in business. When sales start falling, I can go back and reconstruct what I did to boost them the last time in the cycle... It's also reassuring to read back through my business journal and realize nothing lasts forever (p.15). On the benefits of journaling for dealing with blocks such as unresolved personal or business-related issues, Pennebaker (1990) states: "The mind torments itself by thinking about unresolved and confusing issues ... writing ... is a powerful tool to discover meaning. Writing promotes self-understanding" (p. 93). Moon (1999) suggested that journal writing provides a vehicle for reflection and can enhance learning. Moon's (1999) map of the reflective process includes a purpose for journal writing, description of events or issues, linkage to related material, reflective thinking, related processes as testing new ideas, representing material in other forms such as graphics and dialog, statement of something that has been learned or solved, and further reflection.

Cooper and Dunlap (1989) investigated journal use by managers in government and business and educators in administrative positions. Journaling ranged from recording thoughts and problems in a spiral notebook to using a computer program with the input provided in a variety of settings from the office to the bedroom. Participants recorded dreams, fears, and plans. The common thread was that none of them differentiated between personal and professional use of the journal and all of the participants "used their journals as systematic problem-solving tools" (Cooper & Dunlap, 1989, p. 7). One participant, a hospital administrator, reported on using her journal for problem solving: "basically for two things, to get rid of emotions when I am angry or upset about something, I'll go write about it, or just to sort all the clutter from my life..." (p. 9). Administrators reported using journals to help them solve problems in three distinct areas: to sort through chaotic and challenging circumstances, to brainstorm possible solutions as well as to evaluate and analyze the solutions, and to refer back to the journals for past successful solutions (Cooper & Dunlap, 1989, p. 9-10). In this way, journals serve as a personal record of successful strategies. Many participants in the study reported using journaling as a powerful sorting tool for both internal and external noise and distraction. They also felt that writing about situations sharpened their powers of observation and assisted them in discovering what was important.

## **ANALYSIS OF STUDENT DOCUMENTATION OF LEARNING REPORTS**

Twenty Documentation of Learning reports from two distinct university student samples were analyzed for reflective themes, including specific examples and references to prior learning and course-related content. The Documentation of Learning (DOL) reports were written to meet the criteria of a report that offers both detailed substance and elaborate reflection regarding what has been learned and how it was learned" (Matveev, 2007; Milner, 2003, 2005, 2006). Keeping process notes or a journal were recommended, but not required. We assumed the term 'reflection' defined as "the process of giving careful thought to something" (The American Heritage Science Dictionary, 2005). We, therefore, intended to find the clues that the student thought about the various learning activities and related the thoughts to show a deeper understanding of self, business, and/or colleagues. We assumed the term 'example' defined as "one of a number of things, or a part of something, taken to show the character of the whole" (Dictionary.Com). We searched for descriptions of actual events or situations that helped the student in the process of reflection and learning. Students frequently commented that they liked one technique over another, but many would not give a real-life application or go into any details as to why they made the statement.

First we analyzed five student reports from the fall semester of 2007 from Business Policy class offered to junior and senior students in the Bachelor of Science program at City University of New York. The reports were numbered so that no student names can be revealed. We noted several similarities among the DOL reports. Students reported learning a lot about the process for giving better presentations, the positive and negative aspects of group work, and the benefits of taking an active role in topic selection for their groups. In four out of five DOL reports, we did not see evidence of significant reflection on the students' learning process. For the most part, these students focused on summarizing the five topics they chose to study. They provided few if any specific examples to support their ideas. There was little to no reflection on their learning specifically or on how they grew from the beginning to the end of the course. Nor did a majority of these reports reflect any application of their prior knowledge and demonstrate how it could be applied to the course under discussion. One out of the four included a bibliography; the others did not.

One student, identified as M1, did write a detailed and thoughtful reflective report. The student included the following specific examples of reflective practice:

- consulted other texts and referenced insights gained from readings,
- gave specific examples to support statements,
- wrote two reflections on group process detailing pros and cons,
- reflected on research skills of peers,
- concluded the main area of learning was in relation to himself and how he functioned as a leader.

Based on the above examples, we concluded that the report by M1 reflected what an ideal DOL report should look like. Though the student did not say he journaled, the DOL had sufficient detail and personal reflection to warrant the conclusion that he kept process notes or a journal as recommended.

We then proceeded to perform further analysis of DOL reports aiming to find a larger trend in student responses. We randomly selected fifteen DOLs culled from two undergraduate classes taught at Ohio University (Milter, 2003, 2005) and one graduate course taught at Johns Hopkins University (Milter, 2006). These three courses were taught by the same instructor using the same learning methodology and the same DOL report assignment. The DOL reports were combined and analyzed according to whether they used specific examples to illustrate reflection, no specific examples, and evidence of reflection as defined above.

We noticed similarities among all the reports, graduate and undergraduate, chief among them was the finding that none of the students said they had kept either a journal or made process notes during any of the courses. One student discussed at length her insight into the lack of reflection in her daily life, mostly due to a very hurried lifestyle. She noted that when she did follow a practice of reflection, she learned far more and gained significant insights into course-related issues. One student commented that the use of visuals in a presentation made the presentation more memorable, but provided no examples to illustrate the point. When a general principle is used to teach a concept, it is generally followed by a specific example that the person or class finds relevant.

## DISCUSSION

The DOL reports were analyzed according to whether they used specific examples to illustrate reflection, no specific examples, and evidence of reflection. We noted that of the fifteen students in the sample, only three (identified as T1-3) used specific examples to explain what they learned and how they learned it. Two students were graduate students and one was an undergraduate. One graduate student, identified as T1, described a three-step process for adult learning that was used in the class. T1 said that at first she found it very cumbersome, but later realized how helpful it was because she saw an improvement in the quality of her work. T1 student further added that the depth of her responses improved when she engaged in this process and later applied the process to a discussion of political and environmental issues raised in one of the texts.

Specific examples used by T2, an undergraduate, regarding the current crisis in the Middle East supported his reflection on how the continuing turmoil there and the resulting higher gas prices in the United States may well be the incentive companies need to design a larger body of fuel-efficient vehicles. In looking back at his career

as a student, T2 commented on how he had spent most of his time figuring out how to get As, and now wishes he had spent more time asking questions. T2 further says how the material that he reflected on resulted in deeper and broader learning than material he simply studied for a test. T2 also noted that the diverse viewpoints of the class members helped him to reflect on the value of different viewpoints and provided much fodder for what he calls the beginnings of a deeper reflective process.

The second undergraduate student, T3, detailed how he had learned the value of personal planning for the short and long terms. T3 linked this to the business practice of setting six-month, one-year, and five-year goals. T3 also gave a detailed analysis of the strengths and weaknesses of his team members and what he learned about himself and teamwork in the process. When T3 discussed organizational change, T3 linked his opinions to experiences with changing school numerous times in grades K-12, as well as experiencing schedule changes in each school. T3 then said even at his present job, people complained about changes, but now he had a more tolerant view of how managers need to implement change despite protests and resistance from employees. Reflecting on the importance of crafting a critique to meet personality types T3 illustrated the different styles by detailing how one method of critique worked for him while his sister was offended by the same approach. T3 concluded that managers need to be aware of how their messages are interpreted in light of the personality types of their employees. While none of these students said they kept a journal or made process notes, their reflections demonstrated the learning that occurred through application of principles taught in the class to real-life situations.

Twelve students (identified as J1-12) who did not use specifics in their DOLs also had numerous things in common. In their reports they discussed what they had learned in detail, but only offered general principles over specific examples. Graduate student, J2, wrote that he found the discussion on ethics helpful, but offered no specific examples to support his conclusion. One student, J4, commented on the usefulness of visuals in enhancing memory of presentation messages, but offered no examples. Another student, J11, discussed the value of relaxation if you are in a rut, but offered no examples of how she would apply the principle. One student, J9, commented that the books helped him understand corporate culture, but he did not provide any citations to support his conclusion. Another student, J6, liked the Nominal Group Technique for problem solving, but only explained the technique and did not provide specific reasons for his preference. All of the above comments can be viewed as demonstrations of reflection, but lack specific examples to support their reflection. It is the specifics that help students to link knowledge to future applications (Caine & Caine, 81).

## **FUTURE REFLECTIONS**

We suggest future research be done to gather findings from both academic and professional areas. Further, we suggest designing prompts for the academic courses that would assist students in developing the practice of journaling for reflection on learning, problem solving, and professional/personal growth. One possible approach is to take the learning outcomes and then design prompts linked to the outcomes. This approach is supported by the work of Dunlap (2006) who recommends using constructed journal prompts as a way off encouraging students' reflective thinking. To construct journal questions that assist in the reflective process, Dunlap (2006) offers three guidelines: 1) Provide students with cues or guided questions to help them focus their journal responses, 2) Situate journal questions in students' actual work context, and 3) Construct the guiding questions to capture the conceptual and perceptual changes in which you are interested. Similarly, Mitchell and Coltrinari (2001) present a set of guided questions to help students structure their journaling responses: 1) Descriptive entries on what happened, 2) Metacognitive on thoughts, feelings, assumptions, beliefs, values, attitudes, 3) Analytic on the reasoning and thinking behind actions and practices, and 4) Reconstructive on changes plans for future actions.

Examples of guided prompts linked to a specific learning outcome follow:

- Learning outcome: Identify personal strengths and room for improvement in critical thinking techniques. Prompt: Which system do you prefer to use when faced with a problem? Give details of how you applied this approach to a problem and why you found it useful.
- Learning outcome: Develop an understanding of individual and group judgment strengths and deficiencies. Prompt: In looking at your role in any instance of team assignments, did your behavior stay the same or did it change depending on the members of your team?

Specifically, did you take a leadership role or did you wait to be directed? Did you find yourself carrying the load if others slacked off or did you do your part and let the other person go his own way? Are there particular personality types you can identify as being easy or difficult to work with? Support all answers with specific examples.

- Learning outcome: Develop realistic approaches to solving complex organizational and ethical dilemmas. Prompt: When faced with the need to implement large-scale changes in your organization, what three principles would guide your approach? Explain why and support with examples.

## CONCLUSION

As the world becomes more complex, reliable problem-solving approaches become even more valuable. Journaling is a tool that provides a place for reflection, brainstorming, sorting, and resolution. Journals offer a place to reflect on prior experience and to keep track of solutions that worked in the past. Business programs are tasked with teaching future managers not only content, but leadership, problem solving, and effective interpersonal skills. To help students develop these capacities, guidance based on best-practices in journaling is necessary. Whether journaling is used in support of management and leadership skills in the business world or for improving personal health and well-being, both undergraduate and graduate students could benefit from the practice of guided reflection in their courses.

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# **THE PROSPECTS FOR OPTIONAL FEDERAL CHARTERING OF INSURANCE COMPANIES IN THE UNITED STATES**

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## **ABSTRACT**

*The principal driver behind the proposal for optional federal chartering of insurance companies in the United States is the perceived high cost of regulation arising from the present system of state regulation. This high cost is most sharply seen in the case of the multi-state insurance companies. Optional federal chartering relies on the voluntary conversion of state chartered companies to the new proposed federal chartering system. A close parallel to this situation is found in the banking industry, first, with the National Banking Act of 1864 and, subsequently, with the Federal Reserve Act of 1913 and the Federal Deposit Insurance Corporation. The banking case provides guidance regarding what to expect in the case of the insurance industry. Finally, the advantages of the proposed National Insurance Guaranty Corporation are reviewed.*

## **INTRODUCTION**

During 2007, bills were introduced in both the US Senate and House of Representatives toward the objective of creating an "optional federal charter" path for insurers and insurance agencies operating in the United States. In the Senate, this bill was introduced by (add first names of sponsors) John Sununu (Republican -- New Hampshire), and Tim Johnson (Democrat -- South Dakota). In the House of Representatives, the sponsors were: Melissa Bean (Democrat -- Illinois) and Edward Royce (Republican -- California). The House and Senate versions of this bill are similar in broad outline. It is likely, as this legislation proceeds through the legislative process, that additional changes will be made. At this time, we recognize that the basis for congressional debate on this issue has been joined.

Several motivations have contributed to this impetus to adopt the optional federal charter proposal. At present, each state maintains its own regulatory code and supervisory style, the effect of which is to raise operating costs for these multi-state insurance companies. This regulatory environment is most difficult for the larger multi-state insurance firms. These companies face rising regulatory costs as they expand into additional states. But perhaps more important, these companies face onerous barriers in bringing forward new service products or in evolving the existing services offered. In addition, a number of developments have occurred over the past several decades that have caused concerns of a regulatory nature at the federal level, including: holding companies that include insurance operating companies, especially where these companies operate in a number of states; competitive effects of cross-state mergers and acquisitions; foreign firms doing business with U.S.-based insurance customers; the widespread use of reinsurance in risk management; and unevenness in the surety quality of state guaranty fund arrangements.

In late March, 2008 in the wake of the Bear Stearns near bankruptcy, Treasury Secretary Henry Paulson announced a regulatory reform plan for financial institutions. This proposal would let insurers choose federal rather than state regulation, empowering the Treasury Department to charter insurance companies at the federal level, if companies so prefer. Insurance regulation under the Treasury proposal appears comparable to that of the

2007 Senate and House bills described above. Many observers doubt this financial-regulation overhaul proposal will be enacted before 2009, given the political cycle in the U.S.

## **SUMMARY OF PROPOSED LEGISLATION: THE NATIONAL INSURANCE ACT**

The proposed legislation would create an Office of National Insurance (ONI), to be directed by the Commissioner of National Insurance. This office would be housed within the Treasury Department. Among the responsibilities of this Office are the supervision and licensing of national insurers and national insurance agencies.

The Office would be responsible for the supervision and regulation of federally licensed reinsurers. Additional responsibilities of the Office of National Insurance include the regulation of acquisitions involving insurers and agencies, mergers between insurance entities, block transfers of assets and liabilities, reinsurance, and the domestication of foreign-based insurers. Authority is provided to regulate insurance companies held within holding company structures. Additionally, for national insurance companies that encounter financial stress, the proposed Act includes a framework for receivership and insolvency protection; accordingly, Federal court jurisdiction and procedures for judicial review are also delineated.

The federally chartered insurance companies would have access to the resources of the National Insurance Guaranty Corporation, an agency charged with resolving claims against insolvent (failed) insurance companies. It is expected that the NIGC would work in a way similar to the Federal Deposit Insurance Corporation in the banking sector. The NIGC is intended as a pre-funded agency that would employ a claims payoff approach for insurance companies in liquidation or a purchase and assumption transaction where a healthy insurance company can be found to take over selected assets and liabilities of the troubled insurance company.

Should this legislation come to law, the bill sponsors expect that the largest insurance companies, those most oriented toward the national insurance market, would convert to federally chartered status. However, a large number of small regionally-oriented insurers would remain as state-chartered organizations. The proposed legislation calls for coordination between the national regulators and state regulators. However, given the challenge of such coordination across fifty states, it is doubtful that the optional federal charter approach would easily resolve the issue of the lack of uniformity among insurance regulators. At this point in time, and in light of political realities, this second best approach is attractive because of its political achievability.

## **REGULATORY SUPERVISION UNDER OPTIONAL FEDERAL CHARTERING: THE PARALLEL IN U.S. BANKING EXPERIENCE**

From a historical perspective, there is a parallel between the proposed situation that presently exists in the U.S. insurance industry and the situation which existed in the United States at the time of the adoption of the National Banking Act of 1864 (NBA). The NBA essentially created an optional federal chartering system for U.S. banks. Under this legislation, the national banks were subject to their own supervisory system, managed by the Comptroller of the Currency, which office was housed in the U.S. Department of Treasury. The parallel chartering under the National Banking Act allowed state-chartered banks to change their status to become federally chartered. The underlying motivations for the NBA were quite different from those of the insurance industry today. One objective of the NBA was to use the national banks as a mechanism to finance the federal government's prosecution the Civil War through the issue of government bonds that the national banks were required to purchase. A second motivation was the widely recognized need to unify the bank notes-based payments system in the U.S. By 1860, some 7,000 state banks issued their own currency, resulting in considerable transactional inefficiency within the payments system. This second objective was largely achieved when in 1866, the federal government imposed a 10 percent tax on state bank notes. The surcharge on state bank



notes had the effect in the subsequent decade of making national bank notes the primary currency in the U.S., and later provided the incentive for the development of the demand deposit account, also known as the checking account.

With the National Banking Act, the expectation was that there would be widespread shift by state chartered banks to the federal chartered status allowed under the new legislation. However, no such widespread shift occurred.

The relationship between the state banks and the federal government changed as federal institutions were developed that provided service advantages to state banks, and at the same time required that these banks accept federal-level regulatory supervision. With the passage of the Federal Reserve Act in 1913, state banks were allowed to become members of the Federal Reserve System, while retaining their state-chartered status. Most large state banks have since opted for Federal Reserve membership. The national banks, chartered by the federal government, were required to be members of the Federal Reserve System. The Comptroller of the Currency was retained as the supervisory authority for the national banks. The Board of Governors of the Federal Reserve System provides regulatory supervision for state banks that became members of the Federal Reserve System. The establishment of the Federal Deposit Insurance Corporation (FDIC) as the guaranty fund for commercial banks led nearly all state banks (and by legislation, all national banks) to FDIC membership. All state banks that are insured by the FDIC but that are not members of the Federal Reserve System are subject to supervision by the Federal Deposit Insurance Corporation.

From an overall perspective, the source of the charter for the banks ultimately proved to be a matter of lesser importance. Of greater importance were the standards embodied in the regulatory process itself. For the larger state banks, the movement to the federally based regulation standard occurred as those banks sought to qualify to receive the benefits, first, of the national banking system and then, after 1913, of membership in the Federal Reserve System and the FDIC.

It is likely that the conversion of the state chartered insurance companies to the federal chartered status will be driven by the comparison—for specific companies—of benefits relative to costs. Above all, the banking experience shows that what matters most is not the source of the charter, but rather the regulatory standards themselves.

## **REGULATION OF BANKS AND INSURANCE COMPANIES: THE HOLDING COMPANY ISSUE.**

Both banks and insurance companies are commonly organized within a holding company framework. In insurance, for example, the 100 largest life and property-casualty operating companies all are members of multi-state holding company organizations. In the case of banks, there has developed extensive legislation delineating the range of activities in which these institutions are permitted to engage. These restrictions are indicated in the Bank holding Company Act of 1956, and its subsequent amendments. Holding company regulation, including the concept of the Financial Holding Company, is also addressed in the Gramm Leach Bliley Act (1999).

With insurance, the regulatory function is performed only at the state level. The current state of this regulation is seen, from the perspective of an insurance company operating in several states, as the primary justification for the development of the federal chartering option. For these companies, the high cost of regulation arises from the duplicative efforts for approvals for new products that must be filed in the states where the multi-state insurance company does business. The differences among the states vary depending on the nature of the approvals sought. For example, there are differences in the tax application forms issued by all of the 50 state regulatory departments.

In virtually all states, the state-level regulators have examination access to the consolidated position at the holding company level. In some states, notably New York and California, examiners will closely monitor holding company activity as it relates to specific operating companies domiciled in those states. In other states,

for example Connecticut and Maryland, the state code is less specific regarding the allowable activities conducted toward the holding company or its sister affiliates. Transactions or relationships between the in-state operating company and the holding company or other affiliates is required to be conducted under terms that are “fair and reasonable” and that do not jeopardize the financial condition of the operating company. There are limits on the percent of the operating company’s surplus that can be as extraordinary dividends over a 12 month period (usually 10 percent of surplus). Intentions to merge or acquire another insurance company must be filed with the commissioner of insurance, who has a specific time period (usually 60 days) to object to such actions.

Thus, for the insurance companies, holding company regulation is potentially quite extensive. However, in practice, the supervision of holding company activities varies widely from state to state. For example, a number of the less populous states have only small professional staffs in the state-level department of insurance. In these cases, it is difficult for a sufficient division of labor to be developed to allow expertise in the regulatory codes relating to holding company activities.

In the case of the banking system, the level of resources available for bank examination is quite extensive, allowing for the development of high levels of expertise. For example, the Federal Reserve Board of Governors, under current legislation relating to holding companies, has the authority to: examine the relationships, including specific transactions, if relevant, between the bank under examination and its parent and affiliates. Such examining authority extends even to situations where the parent and affiliates do not have direct transactional relationships with the examined bank, but where such transactions may affect the bank under examination only indirectly. The Federal Reserve Board additionally has the power to take enforcement actions against the parent or the affiliates. These may involve compelling the parent and affiliates to provide reports of operations, financial condition, and systems for monitoring risk. The Board is also able to impose consolidated or parent-only capital requirements and require that the parent provide resources to support the bank, should financial exigencies occur. Finally, the Board may compel the parent to divest an affiliate that may pose a serious risk to the safety and soundness of the bank under examination.

## **THE NATIONAL INSURANCE GUARANTY CORPORATION: ATTRACTIVE TO STATE-CHARTERED INSURANCE COMPANIES?**

On the surface, the creation of the National Insurance Guaranty Corporation would appear to be attractive to insurance companies, leading these firms to seek federal chartering. However, if as is presently intended, the NIGC is organized along the lines of the Federal Deposit Insurance Corporation in banking, this would entail the establishment of a fund to cover claims arising from the insolvency or threatened insolvency of covered insurance companies. Member companies would be required to pay annual fees to maintain the NIGC fund and to cover expenses relate to its activities. These fees would be higher for insurance companies that have a higher likelihood of failure, those companies with the lower credit ratings. To all but the largest state chartered insurance companies, these arrangement may be viewed as driving up operating costs. As such, many companies would see this concomitant of federal chartering as undesirable.

Under present state level guaranty arrangements, state insurance regulators place the onus of credit assessment on the customer. This approach reduces considerably the moral hazard problem that has long been associated with the FDIC guaranty approach. In contrast with the FDIC, the state guarantee funds do not accumulate monies in anticipation of insurer bankruptcies. Rather, the states fund losses from failed companies after the fact by assessing all insurers doing business in the state (typically at a percent of premiums in the appropriate lines of business). And, in all states the extent of such assessments has been small for several decades.

The low level of assessments called for by the state guarantee funds has led supporters of the present state-based system to assert that state insurance regulators have done a better job of averting insolvencies than in the banking system. Establishing the accuracy of this assertion is complex. Insurers are less exposed to credit and systematic risk than banks. For most insurance companies, the annuity product line can have systematic risk, in the absence of significant surrender charges. Similarly, the monoline bond insurers involved in default

swaps and insuring CDOs and CMOs are exposed to systematic risk. But most other insurance products are not systematic risk sensitive.

From the standpoint of insurance customers, the present insurer assessment arrangements, at times, may require that an insured party must accept a delay before collecting fully, unlike very prompt FDIC reimbursements. To further emphasize the individual responsibility of the customer, regulators in many states direct agents not point out the existence of guarantee funds when selling insurance products. Banks, on the other hand, universally emphasize FDIC guarantees. So the bank customer often is not concerned with the financial soundness of the bank, as evidenced in the 1980's and early 1990's during the time of the savings and loan crisis.

On the other hand, the creation of the National Insurance Guaranty Corporation would free state governments from having to obtain guaranty fund resources. And, the NIGC would free insurance companies operating in those states from the possibility of paying such assessments in the event of insurance company failures. Participants in state level assessment schemes readily acknowledge their vulnerability to a simultaneous failure of several large insurance companies within their state. Advocates for the industry self assessment approach argue that their system provides peer discipline against unwise industry practices within their state. However, the more frequent problem leading to insolvency or potential insolvency is fraud that occurs through outright misappropriation or the use of illegal accounting practices. Such actions are almost by definition unlikely to be deterred by industry peer pressure.

## **SUMMARY AND CONCLUSIONS**

This article has reviewed the status of the current proposal for the optional federal chartering of insurance companies. The principal driver behind this proposal is the perceived high cost of regulation arising from the present system of state regulation. This high cost is most sharply seen by the insurance companies operating in several states. These companies are typically established within a holding company organizational form. From a regulatory perspective, these are serious difficulties in monitoring multi-state insurance companies.

The optional federal chartering proposal relies on the voluntary conversion of state chartered companies to a new proposed federal chartering system. A close parallel to this situation is found in the banking industry, first, with the National Banking Act of 1864 and, subsequently, with the Federal Reserve Act of 1913 and the Federal Deposit Insurance Corporation. In the banking case, the acceptance of regulation from the federal level was made considerably more palatable to the state banks through the provision of benefits to be gained by such conversions. The process was seen to take several decades before there was a widespread acceptance of standards that are federal-based. As we consider shifting to a dual chartering system, we should be aware that this step will likely only be a first step in what will turn out to be a rather long process.

Finally, the advantages of the National Insurance Guaranty Corporation were reviewed. The state-regulated insurance companies and the state-level regulatory authorities are unlikely to support the creation of the NIGC except in an environment of widespread insurance company insolvencies or near insolvencies. The prevailing view within the industry is that the present system of state guaranty funds has been working to an acceptable standard.

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# BALTIC COUNTRIES IN THE CONTEXT OF GLOBALIZATION: REGIONAL INTEGRATION AND THE NEW FORM OF TRANSITION

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## ABSTRACT

*Regional integration processes in the Baltic region are described and analyzed. These processes are comprehended as an important factor of further social, economic and technological modernization in the Baltic countries, as an precondition for more intensive and active integration of Baltic economic systems into the European and global economic and technological structures, as well as an knowledge based society and knowledge economy creation factor.*

*The arguments determining the idea of the Baltic region community and unity, as well as opposing arguments are evaluated. The main principles of integration in the Baltic region, as well as the possible integration strategies are analyzed. The unified social, economic and technological space in the Baltic region as an research area is described.*

*Formation of the unified social, economic and technological space in the Baltic region could be defined as an important precondition for the further modernization and for more intensive and active integration of the national societal and economic systems in the Baltic countries into the common European and global development processes.*

*Formation of this unified space in the Baltic region could be comprehend as an successful case of the regional transformations in the European Union: regional transformations could be defined as an important aspect of the social, economic and technological modernization in the European Union in general, and as an important factor of the knowledge based society and knowledge economy creation.*

*The basis for the formation of a unified social, economic, technological space in the Baltic region is the comprehension of this region as a whole.*

*Regional transformations and the integral spaces in the Baltic region formation processes could be defined as an important and an complicated scientific research area.*

## INTRODUCTION

The modern knowledge based society and knowledge economy creation is the priority of the development processes in the European Union in the context of globalization.

Knowledge based society and knowledge economy creation could be defined as an *complex transformation* with the qualitatively new societal life oriented priorities. It means, that *the transformation processes* representing the new quality oriented changes in the society and in the social economic life are an important part of the political, social, economic, technological development processes in the European Union in general.

Of course, transformation processes could be defined as an important *object* of the scientific research on the European integration, enlargement of the European Union, on the European culture and social, economic and political development in Europe.

There are some different *traditional and the new definitions* of the transformation processes.

*The popular traditional definition of the transformation or transition processes* in society describes the transformation as *the complex changes from non-democratic system with planning economy into the democratic system with market economy*. This definition traditionally is used for description of the development processes in the Central and Eastern Europe during the last 15-20 years: the political, social and economic systems in the Central and East European countries were transformed into the modern democratic open societies and market oriented economies. ( Hofbauer, 2003; Lavingne, 1995; Melnikas, 2002; Brunner, 1995, 2002 ). The enlargement of the European Union, the integration of the Central and East European countries into the European Union and the spread of the NATO into the East could be defined as the especially important result of the transformation processes in the Central and Eastern Europe.

At this time, in the enlarged European Union, there is a complex process of the new transformations representing the new phase of the political, social, economic modernization. The priorities of these transformations are the further activities of integration processes in the whole space of the European Union and the intensive creation of the knowledge based society and global market oriented knowledge economy. It means, that *the new definition* of the transformation processes, especially- transformation processes in the European Union, could be used: in this case the transformation processes could be described as *the qualitatively new European society creation oriented complex changes covering all spheres of political, social, economic life and technological development in the European Union* ( Brakman, Garretsen, Marrewijk, Witteloostuijn, 2006; Hix, 2007; Melnikas, Reichelt, 2004 ).

An important direction of the transformations in the enlarged European Union is *the active interregional and internal regional political, social, economic and technological integration and formation of the unified social, economic and technological spaces*. This direction could be defined as *regional transformations* and represents some activities towards the creation of knowledge based society and knowledge economy in various regions of the European Union, as well as in the European Union in general.

*Regional transformations* could be described as typical for various regions in the European Union. These transformations could be characterized as typical for the Baltic region too: it means, that the possibilities of the regional political, social, economic and technological integration and the formation of unified social, economic and technological space in the Baltic region could be analyzed as an typical example representing the regional and interregional integration processes in the various regions in the European Union and in Europe in general.

Regional integration oriented transformations in the European Union, including unified spaces formation oriented transformations in the Baltic region, could be defined as an important precondition for further development of qualitative new society in the Baltic countries.

Unified spaces formation in the Baltic region could be defined as *an complicated scientific research area*. The main research priorities in this area are the following: the preparation of the conception of the Baltic region as a whole; the complex analysis of the arguments determining the idea of the Baltic region community and unity, and the complex analysis of the opposing arguments to this idea; the formation of regulating and self-regulating mechanisms, the social, economic, technological strategies for Baltic region.

## **REGIONAL INTEGRATION PROCESSES IN THE EUROPEAN UNION: THEORETICAL BACKGROUND AND MULTIDIMENSIONAL CONCEPTION**

Interregional and internal regional integration processes could be defined as an important factor of the creation of integral cultural, social, economic space in the European Union and of the European society and economy modernization in general ( Johnson, Turner, 2006; Melnikas, 2002; Pollert, 1999; Melnikas, Reichelt, 2004 ). Interregional and internal regional integration processes could be defined as *the new form of transition in the European Union*.

*Theoretical background* for the modeling of the interregional and internal regional integration processes is *the multidimensional conception of the region or of the group of countries in the region as a whole*.

*The multidimensional conception of the region as a whole* represents some possibilities for the formation of a unified social, economic and technological space. The main idea of this conception is *the multidimensional evaluation* of the development factors and processes in the region or in the countries in this region.

The conception of the region as a whole is related to ethnic, social cultural political and economic development process *varieties*, as well as the formation of a *evaluation criteria* for this region as a whole. The base condition, which must be followed for understanding the region as a system, is that the region must be understood as that *whole* together with the characteristic differences and signs of internal conflict. Also, these signs in the region are very clear; the analysis of these signs is a crucial link to understanding the region as a system.

Understanding in the most general case that the region - the people residing and their group whole or community - expresses that one real goal and unity, we can conclude that the region is a system, based on several viewpoints:

- as a whole expressing various internal and external regulation subjects,
- as people and the group whole expressing and implementing various goals and interests,
- as a political, social, economic, or other organizational whole,
- as a formally and informally structured whole,
- as a part of larger geopolitical, economic and other structures,
- as a system having real internal ties, an accumulating social culture, sharing ethnic, historical, political,

and economic similarities.

The aforementioned views represent the variety of the region as a whole, reflecting aspects which show the regions unity, as well as internal conflicts necessary to its development.

In the functioning course of every system, there are two types of forces which represent themselves in various forms - centripetal and centrifugal. This team of forces reflects the two system development tendencies, supplementing one another, in relation to that

- the system expresses itself as a unified, constant and inseparable organism,
- the systems separate parts express themselves, to a great or lesser degree of freedom, in the respect to those rules and limits which conditions the goals, tasks, and interests of the general system as a whole.

The logic behind reflected conceptions of centripetal and centrifugal forces can be used in evaluation of political, social and economic development processes in the region. Assuming that political, social, and economic development as well as transformation processes, were conditioned by two rather opposing and supplementing tendencies in the past, are conditioned now and will be conditioned in the future:

- the formation of the region as a geopolitical, social, cultural and economic community, while the political, social and economic developments rule as much in the region as in the separate countries is the region's *community* and the spread of the *internal integration whole* of the region,
- the formation of the whole of the region as separate countries, while ruled by political, social, and economic development is the *affirmation of every country's internal priorities* and the region as *averagely integrated* and only formally expressing the spread as separate whole communities.

Both of these tendencies are based on a real region as a geopolitical, social, cultural and economic community formation.

The multidimensional conception of the region or group of countries in the region as a whole could be used in the case of regional integration in the Baltic region in the context of European integration in general.

## **THE BALTIC REGION AS THE SPECIFIC REGIONAL SYSTEM IN THE EUROPEAN UNION: CENTRIPETAL AND CENTRIFUGAL FORCE**

The Baltic region in general, all three Baltic countries - Lithuania, Latvia, Estonia, as well as political, social and economic development processes in this region could be defined as *an important object of the scientific research and practice oriented projects* on European integration, enlargement of the European Union, the changes in the society, economy and culture in the Central and Eastern Europe, as well as future oriented relations in the system "West- East" ( Lieven, 1995; Melnikas, 1997, 1998, 1999; Smith, 2005 ).

At this time, in the Baltic region, there is a complex process of political, economic and social transformation, representing the spread of democratic relations, orientation towards the priorities of the universal person's worth, and also the internationalization of political, economic, technological, social and cultural development, as well as the knowledge based society and knowledge economy creation. The changes in the Baltic region represents *the typical trends* of the Baltic countries development processes in the context of the enlargement of the European Union, as well as in the context of the modernization processes in Europe in general.

Perspective views toward the Baltic countries should be connected with the condition, that the transformation processes in the Baltic region should occur in stages to create conditions for the formation of *a unified social, economic and technological space in the Baltic region*.

Apart from that, that the Baltic region is *not yet* unified in the technology, economic, and social spheres, there remains the proper conditions for the formation of that type of space. These conditions allow for the Baltic countries questions to be viewed as those of *system* development, especially because these questions are remarkably actual in the context of European integration and further development of the enlarged European Union. At this point it is noted, that the more active and intensive further integration of the Baltic countries into the social, economic and technological systems of the European Union, the spread of NATO into the East, as well as the further international activities and co-operation problems of the Baltic countries with the partners in the global spaces can constructively be solved only then, if the Baltic region forms a new type of *inter-regional integration and co-operation mechanisms*.

The inter-Baltic countries integration cannot be separated from the formation of a unified social, economic and technological space. It is far more detailed, comprehending the complexity and duality of the formation of such a space, to discuss the array of questions which affect the Baltic region on the basis of its' being a system, as well as on the Baltic countries unified development details.

The *basic reasons* of the idea of the Baltic region as a *geopolitical, social and economic community* are the following:

1. The shared *geography* of the Baltic countries, signifying the similarities and unity of the Baltic countries in the geographic respect;
2. The similarities of *historic culture* of the Baltic countries, expressing that
  - the historical development of the Baltic countries has accumulated many similar factors and facts, indicating analogous reasons as well as clear connections in time,
  - the societal development of the Baltic countries is based on mentality, tradition and living style similarities,
  - the same historic cultural environment was based on very similar *historical* events, indicating a common cultural history of the Baltic countries within the affects of the former there is especially those which were related to this region's development in the Russian Empire until 1918, as well as those related to this region's development in the USSR from 1940 until 1990 (the Baltic region's development within the USSR is related to a deep and multifaceted political, social cultural and economic sovietization of life, expressing unified indicators and standards, and in great part determining the similarities of the Baltic countries at this point in time);
3. The shared *political* development of the Baltic countries, expressing that the Baltic countries unified and continue to unify along as much real as imaginary *external* dangers; these dangers were and remain to be related to potential political, economic and cultural environment invasions and aggressions in view of the Baltic countries (the Baltic community has experienced many painful historical lessons in relation to negative views towards any aggression or invasion in respect to them: this experience expresses itself as a unifying factor of the whole Baltic region, and has special political meaning); external danger is one of the basic Baltic countries political, and military defence co-operation stimuli,
  - the Baltic countries at this time have similar political goals relating to relations with the larger and more influential world countries and international organizations; these political goals include, first of all, guarantees in the areas of security and stability, and they are the Baltic region's, motive for political unity,
  - the larger and more influential of international political subjects view towards the Baltic region is essentially understood as a unified international political, economic and military defence object (all, without exception, of the larger and more influential world countries and organizations see the Baltic region as being a similar part of Europe - internal politics, economics, and social culture - without paying heed to the more clear and essential specific characteristics, which would be necessary for separate countries); the Baltic region could express itself as a unified political, economic, and military defence object, from the point of view of the larger and more influential international political subjects;
4. The shared *economic* development of the Baltic countries indicates that
  - the Baltic countries show a very similar natural, technological, legal, social, cultural, political, and other factors of their economic development: in view of the world economic structure, within the whole Baltic region exists a very similar economic structure, and all the Baltic countries need, essentially, the same level of economic development (especially similarities in work load and quality, as well as in work culture), and it is characteristic of all the Baltic countries, essentially, the same economic reforms as well as economic development problems,
  - any large modern economic or technological program can be successfully realized taking only the *whole* Baltic region: any one of the Baltic countries is too small for the implementation of a large project, and their markets are too small, therefore, realistic economic or technological advancement in various economic spheres must take place in *all* of the Baltic countries simultaneously (at this point, it is noted that attempt to localise large economic or technological projects in the separate countries at the same time would also cause its ineffectiveness: only the implementation of a complete set project can be comprehended as a modern economic criteria viewpoint toward an effective result),
  - the Baltic region is valued as a united international economic situation;
5. The common *social* background of the Baltic countries indicates that
  - the Baltic countries communities' social structures, cultural levels and ethnicity show great similarities,
  - social problems are characteristic of the Baltic countries, relating to the spreading social differentiation and polarization in society, and also problems relating to the fact that the Baltic countries' social structure and cultural levels are inadequate for a forming economic structure and the extent of economic decreases (the Baltic countries, in their social structural respect, are not ready for drastic economic and technological changes);



6. The shared *problematic* tendencies of the Baltic countries and their development in the view of European integration and international co-operation indicates that the Baltic countries raise problems relating to tendencies of the new European integration and international co-operation: these problems are *general* to the whole Baltic region, including those in the areas of economic and social development and require a view which takes the Baltic region as a *whole*: the aforementioned problems are several:
  - the problem of political, economic and humanitarian *support* in the Baltic region is related to the fact that there must be that real and effective *initial* support for European integration and international co-operation conditions, upon which would create opportunities for further spread into international integration orientation processes,
  - the international *security* problems, since the Baltic region is at this point considered, in the local respect, but as well as in the real international insecurity and unstable factors: the Baltic region, at this point, expresses itself as a direct source of ecological, criminological, and other hazards and risks to the Western countries (risk of environmental pollution, various types of illegal immigrants, transport of contraband, narcotics business, various other organized crime activities, prostitution, etc.). This is used as a pretext for escalating political tensions between the larger world countries and defence structures, and as a potential regional ethnic and other conflict source; there are other problems in the Baltic region which can present themselves as a threat to international security, as well,
  - the spread of the *sphere of influence* of the larger world countries and political and economic organizations or other change problems directly affecting the Baltic region as a whole (Baltic integration into the European Union, NATO spread towards the East and other similar problems, which cannot be one way or another, solve without considering the Baltic region as a whole).

The aforementioned, as well as some other reasons reflect the most important arguments allowing that the Baltic region be regarded as a clear geopolitical, social, cultural, and economic community. It is also noted that opposing arguments cannot be ignored, indicating arguments that oppose the possibilities of the Baltic region being a community and a whole.

The *major arguments opposing the Baltic region community and whole* are:

1. The *geographic* variety of the Baltic countries, indicating the formation of separate geographic conditions affecting geopolitical, economic, as well as strategic military situations; the geographic variety of the separate Baltic countries is not as clear as the similarities, however, the existing differences can objectively be used to oppose the community of the Baltic region and the idea of unity;
2. The *historic cultural* differences indicate that the separate Baltic countries has amassed various differing historic cultural traditions, existing in the past and currently within the societies mentalities development:
  - separate nationalities rule the different Baltic countries, having separate cultures, languages, and traditions,
  - within the Baltic countries, there is an inconsistent variety of Christian *culture* (Catholic, Protestant, Pravoslav, and other) development: this indicates variations in Christian mentality within the Baltic region,
  - within the separate countries and regions, there have been unequal affects of various *russifications*, *polonizations*, *germanizations*, *scandinavizations*, and of other similar influences, which are the basis of differences in ethnic cultural integration,
  - within the separate Baltic countries and regions, there has historically been different economic structures, various business priorities, and there has existed many different viewpoints through various societal levels towards economic, social, and political conditions: this shows a rather clear difference within the Baltic region (these differences, in part, support differences between historic political, economic and social life traditions),
  - the separate Baltic countries and regions have historically formed very different *ethnic* resident structures: various regional residents, past or present, express clear ethnic specifications, which due to various aspects, indicate different lifestyles and traditions, appearing in the political, social, and economic development in the separate Baltic countries and regions,
  - very different national community territorial dispersion was and still is characteristic of the separate Baltic countries and regions: the dispersion throughout the Baltic region territories was and remains unequal, as much in the quantitative respect as in the social leveling respect; the ethnic resident structure, as well as the differences in national community territorial dispersion support rather clear historic cultural distinctions between the Baltic countries,
  - the separate Baltic countries and regions differ rather drastically in their community *social* structures, and this supports long-term residential formation of traditions;

3. The *political* differences in the Baltic countries indicate that
  - specific political features are characteristic of every country, proving that the difference in political goals and regulations is not consistent with the political orientation of the Baltic region community as a whole,
  - the orientation of the larger and more influential of the world's countries toward the Baltic countries may differ little: these differences could be due to many reasons relating to the variety of their interests in the Baltic countries: the existence of those differences also indicates the differences in politics between the Baltic countries in general,
  - the Baltic countries, as a part of their region and as international political and economic subjects, are in actuality *competitors* : the political competition between the Baltic countries shows that the region does not display itself as being a unified system;
4. The *economic* peculiarities of the Baltic countries indicating that they have, in the economic respect, in the view of one another, clear *competitive* positions, which were created by the following surroundings:
  - the Baltic countries continue to express similar economics and economic structures: it is necessary for the separate nation economies that their branch structures, production force development level, labour productivity and quality, specialization, as well as created product assortments be very similar; this similarity greatly continues to limit the domestic economic addition and co-operation possibilities and at the same time creates conditions for the appearance of stiff competition as much within the Baltic region, as abroad,
  - the Baltic countries do not have a tradition of economic co-operation: as much up until soviet times (until 1940) as under the USSR conditions, the internal economic co-operation in the Baltic region was very little (during USSR times, every Baltic republic had many economic ties with various USSR regions, including those beyond the Baltic region, however those economic ties were formed and kept working exceptionally under the USSR central planning and controlling mechanisms); the lack of experience and traditions for creating and keeping internal economic ties within the Baltic region expresses itself as one of the preconditions for the current economic competition between the Baltic countries,
  - the very clear current competition between the Baltic countries expresses that each nation strives to represent the economic requirements of the whole region and to attract potential investments for those projects and programs, which essentially would conceal the necessity in use of the Baltic region as a whole: in this respect, it is noted that the Baltic countries compete amongst themselves as investment, as well as economic support attractors for the Baltic region,
  - the real working economic development stimulating mechanisms in each of the Baltic countries, are largely geared towards co-operation with Western countries, and not towards co-operation within the Baltic region: this greatly limits the partnership and co-operation of the Baltic countries, at the same time, strengthening interregional competition; this competition, being that the interregional partnership and co-operation are not developed, negatively works against the possibilities, of the Baltic region as a whole, to successfully compete in world markets;
5. The *social* peculiarities of the Baltic countries indicating that each country's communities display a rather clear *closedness* , because
  - the former social and cultural integration connections into the Central and Eastern Europe and especially within the USSR, which were supported and working during the Soviet time-period, broke very suddenly; the break of these connections negatively affected the ties between the separate Baltic communities; this situation greatly influenced the closedness of each Baltic country's social cultural community, especially since the former ties between Central and Eastern Europe and the USSR was not compensated with adequate ties to the West,
  - the Baltic communities, until 1990, were practically completely separate from the Western social cultural life (only separate individuals and a handful of organizations and establishments had social cultural contact with the West, making a wider integration into the Western social experience and cultural system virtually impossible); during the past years, the social and cultural rules of the West have been spreading over the Baltic region , however, real integration into the Western system is still small scale: this condition very really influences the Baltic communities' closedness, apparent even at present,
  - Western policy in the view of the Baltic and other Central and Eastern European countries, was and is oriented towards the fact that these countries' cultural integration into Western systems would occur with limits and would be strictly controlled by the West; the West's rules for social and cultural integration into European and world structures is more political, than practical in nature, and in fact, are only realized in the Central and Eastern European countries' elite level of society (and then only on a limited scale!); this sort of Western policy is due to the fact that in the Baltic countries (as in other Central and Eastern

- European countries) will maintain a rather marked community closedness,
  - the community closedness in each of the Baltic countries is due to the current perspective of each country, since, first of all, the goal is to integrate not so much into an internal Baltic community (by the by, the Baltic region as a unified and inseparable social organism does not exist), as into the Western community in general; the do or die goal to integrate into a rather abstract and superficially understandable Western community (it is interesting that a Western unified and inseparable community also does not exist) not only greatly slows the real Baltic integration in the social and cultural respect, but also stops the Baltic harmonized community development and unique potential to spread;
6. The *problematic* peculiarities in respect to European integration and international co-operation, indicate that in each Baltic country, there exists a priority of very clear directly relating problems, and general Baltic region or Baltic community problems are not always considered priority.

One of the characteristics of the Baltic region, influencing the integration process problems and complexity of the region as a whole, is that none of the Baltic countries has the abilities and basis to be the *leader* of the integration process, and more so of the Baltic region:

- in the *quantity* respect, (territory, number of residents, natural resources, amassed capital, national products, military and economic power, scientific technical potential, and other parameters evaluating quantity) all the Baltic countries are more or less similar and are seen as weak countries, with small economic and productive power,
- in the *quality* respect, (quality bases representing the community, quality of life, economic level, policy regulations, transformation and reform effectiveness, world image, and other quality indicators) all the Baltic countries are also seen as very similar and not having any basis to lead in respect to the others.

The lack of having a country leader in the Baltic region is due to the fact that the integration process creates a lack of *internal nucleic attraction*, which would be a basis for mobilizing and directionally orienting integration process efforts.

The aforementioned, as well as other, reasons reflect the most important arguments, allowing the assertion that the Baltic region integration can really be implemented along limited average models, whose basis in geopolitical, social, cultural, and economic community formation will express many developmental tendencies which will oppose the logic of the region's unity.

## **THE BALTIC REGION IN THE CONTEXT OF GLOBALIZATION: MODERNIZATION PROCESSES AND INTEGRATION PRIORITIES**

Every geopolitical, social cultural and economic system development's condition is the effective functioning of regulation and self-regulation mechanisms ( Muenkler, 2005; Parker, 2005). This condition is also true in the case of the Baltic region: this means that it is necessary to comprehend the most important appropriate regulating and self-regulating mechanisms formation and improvement *principles*.

The following are considered to be the most important formation and improvement mechanism principles:

1. The *bio-, social- and cultural ecological changes* principle of the region's development, expressing:
  - that the Baltic region must be comprehended as a complete *biosocial ecosystem*, integrating various biological and social subsystems which exist in the region; this comprehension could guarantee the Baltic region as being viewed as a geopolitical, social, cultural and economic community, and this could be a basis for the implementing of the effective regulating and self-regulating mechanisms,
  - that the regional biosocial ecosystem development direction and effectiveness is due to a specific unique *community culture*, whose basis is the implementation of the *adaptation* of people, community, and surrounding biological and social environment, expressing various changes in the environment and community: thanks to the community culture, the regulating and self-regulating means are regulations towards biological, social environment, and community protection and preservation, as well as change; the community culture could cause internal *harmony* and *biosocial balance* in the region,
  - that the accumulated *biosocial culture*, integrating *unique* biological and social cultures, must be protected and preserved, expressing the unity, continuity and internal harmony of the Baltic region's biosocial content,
  - the *Baltic* traditions must gain a foothold in the region's social culture, expressing the region's social cultural unity and the shared mentality of the Baltic residents; the Baltic traditions could be the impulse to spread the integration strengthening *priorities*, and this should be a very positive affect upon the region's political, social, and economic development;
2. The *humanitarian* and *democratic* principles of the region's development, expressing:

- that the development regulating and self-regulating mechanisms must be unconditionally geared towards the general human-valuing priorities; the comprehension and implementation of the latter must be the basis to activate regulating functions and to perform self-regulating acts for all political, social and economic development directions,
  - that it is necessary to base regulating and self-regulating mechanisms on actual, and not artistic or "demonstrative" democratic statutes: the implementation of democratic statutes, must be related to *unity of legal, duty, and responsibility*, including that actions must guarantee *harmony and balance* of goals and interests, which represent various groups within the society,
  - that regulating and self-regulating mechanisms must be spread by such means that forced means be eliminated from the practice: in this sense, *non-forcible* democratic priority statutes can be mentioned,
  - that the region development's humanization and democratization must include all political, social, cultural and economic development directions;
3. The *innovative changes and intellectualization* principles of the region's development express:
- that the regulation and self-regulation mechanisms must be oriented towards all innovative modernization and improvement of science and technological advances, as well as the newest technological basis,
  - that the regulating and self-regulating mechanisms must promote the intellectualization of the community, implementation of a high qualification level, and the formation of those types of social and economic structures which would be geared towards a culture of high labour and life, work load and quality improvement and overall betterment of living standards: it is necessary to implement regulation and self-regulation means allowing the creation of modern production and service areas, via high innovation, technology, and qualification indicators.

Formulating the essential region integration processes and their strategic planning, programming and projection affecting statutes, attention is directed towards the facts:

- that the Baltic region as a geopolitical, social cultural, and economic system internal integration and this system's integration into European and world structures' development content, within, there must be *compromising* decisions, balancing the region's *community* as much as each country's *uniqueness and complete autonomy origins* accumulation,
- that integration process development affecting the region must act in *natural* forms, limiting themselves only to *non-forcible* target methods and means,
- that strategic plans, programs, and complete projects must accumulate whole means, with which, after implementation, concrete modernization and advanced transformation results could be reached in respect to political, economic, social cultural or other views,
- that the internal regional integration could be comprehended as an *essential and necessary stage* for the Baltic countries and region for further more intensive and active integration into European and world structures,
- that that the internal regional integration could be an effective enough means, designed to reduce negative results, that at this time in the region's development, the primary expressing tendency is one of *cordon transit type development*, reflecting the ideas of the region as being within the "East -West" cordon transit zone system: this idea expresses the view of the region as a cordon for the West, protecting the West from the East, and vice versa, as well as a "bridge" (or corridor) between East and West; the internal regional integration could speed up the autonomous Baltic development and modernization, and real strengthened independence.

The presented statutes could be evaluated by preparing and implementing *various thematic* strategic plans, programs and projects; in this case it is necessary to understand that strategic decisions which affect the region's political, economic, and social cultural development are especially important.

Every country's priority is economic development. Especially the direction of the economic development, its content, and results, the ability to solve actual problems, and the formation and implementation of economic strategies is conditioned not only by the economic situation in the Baltic region, but also largely by the political and social situations and their more intensive and active integration possibilities into European and world structures.

Evaluating the economic development prospects in the Baltic region, it is noted that the only alternative (without exception) for all the Baltic countries must be *inter-regional economic integration and a regional integration into European and world economic structures and markets*. In this sense, the integration processes are valued as the region's economic development basis.

Many problems raised concerning the region's economic integration are related to the political development of the region: these questions touch upon the formation of political prerequisites necessary for the spread of economic integration. However, next to these types of questions, another very actual set is those which are related

to the solution of the economic content and the evaluation of the nature of the economic atmosphere, especially those of priority conditions:

1. The Baltic region's economic integration should be related to the *specializations* of the separate Baltic countries, their *co-operation and partnership ideas*, indicating that
  - the region's and each country's economic spread should be based on *long-term economic strategies and programs*, accounting for the separate specializations and economic co-operation and partnership principle content and form; they should orient themselves as much to their own economic development priorities as much as to those of the whole region, taking into account the different specialization, co-operation and partnership regulations,
  - every country's economic priorities should represent each and every one of that country's economic branches and spheres, with which that country must, is, or can be a *leader* for the whole region and with which there is an amassed potential for further development,
  - each country's specializations could make the *whole region* more powerful in respect to economic structures which would be oriented towards the large markets of many countries and would be powerful in the high quality of product and high level of production capacity, allowing them to be competitive in international markets, in turn, activating the economies of the Baltic region; interregional economic internationalization would allow the dismissal, or lessening, of the primitive internal competition in the smaller markets,
  - there should be the creation and implementation of according economic branch and sphere development *promoting* mechanisms, oriented toward internal co-operation and partnership through the whole region; there should also be created mechanisms for a system which would *harmonize* the region, oriented toward the equal stimulus of the region;
2. The economic integration of the Baltic region should first of all be oriented toward the necessary economic and social problem solution, among which are noted the following:
  - a complete *production sphere and production potential modernization* of 'high' and new technological implementation basis for the whole economic system, orienting production branches toward world market competition levels and large export potential product production displaying high specialization and co-operation within the region and high quality: this could guarantee good competition chances for Baltic-produced goods; this type of modernization must be implemented in those branches where they could actually be rated as priority on the Baltic scale,
  - a complete *energy system modernization*, oriented toward the fact that the region have a stabile energy maintenance and that energy sources be used more prudently and effectively,
  - a complete *modernization of the environmental protection system*, so that the less negative affects on the environment could be done in the Baltic region (in the pollution sense) and that less risk of danger could come about,
  - a complete *job network modernization and spread*, so that unemployment could be gradually lessened and that there be more jobs requiring *high qualifications and intellectual* resources which would reflect prestige and social safety standards,
  - *modernization of university and other higher education studies and professional qualification nurturing* systems, so that there would be a *reserve of humanity* in the region, reflecting high qualifications, and that the potential of specialists be exploited, being able to formulate, implement and propagate *innovations, modern technologies, and modern products* for all economic activity directions;
3. The Baltic region's economic integration should be related to the real *economic policy* formation and implementation, foreseeing that
  - the region's economic integration should be oriented toward social, economic and technological development priorities,
  - an *investment* policy should be implemented in the Baltic region, so that the hearth of future economy would be modern industry based on spreading high technologies creation and implementation; in the industry spread prospect, there should be a basic regional source of income, creating preconditions for the intense solution for social problems, the rise in living standards and to guarantee further reproduction of spread,
  - a *tax* policy should be implemented so that those social and economic development regulations could coincide with the set social and economic development priorities: tax mechanisms should be used to promote development in those areas related to the implementation of social and other priorities,
  - a *foreign economic ties* policy should be formed and implemented in view of those relevant priorities, among which are: priorities relating to the region's and countries economic ties; foreign investment ties and those

- relating to economic ties with various foreign countries and their organizations not in the Baltic region,
- a unified *free economic zones, science and technology parks, regional clusters spreading* policy should be formulated and implemented, integrating the current possibilities to spread free economic zones and various specialized science and technology, innovation and other similar parks and clusters: this policy would enable not only the integration of the region's scientific - technological and production potential, but also would greatly increase the attraction for foreign investments and activate the region with modern economic activities,
- an *economic activation required by the spread of the infrastructure* should be formulated and implemented, oriented toward a trustworthy and stable working bank, insurance, consulting and other institution network spread; such a network should function accordingly with European and world working regulations.

## CONCLUSIONS AND RECOMMENDATIONS

Formation of the unified space in the Baltic region could be comprehend as an successful case of the regional transformations in the European Union: regional transformations could be defined as an important aspect of the social, economic and technological modernization in the European Union in general, and as an important factor of the knowledge based society and knowledge economy creation.

Formation of the unified space in the Baltic region could be defined as an important precondition for the further modernization and for more intensive and active integration of the national societal and economic systems in the Baltic countries into the common European and global development processes.

The main research priorities in the area of formation of the unified social, economic and technological space in the Baltic region are the following:

- the preparation of the conception of the Baltic region as a whole, including preparation and evaluation of various system indicators of Baltic region,
- the complex analysis of the expressions of centripetal and centrifugal force forming in the Baltic region as a system,
- the complex analysis of the arguments determining the idea of the Baltic region community and unity,
- the complex analysis of the opposing arguments to the idea of the Baltic region being a community,
- the formation of regulating and self-regulating mechanisms for Baltic region's development,
- the social, economic and technological integration strategies for Baltic region.

The basis for the formation of a unified social, economic, technological space in the Baltic region is the comprehension of this region as a whole.

The comprehension of the Baltic region as a whole is based upon the formation and implementation of political, economic, and social development regulations, and the Baltic region as a unified geopolitical, social and economic system's development strategy preparation and realization should be understood as the principle problem of the Baltic countries' more intensive and active integration into European and world structures. The solution of these problems, requiring a deep and complete set of arguments, could be the essential basis to modernize the Baltic countries, their economic systems and societal structures.

The comprehension of the Baltic region as a whole includes these important problem areas:

- the commonality of the Baltic countries and unified activity system and the evaluation of the effects of these actions,
- the specific distinguishing features of the countries, due to their shared problems and integration difficulties,
- external and internal effects and environments, determining their integration prospects and limitations,
- the integration mechanisms and conditions for them to surface and spread,
- the mechanisms, and their dynamic possibilities, for more intensive and active integration into European and world structures by the Baltic region as a whole.

The development of the Baltic region as a whole and its effectiveness, is largely based upon how sensible and effective these development regulations are, and also the self-regulation mechanisms. The basis of these mechanisms could be spread even in the inter-regional integration processes of the Baltic countries.

The regional economic integration could be defined as the priority of the modernization processes in the Baltic region in the context of globalization and enlargement of the European Union. The Baltic region's economic integration should be related to the *specializations* of the separate Baltic countries, their *co-operation and partnership ideas*, the integration should first of all be oriented toward the necessary economic and social problem solution

The systematic studies of the Baltic region as a geopolitical, economic, technological, social and cultural whole are very prospective and actual in various ways toward the direction of practical and scientific activity.

The regional integration in the Baltic region could be defined as an interesting and important experience for the further integration and modernization processes in the European Union analysis and modeling.

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# GETTING CLOSER TO BUSINESS CUSTOMERS IN THE EYE OF SALES STAFF

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## ABSTRACT

*Attributes and attitudes of sales personnel are treated as crucial diagnostic features by scholars interested in the relationship marketing concept. The individual performance of representatives of selling firm plays a crucial role in inter-organizational communication which, in turn, is identified as “fundamental” to business relationships development (Palmatier et al 2006). Unfortunately, we do not have enough knowledge about the ways in which sales representatives perceive customer relationship processes. Actually, we do not know whether they treat that processes as worth initiating.*

*This paper focuses on selected aspects of creating relationships with business customers from the perspective of focus group interviews conducted in Poland in 2006 and 2008. Focus was realized among sales representatives of companies operating on B2B market. In the paper there are discussed mostly the following research results:*

- *manners of increasing closeness of relationship between buying and selling company;*
- *conditions of using various material incentives of customer loyalty;*
- *opportunities and threats associated with closer customer relationships.*

## INTRODUCTION

Behaviours of market entities are interdisciplinary research object in the economy. The studies concerning market behaviours are conducted by scholars of theoretical economy and strategic management. However it is argued that the most holistic view of behaviours of market entities is implemented by marketing researchers because they use wide set of diagnostic variables and research methods which were developed in various social disciplines. The effectiveness of behaviours of companies is analysed in marketing area from both: quantitative perspective (i.e. analysis of profitability of customer relationships) and qualitative perspective (i.e. measurement of customer value).

Since the 70s. some marketing scholars suggested establishing other principles and other language of explanation in the context of industrial marketing reality (Håkansson and Östberg 1975). According to Kuhn (1996), the relationship marketing (RM) concept may be nowadays seen as a new paradigm of marketing in B2B area. Even if relationship marketing is more and more popular among scholars, it is difficult to define the extent of popularization of this concept in practice in the form of established marketing strategies and appropriate organizational culture.

In marketing theory the company is not perceived as a “black box” but there is an assumption that quality of customer relationships that company can acquire is strongly connected with the internal marketing success (the quality of relationships with employees). It is reasonable to treat the attitudes of personnel of selling firm as crucial for implementation of relationship marketing on industrial market. Thereby it may be surprising when we take into consideration that it is difficult to find in the literature some empirical studies with regard to approaches of sales personnel toward relationship marketing efforts. Most of published researches about business relationships were based on the information acquired from representatives of buying firms, not from the representatives of the selling ones. The knowledge about the way in which front-line employees perceive



business relationships may be helpful in better understanding of the organizational issues crucial for implementation of relationship marketing strategies.

In Poland 19 years have already passed from the beginning of the process of economic transformation: from centrally planned economy to the market economy. In this period of time the popularity of the marketing as the conception of acting of firms on B2B market has been systematically growing, however the potential of relationship approach to marketing seems to be seldom utilized. Some Polish companies use customer databases and CRM computer systems which facilitate market segmentation and communication with customers. More and more popular are promotional schemes which provide customers with various awards in exchange for the continuation of shopping. Firms cannot, however, cope with evaluation of effectiveness of projects fastened upon improving customer relationships. Such projects are often initiated under competition pressure or fashion promoted by the business press, they are, however, hardly ever carefully planned (Mitreǵa 2007).

## **RM LITERATURE VIEW ON THE ROLE OF SALES STAFF**

Attributes and attitudes of sales personnel are treated as crucial diagnostic features by scholars interested in relationship marketing concept. There were studies conducted about the relationships between the effectiveness of marketing and such factors as: sellers' expertise, sellers' customer orientation vs. selling orientation or even sellers' ethics. The individual performance of representatives of selling firm plays a crucial role in inter-organizational communication which, in turn, is identified as "fundamental" to business relationships development (Palmatier et al 2006). From qualitative empirical results it seems that business customers place more emphasis on "personal communication", than on formal information sharing which is traditionally treated as key factor in business communication. Thus, there is probably a need for theoretical differentiation between formal and informal communication (Newman, Lings and Lee 2005). Also from quantitative studies it may be noticed that overall competency of sales representatives is a determinant of business customer trust and this is how it affects the effectiveness of relationship marketing programmes (Doney, Cannon 1997). Despite that some researches do not confirm the domination of inter-firm interpersonal performance among determinants of business customers' decision-making (Wathne Biong and Heide 2001), it seems reasonable to treat the attitudes of personnel of a selling firm as an important factor with regard to implementation of relationship marketing on industrial market.

## **RESEARCH DESCRIPTION**

In 2006 and 2008 research invitations to representatives of companies were sent. Recruited companies were located mostly in Silesia province in Poland which is nowadays an area of dynamic economic transformation. Silesia is well known in Europe as the region of the heavy industry. It is rich in mineral and natural resources and it is home to large amounts of industry. It does have the long tradition of business to business trade conducted on national and international scale.

In 2006 there were 9 sales representatives from different companies that agreed to participate in the discussion. Two years later field research was carried out again. This time 20 sales representatives were involved. Participants were selected with regard to their professional positions. They represented sales personnel maintaining direct contacts with business customers. The research groups were rather not heterogeneous with regard to their demographic features (more or less 30 years old, balanced gender subgroups, all participants possessed bachelor education or higher). In 2006 and 2008 there were research participants with similar features but working in other companies, therefore, there was not a comparison made of results in time (longitudinal study). The main purpose of continuation of project in 2008 was to test and enrich the hypotheses which were created as the result of the previous study. This is why the results of field studies from two following periods were combined and presented together in this paper.

The technique used to identify opinions of people involved directly in sales processes was focus group. Two scholars from Marketing Research Department at University in Katowice were involved as moderators. They initiated main issues for group discussion. The discussion was recorded on a tape and later the course of discussion was analysed with some initial notes made by moderators during the discussion.

## **RESEARCH RESULTS**

## Relationship building instruments

The main and first issue discussed by sales representatives were manners of increasing closeness of relationships between buying and selling company. This theme aroused visible excitement among research participants. In the opinion of disputants sales staff plays a very important role in the relationship marketing process but the potential of this role may be fully realized in the context of appropriate organizational culture. There was consensus that among various relationship building instruments the most effective one is *individual approach* towards customers. This approach can not be realized through interorganizational communication (formal sharing of information). It is the *informal communication* (especially face to face) between front-line personnel and representatives of a buying company which creates the informational and emotional basis for individualization of relationships. The representative of the company which manufactures and sales diodes to industrial companies expressed this using the following words: *The most important thing is to make the person from other side feel as good as I would like to feel myself. Initiation of the contact is always more formal but each next contact should be more partnership. The tea-table conversation makes for business purposes. During informal contacts we get to know the actual expectations of customers and then is it easier to prepare "bespoke offer". Our company is trying to sell more than just a product. We sell the wide array of service: transportation, installation, consulting. Knowing customer better I can prepare more profitable offer. Getting to know each other must not be too formal because then it is too boring.*

Some disputants mostly from companies selling to retailers argued that the individualization of the approach with regard to particular customer may be effective even if it is only apparent. It is important that the customer feels she/he is treated individually. The representative of the manufacturer of FMCG's described that issues as follows: *The exceptionality of prepared offer is important. It might be real or virtual. Even if the offer is actually very similar to other offers it is worth making the customer feel special. To build such emotion it is required to know the customer better than the competition.*

The research participants pointed also at other emotional factors in. These were *trust* and *the customer post-sale care*. The business customers are usually very demanding with regard to time that selling firm should spent on them. The representative of the company selling steelworks argued that "...the customer must feel that s/he is not left alone and there is always somebody to care for his/her matters. (...) This customer feeling that we treat the customer's problems as our problems is needed. Other factors (...) are also important but this is how the trust might be developed". In the opinion of other disputant working for the manufacturer: *"signing up initial contract is needed for the company but the relationship with customer is built on the ways in which the customer is treated later, (...) how the complaints are managed and especially products redeliveries..."*.

Other more quantitative factors like price, technical quality of products and the time of the delivery were also discussed. They were generally treated as necessary but, at the same time insufficient determinants of customer relationships. Additionally, the communication aspects of the relationship sometimes work as switching barrier in case of temporary failure in technical obligations fulfilment. The representative of transportation company selling mostly to motorization producers explained that: *"For the customer the time of components delivery is crucial. Nevertheless, it happens that the delivery is late, but the customer is informed about that sometime before. It allows them for appropriate planning of manufacturing. Finally, timely communication seems to be more important in cooperation with customer"*. Other sales specialist offering FMCG's to network retailers claimed that *"the price and quality is important but crucial are shared subjects of conversation and understanding between me and the manager of the department. It is also effective to be reliable. We can talk about much more things than only business"*.

Few participants also claimed that except the price there are also other financial incentives that might be used to create business relationship. It seems that these incentives are frequently consumed individually by particular representatives of buying firms. This issue was treated as controversial during the discussion. The moderators motivated participants to discuss the advantages and disadvantages of these incentives.

## Using material incentives towards customers

Using various bonuses towards customers if they continue purchasing was introduced as an issue by one of the disputants - a representative of a trade company which sells mainly industrial goods. This issue was indicated as follows: *Each customer which is stored in the database must be visited in the office. This is how I can get to know the company: what needs they have, with whom they cooperate, and so on. (...) For this type of*

*customers it is important to come with something small, some kind of a gadget. It is totally different to speak with the customer, when I brought something for this customer.*

The moderators stimulated participants to speak more about that issue which is usually difficult to explore using standard quantitative research tools like postal questionnaires. Generally, the disputants agreed that among representatives of buying companies expectations of some kind of personal bonuses are pretty widespread but it does not mean that for all customers it is crucial and there are important differences between “small” and “big” promotional bonuses. Some customers can not imagine the cooperation with suppliers without regular gifts treated as a “symbolic” gratitude for the customer loyalty. These gifts range from typical corporate gadgets with the company logo (like a mug, a calendar) to more or less expensive special goods (like dvd player, jewellery, cosmetics).

The disputants indicated and discussed also some problems or threats connected with using various material incentives towards customers. They agreed that the effect of personal bonuses is usually much less durable than effects of other competitive factors (like customer trust and company image). It is even possible that the person provided with promotional incentive might become suspicious with regard to the core offer of the provider. It is usually the threat if the sales representative offers the incentive just at the beginning of the cooperation between companies. There are possible situations when the effect of the incentive might be destructive for the emotional tone of the relationship. This problem was indicated by the research participant who works for the retail company: “... after providing the customer with the gift, the donor expects definite results, which may lower the customer trust and make the customer more alert. Some customers do not want to have some unwritten, not defined debts toward the provider”.

Using some gifts may also be dangerous because it is always difficult to choose the right person within the buying company. There are always fragile questions: Should that be the purchasing specialist, the top manager or maybe the other person? If the superior of the employee (which was donated) becomes familiar with that situation, the superior may suspect irrational purchasing decisions made by the employee.

There was consensus between disputants that the manner to use some incentives and at the same time avoid identified threats is to reward rather the whole buying company than the particular employee. There is usually to establish promotional system which should be oriented only at long-term customers. This system should include discounts with clear intervals with regard to the value and longevity of customer purchases. In business practice sometimes the company offers two discounts’ systems. The first one is widely known, even for potential new customers. It might be presented on the corporate website. The second one is usually less “transparent and equal”. It refers to discounts negotiated individually by representatives of cooperating companies if they work together longer. In the opinion of sales representatives also these hidden promotional systems are necessary because they may be the manner to exceed the customer satisfaction: “They may feel extraordinary if they win something extra, unexpected”.

Summing up, the sales practitioners were sure that these promotional systems oriented at loyal customers are justified. There were also no doubts that they have to be carefully planned, because there are also some threats connected with details of the implementation.

## **Opportunities and threats of closer customer relationships**

During the focus the problem of existing opportunities and threats of having close relationships with business customers was discussed. Most of business benefits indicated spontaneously during the discussion was rather qualitative in nature. The result treated as most important one was acquiring access to detailed knowledge about buying company situation. That knowledge has great business value because it allows for better tailoring the offer and it refers to real buying needs and expectations, the structure of decision making process and the status of relationships with competitive providers and other stakeholders (i.e. requirements of key entities within the international value network through which the buying company generate profits). The depth knowledge about customers is tacit. It is impossible to transfer through the purchase of some external databases. As the result it is not only the main effect of relationship development, it is also crucial to prevent the relationship from switching to competitors in the future.

In the opinion of sales specialists, the close relationships result usually in high level of concentration of shopping. The customer that feels emotional attachment to the business provider buys more from this provider than from all other competitors. However, it is not likely that in the close interorganizational relationship the cooperation will be based on the exclusiveness: “*It is rather a matter of greater share in customer’s wallet. We cannot expect the monogamy*”. Additional benefit from relationship development is connected with the tendency

that loyal customer provides willingly business recommendations. The potential of word of mouth communication may be fully exploited in that situation, so some new customers may be attracted by existing ones without any promotional efforts.

It was clear that during the discussion none of the participants mentioned that closer relationships may be simply more profitable among other customer relationships. What is more, also some important threats connected with having close ties with customers were identified. Most of the disputants confirmed that they experienced real disadvantages connected with their efforts to create long-term, loyal customer relationships. In their opinions, it is quite typical for some customers that the expectations towards them personally and towards the company increase in life-cycle of the relationship. Some customers manifest even more transactional approach than at the beginning of the cooperation: *"When I come to them again they wait continuously for more and more. This can be very difficult because my possibilities are limited"*. Some sales representatives, pointed at the problem that getting closer to the customer may also mean inconvenient familiarizing: *"If we get to know each other better, sometimes there is an expectation that I do not have my own private life and always if he/she wants to drink vodka with me I have to be ready. It may sound funny but in practice it may be hard thing to manage, if you have a family"*. Disputants argue that getting closer to the customer may make the customer more resistant to persuasion so it may be more difficult to negotiate with this customer some crucial issues if there is time for that. The strong interpersonal relationship between the sales representative and the purchasing specialist from other company may also become a disadvantage when some strategic changes in organizational structures of cooperating companies take place. *"If the cooperation between companies is fully based on personal ties it may be really risky for the business. If my friend in the company X is transferred to other position in the company or simply leaves from work(...), that would be very difficult"*.

## IMPLICATIONS OF RESEARCH RESULTS

The research confirmed the importance of the interpersonal ties within the process of creating close relationships with customers in Business to Business context. Most of interpersonal dimensions which were identified in other studies were also indicated during conducted practitioners discussion (communication, trust, individualization, customer care and so on). The interorganizational communication as main relationship stimulator may be treated as a key source of relationship marketing success. This tendency is similar to results of meta-analysis with regard to existing quantitative research results (Palmatier et al 2006, p. 143). Extensive literature comparisons suggest that the sellers expertise and communication antecedents have the greater positive influence on relational cornerstones like commitment, satisfaction and trust. The large positive effect of communication on all relationship mediators is consistent with its role in both uncovering value-creating opportunities and resolving problems (Palmatier et al 2006, p. 143). The results of conducted focus do not confirm the widely spread approach to "communication" construct. Usually it is defined in terms of information exchange or sharing (eg. Anderson and Narus 1990; Cannon and Perreault 1999). In contrast to existing theory focus group participants placed more emphasis on "personal communication" and "informal communication". The difference between formal and informal communication was also stressed in other qualitative study which was conducted among representatives of buying companies (Newman, Lings and Lee 2005). It is argued that informal aspects of business communication should be analysed more carefully by marketing scholars. Even if this aspect of customer relationships is hardly tangible, the omission of qualitative dimensions may be dangerous for marketing theory.

The originality of the research results might be connected with exploration of some "controversial" aspects of close customer relationships. Among business practitioners it is rather "the open secret" that various financial incentives are used to motivate customers to continue purchasing from the same company. This issue is usually discussed in the marketing literature under the topic of "loyalty schemes". The typical loyalty schemes are perceived as short-term, tactical approaches to customer retention which fail to emphasise emotional elements and do not necessarily result in greater marketing efficiency and effectiveness. (O'Malley, Tynan 2000). It seems that research results presented in this paper allow for exploration of that proposition. It is argued that loyalty scheme concept consists in two significantly different phenomena. The first one are those sales promotion systems which are formally established and widely known. These systems distribute various bonuses (especially discounts) among loyal customers on the basis of value of past purchases. These systems may be treated as rational instruments for the relationship building. However research results suggest that they are not as crucial for relationship building like other interpersonal ties. Additionally, it is very important to consider some real threats connected with implementation of personal rewarding systems. Most of these systems are treated by

purchasing specialists as their secret source of personal income. Using simple words, they might be nothing more than “marketing bribery”. In spite of the moral aspect of these phenomena the research results suggest that they may be unbeneficial for the relationship. It is needed to approach that from long-term perspective taking into consideration all probable organizational surprises.

The large stream of research has argued that close, co-operative relationships between buyers and suppliers or channel partners yield benefits to all parties involved. Some researchers, however, believe that this rosy view of relationships goes too far. It is speculated that partners in a long-term relationship may develop a “what have you done for me lately” attitude, which paradoxically makes them more sensitive to short-term costs and benefits (Gruen et al 2000). It was confirmed through longitudinal study that with a long-established business relationship, they may be expected diminishing benefits. The link between the relationship variables and performance becomes progressively weaker (Hibbard et al 2001). The results of focus group presented in this paper seem to correspond well with these doubts concerning benefits of close customer relationships. In opinion of sales representatives some long-term customers manifest more transactional approach than at the beginning of the cooperation. Additionally, the research results point at the problem of personal structure of interorganizational bonds. In close buyer-seller relationships there is serious threat the customer will be lost if the representative of the buying company changes his position in the company or switch to another one.

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# **AN EVALUATION OF SOUTH AFRICA'S ABILITY TO HOST THE 2010 WORLD CUP SOCCER**

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## **ABSTRACT**

*South Africa will stage the 2010 World Cup Soccer. The purpose of this paper is to evaluate South Africa's ability to host the 2010 World Cup Soccer event in terms of an ex ante survey evaluation of the perceptions held by international respondents and a secondary data analysis of the requirements to host such a mega event. The results reveal an unstable evaluation that could either move in a more positive or negative discourse and socio-economic results as time transpires.*

## **INTRODUCTION**

Mega sporting events like the Olympic Games, the Soccer World Cup or the World Cup Rugby attract the attention of a myriad of people. For this reason, cities and countries compete vigorously for the right to stage these spectacles. The Soccer World Cup has become one of the world's biggest sporting events, being broadcasted in 2002 in more than 200 countries and regions around the world, covering over 41,100 hours of programming and reaching an estimated 28.8 billion television viewers (FIFA Media Information, 2002). Mega-events are short-term high profile events are usually thought of in terms of their tourism and economic impacts (Hall, 1992; Getz, 1997). Hall (1989:264) refers to mega events as major fairs, expositions, cultural, and sporting events of international status which are held on either a regular or one time basis. According to Law (1993:57), in an urban context the term mega-event describes large events of world importance and high profile which have a major impact on the image of the host country. In the following section, a brief background will be provided of South Africa's intention to host the 2010 World Cup Soccer.

## **BACKGROUND ON SOUTH AFRICA IN HOSTING THE 2010 WORLD CUP SOCCER**

The Soccer World Cup began in 1930, and is held every four years at a site predetermined by the Federation Internationale de Football Association (FIFA). More than 190 national teams compete in qualifying tournaments within the scope of continental confederations. The final tournament involves 32 national teams competing over a four-week period (The Free Dictionary, 2008). Until 1994, the tournament alternated between Europe and Latin America, the traditional powerhouses of soccer. Motivated by a desire to promote the sport and to capitalise on surging soccer popularity elsewhere in the world, FIFA has recently designated host countries outside Europe and Latin America. 31<sup>st</sup> December 2002 was the cut-off date for countries to inform FIFA of their interest to host the 2010 World Cup Soccer. Five African countries: Egypt, Libya, Morocco, Tunisia and South Africa presented their bids on 30<sup>th</sup> September 2003 (FIFA, 2008). After the presentations, FIFA did inspections of the different countries from October 2003 to January 2004 to assess the bids and inspection reports. On 14<sup>th</sup> May 2004 each country was given a final 30 minutes to convince the Executive Committee that their bid is the best, and a further 10 minutes to answer any questions from the committee (FIFA, 2008). FIFA announced the results of the votes on 15<sup>th</sup> May 2004: South Africa will stage the 2010 World Cup

Soccer (FIFA, 2004). Three compelling arguments could be raised for awarding the 2010 World Cup to South Africa (Matheson & Baade, 2003):

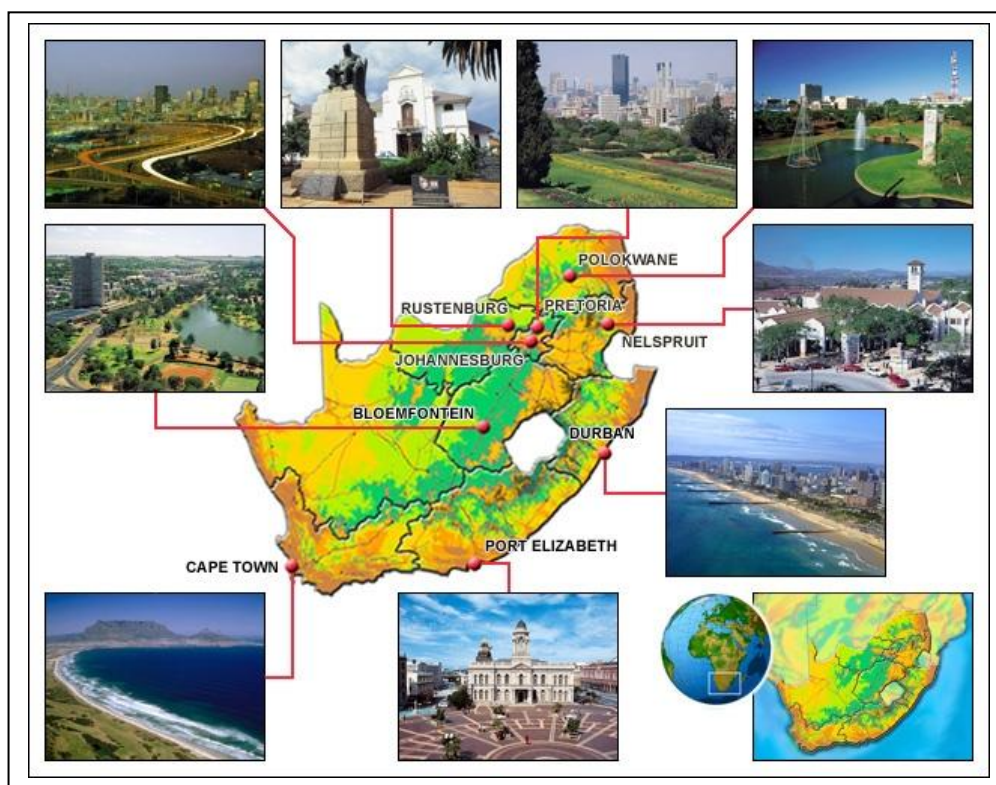
- Africa had never hosted the games previously;
- The African Football Confederation have the largest number of members among any of the regions in FIFA; and
- African nations had become increasingly competitive on the world soccer stage.

South Africa is located at the southern point of Africa bordered by the Atlantic Ocean on the west, the Indian Ocean on the east, Namibia on the northwest, Botswana, Zimbabwe and Mozambique on the northern side. There will be ten venues in the nine host cities of South Africa as indicated by Table 1 (Kick Off South Africa, 2008):

**Table 1: 2010 World Cup Soccer venues**

| Host City      | Stadium           | Capacity | Game Type       | Progress |            |
|----------------|-------------------|----------|-----------------|----------|------------|
|                |                   |          |                 | Date     | Completion |
| Bloemfontein   | Free state        | 40 000   | C, 1 & 2        | 28/3/08  | Aug 2008   |
| Cape Town      | Green point       | 70 000   | 1, 2, Qf & Sf   | 11/2/08  | Dec 2009   |
| Durban         | Moses Mabhida     | 86 000   | 1, 2 & Sf       | 17/3/08  | May 2009   |
| Johannesburg   | Soccer city (FNB) | 94 700   | O, 1, 2, Qf & F | 20/2/08  | Apr 2009   |
| Johannesburg   | Ellis park        | 70 000   | C, 1, 2 & Qf    | 28/3/08  | Jul 2008   |
| Nelspruit      | Mbombela          | 40 000   | 1               | 28/3/08  | Mar 2009   |
| Polokwane      | Peter Mokaba      | 40 000   | 1               | 28/3/08  | Mar 2009   |
| Port Elizabeth | Nelson Mandela    | 50 000   | C, 1, 2 & Qf    | 28/3/08  | Dec 2008   |
| Pretoria       | Loftus Versfeld   | 45 000   | C, 1, 2 & 3     | 20/2/08  | Oct 2008   |
| Rustenburg     | Royal Bafokeng    | 40 000   | C, 1 & 2        | 28/3/08  | Dec 2008   |

*C=Confederations Cup; O=WC Opening; F=WC Final; Qf= Quarter final; Sf=WC Semi final; 1= First round; 2=Second round; 3=Play off for 3<sup>rd</sup> place*



The purpose of this paper is to evaluate South Africa's ability to host the 2010 World Cup Soccer event in terms of *an ex ante* survey valuation of the perceptions held by international respondents and a secondary data analysis of the requirements to host such a mega event.

## LITERATURE REVIEW

According to Maditinos, Vassiliadis and Charlebois (2006) mega events are generally thought to help position a host country as an international tourist destination and to facilitate tourist activity in the years following the event. Thus, the South African hosting cities of the 2010 World Cup Soccer will have a unique opportunity to market themselves to the world. A successful event can be a valuable tool for the tourism sector of these host cities as well as for South Africa. The hosting of a successful 2010 World Cup Soccer may serve the following purposes:

- Improvement of the perception of South Africa on culture, organising ability, equipment and technology, which results to stimulation of sales and differentiation from competitors (other destinations);
- Reinforcement of the brands and increased awareness of the host cities and country, which results to association of the brand with positive attributes and increase of esteem and loyalty;
- Enhancement of local identity and self-esteem of the local population, which leads to exploitation of positive attributes extending the improvements; and
- Creation of a favourable environment within the tourism sector, which means more relations among operators and confidence in the future and implementation of development projects.

Mega sporting events are extremely expensive to host and for the following three reasons it is important for both South Africa as well as for the sporting body (FIFA) to be successful in hosting this mega sporting event:

- Avoid public blaming of FIFA and provide evidence why the event is good for South Africa;
- It justifies the use of scarce public resources for permanent or temporary event infrastructure ensuring that all the necessary event structures for the event is ready in time (Preus & Solberg, 2006); and
- Serves as motivator for other host cities or countries to bid for future events.

Table 2 highlights the positive as well as the negative aspects in hosting a mega sporting event (Ritchie & Aitken, 1984; Haxton, 2000; Lenskyj, 2000 & 2002; Moragas, Kennett & Puig, 2003; Kasimati, 2003; Preuss, 2004; Cashman, 2005; Vigor, Mean & Tims, 2005; and Kesenne, 2005).

**Table 2: Positive and negative aspects in hosting mega sporting events**

| Positive  | Negative  |
|---|---|
| <ul style="list-style-type: none"> <li>• <i>New event facilities</i></li> <li>• <i>General infrastructure</i></li> <li>• <i>Urban revival</i></li> <li>• <i>International reputation</i></li> <li>• <i>Increased tourism</i></li> <li>• <i>Improved public welfare</i></li> <li>• <i>Additional employment</i></li> <li>• <i>Local business opportunities</i></li> <li>• <i>Corporate relocation</i></li> <li>• <i>City marketing</i></li> <li>• <i>Renewed community spirit</i></li> <li>• <i>Inter-regional cooperation</i></li> <li>• <i>Production of ideas</i></li> <li>• <i>Production of cultural values</i></li> <li>• <i>Popular memory</i></li> <li>• <i>Education</i></li> <li>• <i>Experience and know-how</i></li> </ul> | <ul style="list-style-type: none"> <li>• <i>High construction costs</i></li> <li>• <i>Investments in non needed structure</i></li> <li>• <i>Indebtedness of public sector</i></li> <li>• <i>Temporary crowding problems</i></li> <li>• <i>Loss of permanent visitors</i></li> <li>• <i>Property rental increases</i></li> <li>• <i>Only temporary increases in employment and business activities</i></li> <li>• <i>Social unjust displacement</i></li> </ul> |



In the next section the research methodology followed will be discussed, followed by the findings and a general conclusion.

## RESEARCH METHODOLOGY

A quantitative descriptive survey research design approach was followed in the compilation of the primary research data. This design is considered appropriate to map out the perceptions of a population on a variety of issues (Rosnow & Rosenthal, 1999; Leedy, 1993). Further, this design was selected to accommodate large planned heterogeneity in the sample to be selected from the available population or sample frame. The secondary data used for analysis was obtained from available literature.

The population from which the sample respondents were drawn from were people living or visiting London in the United Kingdom. As a recognized world city, visited by people from all over the world, it was considered the best geographical area to obtain a representative world-view on the perceptions of soccer supporters on the ability of South Africa to host the 2010 World Cup Soccer.

An opportunity sampling technique was used to select respondents in a random fashion. This sampling technique was considered sufficient as the researchers were of the opinion that selecting sample units as they become available at popular sites, like Big Ben, Buckingham Palace, Covenant Garden, Heathrow Airport, Kensington Gardens, Nottinghill Oxford Circle, Piccadilly Circus, St. Paul's Cathedral, the House of Parliament, Trafalgar Square, Victoria Station, West End, and alike would provide just as a representative sample as what could be obtained from other random sampling techniques. The sampling technique permitted the researchers to apply the laws of mathematical probability. A total sample of 2806 respondents whom participated in the research program was age distributed as indicated by Figure 1. A total number of 1824 male and 982 female respondents participated as indicated in Figure 2. It is clear from Figure 1 that in both the male and female samples the age group between 18 – 50 years constitutes the majority of sampling respondents. Further, as the two samples have similar distribution patterns it can be concluded that further analysis will not be significantly influenced by gender bias.

A structured self-administrating questionnaire, using numerical rating scales of forced-choice to push respondents to make a definite choice, was developed measuring four dimensions, namely:

- Biographical Information; consisting of three questions measuring age, gender and country of origin;
- Evaluation of South Africa as host country consisting of eleven questions;
- Motivation to attend a sport event consisting of fourteen questions; and
- Principal advantages to host the 2010 Soccer World Cup consisting of nine questions.

All questions, except the Biographical questions were measured on a 7-point Likert-scale allowing respondents to provide responses that could vary between strongly agree to strongly disagree. It was decided to use a 7-point scale to minimize ceiling and floor effects in responses, which could limit the amount of variations in responses that could easily be introduced with a 5-point scale. The responses were weighted from 1 (Strongly agree) to 7 (Strongly disagree). If the scores of responses are added, a low total score for the sample would be indicative of a strong agreement with the statements, whilst a high score would be indicative of a strong disagreement with the questionnaire statements.

For the purpose of this paper, only the dimension "Evaluation of South Africa as host country" will be discussed.

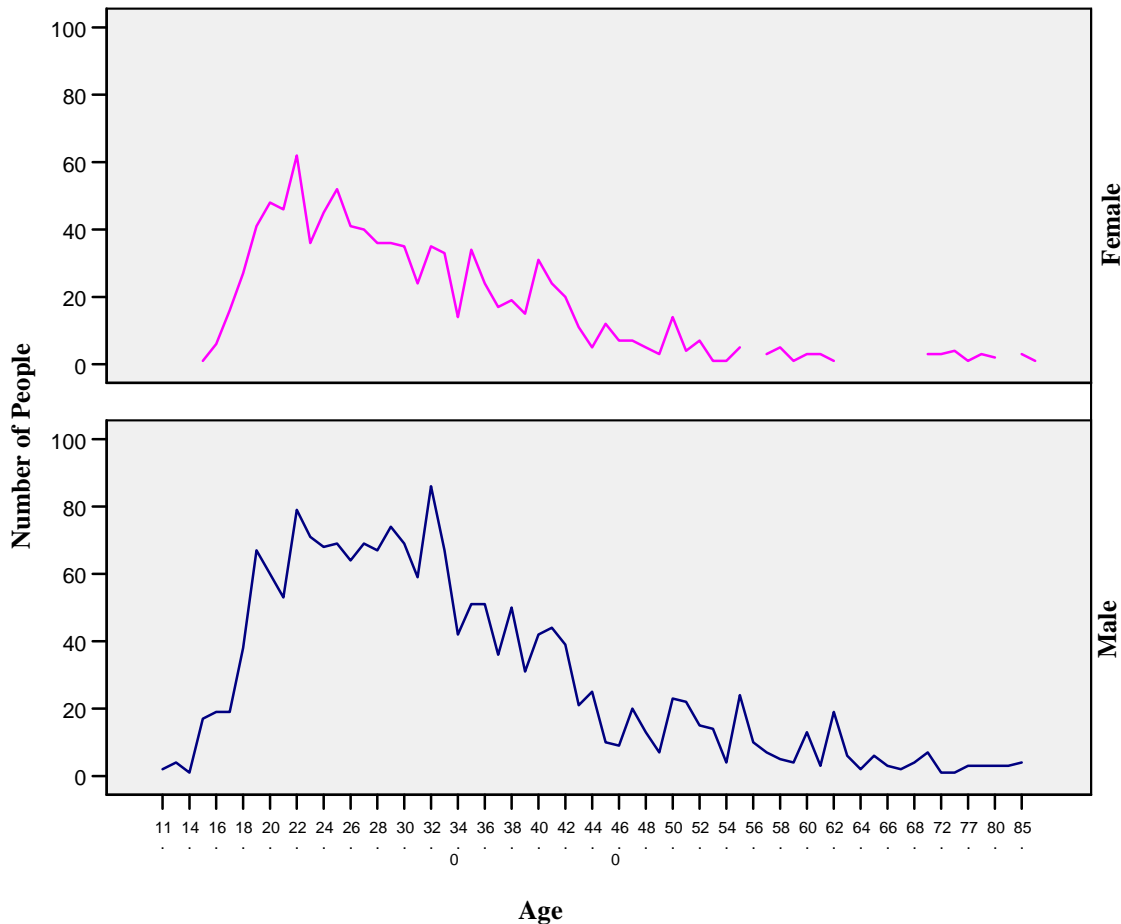
The measuring instrument was administrated in the selected city of London, United Kingdom a recognized cosmopolitan city and visited by tourists from all over the world. Data was collected over the period 26 April-5 May 2007 using 19 post graduate students from Tshwane University of Technology, South Africa who acted as fieldworkers. The fieldworkers were properly trained in administering the questionnaires, protocols involved when approaching potential respondents, purpose of the investigation, content of the questionnaire and how to provide assistance if respondents would experience problems in answering some of the questions due to linguistic or other reasons. The training of the fieldworkers was done over a period of 5 days and one week before commencement of the fieldwork.

The first objective of the survey analysis was to determine the criteria used by the respondents to evaluate the suitability of South Africa to host the 2010 World Cup Soccer. This was done using the Varimax rotation method with Kaizzer Normalisation. The second objective was to determine the perceived performance of South Africa on the evaluation criteria identified. To evaluate the perceived performance of South Africa the following Hypothesis was formulated:

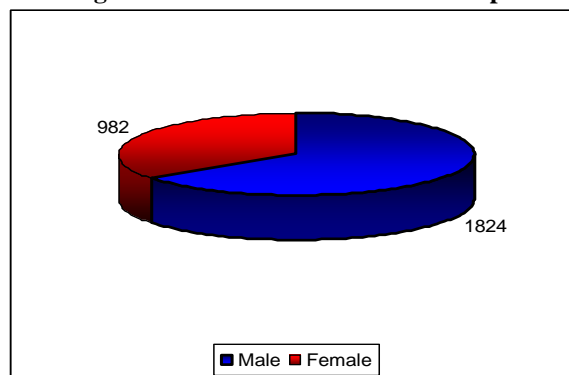
$H_0$ : South Africa has the ability to host the 2010 World Cup Soccer

$H_A$ : South Africa doesn't have the ability to host the 2010 World Cup Soccer

**Figure 1: Age distribution of the two gender samples**



**Figure 2: Gender distribution of sample**



For this reason a one-sample t-test was done testing the sample average against a scale test value of 3.5 which implies a neutral attitude response. A negative t-test value, if tested significantly, would mean a positive evaluation in terms of the Likert-scale utilized. The last objective was to determine the relative distribution of positive responses in relation to neutral and negative responses using the Binomial test. The results achieved will provide evidence on how the majority of respondents reacted on each of the evaluation items specified.

## FINDINGS

With over 500,000 people and millions of dollars expected to descend onto South Africa there is a wide range of services and infrastructure that will need to be provided (South African Cities Network, 2005). These range from good stadiums, transportation systems, hospitality, media, Information and Communications Technology etc. According to Khoza (2002) South Africa's bid for the 2006 World Cup Soccer was based, in part, on the promise that it would bolster the economy by approximately \$6 billion and create as many as 129,000 new jobs. The 2010 World Cup Soccer will host 32 teams over 43 days, with 2.7 million local spectators and 400,000 visitors attending 64 matches with 4 billion international viewers. The direct expenditure that will be created is an estimated R12.7 billion rand, with a contribution of R21.3 billion rand to GDP; equivalent of 159,000 annual jobs created (South African Cities Network, 2005). Even smaller international events such as the Cricket and Rugby World Cups flaunt large benefits. Tourism officials estimated that the 2003 Cricket World Cup generated at least 1.2 billion rand (about \$200 million) for the South African economy (Hassen, 2003).

With regards to infrastructure development:

- Modern highways, trains and airways make travel both comfortable and convenient. South Africa's airports have embarked on a number of multi-billion Rand projects to increase their capacity and efficiency ahead of the 2010 World Cup Soccer. The South African government has set aside R3.8-billion for public transport infrastructure development (Mahlangu, 2006). Two hundred new luxury buses will be bought to transport the FIFA family during the World Cup (Sowetan, 2008). A fast, comfortable and low cost urban transport system, called the "Bus rapid Transit" (BRT) is being planned for the host cities (Gadebe & Masango, 2007). Most of the host cities have Metrorail train and Metro bus systems and numerous meter cab companies (South Africa, 2008a). The government is to spend R7.7-billion on taxi-recapitalisation to replace the old taxis (Mkhize, 2008). The first phase of the Gautrain rapid rail link between OR Tambo airport and Sandton, will be in operation by 2010 (Gautrain, 2008);
- The 2007 South African budget allocated an additional R6.8-billion for crime prevention and justice services. An amount of R666 million will be spent specifically on World Cup safety and security. More than 30,000 police officers will be recruited and trained specifically for strategic deployment for the event (South Africa, 2008b); and
- The energy crisis in South Africa will not negatively affect the 2010 World Cup, according to insurances by the electricity company, Eskom (SAPA, 2008). The national government is too spent just over R1.5-billion on ICT for 2010 (Du Toit, 2008).

In the next section the *ex ante* evaluation of respondents will be discussed as it will provide important information regarding strategic issues that need to be addressed to positively influence the perceptions and attitudes of potential visitors to the 2010 World Cup Soccer.

A Cronbach Alpha reliability coefficient of 0.896 was obtained indicating a high level of internal consistency of the measuring instrument. The analysis revealed that the respondents used three principal criteria to evaluate the suitability of South Africa to host the 2010 World Cup Soccer. The three criteria explained only 67.76% of the total variance which means that the measuring instrument was not able to explain comprehensively all the criteria used by respondents to evaluate the ability of South Africa to host the World Cup. Nevertheless, the three criteria, excluding the other unidentified criteria not measured by the instrument, will be discussed in sequence of importance together with its content as indicated by Table 3:

- Capability of South Africa to host the event;
- Socio-political environment's status in South Africa; and
- Track record of South Africa to host events of this nature.

**Table 3: Criteria used to evaluate South Africa as host country**

| Factor Name  | Percentage of Variance Explained (%) |
|--|--------------------------------------|
| <b>Factor 1: Offering Capability</b> <ul style="list-style-type: none"> <li>I consider South Africa to be an attractive destination for the event</li> <li>I have confidence in South Africa to successfully host the event</li> <li>In my opinion, South Africa is the right choice to host the event</li> <li>I think South Africa will host the event at affordable prices</li> <li>South Africa has the capability to host the 2010 Soccer World Cup</li> <li>South Africa has the technical expertise at hand to run the event</li> </ul> | 51.685                               |
| <b>Factor 2: Socio-Political Environment status</b> <ul style="list-style-type: none"> <li>South Africa is able to provide a safe environment to tourists</li> <li>Media coverage about South Africa hosting the event is positive</li> <li>South Africa is politically stable enough to host the event</li> </ul>   | 8.203                                |
| <b>Factor 3: Track Record</b> <ul style="list-style-type: none"> <li>South Africa has a solid track record in hosting world class sport events</li> </ul>  | 7.856                                |

**Table 4: One sample t-test evaluations**

| Factor 1: Offering Capability   | Mean   | $\mu$ | t-value | Sig (2-tailed) |
|---|--------|-------|---------|----------------|
| I consider South Africa to be an attractive destination for the event     | 2.2749 | 3.5   | -23.303 | 0.000**        |
| I have confidence in South Africa to successfully host the event          | 2.6511 | 3.5   | -16.689 | 0.000**        |
| In my opinion, South Africa is the right choice to host the event         | 2.6518 | 3.5   | -15.608 | 0.000**        |
| I think South Africa will host the event at affordable prices             | 2.7179 | 3.5   | -15.949 | 0.000**        |
| South Africa has the capability to host the 2010 Soccer World Cup         | 2.7962 | 3.5   | -14.190 | 0.000**        |
| South Africa has the technical expertise at hand to run the event         | 2.9862 | 3.5   | -11.293 | 0.000**        |
| Factor 2: Socio-Economic environment                                      | Mean   | $\mu$ | t-value | Sig (2-Tailed) |
| South Africa is able to provide a safe environment to tourists            | 3.5620 | 3.5   | 0.0620  | 0.246          |
| Media coverage about South Africa hosting the event is positive           | 3.2704 | 3.5   | -0.2296 | 0.000**        |
| South Africa is politically stable enough to host the event               | 3.1591 | 3.5   | -0.3409 | 0.000**        |
| Factor 3: Socio-Economic environment                                      | Mean   | $\mu$ | t-value | Sig (2-tailed) |
| South Africa has a solid track record in hosting world class sport events | 3.2407 | 3.5   | -3.657  | 0.000**        |

Table 4 reveals that the hypothesis should be partially accepted that South Africa is able to host the 2010 World Cup Soccer based upon the three criteria considered by the respondents as important. However, due to the forced-choice nature of the self-administrated questionnaire as well as the moderate level of variance explained by the factor-analysis, no conclusive conclusion can be drawn on the perceived ability of South Africa to host the World Cup. Of the three identified criteria, the capability of South Africa in terms of offering attractiveness, confidence, affordable prices, suitable expertise and being the right choice destination for the event was evaluated by far the most important evaluation criterion used by respondents. The next two evaluation criteria, the socio-political environment and the track record of South Africa, were evaluated as almost of equal importance explaining 16.06% of the total variation. It can therefore be concluded that the ultimate success of the 2010 World Cup Soccer from the viewpoint of respondents will depend on the demonstrated capability of South Africa to host the event. The findings reveal that all items under the three evaluation criteria achieved a significant moderate positive outcome, except on the item of South Africa's ability to provide a safe environment. However, this result was not statistically significant. The moderate positive mean scores achieved on all the other items indicate that more needs to be done to create stronger excitement and confidence in South Africa's ability, socio-political environment and track record to host the Soccer World Cup 2010.

The results of Table 5 reveal that the vast majority of respondents consider South Africa to be an attractive destination for hosting the World Cup. Whilst a positive evaluation was obtained that South Africa was the right

choice for the event, the majority of the respondents did not agree with this viewpoint. This result was achieved because the minority of respondents indicated a strong inclination for South Africa being the right choice whilst the majority of respondents indicated a neutral to slightly negative feeling towards South Africa as preferred choice. The same tendency was observed with regards to the capability of South Africa to host the event as well as the technical expertise that exist in the country. In these cases the majority of respondents were of the opinion that South Africa doesn't have the capability nor the technical expertise to host the World Cup. A definite distinction could also not be made, thus ambivalence, between the positive and neutral to negative number of respondents on the following two items:

- South Africa will be able to host the event at affordable prices; and
- South Africa is able to provide a safe environment.

**Table 5: Binomial test for significant differences between positive and neutral to negative evaluations**

| Item  | Category                     | % of Respondents | % Test Proportion | Asymp. Sig. (2-tailed) |
|---|------------------------------|------------------|-------------------|------------------------|
| I consider South Africa to be an attractive destination for the event     | Positive<br>Neutral/Negative | 81<br>19         | 50                | 0.000**                |
| I have confidence in South Africa to successfully host the event          | Positive<br>Neutral/Negative | 74.5<br>25.5     | 50                | 0.000**                |
| In my opinion, South Africa is the right choice to host the event         | Positive<br>Neutral/Negative | 28<br>72         | 50                | 0.00**                 |
| I think South Africa will host the event at affordable prices             | Positive<br>Neutral/Negative | 49.2<br>51.8     | 50                | 0.648                  |
| South Africa has the capability to host the 2010 Soccer World Cup         | Positive<br>Neutral/Negative | 35.4<br>64.6     | 50                | 0.000**                |
| South Africa has the technical expertise at hand to run the event         | Positive<br>Neutral/Negative | 36<br>64         | 50                | 0.00**                 |
| South Africa is able to provide a safe environment to tourists            | Positive<br>Neutral/Negative | 49<br>51         | 50                | 0.514                  |
| Media coverage about South Africa hosting the event is positive           | Positive<br>Neutral/Negative | 47<br>53         | 50                | 0.037**                |
| South Africa is politically stable enough to host the event               | Positive<br>Neutral/Negative | 60<br>40         | 50                | 0.000**                |
| South Africa has a solid track record in hosting world class sport events | Positive<br>Neutral/Negative | 46<br>54         | 50                | 0.034**                |

## CONCLUSION

Mega-events, like 2010 World Cup Soccer present mega-opportunities to shape, restructure, improve, prepackage and sell South Africa to an international audience. It will attract billions of viewers internationally and hundreds of thousands of visiting spectators. However, the specialized infrastructure and operating expenses required to host the event will be extremely costly, and it is not all that clear that either the long or short-term benefits of hosting such an event in South Africa will be large enough to cover the costs. According to the stringent requirements of FIFA of 10 new soccer-specific stadiums, South Africa would need to build entirely new facilities to host the 2010 World Cup. The extent to which newly constructed sports facilities represent a good public investment depends not only on the immediate economic impact of 2010 World Cup Soccer, but also on the usage of the facilities after the event. As sport and leisure entertainment is a luxury good, the demand for sports infrastructure in the aftermath of the World Cup, will likely be lower in a developing country like South Africa than in developed countries.

It can also be concluded that although the survey study revealed a positive outcome on the three evaluation criteria (offering capability, socio-political environment status and track record) the results indicated only moderately positive evaluations on all three criteria, whilst in some cases the majority of respondents offered a neutral to slightly negative evaluation on items. Overall, these results represent an unstable evaluation status that can either move in a more positive or negative discourse as time transpires.

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# MERGERS IN HIGHER EDUCATION IN SOUTH AFRICA THROUGH THE EYES OF THE STAFF INVOLVED.

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## ABSTRACT

*Over the past decade the rate at which mergers have been effected have increased exponentially. However, while the scope and frequency of merger activity are monitored at regular intervals, the pivotal role of the human element in mergers seems under researched. As a consequence relatively little is known about employees' experience of such mergers. This paper explores academics' experiences of the recent mergers in Higher Education in South Africa. From a survey questionnaire that was subjected to descriptive statistical analysis, qualitative comparison to longitudinal work done at one University reflects that the national scenario is in line with what was found in the single university context. This is also largely consistent with the extant knowledge base and yet also suggest that novel and innovative managerial strategies should be explored that would ensure the success and longevity of these merged institutions.*

## INTRODUCTION

Over the past two decades or so mergers have become a common occurrence in the organisational landscape (Panchal & Cartwright, 2001; Papadakis, 2005) and regularly feature on managerial agendas as a strategic option (Schraeder & Self, 2003). Their popularity is grounded among other in their apparent effectiveness as an adaptive response to an operating environment that is becoming increasingly competitive, integrated (global) and fast paced (Burns, 2003; Miller, 2004; Schabracq & Cooper, 2000).

Despite the generally optimistic view mergers receive, there is substantial evidence to suggest that mergers and merger-related activities are not as successful as they were intended to be (Cairncross, 2003; Eriksson, 2004; Van Tonder, 2004a). Reported success rates for mergers are surprisingly low and the incidence of failure reportedly varies between 40% and 80% (Panchal & Cartwright, 2001; Papadakis, 2005; Schraeder & Self, 2003). The majority of mergers essentially fail to satisfy the original intention behind their initiation.

Regardless of the deemed success (or otherwise) of mergers, the consequences and implications of mergers are substantial. Mergers inevitably lead to a reassessment of merged operations and activities and often result in re-organisation, rationalisation and redundancies (CIPD, 2000:2) which, in turn, prompts a reconfiguration of functional teams that contribute to confusion around reporting lines - to the extent that people lose their "mental maps" of how the workplace functions (Lundback & Horte, 2005). Any attempt at integrating corporate entities whether a merger, an acquisition or a joint venture, has very real Human Resources implications (CIPD, 2000; Nel, Marx & Burchell, 2004; Papadakis, 2005). Failing to address these Human Resources issues typically evokes a range of symptomatic responses that are commonly observed in mergers, such as stress, fear, anxiety, depleted productivity levels, increased absenteeism, declining job satisfaction, resistance to change and feelings of defeatism (Eriksson & Sundgren, 2004; Papadakis, 2005; Van Tonder, 2004a). Collectively referred to as "merger syndrome", these symptoms are a logical consequence of what is generally conceptualised as a very stressful life event (Panchal & Cartwright, 2001) and indicative of the less



than adequate attention that Human Resources issues receive during the merger. The latter, which fuels employee resistance, is considered one of the main reasons for merger and acquisition failure (Appelbaum, Gandell, Yoritiz, Proper & Jobin, 2000a; Van Tonder, 2004b).

The preceding context highlights the pivotal role of the ‘human factor’ and the substantial consequences of mergers regardless of whether they are considered successful or otherwise. It provides a reasonable platform from which to anticipate the challenges and likely outcomes of mergers that broadly conform to the descriptive parameters of those on which the literature reports. Whether these parameters still hold when a merger, in character, clearly departs from these descriptive characteristics, is uncertain, as the literature does not clearly differentiate between different types of mergers i.e. mergers that depart substantially in a number of areas from those descriptive dimensions on which the literature is based.

## **MERGERS IN THE CONTEXT OF SOUTH AFRICAN HIGHER EDUCATION**

A recent wave of mergers in the South African Higher Education sector, which has seen some eight mergers of universities and technikons over the past three years, is an example of mergers that deviate in character from the “conventions” observed in respect of business-oriented mergers, although higher education is increasingly coming into its own as a business sector. Initiated by the South African government (the Department of Education), these mergers follow in the wake of a major socio-political transformation of civil society and its institutions and were therefore informed by political and ideological motives and *not* economic growth or institutional survival or sustainability. Moreover, these mergers were imposed (enforced). Unlike business-orientated mergers where the merging partners generally harbour at least an expectation of improved functioning and returns and hence normally enter the merger with a degree of willingness, the merging parties in most of these enforced mergers were substantially unwilling merger partners.

The former Minister of Education, Prof Kader Asmal, explicitly stated that Higher Education had reached a stage where fundamental and radical transformation of the higher education system was imperative. The instruments for such transformation have been put in place since 1994, and the time was thus afoot to put them to use (Mokadi, 2002).

In terms of the National Plan for Higher Education, five key policy goals or strategic objectives were identified for attaining the overall aim of transformation in South African Higher Education. The governments proposal for the restructuring of higher education should always be viewed against these policy goals. The five key policy goals are (Mokadi, 2002):

- To increase access for learners and produce graduates with the required skills to meet the country’s human resource needs.
- To promote equity of access and outcomes, and to redress past inequalities through ensuring that staff and student profiles reflect the demographic composition of South African society.
- To ensure diversity in the higher education institutional landscape through mission and programme differentiation to meet national and regional skills and knowledge needs.
- To build high-level research capacity and to promote research linked to national development needs.
- To restructure and consolidate the higher education institutional landscape in order to transcend the fragmentation, inequalities and inefficiencies of the apartheid past, and to enable the establishment of South African institutions consistent with the vision and values of a non-racial, non-sexist and democratic society.

The net effect of these proposed – and forced – mergers was a reduction of the number of HEIs. All Technikons were transformed to Universities of Technology. Mergers were also proposed between traditional Universities and Technikons, which saw the creation of a hereto unknown form of HEI; a so-called Comprehensive Insitution.

## **AIM AND METHODOLOGICAL OUTLINE OF THE STUDY**

This study can be seen as a continuation of the work by Goldman & Van Tonder (2006a; 2006b; 2006c; 2006d) and the work of Goldman (2007a; 2007b). In the first instance, Goldman & Van Tonder (2006a; 2006b; 2006c; 2006d) explored the merger experiences of academic staff at the University of Johannesburg. The work of Goldman (2007b) longitudinally expanded on the original University of Johannesburg study, investigating to

which extent these merger experiences of academic staff had changed over the period of one year. The basic research question for this study is forthcoming from these two studies. As the work of Goldman & van Tonder (2006a; 2006b; 2006c; 2006d) and Goldman (2007a; 2007b) explores the merger experiences at the University of Johannesburg, one would logically want to explore the extent to which these findings hold true for the rest of the South African Higher Education environment. Formally thus, the research question could be stated as follows:

To what extent do employees at other Higher Education Institutions in South Africa share the sentiments, as far as merger experiences are concerned, of their counterparts at the University of Johannesburg? The aim of this study is, therefore, is to:

Describe the extent to which the findings forthcoming from the merger experiences studies at the University of Johannesburg can be extrapolated to other Higher Education Institutions in South Africa.

To this end, the study, in line with the work of Goldman and van Tonder (2006a; 2006b; 2006c; 2006d) and Goldman (2007a; 2007b), employs an Interpretive research paradigm, making use of both quantitative and qualitative methodologies. It must be borne in mind that the initial work of Goldman and Van Tonder (2006a; 2006b; 2006c; 2006d) and Goldman (2007a; 2007b) was purely qualitative in data collection as well as analysis and that the current study wishes to basically compare primary data to these findings. On the other hand, the current study also endeavors to serve as point of departure for a standardized measuring instrument for measuring merger experiences of staff. The current study thus employs a customized, quantitative survey questionnaire as data collection instrument.

The sample for this study was selected on a convenience basis. Two conferences were targeted that consisted exclusively of delegates from Higher Education Institutions. Firstly, the HESA (Higher Education South Africa) conference was selected, as it is attended only by staff from within the ranks of Higher Education Institutions. Secondly the Annual NUTESA (National Union of Tertiary Employees of South Africa) was also selected. NUTESA is organized exclusively from the ranks of HEI's, and therefore all delegates attending the Congress are employees from HEIs in South Africa. Both these conferences took place in November 2007. Although the sample is a non-probability, convenience based sample, it is still, to a degree representative, as all respondents are HEI employees and, as such, can serve as basis for confirmation (or not) of the findings of the University of Johannesburg scenario. The aim of the study is not to verify (i.e. statistically prove) that the University of Johannesburg findings are representative of the HEI environment as a whole in SA, but rather to see whether there is alignment between the initial University of Johannesburg findings and experiences measured at other HEI's.

Data collection for this study was through means of a customized survey questionnaire developed by the authors. This questionnaires used the findings of Goldman (2007b) as point of departure for the specific items presented therein. The data forthcoming from this survey was primarily nominal, with the last section of the questionnaire soliciting ranked data. As it was imperative to solicit data from as many respondents as possible, a qualitative data collection method was not used, as interviewing would be far too time consuming. It was also felt that standardized data would facilitate ease of comparison to the University of Johannesburg findings presented by Goldman (2007b). Hence the data was subjected to descriptive analysis (cross-tabulations and arithmetic means) and then qualitatively compared to the themes forthcoming from the University of Johannesburg findings as presented by Goldman (2007b).

## FINDINGS FORTHCOMING FROM THE STUDY

Before the findings of the survey are introduced, it would be prudent to reflect upon the findings of Goldman's longitudinal research at the University of Johannesburg between 2006 and 2007 (Goldman, 2007b), as this work is the basis for the questionnaire used in this survey. As such, the findings of this previous research would thus also serve as basis for comparison.

**Table 1: Summarised findings for the 2005/6 research conducted at UJ**

| FACTOR                                  | 2005  | 2006   |
|---|---|--|
| Changes in physical working environment | No physical changes. Changes mostly in reporting lines  | Minimal change in location. Increased workload due to administrative duties. Rapid and numerous changes in operating procedures  |
| Perceived roll out of the merger        | Roll-out was time consuming. Many operational frustrations. Strategically, merger was standing still. Strong feeling of "Us and Them". Change very slow, few visible changes. | Roll-out is frustrating, things are taking way too long. People were warming up to the ideal of the merger. The "right things" were starting to be addressed. "Us and Them" syndrome still very prominent. Integration at departmental level was |

|   |  |  |
|---|--|--|
|   |  | speeding up. Change still taking place at a slow pace at an operational level, leading to frustration in terms of operational issues.  |
| Interim phase of the merger                   | The single largest negative aspect of the merger. Perceived as the cause of most of the debilitating factors associated with the merger such as lack of direction, indecisiveness, excessively long decision making timeframes and lack of visible leadership.                                 | Something of the past. Permanency was reassuring. University can now move in a specific direction. Arguably the aspect staff were most pleased about.  |
| Perceptions of management at UJ               | Acute dissatisfaction with excessively long decision making timeframes; causing immense operational frustration dissatisfaction. Managers lack a sense of the “big picture”. Negatives not the result of deliberate actions but the result of a depleted management team forced crisis manage. | Overwhelmingly positive sentiments; as a result of the end of the interim phase. More stability and direction in terms of management. Improvement in terms of operational procedures. Strategically things are moving at a rapid pace; but operational issues still abound. Sense of the Big Picture instilled with institutional management. Negatives not the result of deliberate actions but the result of being forced to prioritise and crisis manage. |
| Perceptions of leadership at UJ               | Suffering from many shortcomings. Criticism for lack of leadership effort was pertinently directed toward individuals. Leadership efforts fragmented. Isolated incidence of appropriate leadership. No conscious, consolidated leadership initiative existed. Invisibility of leadership.      | Top management seen as coming together as a team and functioning as a unit. Possess a sense of vision and direction<br>Focused and firm. New VC’s influence visible to lower levels. VC’s leadership style just what the university needed.<br>More visible. Out of touch with operational difficulties.   |
| Current concerns of academic staff            | Overformalisation of the working environment. Confusion over conditions of service. Apprehension concerning vast change still to come. Pressures associated with increased workloads.  | 2005 concerns perpetuated. Academic drift at the expense of vocational programs. Alarming amount of resignations being tendered.   |
| Formal communication pertaining to the merger | Very impersonal. Communicative efforts had dwindled as merger roll-out had intensified. Door was open for rumours and “grapevine” communication.   | No tangible improvement. Campus visits provide another, more personal communication channel.   |
| Benchmarking of the UJ merger                 | The benchmark merger in Higher Education. Staff morale high. Positive outlook of staff.  | Still the benchmark merger. Critical need to address key areas. Gap between merged and unmerged institutions.  |
| Expectations of academic staff                | Myriad of expectations centred around self crafted visions.  | Individual expectations based on personalised visions. Expectations more communal; aspects such as transparency, fairness, integrity, honesty, equality, performance culture and integration emerged.  |

**Source: Goldman, 2007b**

As can be seen from the above table, the findings are divided into nine distinct sections. These findings represent the platform from which the current survey questionnaire was devised. A total of 66 usable questionnaires were received back from the two conferences targeted for data collection. Although this response rate was rather disappointing to the authors, the feeling was that it was sufficient to facilitate comparison with the University of Johannesburg findings. The low response rate could not facilitate disaggregation of survey findings for individual HEIs, but could be used to reflect the views and opinions of the HEI environment as a whole. As the 2005/6 data forthcoming from Goldman’s study was qualitative (Goldman (2007b), it was decided to subject the survey data to descriptive statistics as basis for meaningful qualitative comparison, as previously explained. To this end, cross tabulations and arithmetic means were employed for the majority of the questionnaire. Only the last section of the questionnaire, which required respondents to devise a ranking of the data, employed a mean of rankings in descending order to provide an overall ranking forthcoming from respondents. The following table represents the responses for broader issues surrounding the merger:

**Table 2: General merger related items**

|     | Item  | Mean score |
|-----|---|------------|
| 1.1 | Our merger has failed to satisfy the original intentions behind its initiation. | 2.22       |
| 1.2 | Our merger has resulted in large scale re-organisation.                         | 1.71       |
| 1.3 | Our merger has resulted in large scale rationalization.                         | 2.58       |
| 1.4 | Our merger has resulted in very few redundancies.                               | N/A        |
| 1.5 | Our merger has led to confusion around reporting lines.                         | 2.09       |
| 1.6 | Our merger has resulted in high levels of staff stress.                         | 1.49       |
| 1.7 | Our merger has led to very little anxiety.                                      | 4.03       |
| 1.8 | Our merger has led to lower levels of productivity.                             | 2.12       |

|      |   |      |
|------|---|------|
| 1.9  | Our merger has not resulted in increased absenteeism.                 | 3.62 |
| 1.10 | Our merger has resulted in a new and very appropriate strategic plan. | N/A  |
| 1.11 | Our merger has resulted in an increased (voluntary) staff turnover.   | 2.28 |
| 1.12 | The stature of our institution has been enhanced by the merger.       | 3.52 |
| 1.13 | The reputation of our institution has been harmed by the merger.      | 2.55 |
| 1.14 | The marketability of our institution has been improved by the merger. | 3.41 |

Note: A 5 point scale was used here: 1 denoting Strongly Agree and 5 denoting Strongly Disagree

It is clear to see from the above data, that these findings clearly reflect the longitudinal work of Goldman at UJ, as one can gain from a simple comparison of Table 1 as a whole with Table 2. However, questions 1.4 and 1.10 were discarded as they could have been misinterpreted by respondents. The second section of the questionnaire dealt with perceived roll-out factors of Higher Education mergers. Here, again, the survey data supports the findings of Goldman (2007b). As a whole for this section, cross-tabulations reflect an average “yes” response of 89,75%. The exception was question 2.4. This question was discarded as it was felt that it might be too much of a leading question. Section three of the survey dealt with perceptions of the so-called interim phase of mergers. To this extend the mean scores (on a four point scale with 1 = not problematic and 4 = very problematic) can be reflected as follows

**Table 3: “Interim phase of merger” items**

|     | Item  | Mean score |
|-----|---|------------|
| 3.1 | Using of current capacity to fill key and functional positions. | 2.77       |
| 3.2 | Lack of Direction.  | 3          |
| 3.3 | Indecisiveness.   | 3.03       |
| 3.4 | Excessively long decision making timeframes.                    | 3.35       |
| 3.5 | Lack of visible leadership.                                     | 2.92       |
| 3.6 | An emphasis on tasks rather than principles.                    | 2.95       |
| 3.7 | Over consultation.  | 2.63       |
| 3.8 | Managers not having a sense of the “Big Picture”.               | 3.02       |

Again, a simple comparison of Table 1 with Table 3 indicates that the survey reiterates the findings of Goldman (2007b), which were applicable to the UJ merger only. The fourth section of the survey questionnaire interrogated employees perceptions of leadership during the merger. The cross-tabulation average for this section reflects a “Yes” score of 63.72%. This average, however, is slightly skewed by question 4.6 (Management not being firm enough), with a “Yes” response of 34.8% and question 4.10 (Campus visits by managers are regular), with a “Yes” response rate of 18.2%. As a whole, this section echoes the findings of Goldman’s work at the UJ merger (Goldman, 2007b). However, the national survey reflects that management is quite firm (question 4.6) which does differ from the UJ study, where management was found not to be firm enough. Although only scoring an 18.2% “Yes” response, question 4.10 does echo the sentiments of Goldman’s work, where UJ leaders were also not seen to be visible enough across all campuses. Section 5 of the questionnaire was aimed at measuring the concerns of academic staff members. To this end, yet again, the cross-tabulation average for this section as a whole reflects a “Yes” score of 70.67%, indicating that on the whole, that the concerns identified by Goldman in the UJ study are verified by the current survey. Section six of the questionnaire interrogates merger communication. Here, the mean scores (on a five-point scale, 1 = strongly agree and 5 = strongly disagree) are reflected as follows:

**Table 4: “Communication in the merger” items**

|     | Item  | Mean score |
|-----|---|------------|
| 6.1 | Communications have become very impersonal.           | 2.15       |
| 6.2 | Not enough of the correct things are being addressed. | 1.69       |
| 6.3 | Communications are not pitched on the personal level. | 2.06       |
| 6.4 | Communication is very formal.                         | 2.46       |
| 6.5 | Communication is almost condescending.                | 2.31       |

Again, simple comparison of Table 4 with the communication related aspects of Table 1 shows that the survey verifies the findings of Goldman’s work conducted at UJ. In fact, as far as communication is concerned, all items scored, on average, under 3 out of 5, indicating moderately strong unhappiness amongst staff concerning merger communication. The final section of the questionnaire addresses future expectations of staff members. As this data is ranked, a mean of rankings in descending order was employed to gain meaningful insights, as can be seen below:

**Table 6: Ranked expectations of staff**

|   | Rank |
|---|------|
| More integration.                         | 6.20 |
| Better re-branding of the university.     | 5.86 |
| More equality in the university.          | 5.15 |
| Less politics.                            | 5.13 |
| A self crafted vision for the university. | 4.62 |
| A greater performance based culture.      | 4.55 |
| Operational functionality                 | 4.38 |
| More honesty in the university.           | 4.35 |
| More fairness in the university.          | 4.13 |
| More transparency in the university.      | 4.10 |
| More integrity in the University.         | 3.93 |

## CONCLUSIONS AND MANAGEMENT IMPLICATIONS

The comparison of the descriptive data forthcoming from this study with the University of Johannesburg findings forthcoming from the longitudinal work by Goldman (2007b) can thus be summarized as follows:

**Table 7: Summarised comparison between the UJ findings and the national survey**

| Factor                       | University of Johannesburg findings  | Survey findings   |
|------------------------------|--|---|
| General merger issues        | Merger has not achieved intended objectives. Strategic reorganization, but not so much on operational level. Staff experiencing high levels of work stress. Staff turnover increasing. UJ merger going better than others.                                 | Has not fulfilled original intentions of government. Accompanied by large scale reorganization. Feeling of being stressed. Staff turnover increasing  |
| Roll-out factors             | “Us and Them” feeling largely prevalent but on the decrease. Merger pace is very slow. Operational issues extremely frustrating.   | “Us and Them” feeling. Pace of the merger is slow. Operational inefficiencies are extremely frustrating   |
| “Interim phase”              | Lack of direction. Indecisiveness. Extremely long decision making timeframes. A heightened sense of the “Big Picture”  | Lack of direction. Indecisiveness. Extremely long decision making timeframes. No sense of the “Big Picture”   |
| Leadership                   | Institutional leadership not functioning as a cohesive team. Lack of vision. Institutional leadership is not visible enough and not firm enough.   | Leaders are forceful, bordering on autocratic. Institutional leadership not functioning as a cohesive team. Lack of vision. Institutional leadership is not visible enough.   |
| Concerns of staff            | Work environment overformalised by plethora of policies and procedures. Conditions of Service is a source of confusion. Vast change still to come. Increased workloads. Academic drift at the expense of vocational programs. Resignations are increasing. | Work environment being overformalised. Conditions of Service is a source of confusion.or still not finalised. Vast change still to come. Increased workloads. Third stream income is being clamped down on. Resignations are increasing |
| Merger communication         | Very impersonal. Communicative efforts had dwindled over time. Rumours and “grapevine” is rife.  | Very impersonal. Communicative efforts had dwindled over time. Rumours and “grapevine” is rife.   |
| Future expectations of staff | Individual expectations based on personalised visions. Expectations are communal; aspects such as transparency, fairness, integrity, honesty, equality, performance culture and integration emerged.   | In ascending order, more integration of precursor institutions; better branding of the institution; a call for equality and less political game playing emerged as the most salient expectations of staff.                              |

Quite simply put, then, it seems as though the national survey indeed does reflect the findings of the University of Johannesburg, as presented by Goldman (2007b). It is therefore safe to conclude that employees at other Higher Education Institutions in South Africa do indeed share the sentiments, (in terms of merger experiences) of their counterparts at the University of Johannesburg. Although minor differences do exist, this is to be expected, as each Higher Education Institution functions in a unique environment and, therefore, has its own, unique internal dynamic. It would appear as though operational inefficiencies and associated frustrations from staff is the largest merger related challenge faced by Higher Education Institutions in South Africa. From the survey, it is obvious that there is no more time to postpone paying immediate attention to these potentially damaging operational dysfunctions. Operational inefficiencies, the slow pace of change and unresolved issues are seemingly the major hurdles to the successful roll-out of Higher Education mergers in South Africa.

## CONCLUDING REMARKS

To date, the extant literature appears to have directed scant attention to individual experiences of a merger, especially on a longitudinal basis. More detailed knowledge of how individuals experience a merger will enable business leaders to tailor change management interventions to negate the effect of these often overlooked human aspects of large-scale change and facilitate more effective execution of the merger. Although not ‘conventional’ merger due to the ideological motivation behind it, the South African Higher Education mergers have relevance to mergers worldwide; as at the end of the day employees react to change, not the reason for the change. As Higher Education Institutions worldwide are experiencing change (mergers have occurred in the UK and Germany; German speaking countries are experiencing changing academic rules and regulations, Higher Education Institutions in New Zealand are in a state of restructuring and the Bologna Process has the potential of leading to numerous changes in Higher Education throughout the EU); the South African context definitely has a global application.

Furthermore, mergers in South African Higher Education are forcing Institutions to take an introspective look at how they approach their own innovation. It is widely, and almost jokingly, speculated by academics that a university is most probably the most bureaucratic type of institution, slow to change and sluggish in taking charge of innovative opportunities. Although this situation is likely to persist, the current environment of mergers in Higher Education is an ideal opportunity for universities who have merged (and have to deal with the “business of merging” as well as the “business of higher education”) to revisit their outlook on innovation within the university. One of the biggest lessons of the mergers in South African Higher Education is the way in which Higher Education Institutions have to reinvent themselves in order to be able to compete with the non-merged institutions. Maybe, and hopefully, this energy to be innovative can permeate throughout these institutions and impact where it will be needed most – in the lecture halls and in the minds of our students.

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# CONSUMER SATISFACTION, LOYALTY AND SWITCHING BEHAVIOR IN AIRLINE INDUSTRY

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## ABSTRACT

*Consumer satisfaction, loyalty, and brand switching behavior of consumers are among the strategic topics that gained particular attention from both the scholar and business world. There is an immense body of research about each of these constructs in the marketing literature, and it is crucial to note that the relationships between them are investigated for different sectors since the dynamics of different markets affect these variables to a large extent. In this study, consumer satisfaction, loyalty and switching behavior in Turkish airline industry is considered. The objectives of the current research are two-fold. The initial intention is to examine the overall level and different dimensions of satisfaction among airline passengers in Turkey. Consequently, researchers aim to present the differences between consumer groups in terms of their involvement with and loyalty towards their current airline company. In order to classify consumers according to their switching behavior, a replication of the study of Ganesh et al. (2000), in which the authors classify consumers as stayers, satisfied switchers, and dissatisfied switchers has been done. Additionally, this research explores the attitude of these consumer groups against loyalty programs offered by airline companies. Results show that in terms of overall level and dimensions of satisfaction, and loyalty behavior there are significant differences among the consumer groups; moreover there is significant difference among the consumer groups regarding to their involvement with the airline companies. Furthermore, it is found that there is a significant difference among the three consumer groups about their attitude toward loyalty programs, where stayers give highest importance to loyalty programs offered by airline companies.*

## INTRODUCTION

The airline industry has been fighting with high fuel rates, new security requirements against terrorist attacks, fierce competition conditions based on price wars, and mergers and acquisitions in the sector. There are airline alliances which grow into acquisitions as weaker companies fight for survival (e.i. Air France-KLM, American-TWA, etc.). Furthermore, Europe's largest airline company-Air France KLM (the Franco-Dutch group)- wanted to buy the loss generating Italian airline company, Alitalia. On March 16<sup>th</sup> 2008, Alitalia's board accepted Air France-KLM's bid valued at \$1.1 billion in a move to save the struggling national carrier (Topix, 2008). In addition, British Airways has bought 28,745,767 shares of the Spanish airline Iberia at an average price of €2.34 per share, taking its holding to 13.15 % (Reuters, 2008). On March 1<sup>st</sup> 2008, Finnair and its alliance partner Cathay Pacific start code-sharing on flights between Hong Kong and the three Australian cities Sydney, Melbourne and Perth, and also to Bangkok in Thailand (Asiatraveltips, 2008). In this turbulent environment, Singapore Airlines is named as winner of the prestigious Airline of the Year title, top honor of the 2007 World Airline Awards (Skytrax Research, 2007). Thai Airways achieved an impressive performance, taking 2<sup>nd</sup> place overall in the survey, as well as walking off with the Best First Class Lounge Award, and 3<sup>rd</sup> position in the Cabin Staff section (Skytrax Research, 2007). A former Airline of the Year winner, Cathay Pacific (3<sup>rd</sup>), was a very consistent performer across the World Airline Survey (Skytrax Research, 2007). The prominent airline companies such as Air France-KLM, Lufthansa, and Gulf Air were not able to find a place in this top ten survey list. After the deregulation, Turkish Airline sector also faced with intense competition due to the increased number of players both in domestic and international flights; hence companies try to generate differences in



order to retain and acquire customers. In other words, to create customer satisfaction, brand loyalty and brand preference become critical issues for the airline companies. Furthermore, the increased competition rate in the market causes brand switching behavior among consumers. Consequently, consumer switching behavior has an impact on the profitability and even the survival of companies.

The objectives of this research can be summarized as follows: initially, the researchers aim to determine consumers' overall satisfaction level and the attributes of airline companies from which they are satisfied/not satisfied from. Consequently, these variables are classified into subgroups with factor analysis in order to see which attributes hang together in terms of determining consumer satisfaction. In the second stage, the loyalty of consumers towards their current airline company has been examined in terms of their commitment to the relationship and other explicit loyalty behavior. The loyalty expressions of consumers are also classified into subgroups with factor analysis. In addition, the involvement of consumers in terms of level of interest during the purchase process and the importance of the service/product to the individual are investigated and categorized accordingly. These research objectives are explored by considering the differences between consumer groups with different past switching behavior styles. The classification of consumers according to their switching behavior is done by replicating the study of Ganesh et al. (2000), where consumers are grouped into three as stayers, satisfied switchers, and dissatisfied switchers. Then we analyze the differences between three groups of customers with regard to their attitudes towards the loyalty programs of their current airline company.

## **CONSUMER SATISFACTION, LOYALTY AND SWITCHING BEHAVIOR**

Consumer satisfaction is a widely used construct in marketing in order to describe the difference between particular alternatives and brands. In other words, "customer satisfaction is the accumulated experience of a customer's purchase and consumption experiences" (Andreassen, 1994, p. 20). Since satisfied customers tend to consume more of the same product or service, customer satisfaction has become an essential indicator of quality and future revenue (Andreassen, 1994). Furthermore, Fornell (1994) asserts that customer satisfaction influences purchasing behavior; that is to say, satisfied customers tend to be loyal customers, however, loyal customers are not necessarily satisfied. The past research show that customer disloyalty leads to decreased market share and profitability, and sluggish company performance (Reichheld and Sasser, 1990; Rust and Zahorik, 1993; Ganesh et al. 2000). Besides, it is verified that loyal customers are more willing to pay premium prices and are also helpful in creating and delivering positive word of mouth about the company (Keaveney, 1995; Zeithaml, 2000). Hence, retaining current customers rather than attracting new customers is found to be less costly because the latter requires additional advertising and promotion expenses, and costs of explaining and teaching business procedures to the newly acquired customers (Keaveney, 1995). Even though, aforementioned benefits of customer loyalty are accepted as the initiators of loyalty programs in most customer-centric companies, some of the researchers are doubtful about the implementation of customer retention and loyalty efforts (Ganesh et al. 2000; Dowling and Uncles, 1997). The main reason of this doubtful approach is clearly stated by Ganesh et al. (2000) who argue that some of the most satisfied and loyal customers might still switch for reasons beyond the control of the firm and at times even beyond the control of the customer. In addition the study of Van Trijp et al. (1996), has proved that consumers switch brands in order to satisfy their need for variety, and switching behavior takes place when consumer involvement is lower and when smaller differences are perceived among alternatives. This study has illustrated that both personal factors and specific factors about the product category influence the switching behavior of consumers. In other words, it is difficult to generalize the satisfaction, loyalty relationship when there are so many influences triggering brand switching.

According to Ganesh et al. (2000), the customer base of a company consists of three groups: stayers, satisfied switchers, and dissatisfied switchers. Understanding the attitudes of these three different groups of customers plays an essential role when implementing effective and feasible retention and loyalty strategies. The basic contribution of the article of Ganesh et al. (2000) is that, the authors examined the customers, who have switched from a service provider to a new one in terms of their satisfaction with and loyalty towards the new company. Lin et al. (2003) replicate this study in U-V skincare products and find that satisfaction with the services provided by UV-skincare companies and the satisfaction with and loyalty towards these customers' currently used brand differ among the three customer groups. Our research applies the study of Ganesh et al.

(2000) to another service sector: airline companies. In line with the research objectives of this research that are given in the introduction part, the major hypotheses of the research can be listed as follows:

**H<sub>1</sub>:** There is a significant difference between the overall satisfaction levels of three groups of consumers (stayers, satisfied switchers and dissatisfied switchers).

**H<sub>2a</sub>:** All else being equal, compared with satisfied switchers and stayers, dissatisfied switchers are more satisfied with their current airline company.

**H<sub>2b</sub>:** Compared with stayers, satisfied switchers are less satisfied with their current airline company.

**H<sub>3a</sub>:** There is a significant difference among three groups of consumers in terms of their satisfaction with both “core features and services” and “price and timeliness” factors.

**H<sub>3b</sub>:** Compared with both satisfied and dissatisfied switchers, stayers are more satisfied with “core features and services” of their current airline company.

**H<sub>4a</sub>:** There is a significant difference among three groups of consumers about their purchase and ego involvement with the airline company.

**H<sub>4b</sub>:** Compared with satisfied switchers, dissatisfied switchers exhibit higher levels of purchase involvement.

**H<sub>4c</sub>:** Compared with stayers, both satisfied and dissatisfied switchers exhibit lower levels of ego involvement.

**H<sub>5a</sub>:** There is a significant difference between three groups of consumers with their both active and passive loyalty behavior toward the airline company.

**H<sub>5b</sub>:** Compared with satisfied switchers and stayers, dissatisfied switchers are more loyal to their current airline company (in terms of both active and passive loyalty).

**H<sub>5c</sub>:** Compared with stayers, satisfied switchers are less loyal to their primary airline company (in terms of both active and passive loyalty).

**H<sub>6a</sub>:** There is a significant difference between three groups of consumers in terms of their attitude towards loyalty programs of airline companies.

**H<sub>6b</sub>:** Compared with satisfied and dissatisfied switchers, stayers give more importance to loyalty programs of airline companies.

## RESEARCH DESIGN

### Data Collection and Sampling

The data for this research was collected through an online survey, which was constructed according to the research objectives and hypotheses of the study. The questionnaire link was sent to 27 different randomly chosen e-groups and to a customer database with 10,000 members that was taken from a consultancy firm. By this way, the survey reached approximately to 20,000 people. A total of 785 consumers fulfilled the survey, but of this the valid number of responses was 732. In the initial part of the study, the respondents were asked about how frequently they fly, and about their last flight time. Then the respondents were asked about their most far flight destination. The participants also answered whether they use the same airline company for all of their flights or not, and whether their current airline company was their primary choice for flights. If their answer was “no” then they stated the reason why they switched from one airline company to other. For the rest of the survey, the scales that were used by Ganesh et al. (2000) were adapted to the current research. The demographic profile of the respondent group is presented in Table 1. To test the hypotheses, we designed our survey to collect information about a) demographic characteristics, b) whether the consumers are switching their airline companies for reasons other than dissatisfaction and unavailability of a flight destination, or whether they’re always choosing the same company, or whether they’re switching because of dissatisfaction, c) overall satisfaction level of these three consumer groups with current primary airline company, d) satisfaction of with the individual aspects of the airlines, e) purchase and ego involvement associated with the choice of the airline company, f) consumers’ sense of loyalty towards the airline companies, and g) consumers’ attitudes towards loyalty programs of airline companies.

All of the scales that were used to measure the aforementioned constructs of this research, except the attitude towards loyalty programs, were either fully or partially borrowed from the study of Ganesh et al. (2000). The overall satisfaction is measured by using a 4-point Likert-scale. The question to identify the individual aspects of satisfaction is composed of seven items and measured through a 4-point Likert-scale (1=very

dissatisfied, 4=very satisfied). In addition, each of the loyalty and involvement scales were consisted of six items and measured through a 4-point Likert-scale (1=strongly disagree, 4=strongly agree). To measure the reliability of these constructs Cronbach's alpha was used, and the  $\alpha$  scores of each of the constructs were above the acceptable level of 0.60 (Hair et al., 1998). For satisfaction scale  $\alpha$  score was 0.71, and for both involvement and loyalty constructs, the  $\alpha$  score was 0.60. Factor analysis was conducted in order to group the satisfaction aspects, involvement, and loyalty constructs. Principal components method was used while conducting the factor analysis. In addition, Varimax rotation has been used to see which variables load together.

**Table 1: Demographic Profile of Respondents**

| AGE                             | 18-25     | 26-35           | 36-45           | 46-55           | 56-65           | >66             |                 |             |
|---------------------------------|-----------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------|
|                                 | 17%       | 39%             | 24%             | 15%             | 4.5%            | 0.5%            |                 |             |
| GENDER                          | Female    | Male            |                 |                 |                 |                 |                 |             |
|                                 | 39%       | 61%             |                 |                 |                 |                 |                 |             |
| ANNUAL INCOME<br>(1\$≈1.30 YTL) | <9000 YTL | 9001-14999 YTL. | 15000-23999 YTL | 24000-35999 YTL | 36000-47999 YTL | 48000-59999 YTL | 60000-99999 YTL | >100000 YTL |
|                                 | 12%       | 14%             | 15%             | 11.5%           | 11%             | 9%              | 12%             | 15.5%       |

## Overall Satisfaction

$H_1$ ,  $H_{2a}$  and  $H_{2b}$  are relevant to differences among the three groups regarding to their overall satisfaction with their current primary airline company.  $H_1$  states that there is a significant difference between the overall satisfaction levels of three groups of consumers, and  $H_{2a}$  states that compared with satisfied switchers and stayers, dissatisfied switchers are more satisfied with their current airline company, whereas  $H_{2b}$  testify that satisfied switchers are less satisfied with their current airline company than stayers. In order to test these hypotheses, we compared group means on the overall satisfaction item using ANOVA. The results show that the groups differ significantly in their overall satisfaction with their current primary airline company (see Table 2). This provides evidence for hypothesis  $H_1$ . And, the results indicate that both stayers (mean score=3.13) and dissatisfied switchers (mean score= 3.13) are significantly more satisfied with their current airline company than satisfied switchers (mean score=2.99). This provides a partial support for the  $H_{2a}$  since the mean scores of stayers and dissatisfied switchers are same, and they're both higher than that of satisfied switchers. However, this result also gives support to  $H_{2b}$  which states that satisfied switchers are less satisfied with their current airline company than stayers. Hence,  $H_1$  and  $H_{2b}$  are fully substantiated but  $H_{2a}$  is partially supported.

**Table 2: Overall Satisfaction Measure: Difference Between Group Means**

| Measure   | Groups                        | Mean Scores | ANOVA Sig. |
|---|-------------------------------|-------------|------------|
| Overall, how satisfied are you with your primary airline company? | Stayers (n=415)               | 3.13        | 0.004      |
|   | Satisfied switchers (n=215)   | 2.99        |            |
|   | Dissatisfied switchers (n=45) | 3.13        |            |

## Dimensions of Satisfaction

In order to test the subsequent hypotheses that pertain to group differences with regard to satisfaction with the individual aspects of the service provided by the companies, involvement and loyalty, the individual measures of these three constructs were factor analyzed to identify their measurement properties and dimensionality. For the seven satisfaction items, eigenvalues indicated a two-factor solution with a total explained variance of 55%, and in Table 3 we submit the items and the corresponding factor loadings. Five of the satisfaction items loaded highly on the first factor and these items are related with the quality and variety of the core features and services provided by the airline companies, so it is interpreted as the "core features &

services” factor. The rest two items-price and on-time flights- loaded on the second factor which is interpreted as “price & timeliness” factor.

## Dimensions of Involvement

A factor analysis of the involvement items revealed a two factor solution, which is consistent with that of Ganesh et al. (2000). The three items that were loaded high on the first factor are related with being involved with the particular purchase decision of choosing an airline company. Hence, this factor was interpreted as “purchase involvement”. The rest three items, which were related with the importance and compatibility of the service/product with the consumer, constitute the second factor and it was called as “ego involvement”. Table 4 illustrates the involvement items and the corresponding factor loadings, eigenvalues and total explained variance.

**Table 3: Factor Analysis Results for Satisfaction Items**

| Items  | Core Features & Services | Price & Timeliness |
|--|--------------------------|--------------------|
| Flight destination variety of the airline company  | 0.78                     |                    |
| Agents of the airline company (plenty of and reachable agents, availability of online services, call centers etc.) | 0.77                     |                    |
| Flight crew & personnel  | 0.71                     |                    |
| Service quality during flight  | 0.61                     |                    |
| Comfort of seats   | 0.47                     |                    |
| Ticket Prices  |                          | 0.88               |
| On-time flights  |                          | 0.61               |
| <b>Eigenvalues</b>   | 2.7                      | 1.1                |
| <b>Total Variance Explained: 55%</b>   |                          |                    |

**Table 4: Factor Analysis Results for Involvement Items**

| Items   | Purchase Involvement | Ego Involvement |
|---|----------------------|-----------------|
| I carefully compared several airlines on distinct attributes before choosing one of them to fly with.       | 0.78                 |                 |
| I’m usually well-informed about a reasonable price for a specific destination.                              | 0.72                 |                 |
| After deciding on my current airline company, I have weighed the pros and cons of my choice.                | 0.57                 |                 |
| The brand image of the airline company played a major role in my decision to become a customer of the bank. |                      | 0.78            |
| The airline company that I fly with says a lot about who I am.  |                      | 0.72            |
| It is important for me to get the approval of my family and friends regarding to my airline company choice. |                      | 0.68            |
| <b>Eigenvalues</b>  | 1.25                 | 2.03            |
| <b>Total Variance Explained: 55%</b>  |                      |                 |

## Dimensions of Loyalty

A factor analysis of the six items that measure customers’ loyalty toward their current primary airline company shows a two-factor solution with a total explained variance of 66%. The loyalty items and their factor loadings and eigenvalues are presented in Table 5. The first factor is consisted of items that are related with consumers’ willingness to make positive word of mouth and their intentions to fly more with the airline company. Therefore, this factor is labeled as “active loyalty”. The remaining three items were loaded high on the

second factor which is relevant to competitive price immunity and self-stated retention; hence this factor is named as “passive loyalty”.

## Consumer Group Differences Regarding to Satisfaction, Involvement, and Loyalty Factors

The one-way ANOVA test was conducted in order to see group differences in terms of satisfaction, involvement, and loyalty factors (see Table 6). It is revealed that three consumer groups are statistically different regarding to all of the factors, namely: core features and services, price and timeliness; purchase and ego involvement; and active and passive loyalty at a significance level of 0.05.  $H_{3a}$  states that there is a significant difference among three groups of consumers in terms of their satisfaction with both “core features and services” and “price and timeliness” factors. The ANOVA results confirm the hypothesis  $H_{3a}$ . Likewise,  $H_{4a}$  testifies that there is a significant difference among three groups of consumers about their purchase and ego involvement with the airline company. Since the ANOVA results for purchase and ego involvement are significant at the level of 0.05,  $H_{4a}$  is also substantiated. Similarly,  $H_{5a}$  states that there is a significant difference between three groups of consumers with their both active and passive loyalty behavior toward the airline company. The hypothesis  $H_{5a}$  is also validated at a significance level of 0.05.

A deeper look at the ANOVA findings shows that  $H_{3b}$ , which states that compared with both satisfied and dissatisfied switchers, stayers are more satisfied with “core features and services” of their current airline company, is also substantiated. Furthermore, this dimension of satisfaction is the most differentiating one due to its high F value (15.16). On the other hand,  $H_{4b}$  and  $H_{4c}$  pertain to group differences with regard to purchase and ego involvement, respectively.  $H_{4b}$  stresses that dissatisfied switchers exhibit higher levels of purchase involvement than the satisfied switchers. The dissatisfied switchers has a mean value (2.96) which is higher than that of satisfied switchers (2.92) at a significance value of 0.018 ( $p = 0.05$  level), so  $H_{4b}$  is supported. In addition,  $H_{4c}$  asserts that both satisfied and dissatisfied switchers exhibit lower levels of ego involvement than stayers. However, as seen in Table 6, only satisfied switchers (mean score=2.24) show lower ego involvement than stayers (mean score=2.38), whereas dissatisfied switchers has the highest mean score (2.42). Therefore,  $H_{4c}$  is partially substantiated.  $H_{5b}$  and  $H_{5c}$  are related with group differences with regard to groups’ loyalty toward the airline company, and the former hypothesis states that dissatisfied switchers are more loyal to their current airline company than the stayers and satisfied switchers.  $H_{5b}$  is supported in terms of “active loyalty”, since dissatisfied consumers have the highest mean value (2.92) among the consumer groups, and they are followed by stayers and satisfied switchers, respectively. However, in terms of “passive loyalty”, stayers (mean=2.53) are slightly more loyal than dissatisfied switchers (mean=2.50). Hence,  $H_{5b}$  is partially supported. In addition,  $H_{5c}$  states that satisfied switchers are less loyal than stayers. This hypothesis is substantiated since satisfied switchers have lower mean scores than stayers for both “active” and “passive” loyalty.

**Table 5: Factor Analysis Results for Loyalty Items**

| Items   | Active Loyalty | Passive Loyalty |
|---|----------------|-----------------|
| I would highly recommend my current airline company to my friends and family.                                       | 0.82           |                 |
| In the near future, I intend to fly more frequently and to a variety of destinations with this airline company.     | 0.81           |                 |
| I see myself as a frequent and regular customer of this airline company.  | 0.64           |                 |
| If a competing airline company were to offer a promotional deal or discount, I would switch.                        |                | -0.80           |
| If my current airline company were to raise its ticket prices, I would still continue to be its customer.           |                | 0.77            |
| I do not foresee myself switching to another airline company, even if my friends recommend another airline company. |                | 0.65            |
| <b>Eigenvalues</b>  | 2.8            | 1.1             |
| <b>Total Variance Explained: 66%</b>  |                |                 |

**Table 6: Customer Group Means and Sig. Levels for Satisfaction, Involvement and Loyalty Factors**

| FACTORS                  | Stayers |      | Satisfied Switchers |      | Dissatisfied Switchers |      | F     | ANOVA Sig. |
|--------------------------|---------|------|---------------------|------|------------------------|------|-------|------------|
|                          | n       | Mean | n                   | Mean | n                      | Mean |       |            |
| Core Features & Services | 387     | 3.03 | 200                 | 2.84 | 41                     | 2.86 | 15.16 | 0.000      |
| Price & Timeliness       | 411     | 2.67 | 209                 | 2.82 | 43                     | 2.73 | 5.44  | 0.005      |
| Purchase Involvement     | 384     | 2.81 | 202                 | 2.92 | 40                     | 2.96 | 4.02  | 0.018      |
| Ego Involvement          | 383     | 2.38 | 203                 | 2.24 | 42                     | 2.42 | 4.17  | 0.016      |
| Active Loyalty           | 410     | 2.92 | 212                 | 2.68 | 44                     | 2.94 | 14.61 | 0.000      |
| Passive Loyalty          | 391     | 2.52 | 200                 | 2.39 | 42                     | 2.50 | 6.30  | 0.002      |

## Consumer Group Differences Regarding to Loyalty Programs

The basic contribution of this study is to evaluate the three consumer groups in terms of their attitude toward loyalty programs offered by airline companies. Since the majority of the airline companies invest too much on loyalty programs, it plays a vital role to learn which group really cares for these programs. The respondents were asked whether they give importance to loyalty programs such as frequent flyer, shop & miles, co-branded campaigns, multi merchant programs, loyalty coupons, and etc. This statement is measured through a 4-point Likert-scale question (1=strongly disagree, 4=strongly agree). From Table 7, it is seen that there is a significant difference between three groups of consumers in terms of their attitude towards loyalty programs of airline companies (sig. value=0.00). This provides support for hypothesis  $H_{6a}$ . Additionally,  $H_{6b}$  states that stayers give more importance to loyalty programs of airline companies than satisfied and dissatisfied switchers. Since the mean value of stayers is 2.79 which is higher than those of both satisfied (mean value: 2.56) and dissatisfied switchers (mean value: 2.55), it can be concluded that  $H_{6b}$  is also substantiated. Hence the customers, who regularly use an airline company as their primary choice, are the people who give importance to the existence of loyalty programs. Furthermore, the customers who are switched from a previous airline company for reasons of dissatisfaction or who are switched because of reasons other than dissatisfaction do not give importance to loyalty programs as much as stayers. It can be concluded loyalty programs that are directed to stayers will be more beneficial for the airline companies.

**Table 7: Customer Group Means and Sig. Levels for Loyalty Programs**

|   | Stayers |      | Satisfied Switchers |      | Dissatisfied Switchers |      | ANOVA Sig. |
|---|---------|------|---------------------|------|------------------------|------|------------|
|   | n       | Mean | n                   | Mean | n                      | Mean |            |
| I give importance to loyalty programs (frequent flyer, multi merchant programs, loyalty coupons, shop & miles, etc.) of my airline company. | 396     | 2.79 | 199                 | 2.56 | 42                     | 2.55 | 0.000      |

## CONCLUSIONS

This study has aimed to identify and understand the nature of the relationship between overall satisfaction, the dimensions of satisfaction, involvement, and the loyalty or switching behavior of consumers in the airline industry of Turkey. The findings of this study show that consumer satisfaction is composed of two main dimensions: “core features & services” and “price & timeliness”. In addition, the involvement with the primary airline company is consisted of “purchase involvement” and “ego involvement”, where purchase involvement deals with the level of interest in the purchase process that is initiated by the need to consider a particular purchase. On the other hand, ego involvement is defined as the importance of the product to the individual and individual’s values and self-concept. It is also found that loyalty toward the current primary airline company has also two dimensions, namely: “active” and “passive” loyalty. The results indicate that three consumer groups significantly differ in terms of their “overall satisfaction level”, and satisfied switchers are found to be the consumer group with the lowest overall satisfaction level. The two individual dimensions of satisfaction-“core features & services” and “price & timeliness”- also specify a significant difference among the

three groups. In addition, “core features & services” is the satisfaction dimension with highest mean scores and F value, which indicates a major difference between consumer groups. It is seen that stayers are more satisfied with the “core features & services” aspect of satisfaction. The purchase and ego involvement both lead to difference among consumer groups. Dissatisfied switchers exhibit higher levels of purchase and ego involvement. In terms of loyalty, the three consumer groups show significant differences, and in terms of active loyalty dissatisfied switchers have the highest mean scores. Because of their negative experiences, dissatisfied consumers are assumed to have high levels of dissonance and this may lead them to engage in dissonance reducing activities such as spreading word of mouth-which is accepted as active loyalty. In addition, switching costs and involvement may lead stayers to exhibit passive loyalty. However, for passive loyalty, stayers have a slightly high score than dissatisfied switchers. Furthermore, satisfied switchers exhibit low levels of both active and passive loyalty. This study also examines the attitude of consumers against loyalty programs offered by airline companies. The results reveal that the three consumer groups are again significantly different regarding to their attitude toward loyalty programs. It is seen that stayers give high importance for these programs of airline companies. Hence, the loyalty programs that are designed for and directed to stayers will be more efficient and effective.

Our results propose that companies in the airline travel industry essentially confronted with managing three distinct consumer groups: dissatisfied switchers, satisfied switchers, and stayers. In order to successfully target consumers with loyalty programs there is a need for knowledge about these people. It is required to treat these segments differently with regard to potential investment strategy. The findings of this research provide a worthy reference for airline travel industry in utilizing existing consumer databases and formulating marketing strategies to acquire and retain consumers by targeting different consumer groups.

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# **NEW APPROACH TO STUDYING AND MEASURING A PUBLIC POLICY STATUS**

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## **ABSTRACT**

*A new Approach for studying Public Policy based on a special Index is described. Methodology for constructing the Index is given. The specially elaborated Questionnaires for collecting Data on Maturity of Public Sphere Actors as well as on Society Democratization and Openness by polling and interviewing three Groups of Respondents (Businessmen, NGO-people and State employees) are applied. The Mathematical Model for Calculating Values of the YN-Index are presented. This Instrument was applied for the Period 2004 - 2007 in 16 Russian Regions. Findings of Research are presented and discussed.*

## **INTRODUCTION**

Qualitative Research is a prevailing Tendency in Public Policy Studies. Majority of Publications dealing with various Public Policy Issues for many years in different countries describe mainly structural, economic, philosophical and social aspects of this field. (Bueme, 1974, Truman, 1971, Habermas, 2000, Young, 2000, Nikovskaya and Yakimets, 2007a)

At the same time due to the globalization process as well as an increasing system complexity and many other new challenges the practice of Public policy invoke new – quantitative - approach to studying, measuring and monitoring of the Public Policy Status at the regional and national levels.

In this Paper a new Approach for studying Public Policy based on measuring a Status of Public Sphere Subjects as well as a Level of Society Democratization and Openness is described (Nikovskaya and Yakimets, 2007b). The core for this Approach is a special type of Index, constructed in a way to collect data from three core groups of actors, such as representatives of regional Government, Business and Nonprofit Organizations. Collected information by the help of special procedures is transformed into 3 different sub-indexes. Due to such indexes an Opportunity occur to evaluate the regional Public Policy Status, to reveal weaknesses and to design recommendations for improvement. In addition one can use this approach for developing system for monitoring Public Policy Transformations. Studies based on this approach implemented in more than 20 Russian regions for period of 2005 – 2007 confirmed effectiveness of this instrument. To be more competitive and innovative any Government has to possess modern quantitative methodologies. This is especially true if one take into account dissemination of Good Governance Concept and Practices as well as Activities connected to Electronic Government Promotion (Yakimets, 2008).

## **METHODOLOGY**

Methodology developed by authors consists of 5 complementing Components (A-E):

- A. Procedure of selecting and grouping key parameters for studying Public Policy;
- B. Developing sociological instruments for collecting and treating primary Data;

- C. Designing Structure of Index for Public Policy Measuring (named YN – Index);
- D. Mathematical Model for calculating Values of various Indexes for Regions under Investigation (Yakimets, 2006);
- E. Visualization of Preliminary and final Results.

Short description of the above Components are given below.

- A. The initial Set of Parameters extracted by the Authors from Literature and the own Studies included about 35 qualitative Characteristics. By the specially constructed Filtering Procedure 17 of them categorized into 2 groups were selected. The first of this group include parameters describing what we named as Characteristics for Public Sphere Institutions Maturity Evaluation. The second Group consist of parameters describing Society Democratization and Openness.
- B. To collect data from three core groups of respondents (representatives of regional Government, Business and Nonprofit Organizations) a corresponding set of sociological instruments such as questionnaires, interviews, content analysis, etc. was elaborated, tested and prepared for computer treatment and calculations.
- C. A Study of Public Policy at Regional Scale is characterized by multidisciplinary and multiobjective nature. To reflect such a Nature the authors developed the structurized YN-Index. It includes two variants of primary Indexes – Index for Evaluating Public Sphere Institutions Maturity along with Index for Evaluation of a Society Democratization and Openness and several composite Indexes such as separate combined Indexes for different groups of respondents as well as integral Index (without splitting respondents into groups).
- D. As selected parameters were separated into 2 groups two different questionnaires and the other sociological instruments were constructed. For instance, a questionnaire for Evaluation of a Society Democratization and Openness included some statements related to 8 parameters. On the other hand a Questionnaire for Evaluating Public Sphere Institutions Maturity consists of statements related to the other 9 parameters.

In many cases the respondent was requested to evaluate each parameter by using 10-score scale ( with 10 as the maximum and 1 as the minimum).

By compiling Respondents Evaluations two Matrices of Estimates were obtained, namely:

$\begin{bmatrix} d_{ij} \end{bmatrix}_k^r$  - matrix of a Society Democratization and Openness estimates consisting of Estimates by Respondents of  $k$  - th Group from the  $r$ -th Region.

In other Words three Matrices of this Type  $D_k^r$  were obtained for each of core Groups of Respondents

- Matrix for State Employees -  $D_1^r$ ; Matrix for Businessmen -  $D_2^r$  and Matrix for NGOs Representatives -  $D_3^r$ .

Following Notations are used:

$i = 1, 2, \dots, n^d$  - the Number of Parameters for evaluating Society Democratization and Openness,  $n^d$  - Number of these Parameters;

$i = 1, 2, \dots, n^s$  - the Number of Parameters for evaluating Public Sphere Institutions Maturity,  $n^s$  - Number of these Parameters;

$j = 1, 2, \dots, m_k^r$  - the Respondent Number,  $m_k^r$  - Number of Respondents for  $k$  -th core Group, interviewed in  $r$  -th Region,

$r = 1, 2, \dots, R$  where  $R$  - Number of Regions under Study.

$\begin{bmatrix} s_{ij} \end{bmatrix}_k^r$  - Matrix of Estimates for Public Sphere Institutions Maturity, constructed as the previous one.

Using Data from the above Matrixes for each  $i$ -th Parameter of each core Group collective Estimates were calculated:

$$d_i^k = \frac{\sum_{j=1}^{m_k^r} d_{ij}}{m_k^r}$$

(1)

- collective Estimate of Society Democratization and Openness for  $k$  - th core Group from  $r$  -th Region.

$$S_i^{rk} = \frac{\sum_{j=1}^{m_i^r} S_{ij}^r}{m_k^r}$$

(2)

- collective Estimate of Public Sphere Institutions Maturity for  $k$  - the core Group from  $r$  -th Region.

At the next Step collective Estimates  $d_i^{rk}$  and  $s_i^{rk}$  used for calculating YN-Indexes:

$$D^{rk} = \frac{\sum_{i=1}^{n^d} d_i^{rk}}{n^d \cdot 10}$$

(3)

- to calculate Values of the YN-Index of Society Democratization and Openness for each  $k$  -th core Group of Region under Study.

$$S^{rk} = \frac{\sum_{i=1}^{n^s} s_i^{rk}}{n^s \cdot 10}$$

(4)

- to calculate Values of the YN-Index of Public Sphere Institutions Maturity for each  $k$  -th core Group of Region under Study.

As a Result in each of two Cases three Values of the YN-Indexes for each core Groups are calculated. These Values are varied from 0 (minimum) to 1 (maximum).

The composite Index can be easily calculated by summing up Estimates for all three core Groups.

For instance the composite YN-Index of the Society Democratization and Openness is calculated as follows:

$$D^r = \sum_k^3 D^{rk}$$

(5)

And finally one can calculate the so-called Integral YN-Indexes for each Region:

$$D^r = \sum_{k=1}^3 D^{rk} = \frac{\sum_{k=1}^3 \sum_{i=1}^{n^d} d_i^{rk}}{n^d \cdot 10}$$

(6)

and

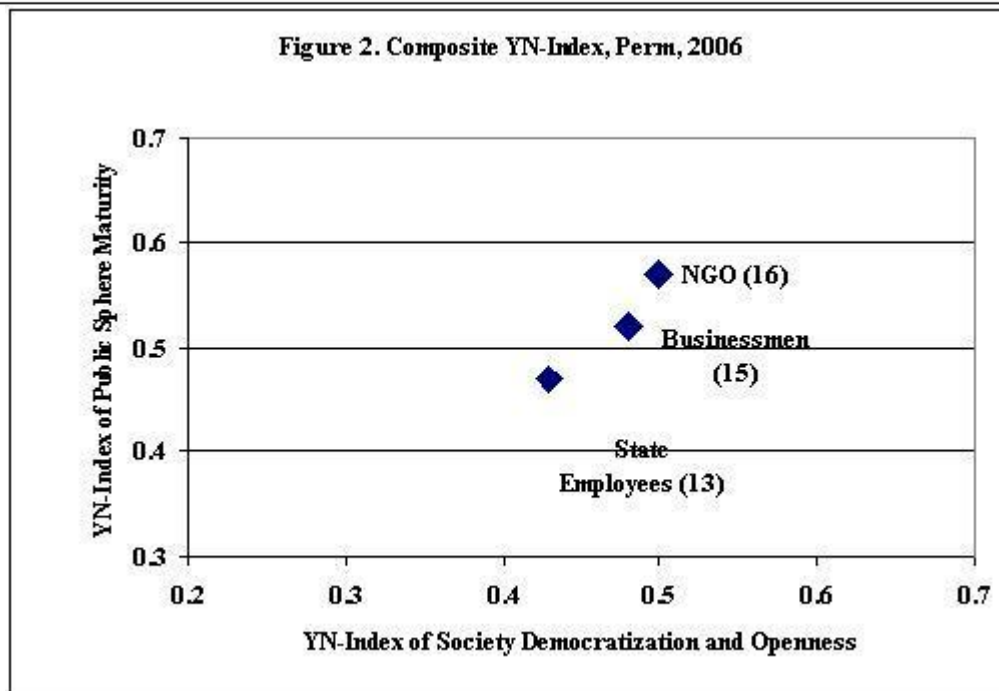
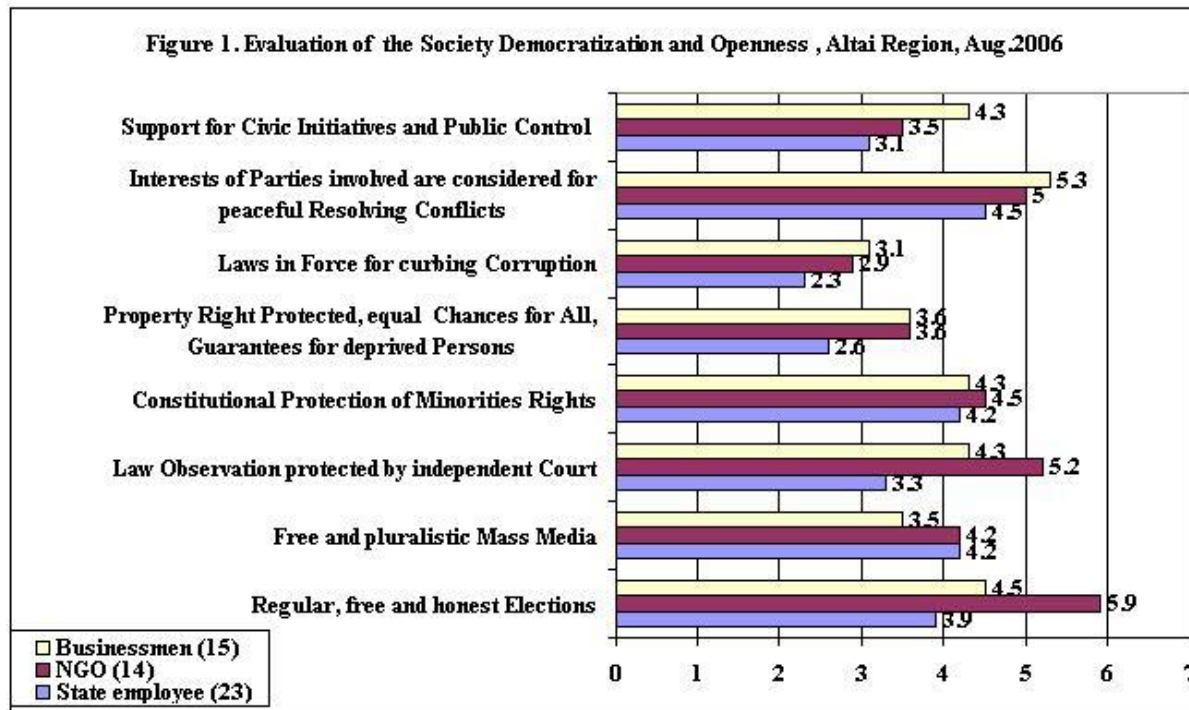
$$S^{rr} = \sum_{k=1}^3 S^{rk} = \frac{\sum_{k=1}^3 \sum_{i=1}^{n^s} s_i^{rk}}{n^s \cdot 10}$$

(7)

E. Visualization of calculated values can be given in two variants: in the form of histograms or in the form of two-dimensional pictures.

## FINDINGS AND INTERPRETATIONS

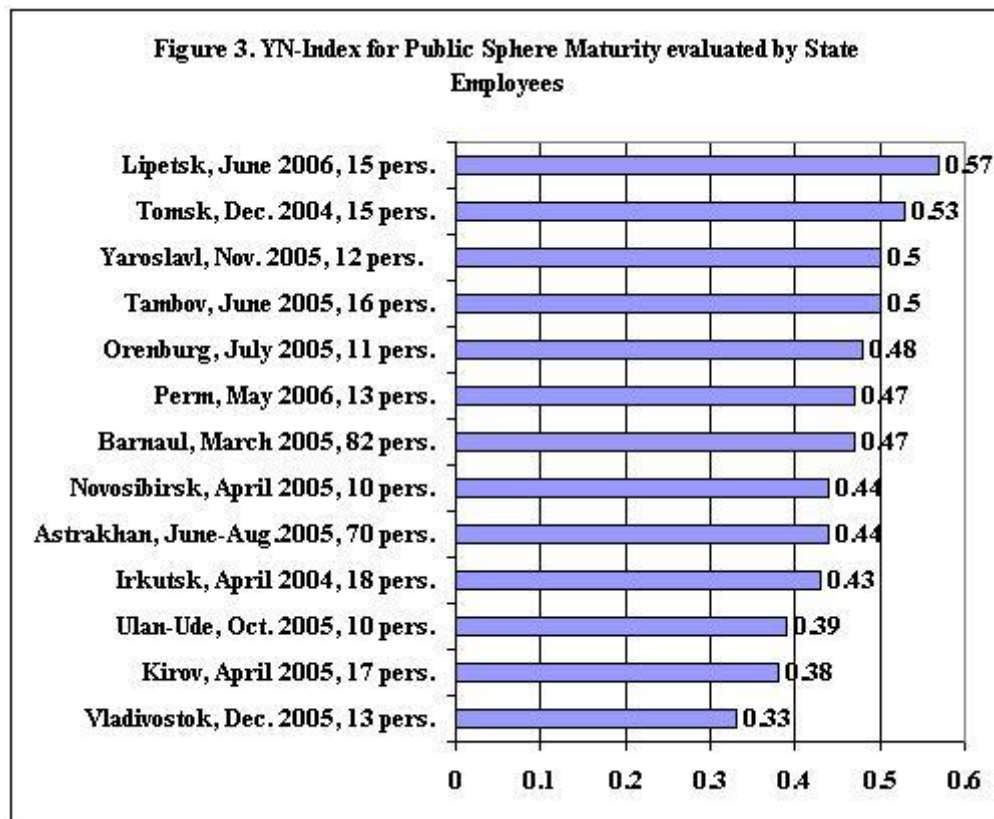
The Methodology described above was applied in a Field Studies in 16 Russian Regions for Period 2004 – 2007. In some of such Regions Field Studies were conducted two or more times. In this Paper some Findings will be outlined. In Fig.1 Collective Estimates of the Society Democratization and Openness are shown in a form of histograms, calculated by applying Formula (1) and (2). According to this Picture one can easily observe that Representatives of NGO and businessmen in average more optimistically evaluate the Status of the Society Democratization and Openness.



With the help of Formula (3) and (4) the corresponding YN-Indexes are calculate. The results of calculation can be presented in the two-dimensional Picture (Fig.2).

In this case one can see that the previously observed trends are much more clearly reflected for all three core Groups.

For some reasons it can be interesting to compare what are differences among Regions for one or the other YN-Index. In Fig.3 we see that the State Employees from Lipetsk Region with more enthusiasm evaluate the Public Sphere Maturity than in all other Regions under Study. It can be explained, first, by the “Donor” Status of this Region with respect to the Country Budget compared to the other 80 russian Regions and, second, by more sustainable Activities of the Regional Administration.



In Fig.4 one can compare conditions for activities and surviving of NGOs in various Regions. The Authors Experience confirms that within the Perm Region the most productive and fruitful legislative and economic conditions for promoting civic initiatives were established.

Looking at Fig.5 where Estimates of all three core Groups are combined we may observe that Regions under Study are split along with both “axes”. It means that Regional Public Policy is quite clearly described by both Composite YN-Indexes. Namely, two Regions – Tomsk and Perm - obtained the highest Values compared to the other Regions. As a matter of fact the Integral YN-Index gives us opportunity to see interregional Public Policy “Picture” as a whole.

## CONCLUSIONS

The new Methodology proposed and described in this Paper makes significant contribution to the Methods for Studying Public Policy. This is a quantitative Addition to the prevailing Set of qualitative Instruments. As one can see this new Approach allows to confirm tendencies or what is much more important to expand Ways for Investigating Public Policy.

As far as Businessmen concerned a Comparison of their Attitude and Evaluations with the Views and Opinions of other core Actors of a Regional Public Policy allow them to obtain real Data on the Maturity of Public Institutions as well as to improve their own Activities within Regional Framework too (Nikovskaya, 2008, Nikovskaya and Yakimets, 2005).

Figure 4. Composite YN-Index by NGO Estimates

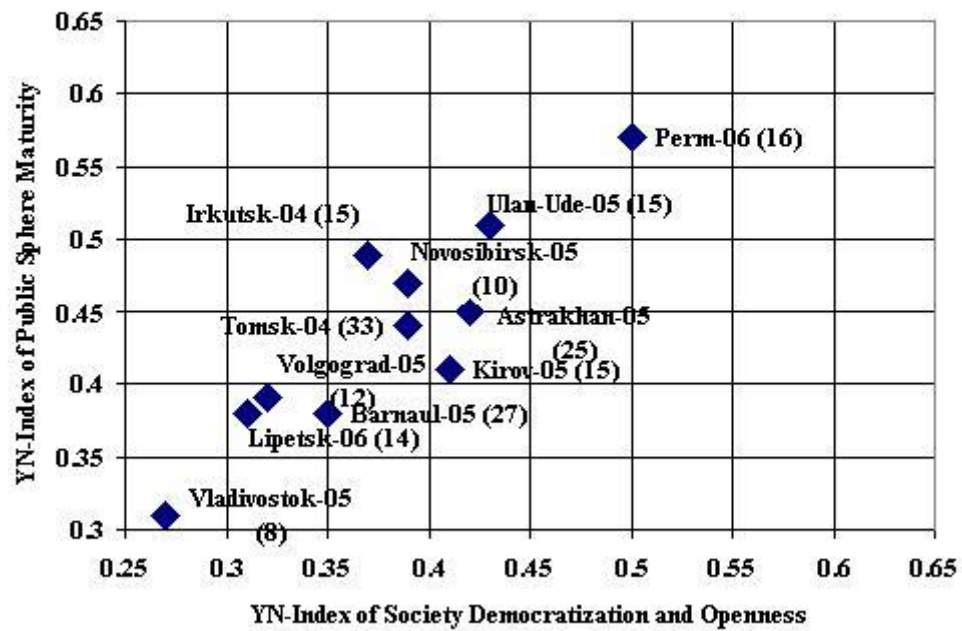
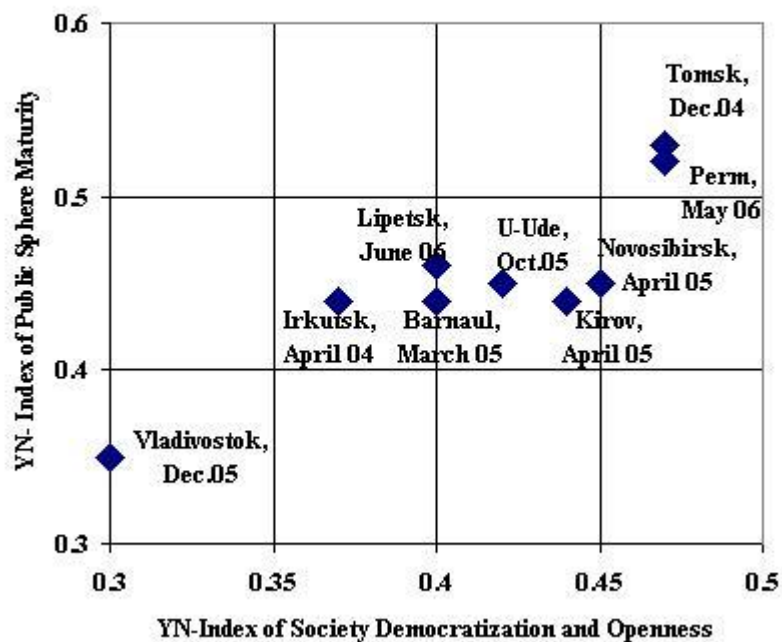


Figure 5. Integral YN-Indexes for Regions under Study



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# **DISTANCE LEARNING AND CORPORATE TRAINING IN BRAZIL: THE IMPORTANCE OF EDUCATIONAL TECHNOLOGY**

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## **ABSTRACT**

*The article focus the importance of distance learning and corporate training in brazil. Organizations increasingly emphasize the importance of continuous education in order to develop a strategic adjustment of competences and requirements for the employees. Looking into this reality corporate education has increased in brazil and it may contribute to the inclusion of many people in society, reducing the social exclusion. The paper also emphasize the information technology in education and schools in brazil.*

## **INTRODUCTION**

Regardless of the approach given on the new scenario, an unprecedented value to the education can be realized. A continuous education, common in an education-based society aware of the importance to generate and take advantage of opportunities so that people can develop.

Doing more and better outlines the path to achieve results in an ever-changing world.

We are living a unique moment in the history of science, where most scientific events of all times ever are now developing.

Human knowledge is rapidly increasing. Short time ago it was believed that knowledge used to double every eighteen months; but lately, it doubles up every nine months. The world has become collectively smarter, therefore, more complex. There are lots of catalogued books, homepages on the Internet, doctoral theses, articles and others, which stand for a live witness of this effort.

These historical conditions have demanded for a greater deal of specialized knowledge. A trend to qualify and train people can be observed. The value given to education, formerly limited to the academic world has been increasingly, as required by organizations to meet the needs of the production sector.

The companies are compelled to recognize the relentless reality of the modern times - the need for updating the people's knowledge. That is why on outlining their personnel's policies, the organizations increasingly emphasize the Continuous Education in order to develop a strategic adjustment of competences and requirements for the employees (Bayma, 1994).

Despite the supermodern character of the world, we have testified high rates of illiteracy, social exclusion and educational exclusion bringing up such priority matters as the result of a long historical debt. A long social debt that needs to be reverted through the implementation of public policies and concrete actions. There are sixteen million of young and adults totally illiterate, in spite of the graduation of over 6,500 doctors (PhD) per year in Brazil (MCT,2004). A country of hugely impressive contrasts.

Looking into this reality, evaluations have revealed that Distance Learning is far from being a magic solution, but as properly used, it may contribute to the inclusion of many people in the society, reducing the social exclusion. Distance Learning is not a new fact; in Brazil it dates over a century, but with no means/scale to provide access to the education to all those in need of it.



Distance Learning was mainly directed to those economically less favorable clusters, thus being unfolded under the stigma of a second-class education, surrounded by prejudice, and regarded by many as the cause of job losses. Nevertheless, both the traditional and the new generation of Distance Learning will continue requiring the teacher's assistance. When dealing with complex fundamental and delicate areas such as educational, some have recommended caution.

Internet expansion and enhancement of information and communication technologies have provided the basis for the development of the e-learning and the Distance Learning. It is worth mentioning the inception of corporate networks, stimulating and granting the Distance Learning a new status. Therefore, the use of Intranet and Internet has promoted big jumps in corporate training. We have realized that not only the technologies have systematically becoming increasingly more complex, but also the desire to include those willing to get access to education, whether face-to-face classes or not. Whereas in the past it was senseless to regard Distance Learning as a secondary method, nowadays it is even more senseless. Paulo Freire (1996) used to highlight the curiosity that technology represents to the youngsters, adults and children, and as we know, lack of curiosity makes the wishful thinking impossible. In a world crying out for innovation, it is of paramount importance the creative spirit involved by dreams and lots of imagination. Online education is also education, whereby the technology enables other forms of interaction between people without putting aside the need of a competent teacher. When Distance Learning is well done, it does not represent an omission, instead, another way of being present. Nevertheless, technology involves controversies that serve as alerts, which must be properly used. Improper use of technology resembles the multimedia reproducing lectures supported by expensive technological apparatus, causing the fear of challenging, which is so harmful for the organization practices. In its onset, the movie industry used to copy the theater techniques, that is, the stage was recorded by putting in evidence the fear of shifting.

Upon the use of videoconferences and e-learning for the Distance Learning it is essential to explain the advantages of these tools, and highlight the potential each of these multimedia resources and how much they can contribute to exceeding beyond the traditional classes, showing how innovative they can be, and how difficult it could be in face-to-face lecture classes.

It is critical to have a clear-cut understanding of the role of technology, and not to glorify it. As the Minister Eduardo Portella (1999) stated, the virtual cannot overlap the virtuous. But it is increasingly required that the virtuous comes closer, embraces and applies the technology so that it will become even more virtuous, and make the education and virtues resulted thereof a contribution to build a better society. Integration between technology and education is needed, and the technology shall be always at the education service, analyze the advantages and disadvantages, being able to match the face-to-face classrooms and the distance service. The virtual learning trend should lead us to accept the idea that it is important to deal with this relentless reality.

However, it is important to be aware that technology undoubtedly helps, but the focus needs to be on qualification, that is, high-quality education.

## **STRATEGIC CONTRIBUTION OF EDUCATION**

In the 1970s, the new worldwide technological dynamics associated with the paradigm based on micro-electronic replaced the process of mass production with material and energy-based technologies with intensive technologies based on computer and customized information and production.

1) Within the scenario of continuous changes, scientific and technological knowledge becomes of paramount importance for the competitive strategies in the new technological trajectories. The global competition is featured by changes in the markets, business systems, and in the ability to provide and absorb the technological breakthroughs. Knowledge-based economy demands the acquisition of new learning, and the capabilities of the company's agents to learn and transform such knowledge into competitive edge.

2) Challenges and uncertainties in this context are huge. Information and communication technologies do not ensure the transfer of crucial elements of knowledge relating to scientific researches for the development of products, production and management processes, which empower the organizations and the economic agents to adapt quickly to constant changes.

Technological revolution in the end of the 20<sup>th</sup> century has transformed the marketplace because of the speed of new knowledge, the challenges in the application of technological resources and the impacts on the occupation and qualification ways by demanding from the workforce new forms of thinking and acting. Changes were not restricted to the job, professional qualifications, labor relations, and work environment conditions, but it also caused changes in the way to develop the traditional activities. The set of technologies have turn the offices

into a computer-based place (text editors, spreadsheets, database), which has enabled the people to work from home.

Information and communication society, by bringing together the technologies, and the information with the telecommunications produced modifications and a great impact on the social, political and cultural system.

New computer-based technologies and huge growing of knowledge have led to a new order of work organization, where specialized knowledge and transdisciplinary and interdisciplinary collaboration is required. This way, educational projects must overcome the challenges of the productive system's requirements resulting from the scientific and technological breakthroughs. Educational institutions must also prepare and organize educational knowledge and practices in order to ensure a high-quality basic education for all citizens.

The search for educational alternatives aiming at people's education, their position in the marketplace, income, savings, and welfare should be given priority on the governmental policies.

The new resources of information and communication technologies are relevant instruments for the knowledge-based society, but the partial integration of the countries on the edge of the new economy shows that the social and spatial distance determined by the lack of information and scientific-technological knowledge. Such weakness places no-crossing limits to those provided with smaller capacity to address the challenges of the new technical and economical paradigm.

Recent studies point out the following problems the Brazilian education system is faced with: access and avoidance of early school leaving; high rates of failure and dropping out, and difficulty in coping with learning demands. These studies also show that out of 100 students enrolled in the preliminary school just 50% complete de 8<sup>th</sup> grade and 60% of the children complete the 4<sup>th</sup> grade unable to read and understand what they read. At high school, the failure rate is around 7.5%, and the school leaving around 16.7%. This weakness of our education is revealed whilst professional performance is increasingly valued by analytical, communication, understanding and problem-solving skills, in addition to the technical background for the efficient and innovative application of such leading-edge tools.

Distance learning is the response to overcome those chronic and continuous problems of the Brazilian education, where only 9% of school children, from 18 to 25 years old, are enrolled in college, while in Argentine 30% are in college, in the United States, 50% and Canada, 60% (Formiga, 2004).

This paper also aims at highlighting the importance of Corporate Education, that is, the investment made by the companies to provide better qualification opportunities to their employees.

It is correct to say that the knowledge plays a relevant and strategic role, and investments in education deliver advantages in productivity and competitiveness of the countries.

## **EDUCATIONAL TECHNOLOGY**

Changes in information and communication technologies are the outcome of the revolution in satellite telecommunications, data transmission, information technologies and their global connection resources. Expansion of channels, networks and systems for the treatment and broadcasting of information among economic agents enable the communication, processing, storage and transmission of information at decreasing prices.

The adoption of new information and communication technologies in the educational area has an impact on the teaching practice, and even on the learning processes. The new educational practices systematically aim to plan and implement the learning process based on investigation of learning and human communication, applying human and technological resources to make learning more effective.

Educational institutions are facing the challenge of incorporating new technologies into the educational system. They are also challenged to recognize, and based on information, prepare, develop and evaluate teaching practices that foster the analysis on knowledge and applications of the technology.

The new information and communication technologies, represented by computers that speed up the information processing, derive from the Latin word *computare*, which means to calculate or count. Since the most remote civilization, calculation is a very indispensable task.

Schools directors should be aware that it is not only a matter of purchasing equipment, hardware and software, and hiring a computer technician to be in charge of the laboratory, but also to train the whole teaching team to conduct an educational project that includes computing systems with the objectives proposed from a teaching point of view.

The three main principles of educational technology system include technological infrastructure, data transmission processes and educational agents. Information is the necessary condition, but possibility of accessing the information does not ensure the transmission of knowledge.

In the Knowledge-based Society, it is of paramount importance that the communication technologies effectively convey this information considering that the information technology can transmit good educational contents. Therefore, people can acquire knowledge from a combination of technological infrastructure, content and means to access such information.

New computer-based technologies and huge growth of knowledge have established a new order of work organization, which required: specialized knowledge, which originated the specialist professional; transdisciplinary and interdisciplinary cooperation; easy access to information (files, data base, etc); consider knowledge as a precious good that can be measured in terms of acquisition, cost, utilization, productivity (Ligouri, 20010).

The technological revolution focus on issues concerning with the development of educational projects:

- Respond to the productive system demands due to the current scientific and breakthrough;
- Train professionals to be able to cope with Information Technology by making clear that technology is not a limited subject restricted to professionals of that segment, and involve all those expecting to survive in the information area;

- Draw up teaching projects and curricula to ensure quality training;

- Interconnect ICT to educational curricula;

- Supply schools with integrated systems to enable the educational process management.

## **INFORMATION TECHNOLOGY IN EDUCATION AND SCHOOLS**

Educating is to develop the dimension of knowledge, social, ethics, critical view and sympathy in the human being. Education is the pathway for the integrated human development and decrease of poverty, violence and social exclusion. Education should not be emphasized only in the cognitive aspect, directed to the marketplace and its effects on the economic growth; nowadays, the human development in terms of ethics, cultural and ecological aspects is the key.

The remarkable scientific and technological breakthroughs enable us to state that the knowledge has progressed in a pace never seen in the history of humankind. We see an increasing surge of websites and information every day. However, while the knowledge progresses, the wisdom understood as the close relation between knowledge and values is weakened. Then, educating also means helping people understand the world, the others, enabling thus, the mutual understanding and responsible interaction.

The act and challenge of educating consist of spurring the delight and pleasure of learning, developing the capability of learning how to learn, and the intellectual curiosity of people.

To meet the requirements of education in the contemporary world, education should be directed to the development of searching capabilities, regardless of information, analysis, and data interpretation. This development will certainly contribute to the production of new knowledge to be applicable either to the science advancement or to the social practice.

The role of schools is to educate students, enabling them to learn to how to be familiar with things, to do, to live together, and to be, according to Unesco's definition (Delors, 1996).

New needs and possibilities concerning teaching and learning process arise in the Information Society. Currently, the use of technologies is required inasmuch as it represents the promising option to fulfill the needs, and underpin the possibilities arising out in the contemporary world such as flexibility in time and space, cost reduction, wider geographical range, higher exchange of information between professionals of different knowledge areas by emphasizing the learning itself.

It means that the course attendees are invited to think together in order to solve problems in a creative manner, although they are not required attending classes.

Internet expansion and enhancement of the Information and Communication technologies have provided the basis for the development of the e-learning and the Distance Learning. We must point out the advent of corporate networks that has been spurring and grant to the Distance Learning a new status.

On the other hand, the Technology used to enable access to Education has gradually grown in order to manage the processes of the Teaching Institutions. Although Technology has been used in a soft way and slow pace, schools are very likely to use it also to manage their internal processes.

In the era of information and communication, the impact of technology reaches the entire educational sector and its administrative and academic processes. This has led Technology to take up an increasingly strategic position within the organizations, connected to the top management and directed towards integrated architectures meant for internal management of administrative and academic processes, as well as towards external environment (20/02/05).

IT Planning is given greater emphasis inasmuch as it is aligned to the organizational strategy enabling that the organizations are developed within the marketplace, and operating their core activities in an effective manner, delivering productivity gains, service quality and satisfaction of all stakeholders: students, administrative workers, professors and the community. Managerial information generated through information technology is critical for the improvement of processes and underpinning of strategic decision-making. Therefore, planning, setting up, and monitoring the IT infrastructure is the key for the provision of services and the supply of leading edge and high quality infrastructure to all users within the organization: administrative workers, professors, and students. In addition, planning, managing and proper application of the potential ICT may contribute to innovation and competitive advantage to the organizations as a whole.

A research on Technology in Higher Education carried out by E-Consulting in partnership with IDG Brasil remarks that the Brazilian educational institutions have not yet realized the benefits of technology. Only 41% of the universities have some type of management control based on ERP system. Among the institutions using technology, 30% have chosen proprietary solutions. These data show that a great deal of educational institutions have a mistrustful view towards technology and partnerships (27/11/04). It is worth pointing out that the culture in the educational world is fairly more traditional than the business world culture, thus leading to educational institutions' unwillingness to adopt business practices.

On the other hand, reinforcing the great deal of opportunities in the sector, the research shows that 80% of the institutions interviewed believe in a larger IT budget in comparison to the last year's budget. This figure points out a challenge for IT companies, since currently just 6% of the solutions have been purchased under a market package format. Moreover, the solutions developed under partnership account for 31% of the solutions. According to Brito, a partnership is required between the solution-providers and the educational institutions for the successful use of IT, and the educational institutions should not be treated as clients (24/02/05).

The information revolution that has started in the business environment and has changed the operational processes in companies is now deployed into the educational sector. (Drucker, 1997).

Therefore, it is important to remark that Information and Communication Technology in Education is an irreversible theme and therefore it is unlikely that the educational institutions will not be impacted and involved by technology, which is part of the market reality. The competitiveness in educational market grows faster, having relatively several new institutions offering courses even in partnerships with international educational institutions. Likewise, the demands from students and players involved with the educational process increase in terms of quality and the expectations towards more dynamic and enriching teaching approaches that need to be fulfilled by the educational institutions framed into an interactive world full of information and innovations.

In this Information and Communication Society, countries such as Hong Kong plan and adopt a multidimensional approach including offer and quality-oriented measures in the short and long term, in order to manage the qualification issue in the information technology sector focusing on Education.

According to the Legislative Council's Panel on Information Technology and Radio Broadcasting, the Workforce for IT Workers revealed that workers of this sector are not only required in this industry, but in all other sectors of the economy (III). A study on the workforce requirements for 2005 estimated that the global demand on IT personnel in Hong Kong would increase from 50.000 in 1999 to about 98.000 in 2005 on an average annual growth of 11.8% (30/11/04).

These figures show a clear-cut need for the countries to adopt immediate measures, and in the long run, invest in education associated to the IT qualification.

Recent report brings the outcome of a research on the use of Information Technology in education, research and administration of Higher Education Institutions in Brazil, coordinated by Fredric Litto, shaped on a research conducted 14 years ago in the USA.

Results on general IT and Computer Science policing, as far as distance learning is concerned, only 22% of the institutions had a formal policy set forth for the area, although 85% of higher education institutions respondents to this research claimed to offer full online courses.

In terms of computer science and IT academic policy, the research shows that 32% of the institutions have a formal plan for integration of IT in the curricula, 38% have a technological resources center focusing on the institutional use of technology, and 33% develop some software project for institutional use. Only 9% of the

High Education Institutions have a formal program to evaluate the impact of IT on instruction and results of learning.

## **CONTRIBUTION OF CORPORATE TRAINING IN BRAZIL**

The initiatives in corporate training have increased, underpinned by hugely significant investments. The number of professionals engaged in these activities has increased considerably. The United States have observed a wide range of these initiatives, and within 10 years the quantity of organizations offering corporate learning will be higher than the traditional universities.

Therefore, it is important to have a better understanding of the phenomenon of the growth of such institutions into business education process, by getting to know their main characteristics, striving to distinguish them from the characteristics of academic universities and traditional educational processes in companies in order to obtain a cluster of requirements for the successful implementation of the models of Corporate Universities.

Corporate Universities derive from the Knowledge Society. Concern with this subject is directly related to the growth of complexity that the companies need to cope with. Current market demands have made companies even more competitive requiring more skilled and capable employees in terms of management. It is of paramount importance that the companies draw up policies to ensure the qualification of competent professional teams.

The organizations have been increasingly valuing learning as a business asset. This insight has enabled the increase of educational functions within the companies, including devoting time for the studies.

Framed into this new business standpoint on the human participation, the objective of corporate learning programs should consist in the increase of the Intellectual Capital (IC), an asset that is not reported on the companies' financial statements, but that can be measured by the difference between the Market Value (MV) and the Asset Value (AV) – ( $IC = MV - AV$ ) of each company (Souza, 2000).

Corporate Universities result from the qualitative and quantitative increment of the business educational activities.

According to this view, the concept of Corporate University differs from traditional activities of T&D - Training and Development, inasmuch as it is oriented to develop and educate employees, clients, suppliers and stakeholders. It should comply with the organization's strategies by keeping its competitive advantage, based on continuous learning. Crucial in this approach is the development of professional, technical and managerial competences fundamental for the implementation of the business strategies.

Therefore, Corporate Learning stands for a new dimension for the Training and Development being regarded as an enhanced evolution, since it creates and also incorporates and adapts the philosophical, methodological and business principles included in the training practices.

Corporate Learning is a progress in terms of traditional programs of training aiming to seek the development of competences aligned with the companies' strategies. The focus lies on the learning organization, spurring the learning, mainly the essential competences of the company.

The role of Corporate University is then to ensure the internal continuous education, linking the relation between the company's business, strategic planning and search of resources and knowledge in the university.

The first Corporate University was conceived almost a half century ago when General Electric – GE established the Crotonville in 1955. However, it was in the end of the decade of 1980s that the real interest gained momentum for the use of that model.

Over the last 10 years, a growth from 400 to 2,000 Corporate Universities in the United States was recorded. In Brazil, there are about 100 Corporate Universities.

Now we face a new concept of business education called Corporate Learning, and upon the significant increase of these organizational models, we may question if they are effectively Corporate Universities or they adapt to the concept of organizations searching for organizing, developing and transmitting knowledge, thus filling the gaps left by some universities and educational institutions that have not been able to offer programs timely and under the quality the Knowledge Society has demanded.

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# FOREIGN BANK ENTRY AND EVOLUTION OF EFFICIENCY: EVIDENCE FROM TURKISH BANKING SECTOR

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## ABSTRACT

*The recent wave of foreign investment in Turkish banking sector and the existing opportunities for new entrants suggest that foreign banks are likely to play an increasingly important role in Turkey. The aim of this paper is to provide empirical evidence on the evolution of efficiency in the Turkish banking sector following the 2001 financial crisis with a special emphasis on the role of foreign banks. We find that, on average, foreign-owned banks have higher overall efficiency than domestic banking groups, for the period 2002-2006. Furthermore, the overall banking efficiency has increased slightly but consistently during the same period.*

## INTRODUCTION

Foreign bank entry may help to improve the efficiency of the banking systems by increasing competition. This assumption of many financial economists lead to this paper's central question: Does foreign bank entry help to improve the efficiency of the banking system in Turkey?

Similar to many other emerging countries, foreign banks have greatly increased their presence in Turkey, in recent years and the strengths and weaknesses of this internationalization process is currently in debate. Therefore, the detailed investigation of this process is crucial for making predictions about the future of Turkish financial system. This paper contributes to the literature discussing this issue.

The rest of this paper is structured as follows: The section following the introduction provides a brief review of the related literature. Section III gives an overview of the Turkish banking sector. Section IV discusses methodology and data. Section V presents the main results. Finally, the conclusion sums up the research results and it contains suggestions for future empirical research.

## LITERATURE REVIEW

### Literature review on “foreign bank entry”

The expansion of financial market globalization, in recent decades, has triggered the increase in the number of studies about the role of “foreign bank entry” on the “efficiency of banking systems”. In fact, the vast majority of studies, on this topic, covers the USA and other developed countries. On the other hand, research about emerging markets is relatively limited. This section briefly reviews some of the main articles in this field focusing especially on the emerging and transition countries.

Bonin, et. al. (2005) examine the impact of foreign ownership on bank efficiency, from 1996 to 2000, in eleven transition countries (*Czech Republic, Hungary, Poland, Slovakia, Bulgaria, Croatia, Romania, Slovenia, Estonia, Latvia and Lithuania*) consisting of 225 banks, by using stochastic frontier estimation procedures. The

authors find that foreign-owned banks are more cost-efficient than other banks. By using data from 1997 to 2001 and the DEA methodology, Havrylchyk (2006) investigated the efficiency of the Polish banking industry. The results of the study indicate that bank efficiency has not improved during the years analyzed. Moreover, while the greenfield banks have achieved higher levels of efficiency than domestic banks, foreign banks that acquired domestic institutions have not succeeded in enhancing their efficiency. It is difficult to state that the efficiencies of banks operating in Turkey have been investigated extensively in the literature. The studies conducted by Oral and Yolalan (1990), Işık and Hassan (2003) and Özkan-Günay and Tektaş (2006) are the examples of research studies on the efficiency of Turkish banks. Özkan-Günay and Tektaş (2006) analyze the technical efficiency of nonpublic commercial banks operating in Turkey, for the period 1990-2001, by using the DEA model and they observe a declining trend in the number of efficient banks and the mean efficiency of bank subgroups.

## Theoretical background of “financial institutions’ efficiency measurement”

The mathematical models used to study the efficiency of financial institutions can be divided into two groups: those, which are based on parametric frontier techniques (e.g. stochastic frontier analysis) and those, which are based on non parametric techniques (e.g. Data Envelopment Analysis (DEA)). The nonparametric and parametric methods differ in several ways such as, with respect to their behavioral assumptions and whether or not they recognize random errors in the data. Parametric methods require the specification of a particular functional form, which shapes the form of the frontier. One of the major shortcomings of the parametric methods appears to be that, in case of the misspecification of the functional form, the calculation of efficiency may be biased. The nonparametric methods, on the other hand, seems to allow more flexibility to the analysts since these latter do not require the specification of the functional form for the frontier. Moreover, when the Decision Making Units’ (DMU) outputs are multidimensional, nonparametric methods may provide better results (Coelli et al., 1999). Therefore, while measuring bank efficiency, non-parametric approaches seem to be more appropriate, since the output of banks is considered to have multi-dimensional characteristics. The issue of “bank efficiency” has been investigated extensively in the literature. Particularly, in many studies, the DEA approach is adopted for measuring the financial institutions’ efficiencies (e.g. Fukuyama, et. al., 1999; Laeven, 1999; Grigorian, 2002; Chang and Chiu, 2006).

## OVERVIEW OF THE TURKISH BANKING SECTOR

In Turkey, financial deregulation begun in the early 1980s and accelerated during the following decades. The main objective of this deregulation was to improve the efficiency of the financial system by encouraging competition in the system. Though the number of foreign banks increased significantly in the post-liberalization period, the market the share of foreign-owned banks, in terms of total assets, remained very limited until recent years (Table 1).

**Table 1: Market shares in terms of total assets (%)**

|   | 1980 | 1990 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|---|------|------|------|------|------|------|------|------|------|
| <b>Privately-Owned Commercial Banks</b>                 | 44,2 | 43,2 | 47,0 | 55,0 | 56,0 | 57,0 | 57,0 | 60,0 | 55,0 |
| <b>State-Owned Commercial Banks</b>                     | 44,1 | 44,6 | 34,0 | 33,0 | 32,0 | 33,0 | 35,0 | 31,0 | 29,0 |
| <b>Foreign-Owned Commercial Banks</b>                   | 2,9  | 3,5  | 5,0  | 3,0  | 3,0  | 3,0  | 3,0  | 5,0  | 12,0 |
| <b>Banks under Savings &amp; Deposit Insurance Fund</b> | 0,0  | 0,0  | 9,0  | 5,0  | 4,0  | 3,0  | 1,0  | 1,0  | 1,0  |
| <b>Development &amp; Investment Banks</b>               | 8,9  | 8,7  | 4,0  | 5,0  | 4,0  | 4,0  | 4,0  | 3,0  | 3,0  |

Source: The Banks Association of Turkey ([www.tbb.org.tr](http://www.tbb.org.tr))

The introduction of the liberalization process in 1980, 1994 crisis and 2000 & 2001 crises can be considered as three watersheds for the Turkish banking system (Süer, 2008). The Turkish banking sector has experienced great problems at the beginnings of 2000 and the structure of Turkish financial system, which is largely bank-based, has undergone considerable changes since the most recent financial and economic crisis, which occurred in 2001, in Turkey. The restructuring efforts in the Turkish financial system, particularly in the banking sector, the improvements in the Turkish economic stability and the new regulatory and supervisory developments facilitated the entry of new foreign banks (e.g. Fortis Bank, National Bank of Greece, Unicredit



Italiano). The market share, in terms of total assets, of foreign owners in the Turkish banking market, increased to %12, in 2006 from %3, in 2001 and still continues to increase (Table 1). The analysis of the development of the number of banks, the number of branches and the number of employees validates the growing presence of foreign-owned institutions in the Turkish banking system (Table 2). Hence, the Turkish banking sector provides a prominent setting for analyzing the evolution of efficiency in an emerging country experiencing an internationalization process.

**Table 2: Turkish Banking Sector**  
(number of banks, number of branches, number of employees)  
2000-2006

|      |                     | Sector Total   | Commercial Banks | State-owned Banks | Privately-owned Banks | Foreign-owned Banks | Banks Under Deposit Insurance Fund | Non-depository Banks |
|------|---------------------|----------------|------------------|-------------------|-----------------------|---------------------|------------------------------------|----------------------|
| 2000 | Number of Banks     | <b>79</b>      | <i>61</i>        | 4                 | 28                    | 18                  | 11                                 | <i>18</i>            |
|      | Number of Branches  | <b>7.837</b>   | <i>7.807</i>     | 2.834             | 3.783                 | 117                 | 1.073                              | <i>30</i>            |
|      | Number of Employees | <b>170.401</b> | <i>164.845</i>   | 70.191            | 70.954                | 3.805               | 19.895                             | <i>5.556</i>         |
| 2002 | Number of Banks     | <b>54</b>      | <i>40</i>        | 3                 | 20                    | 15                  | 2                                  | <i>14</i>            |
|      | Number of Branches  | <b>6.106</b>   | <i>6.087</i>     | 2.019             | 3.659                 | 206                 | 203                                | <i>19</i>            |
|      | Number of Employees | <b>123.271</b> | <i>118.329</i>   | 40.158            | 66.869                | 5.416               | 5.886                              | <i>4.942</i>         |
| 2003 | Number of Banks     | <b>50</b>      | <i>36</i>        | 3                 | 18                    | 13                  | 2                                  | <i>14</i>            |
|      | Number of Branches  | <b>5.966</b>   | <i>5.949</i>     | 1.971             | 3.594                 | 209                 | 175                                | <i>17</i>            |
|      | Number of Employees | <b>123.249</b> | <i>118.607</i>   | 37.994            | 70.614                | 5.481               | 4.518                              | <i>4.642</i>         |
| 2004 | Number of Banks     | <b>48</b>      | <i>35</i>        | 3                 | 18                    | 13                  | 1                                  | <i>13</i>            |
|      | Number of Branches  | <b>6.106</b>   | <i>6.088</i>     | 2.149             | 3.729                 | 209                 | 1                                  | <i>18</i>            |
|      | Number of Employees | <b>127.163</b> | <i>122.630</i>   | 39.467            | 76.880                | 5.880               | 403                                | <i>4.533</i>         |
| 2005 | Number of Banks     | <b>47</b>      | <i>34</i>        | 3                 | 17                    | 13                  | 1                                  | <i>13</i>            |
|      | Number of Branches  | <b>6.247</b>   | <i>6.228</i>     | 2.035             | 3.799                 | 393                 | 1                                  | <i>19</i>            |
|      | Number of Employees | <b>132.258</b> | <i>127.857</i>   | 38.046            | 78.806                | 10.610              | 395                                | <i>4.401</i>         |
| 2006 | Number of Banks     | <b>46</b>      | <i>33</i>        | 3                 | 14                    | 15                  | 1                                  | <i>13</i>            |
|      | Number of Branches  | <b>6.849</b>   | <i>6.804</i>     | 2.149             | 3.582                 | 1.072               | 1                                  | <i>45</i>            |
|      | Number of Employees | <b>143.143</b> | <i>138.570</i>   | 39.223            | 73.220                | 25.794              | 333                                | <i>4.573</i>         |

Source: The Banks Association of Turkey (www.tbb.org.tr)

## METHODOLOGY AND DATA

This paper employs Data Envelopment Analysis (DEA), which was developed by Charnes et al. (1978), to measure the efficiency of banks. The DEA is a linear programming technique, which provides to consider many inputs and outputs simultaneously for measuring the relative efficiencies of evaluated entities. The main advantage of DEA is that it does not require the assignment of predetermined weights to input and output factors. The roots of DEA go back to the study of Farrell (1957). The method proposed by Farrell (1957), for identifying efficient production units and building a piecewise linear efficiency frontier, was initially implemented by Charnes *et al.* (1978). Charnes *et al.* (1978) made use of linear-programming methods for identifying the efficient units and they named their method as DEA. DEA provides relative measures of efficiency for each Decision Making Unit (DMU) in a set of DMUs. A relative efficiency measure is defined by the following formula (Farrell, 1957):

$$Efficiency = \frac{\sum_k u_k y_{k,j}}{\sum_i v_i x_{i,j}} \quad (1)$$

where, each DMU  $j$  has multiple inputs  $x_{i,j}$  and multiple outputs  $y_{k,j}$  and where  $u$  and  $v$  are weights. The efficiency score obtained for the  $j^{th}$  bank will range between 0 and 1.

In the present study, the CCR (Charnes, Cooper, Rhodes, 1978) model, among number of DEA models (e.g. BCC), is implemented. Based on the CCR model, the efficiencies of the banks (DMUs) are calculated according to the following optimization problem:

The maximization of the efficiency ( $\theta$ ) of a single Decision Making Unit ( $j_0$ ) is carried out by the help of the following formula (the constraint is that efficiencies of all other DMU's remain less than or equal to 1):

$$\underset{u,v}{\text{maximize}} \Theta_0 = \frac{\sum_k u_k y_{k,j_0}}{\sum_i v_i x_{i,j_0}} \quad (2)$$

$$\text{subject to } \frac{\sum_k u_k y_{k,j}}{\sum_i v_i x_{i,j}} \leq 1 \quad \forall j$$

$$u_k, v_i \geq 0$$

In order to solve this maximization problem, the next step is to transform the formula No: 2 to the linear programming format:

$$\underset{u,v}{\text{maximize}} = \sum_k u_k y_{k,j_0} \quad (3)$$

$$\text{subject to } \sum_i v_i x_{i,j_0} = 1$$

$$\sum_k u_k y_{k,j} \leq \sum_i v_i x_{i,j} \quad \forall j$$

$$u_k, v_i \geq 0$$

In order to calculate the overall efficiency scores, the above procedure is followed by using General Algebraic Modeling System (GAMS). GAMS is a modeling system for mathematical programming specifically designed for modeling linear, nonlinear and mixed integer optimization problems. The system is especially useful for large, complex problems. The GAMS/DEA interface was originally developed to solve large scale DEA models efficiently ([www.gams.com](http://www.gams.com)).

For measuring efficiency, to make a decision on the appropriate nature of banking activity is necessary (Havrylchyk, 2006). Two different approaches exist in the banking literature: the production and intermediation approaches. In this paper, the intermediation approach is adopted and the following inputs-outputs combination is chosen (Table 3):

**Table 3: Selected Inputs and Outputs**

| INPUTS   | OUTPUTS                                  |
|--|--|
| X <sub>1</sub> : Total number of employees     | Y <sub>1</sub> : Total loans             |
| X <sub>2</sub> : Total number of bank branches | Y <sub>2</sub> : Off-balance sheet items |
| X <sub>3</sub> : Total deposits                |  |
| X <sub>4</sub> : Total shareholders' equity    |  |

The data used in this study covers the period from 2002 to 2006, during which there was a stabilization in Turkish economy and a restructuring process in the Turkish banking market. The sample of the study comprises only the commercial banks operating in Turkey and it covers 100% of commercial banks' assets, for each year. Bank level data is collected from the database of The Banks Association of Turkey.

## RESULTS

This paper focused on the evolution of efficiency in the Turkish banking sector during the post-crisis period. To investigate the efficiency of each bank (DMU), we have computed the overall efficiencies by using the formulas illustrated in the methodology section of the study. The results about the DEA efficiency scores, for each year, for each bank, for each banking group (state-owned domestic banks, privately-owned domestic banks, foreign-owned banks) and for the entire sample, in the sample period, are presented in tables 4, 5, 6, 7 and in figure 1. Major findings of the present study can be summarized as follows:

During the observed period of 2002–2006, the overall efficiency of each banking group, both domestic and foreign, and the efficiency of the total banking system have improved slightly but steadily (Figure 1). We have found that the average overall efficiencies have been 63,4% in 2002, 71,1% in 2003, 71,7% in 2004, 76,7% in 2005, 81,4% in 2006, for the Turkish commercial banking system (Table 7). We suppose that efficiency increases are mainly due to better management practices rather than improvements in scale, as it is suggested by Işık and Hassan (2003). Compared to domestic banks (state-owned or privately-owned), foreign-owned banks exhibit higher overall efficiency, on average, every year from 2002 to 2006. These results are in line with other studies carried out on different emerging countries (e.g. Bonin, et. al. ,2005; Havrylchyk, 2006). However, the differences between privately-owned domestic banks and foreign-owned banks, in terms of overall efficiency, appear to be very small (Table 7 and Figure 1). Nonetheless, among the domestic banks, the privately-owned domestic banks appear to be more efficient than their state-owned counterparts. The results of our analysis show also that the efficiency gap between privately-owned domestic banks and their foreign-owned counterparts became wider after 2005. This may stem from the fact that, in recent years, the relatively more efficient privately-owned domestic banks, like Koçbank and Finansbank, became the targets of new foreign entrants.

Overall, the results from the empirical analysis provide evidence for the improvement in the efficiency in the Turkish banking system, during the observed period of 2002–2006. However, we think that more evidence is needed for claiming that this efficiency increase stems from the competition created by the new entrants. We think that further studies, with the data of the following years, are needed for understanding the real impact of the new entrants to the Turkish banking system.

**Table 4: Efficiency Scores (State-Owned Banks)**

|  | 2002         | 2003         | 2004         | 2005         | 2006         |
|--|--------------|--------------|--------------|--------------|--------------|
| <b>Türkiye Cumhuriyeti Ziraat Bankası A.Ş.</b> | 0,204        | 0,248        | 0,345        | 0,416        | 0,399        |
| <b>Türkiye Vakıflar Bankası T.A.O.</b>         | 0,705        | 0,794        | 0,842        | 0,953        | 1            |
| <b>Türkiye Halk Bankası A.Ş.</b>               | 0,336        | 0,331        | 0,351        | 0,394        | 0,532        |
| <b>Mean efficiency score</b>                   | <b>0,415</b> | <b>0,458</b> | <b>0,513</b> | <b>0,588</b> | <b>0,644</b> |

**Table 5: Efficiency Scores (Privately-Owned Banks)**

|                                      | 2002  | 2003  | 2004  | 2005  | 2006  |
|--------------------------------------|-------|-------|-------|-------|-------|
| <b>Akbank T.A.Ş.</b>                 | 0,406 | 0,648 | 0,698 | 0,961 | 0,981 |
| <b>Türkiye İş Bankası A.Ş.</b>       | 0,513 | 0,498 | 0,467 | 0,669 | 0,685 |
| <b>Türkiye Garanti Bankası A.Ş.</b>  | 1     | 1     | 1     | 1     | 1     |
| <b>Yapı ve Kredi Bankası A.Ş.</b>    | 0,694 | 0,712 | 0,715 | 0,969 | 0,892 |
| <b>Koçbank A.Ş.</b>                  | 1     | 1     | 1     | 1     |       |
| <b>Finans Bank A.Ş.</b>              | 0,631 | 0,855 | 0,999 | 1     |       |
| <b>Türk Dış Ticaret Bankası A.Ş.</b> | 0,564 | 0,662 | 0,653 |       |       |
| <b>Denizbank A.Ş.</b>                | 0,499 | 0,679 | 0,612 | 0,697 |       |
| <b>Oyak Bank A.Ş.</b>                | 0,734 | 1     | 1     | 0,853 | 0,97  |
| <b>Türk Ekonomi Bankası A.Ş.</b>     | 0,724 | 0,84  | 0,81  | 1     | 1     |
| <b>Şekerbank T.A.Ş.</b>              | 1     | 0,89  | 0,895 | 0,491 | 0,635 |
| <b>Anadolubank A.Ş.</b>              | 0,745 | 0,939 | 0,838 | 0,707 | 0,67  |
| <b>Alternatif Bank A.Ş.</b>          | 1     | 0,855 | 0,913 | 1     | 1     |
| <b>Tekstil Bankası A.Ş.</b>          | 0,69  | 0,985 | 1     | 1     | 0,941 |
| <b>Tekfenbank A.Ş.</b>               | 0,406 | 0,494 | 0,53  | 0,5   | 0,66  |

|                             |              |              |              |              |              |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| Turkish Bank A.Ş.           | 0,079        | 0,073        | 0,152        | 0,264        | 0,281        |
| MNG Bank A.Ş.               | 0,584        | 0,628        | 0,595        | 0,698        |              |
| Adabank A.Ş.                | 0,382        | 0,212        | 0,144        | 0,08         | 0,283        |
| Türkiye İmar Bankası T.A.Ş. | 0,682        |              |              |              |              |
| Turkland Bank A.Ş.          |              |              |              |              | 0,693        |
| Fiba Bank A.Ş.              | 0,388        |              |              |              |              |
| Mean efficiency score       | <b>0,636</b> | <b>0,721</b> | <b>0,723</b> | <b>0,758</b> | <b>0,764</b> |

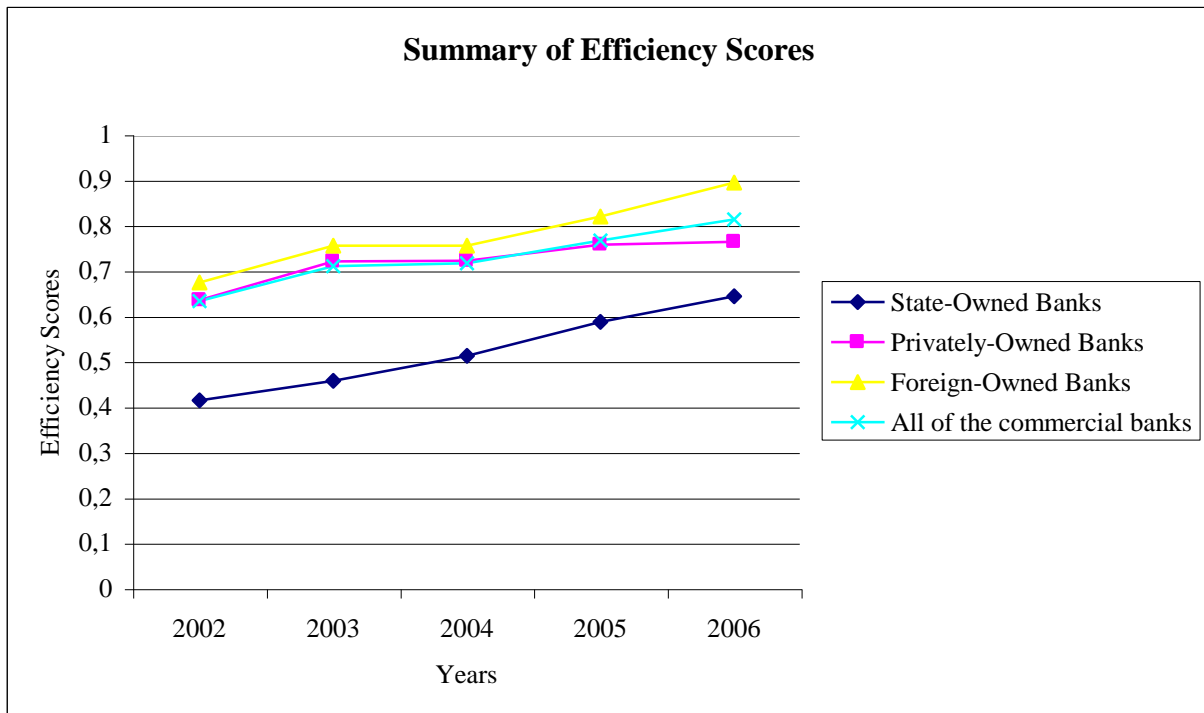
**Table 6: Efficiency Scores (Foreign-Owned Banks)**

|                              | 2002         | 2003         | 2004         | 2005        | 2006         |
|------------------------------|--------------|--------------|--------------|-------------|--------------|
| Finans Bank A.Ş.             |              |              |              |             | 0,783        |
| Denizbank A.Ş.               |              |              |              |             | 0,778        |
| HSBC Bank A.Ş.               | 0,812        | 0,751        | 0,786        | 0,884       | 0,959        |
| Fortis Bank A.Ş.             |              |              |              | 0,64        | 0,799        |
| Citibank A.Ş.                | 1            | 1            | 1            | 1           | 1            |
| Millennium Bank A.Ş.         |              |              |              |             | 0,924        |
| Deutsche Bank A.Ş.           |              |              | 1            | 1           | 1            |
| ABN AMRO Bank N.V.           | 1            | 1            | 1            | 1           | 1            |
| WestLB AG                    | 1            | 1            | 0,475        | 0,172       | 0,6          |
| Société Générale (SA)        | 1            | 1            | 1            | 0,632       | 1            |
| Arap Türk Bankası A.Ş.       | 0,475        | 0,585        | 0,689        | 0,754       | 0,58         |
| Bank Mellat                  | 0,681        | 0,64         | 1            | 1           | 1            |
| JPMorgan Chase Bank N.A.     | 1            | 1            | 0,045        | 0,59        | 1            |
| Banca di Roma S.P.A.         | 0,912        | 1            | 0,835        | 0,983       | 1            |
| Habib Bank Limited           | 0,574        | 1            | 1            | 1           | 1            |
| BankEuropa Bankası A.Ş.      | 0,01         | 0,183        | 0,381        | 1           |              |
| Credit Lyonnais Turkey       | 0,096        | 0,041        |              |             |              |
| Bnp-Ak Dresdner Bank A.Ş.    | 0,378        | 0,63         |              |             |              |
| Credit Suisse First Boston   | 1            |              |              |             |              |
| ING Bank N.V.                | 0,191        |              |              |             |              |
| Ak Uluslararası Bankası A.Ş. |              |              | 0,618        |             |              |
| Mean efficiency score        | <b>0,675</b> | <b>0,756</b> | <b>0,756</b> | <b>0,82</b> | <b>0,895</b> |

**Table 7: Summary of Efficiency Scores  
(All of the Banking Groups and the Banking System)**

|                             | 2002         | 2003         | 2004         | 2005         | 2006         |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| State-Owned Banks           | 0,415        | 0,458        | 0,513        | 0,588        | 0,644        |
| Privately-Owned Banks       | 0,636        | 0,721        | 0,723        | 0,758        | 0,764        |
| Foreign-Owned Banks         | 0,675        | 0,756        | 0,756        | 0,82         | 0,895        |
| All of the commercial banks | <b>0,634</b> | <b>0,711</b> | <b>0,717</b> | <b>0,767</b> | <b>0,814</b> |

**Figure 1:**



## CONCLUSION

This study provides insights into the dynamics of the Turkish banking system for the period between 2002 and 2006. During this period, the foreign entry to the Turkish banking system increased dramatically and it seems that foreign banks will continue to play an increasingly important role in the system. Overall, the empirical findings presented in this paper suggest that, on average, foreign-owned banks have higher overall efficiency than their domestic counterparts, during the period of analysis. Moreover, the overall banking efficiency in Turkey has increased slightly but consistently during the same period.

We believe that our findings will have contributed to a better understanding of how the recent structural changes and foreign bank entry, which occurred in the Turkish banking system following the 2001 financial crisis, have influenced the efficiency of the banks operating in Turkey. Hence, the results of this study should be of interest to managers and policy makers in the banking sector in Turkey or in other countries (particularly the emerging countries) and financial economists studying bank performance trends internationally. However, it is important to point out that, since this study considers only one emerging country's (Turkey) banking sector with a particular institutional structure, one should be careful in generalizing the results of this study to other settings.

We think that further studies, with the data of the following years, are needed for understanding the medium and long-term effects of foreign bank entry on the Turkish banking system. In other words, future research on this issue should focus on extending the data set in terms of years. In addition, further research may apply different methods (e.g. parametric frontier techniques) to analyze the impact of foreign bank entry on bank efficiency to see whether and to what extent the results are sensitive to the methodology used.

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# **MARKETING RESOURCES, SUPPLY CHAIN COORDINATION AND BUSINESS PERFORMANCE IN THE CONSTRUCTION INDUSTRY: A PROPOSED CONCEPTUAL PAPER**

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## **ABSTRACT**

*In today's competitive business, knowledge such as information, intelligence and expertise are considered as critical organisational resources and is increasingly important source of competitive advantage. Marketing resources that largely stem market orientation that stress on knowledge and information about the market and channel participants are perceived to be an important ingredient in creating wealth of the firm. This preliminary study would highlight the marketing resources of construction firms that encourage supply chain coordination particularly in supply chain process and hence leads to higher business performance.*

## **INTRODUCTION**

Supply chain coordination is perceived to be a critical success factor for supply chain management (SCM) and effectively improving the performance of the business. The term coordination is defined as the integration of various parts of an organization or various organizations in supply chain to achieve a collective set of tasks and to accomplish mutual benefits (Xue et al., 2005). Relying on the same reference by Xue et al. (2005), this study will view construction supply chain management as the coordination of the inter-organizational decision making in construction supply chain and the integration of main construction business processes and key players involved in construction supply chain.

Construction industry in Malaysia is perceived to face several key areas of concerns which include inefficient and ineffective methods and practices (Construction Research Institute of Malaysia, 2008). Apart from that several other studies indicate that there is a need for improved collaboration, integration, communication and coordination between firms in the construction industry particularly in dealing with waste which would help to move away from the traditional construction management to a more holistic approach such as the adoption of lean construction. This scenario warrants for further investigation and it is believed that diverse approaches might be needed in order to address such problems. For instance by applying the organizational theory, such as the concept of marketing resources and supply chain coordination in addressing the issue.

With reference to Hooley et al. (2005), the term marketing resources is used to epitomise those resources that create value in the market place. These market-based resources include market orientation, reputation, innovations, customer related capabilities and distribution-based assets are perceived to be important factors to promote individual firms' coordinated activities inside and outside the firms to accomplish customer satisfaction at a profit (Min, 2001). This interconnectedness concept of intra-functions and inter-firms is consistent with the concept of supply chain management which stress on integrative philosophy to manage the total flow of distribution channel from supplier to the ultimate user (Ellram & Cooper, 1990). This preliminary study would

highlight the marketing resources of construction firms that encourage supply chain coordination particularly in supply chain process.

## **PROBLEMS IN CONSTRUCTION SUPPLY CHAIN**

Palaneeswaran et al. (2003) in their study revealed a list of weak links in the construction supply chain. Among those problems faced are: adversarial relationship between clients and contractors, inadequate recognition of the risks sharing and benefits, fragmented approaches, 'win/lose' attitudes, power domination and lack of contractual commitment, less transparency with inadequate information sharing, as well as less effort to foster sustainable long term relationship.

The above scenario provides some clues that the players in this industry require the collective know-how of coordination in synchronising the interdependent processes and thus encourage organisational learning. No doubt that various approaches have been used to find ways of dealing with, such as emphasising on information technology and re-engineering as well as implementation of various related programmes. Nevertheless, such investment of the programmes would be useless without proper mental change towards the desired culture that consistent with the new landscape of the industry.

## **RESOURCE BASED VIEW AND MARKETING RESOURCES**

As compared to Porter's Forces Model, Porter (1980), the RBV stresses on organisation specific resources rather than the industry forces. Marketing resources as multi-faceted construct leads a firm behaviour towards maintaining and enhancing inter-firm relationships to satisfy customer. Market orientation for instance consists of three behavioural elements that involve market intelligence generation, dissemination and managerial action in which these elements provide a unifying focus for the effort and projects of individuals and functions within a firm (Jaworski & Kohli, 1993). On top of that, Min & Mintzer (2000) highlighted that the influence of market orientation do not limit within the boundaries of the firm, in fact, it is expanded to inter-firm relationships with users, clients, suppliers and distributors. Market orientation basically helping the firms establish commitment, trust, cooperative norms and reduce conflict and thus provides an environment in which relationship marketing is nurtured. Such environment basically plays a pivotal role in the implementation of SCM.

## **SUPPLY CHAIN MANAGEMENT AND COORDINATION**

Numbers of definitions can be used to define the term SCM. For instance, (Mentzer, 2001, p. 2) defines SCM as "the systematic, strategic coordination of the traditional business functions within a particular company and across business within the supply chain, for the purpose of the individual companies and the supply chain as a whole". As cited by Xu & Beamon, (2006), SCM is normally interpreted based on coordination and this can be seen through the definition given by Arunachanlam et al., (2003), "SCM is the planning and coordination of activities, from procurement to production, through...distribution". In a nutshell, SCM itself involves coordination of activities among members within and between firms which facilitates the flow of information, product as well as finance toward ultimately providing value and satisfying the customer. As mentioned by Fugate et al. (2006), coordination is the essence of SCM. For the purpose of this study, supply chain coordination will be viewed as the ability to integrate the interdependencies between activities in which ultimately to attain the chain goal. In this respect, supply chain coordination is conceptualised as a process coordination capability. A model will be used to analyse the impact of marketing resources on supply chain coordination capability. Apart from that it will also be used to examine the performance outcome of supply chain coordination. The supply chain coordination process will be based on previous literature relevant to the construction industry. For instance, a study by Xue, Li, Shen, & Wang, (2005) has identified main construction business process which are implemented within the construction supply chain across organisational boundaries. The process includes: project management, client service management, supplier relationship management, demand management, order fulfillment, construction flow management, environment management as well as research and development.



# **LINKING MARKETING RESOURCES AND SUPPLY CHAIN COORDINATION IN THE CONSTRUCTION CONTEXT**

As mentioned by Ellram & Cooper (1990), SCM extends the concept of functional coordination beyond single firm to all the firms in the supply chain (inter-firm coordination) and this leads each member of a supply chain helps each other improve the competitiveness of the chain. In a construction industry for instance, members such as the contractor, sub-contractor and the client would need to work closely in order to achieve the chain goal. Related activities such as planning, procurement and design require these supply chain members for the ability to coordinate and cooperate. Through supply chain coordination, supply chain members collaborate planning, forecasting and replanishment in a systematic ways. As mentioned by Simatupang & Sridharan (2002), for coordination to take place, channel members need to consider information sharing, appropriate performance measures, integrated policies and incentive alignment for collaboration. Learning through other members in the supply chain permits the transfer, recombination or creation of specialised knowledge.

Marketing resources as multi-faceted construct involving market orientation and competencies, guides a firm's behaviour (referred as relationship marketing) to develop, maintain and enhance inter-firm relationships to satisfy customers (Min & Mentzer, 2000). Nurturing relationship through market orientation leads supply chain members to establish commitment, trust, and cooperative in which this indirectly allow for conflict reduction between firms. Since trust becomes the pillar in a market oriented firms, voluntary information sharing would naturally take place among the group members. Open communication and organisational learning would enhance individual firms' coordinated activities inside and outside the firms to accomplish customer satisfaction at a profit. Such cooperative norms are crucial to the development of supply chain management and hence this encourages to the adoption of lean construction.

In their empirical study of marketing resources and performance, Milfelner (2008) adopted distribution-based assets as one the elements to represent marketing resources. Apart from emphasising on customer relationship, the ability to understand distribution channel members is important and is considered as an opportunity to create a sustainable competitive advantage. On top of that it is considered significant since it generates sustainable competitive advantage especially in dealing with conflicting groups within the organisation and between organisations in achieving common goals. Hence this gives some clues that distribution-based assets may influence firms in the process of supply chain coordination.

With appropriate resources and orientation cultivate in the organisation, the process of transforming conventional type of construction supply chain is perceived to be more effective and influential. A fundamental mental change towards a more holistic approach of managing supply chain is crucial in order for all supply chain members to appreciate and perceived cooperative norms as part of organisational culture.

## **CONCLUSIONS**

Although several attempts have been made to address the issue of construction supply chain coordination (by using various managerial approaches), applying marketing approach and supply chain concept in addressing this issue would help to provide new perspective to the development of the knowledge and thus open more rooms to the improvement of this industry. Marketing resources that stress on customer oriented and relationship marketing would lead the industry to a new culture of systematic and cooperative approach in managing their supply chain. Although there is no question that marketing resources impact performance, there is a question concerning the impact that supply chain coordination has on the link. This study is design to investigate the performance link within a supply chain coordination context in the construction industry.

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# OUTSOURCING PRODUCT DEVELOPMENT INTERNATIONALLY – LOCATION AND OBJECTIVES

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## ABSTRACT

*Product development is nowadays quite a challenging field due to the multidisciplinary nature of modern technologies. Therefore, resorting to external capabilities in product development is rising, and it seems that outsourcers are nowadays cooperating with emerging country business partners in these matters. This study examines the objectives companies have in outsourcing product development operations internationally, especially to emerging country providers. Furthermore, the choice of location, i.e. an emerging country is discussed. The empirical data for the study is collected by conducting a telephone survey among Finnish companies in relatively technology-intensive sectors.*

## INTRODUCTION

Product development is a central function for many companies, and it may be one of the most important sources of competitive advantage. Nonetheless, it is very resource-intensive, and thus requires lots of know-how and generates considerable costs. Therefore, companies need to organize these operations in ways that generate the most value for them. Outsourcing the operations is an option that more and more companies are turning to.

Outsourcing of product development operations has existed for sometime already, but what is new is outsourcing them internationally, into emerging country locations. This, i.e. offshore outsourcing, is an emerging operation mode, which has not been studied much yet. (Bardhan 2006; Duga & Studt 2006; Maskell, Pedersen, Petersen & Dick-Nielsen 2007; Zedtwitz von, Gassmann & Boutellier 2004)

Product development operations include various tasks ranging from basic research all the way to developing technical service for physical products. Product development basically encompasses the whole R&D function of a company, and thus product development and R&D are used as synonyms in this paper. With these terms it is referred to the management of scientific research and development work of new products. (Trott 2008) In other words, product development is here understood as a process during which an idea is developed into a commercialised product, service, process, or system (Saren 1994). Offshore outsourcing, on the other hand, is here understood as the transfer of the responsibility for an operation previously performed internally to an outside provider that is located on another continent than the outsourcing company (Gilley & Rasheed 2000; Lacity & Hirschheim 1993; Quelin & Duhamel 2003). This can concern a whole business function or it may involve only certain tasks or activities within a function. Outsourcing can be done domestically or it can be done internationally. Therefore, the term is quite often confused with the term offshoring, which refers to the transfer of internal operations to an offshore location, i.e. it is foreign direct investment. (cf. Monczka, Markham, Carter, Blascovich & Slaughter 2005)

It is a fact that product development operations have been becoming increasingly international lately (Bardhan 2006; Lehrer & Asakawa 2002; Narula & Zanfei 2005; Reddy 1997; Zedtwitz von et al. 2004). With regard to international outsourcing of these operations, an interesting development in recent years has been the rise of some emerging countries as locations for these kinds of knowledge-intensive operations (Duga & Studt 2006; United Nations Conference on Trade and Development (UNCTAD) 2005). Thus, there must be some issues that make these locations attractive for outsourcing also knowledge intensive operations. These reasons have been argued to include, for example: the cost level in the target country, knowledge and capability issues

and the efficiency of the operations (Bardhan 2006; Duga & Studt 2006; Howells, Gagliardi & Malik 2006; Narula 2001; Pisano 1990; Veugelers 1997). This study aims at examining the importance of these factors in the outsourcing location choice of the Finnish companies outsourcing parts of their product development internationally.

The purpose of this paper is to examine the objectives firms have for outsourcing product development operations internationally, and especially to emerging country providers. This is approached from two complementary viewpoints. On one hand the paper seeks to discuss the overall motives for outsourcing product development. On the other hand, the paper seeks to discuss the choice of location, i.e. why do the firms choose an emerging country provider.

This study aims at contributing to the international business field by discussing international outsourcing of product development from the viewpoint of the corporate capabilities and the knowledge-based view of the firm. In addition, the traditional approaches to the location decision are applied, even though these have usually been applied only to captive operations (operations that take place within the firm boundaries) (Dunning 1981, 1998). From the managerial perspective, this study provides valuable information for benchmarking own operations and thus for evaluating the firm's position in relation to others. The aim is to be able to draw conclusions concerning certain sectors, and thus provide these relatively research intensive sectors with information on the state of international product development outsourcing in the field. Managers can also gain from understanding the motives of other companies' product development outsourcing decisions and their location choices.

## **THE OUTSOURCING OF THE OPERATIONS INTERNATIONALLY**

### **The product development activities outsourced internationally**

This study builds on the knowledge-based or competence-based view of the firm (Freiling 2004; Makadok 2001). According to this approach, firms possess different capabilities which makes it possible and reasonable to outsource certain operations and to hold on to other ones. The predominant view is that companies should outsource operations that do not incorporate their core capabilities, because outsourcing these should not endanger the competitive advantage of the firm. In addition, outsourcing these gives the firm the possibility of focusing on areas where they have a distinctive advantage (Pisano 1990, 153, 174). Even though product development, as it involves knowledge-intensive processes, can easily be seen to be in the core of any company's operations, it is possible to find operations within the function that are not in the core, and thus are possible targets for outsourcing (cf. Duga & Studt 2006).

It is difficult to divide product development operations into different categories. However, one rough division that is often referred to, is to distinguish between basic research and applied research. In addition to these, also development work and testing are included in product development operations. (Ali-Yrkkö 2007; Monczka et al. 2005)

By analysing the operations that are being outsourced, it is possible to discover what types of product development operations are possible targets for international outsourcing and on the other hand, what are such operations for which outsourcing is not possible. This discussion is closely linked to discovering the core capabilities of the firm and the sources of sustainable competitive advantage. It has been argued that the competitive core of many modern companies is not anymore in performing the manufacturing or any other production operations, but in either managing the customer interface or in managing the network of numerous business partners (Engardio, Einhorn, Kripalani, Reinhardt, Nussbaum & Burrows 2005). It is also interesting to discover whether there appear any connections between the type of activity outsourced and the objectives of the outsourcing initiative.

### **Why to outsource product development internationally?**

In the early days of international outsourcing, this operation mode was mainly used as a way to cut costs. However, more recently, companies have started to realize that there is a range of other objectives that can be achieved by outsourcing. (Leavy 2004) Therefore, the reasons behind international outsourcing, most

probably, are nowadays much more versatile. Cost reduction and other significant reasons behind outsourcing, and especially product development outsourcing to an emerging country provider recognized by previous research, are discussed in the following.

**Cost reduction** remains to be an important reason for companies to outsource product development operations, especially in the international context (Bardhan 2006; Duga & Studt 2007; Narula 2001). This should turn out to be one of the essential reasons behind outsourcing product development offshore. The lower cost level can free up resources that can then be used for other activities (Offshore outsourcing 2007). In addition to cost reduction, also restructuring the corporate costs (e.g. between fixed and variable) is important (cf. McIvor, Humphreys & McAleer 1997; Monczka et al. 2005).

Another important reason for companies to outsource their product development operations is to be able **to respond to rapid and extensive changes in technology** (Duga & Studt 2006; Monczka et al. 2005; Pisano 1990). A very broad portfolio of skills and capabilities is needed in developing modern technologies, because they often are multidisciplinary. Therefore, companies may need to tap into external skills and thus outsource some of the operations. (Howells 1999; Narula 2001) Outsourcing provides a good way of accessing capabilities that would be costly and very time consuming to develop in-house. This is especially important for small and medium-sized companies. (Narula 2001; Teece 2000) However, it is unclear whether this applies also in the emerging country context. The capabilities of the provider are the key issue with this regard.

Furthermore, **risk reduction** has been argued to be one reason to outsource product development (Narula 2001). Nonetheless, outsourcing knowledge intensive operations is also risky in itself (Mehta & Peters 2007; Monczka et al. 2005). Therefore, it has been argued that R&D operations can and should be outsourced only when it does not endanger the competitive advantage of the company and when it at the same time is cost efficient to do so. (Narula 2001; Veugelers 1997) Thus, it is not self-evident that risk reduction applies as a motivation when product development is outsourced to an emerging country provider.

It seems that also **reducing the time to market** is one important reason for outsourcing product development (Bardhan 2006; Duga & Studt 2006; Mehta & Peters 2007). Because the specialized provider can often perform the operation more efficiently, the process becomes faster. In addition, by outsourcing some of the R&D operations companies also get a chance of specialising and focusing themselves on the areas where they are the strongest. (Monczka et al. 2005; Pisano 1990; Quelin & Duhamel 2003) This is linked to the motivation to strive for remaining competitive in the rapidly changing markets and coping with the increasingly complex technologies that was mentioned above. Reduced time to market and access to highly skilled professionals can, furthermore, yield companies competitive advantage in the form of market entry advantage (Khan & Fitzgerald 2004).

Even though the offshore context differs from the domestic one, it could be expected that these motivations are, to some extent, valid also there. This is because, the provider must be able to provide certain added value, i.e. have certain level of capabilities so that outsourcing is reasonable in the first place. The location benefits involved in offshore outsourcing of product development operations are examined next.

## Discovering the location of the outsourced product development

It seems that there are substantial advantages to be achieved through outsourcing product development operations to offshore providers, and thus the first mover advantage accruing to the forerunners most probably forces other companies to follow (Maskell et al. 2007). Thus, there seem to be reasonable explanation for why the outsourcing of also knowledge-intensive operations to emerging country providers (e.g. in India and China) is increasing in popularity (cf. UNCTAD 2005)

For any company to outsource its product development internationally, there must be some advantages that cannot be achieved through domestic operation modes; otherwise it would not engage in such a risky and demanding initiative (see e.g. Bardhan 2006; Zedtwitz von et al. 2004). In a way the benefits stemming from the offshore location are the flip side of the objective sought by outsourcing. Nonetheless, what is important here, is the explanation of why do these benefits exist in the specific location.

The issue of location choice has mainly been examined from the viewpoint on MNEs, and therefore also here it is referred to sources discussing MNE location choices. The basic issues are most probably quite similar, even though certain factors may be more or less significant in outsourcing the operations.

Various emerging countries, including India and China as the most notable ones, have been developing very fast in the recent years. The infrastructure has been built in these countries, especially in the urban areas, and thus the conditions for making business have been considerably improved, nonetheless, there still is a lot to

be done (Myron 2004). Furthermore, the intellectual property rights regimes have been developing internationally, and thus also emerging countries have become possible locations for creating new knowledge and being able to protect it from others (UNCTAD 2005). In addition, there is an increasing supply of high quality skills in many developing countries, like India for example (Marsh 2006), which naturally makes these more attractive locations.

For the most part, the R&D activities MNEs have carried out abroad have been adaptive, meaning that the aim has been to customize technologies to local conditions (UNCTAD 2005, 99). For these kinds of activities, local know-how is essential, since it is necessary for the developer of the product to be aware of the local regulations as well as the local customer demands. Therefore, having local business partner, i.e. a local provider in the case of offshore outsourcing, is very important. This can be seen to be connected to the existence of large potential markets, i.e. market seeking (cf. Dunning 1998), since adapting a product for new markets is more inviting when there are large potential markets to be conquered.

However, MNEs have also, to some extent, been engaged in technology sourcing or monitoring to keep track of newest technological developments. In these cases, R&D units are located in countries with centres of excellence. (Cantwell 1995; UNCTAD 2005) Seeking strategically important assets has been acknowledged as one of the increasingly important variables that influences the location choice. In addition, also availability of other resources has been argued to play a role in the location choice. (Dunning 1998) In the emerging country context, it can be seen that there exists a large pool of educated work force, and thus there are resources. Even though the quality of higher education is variable in these countries, there are also plenty of well trained and talented people. (see e.g. Kobayashi-Hillary 2005)

Based on these arguments, product development operations are likely to be outsourced into locations where there is a considerably high level of know-how. This, however, can be approached from two different angles; it can mean mastering the most recent and emerging technologies, or it can be mastering the local conditions. It is debatable whether the conditions in emerging countries are such that there can be seen to exist e.g. centres of technological excellence, but there certainly is strong knowledge of the local business environment, the regulatory framework as well as the customers' preferences. These are very valuable assets for companies seeking to enter the markets. It, however, seems that the level of technological knowledge is rising in the emerging countries, as the level of education improves and the numbers of e.g. technical graduates rises steadily (see e.g. Kobayashi-Hillary 2005) Therefore, it can be expected that also offshore locations also start to attract the most knowledge-intensive, and creative tasks involved in the product development process.

## THE SURVEY ON R&D OFFSHORE OUTSOURCING

The empirical phenomenon of international outsourcing of product development is examined with the help of this theoretical framework. The empirical data is collected in Finland in May and June 2008. The data is gathered with the help of a computer assisted telephone survey.

The main aim of the survey is to identify Finnish companies that have outsourced some of their R&D operations internationally. The survey is conducted via telephone to reduce misunderstandings and to make responding easy (cf. Heikkilä 1998, 66–68). The questionnaire is electronic, and thus the survey can be called a computer aided/assisted telephone survey.

The survey is actually an omnibus survey, meaning that questions of several researchers are combined into one survey. Altogether five researchers have contributed to the content of the survey; all of the questions are innovation-related, in addition to which there are naturally also some background questions. The sample is drawn from companies operating in Finland in five different industries (manufacture of chemicals and chemical products, manufacture of fabricated metal products, except machinery and equipment, manufacture of machinery and equipment n.e.c., manufacture of electrical and optical equipment, computer and related activities).

The number of companies in the sample is 879. The survey naturally aims at a good response rate; the aim is to get around 200 responses. Thus the time of calling to the respondent is agreed with the respondent in beforehand. The results from the survey are to be presented at the GBATA 2008 conference.

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# VALUE CREATION IN METAMORPHIC MERGING? ACQUIRER RETURNS IN TRANSFORMATIONAL MEGA-DEALS OF THE 1993-2000 MERGER WAVE

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## ABSTRACT

*The last twentieth-century merger wave witnessed many amicable, horizontal combinations bilaterally negotiated between firms of comparable size and undertaken as transformational transactions. Large mergers and acquisitions (M&A) have been found to depress acquiring firm performance, and research has repeatedly demonstrated a typical null return for acquiring firms. This study explores whether transformational deals in the 1990s involving the metamorphic intent and input of corporate governance from both the acquiring and target sides resulted in a different outcome. I examine benchmarked stock price returns using a market model in two event windows. The unfolding results have implications for future research and practice in strategic management toward further understanding modes of dealmaking conducive to shareholder wealth creation.*

## INTRODUCTION

As many as 80 percent of the mergers and acquisitions during the 1990s and other time periods ended in failure (Harding and Rovit 2004). More often than not, M&A deals decreased acquiring firm shareholder value and fell far short of achieving the broadcasted expectations for cost savings or synergy creation (Selden and Colvin 2003; King, Dalton, Daily and Covin 2004). An ongoing challenge of research into merger consequences has been to categorize deals (e.g., Bower 2001) and differentiate outcomes according to deal type. Large deals in particular have been mechanisms for value destruction: Moeller, Schlingemann and Stulz (2005) determined that while only 2 percent of transactions from 1998-2001 lost over \$1 billion in shareholder wealth, that tiny percentage of deals accounted for a net dollar loss of \$240 billion to acquiring firm shareholders in the time period. Moreover, the stock price of large acquirers, with market capitalization in the upper quartile for NYSE firms for the acquisition year, declined an average 2.45 percent at the time of merger announcement for equity-financed acquisitions of public targets from 1980-2001 (Moeller, Schlingemann and Stulz 2004).

Previous research has established that within-industry deals (Morck, Shleifer and Vishny 1990), financed by cash (Linn and Switzer 2001) or moderate premiums (Sirower 1997), involving the acquisition of tangible assets (Arikan 2002) or the purchase of smaller firms or subsidiaries (Moeller et al. 2004) are more successful. Acquiring firms with overconfident CEOs (Malmendier and Tate 2003), low leverage (Maloney, McCormick and Mitchell 1993), large cash holdings (Harford 1999), low managerial share ownership (Amihud, Lev and Travlos 1990), and large market capitalizations have experienced adverse returns. In addition, hostile deals (Schwert 2000) or transactions involving publicly traded targets (Chang 1998; Fuller, Netter and Stegemoller 2002) have had poor showings. Successive conglomerate acquisitions have resulted in the enduring underperformance phenomenon known as the diversification discount (Berger and Ofek 1995). The present study adds to the total research on characteristics related to acquiring firm abnormal returns by examining the performance outcomes of metamorphic mergers in the 1990s merger wave. I now turn to the explication of metamorphic mergers as a subset of large M&A transactions.

## MERGER BACKGROUND

Mergers and acquisitions have occurred in five distinct waves between 1890 and 2000, with each era of transaction intensification triggered by favorable economic, technological, regulatory, equity, and liquidity conditions (Auster and Sirower 2002; Shleifer and Vishny 2003). M&A activity reached unprecedented (inflation-adjusted) levels in the 1993-2000 wave when over 58,000 firms combined in the global exchange of more than \$12 trillion in assets. Yet the performance has not matched the frequency or valuation of the deals. In the dealmaking frenzy of the last wave, acquiring firms experienced losses disproportionate to benchmark portfolios of industry peers (Business Week 2002). While acquiring shareholders lost equity wealth, acquiring and target CEOs enriched themselves through lavish compensation packages and golden parachutes (Harford and Li 2004). Managerial self-interest cannot be ignored (e.g., Bliss and Rosen 2001), but other factors contribute to CEO dealmaking as well.

## WHEN AND HOW DOES SIZE MATTER IN MERGER TRANSACTIONS?

While intercorporate combinations by large firms have mostly not met dealmakers' expectations, I explore deals defined not simply by acquiring-firm size (or even simply by acquirer size, equity financing, and the publicly traded status of the target) but by additional coexisting considerations. Metamorphic merging subsumes the reconfiguration of multiple assets, and metamorphic mergers thereby differ from mergers defined solely by size. In moving from qualitative to statistical data, I proxy the multidimensional change through widely available metrics. Metamorphic mergers are horizontal, highly integrative, amicably agreed combinations between large public firms in the same industry sector. They resemble but are not identical to mergers of equals (Wulf 2004) in that they are friendly rather than hostile, accomplished through bilateral negotiation rather than tender offer, financed largely or entirely through equity rather than cash or debt, and occur between firms of comparable size during the same fifth merger wave emphasizing strategic consolidation; they differ from mergers of equals in that they do not presume close to zero premium or the approximately equal division of post-deal shareholdings and corporate governance positions between the participating firms. From a sample of 158 such completed transactions announced during the merger wave of 1993-2000, I investigate the performance of these deals relative to the S&P 500 to determine whether acquiring shareholder wealth was created or destroyed. The preliminary assessment reported in the results section focuses on a subset of the sample.

Size derives not only from the acquirer capitalization (or assets, revenues or employees) but also from the magnitude of merger-related gains and losses (which are related to the size of the acquirer and the size of the deal). As noted peripherally by Moeller *et al* (2005), while large loss deals heavily outnumbered large gain ones from 1998-2001 (87 versus 56), the number of large loss deals is outweighed by the number of large gain ones in the earlier extended time period 1980-1997 (23 versus 17). Large in this context means exceeding one billion. Research has still not documented the factors distinguishing large gain deals, and I speculate as to the consequences of metamorphic transactions. Considering the various aspects of size, I propose that *metamorphic mergers will have differential stock price performance compared to the general category of intercorporate combinations between large firms.*

## METHODS

### Sample

The sample began with the 285 largest completed acquisitions involving a U.S. target announced from January 1, 1993 to December 31, 2000 as identified in the Mergers and Acquisitions database of SDC Platinum. The initial sample size was conservatively estimated to capture all relevant deals valued at a minimum of \$5 billion. That figure was chosen as a midpoint between the \$1 billion mega-merger threshold and the \$10 billion threshold into the valuation territory for record-breaking deals (Mergerstat 1998; Flom 2000; 2000). The list of all completed deals announced between January 1, 1993 and December 31, 2000 involving U.S. targets valued at \$500 million and above numbered 2,127. The selected time period covered an international wave of M&A activity, such that all the deals occurred in a time of similar conditions. Transactions that involved private firms, subsidiaries, non-

U.S. acquirers, or that appeared to have been completed but were ultimately withdrawn were excluded as were deals not pertaining to the combination of two entire firms (recapitalizations, privatizations, spinoffs, stock buybacks, and minority stake purchases). The final sample of 158 firms was thus constrained not only by firm nationality and public versus private ownership, but also by deal valuation, entirety, completion and timing. The deals ranged in value from \$3.96 billion to \$165 billion at the time of the offer.

## Analysis

A standard means of estimating gains to the shareholders of acquiring firms is to compute the abnormal return for a given window around the acquisition announcement (Magenheim and Mueller 1988). The two most common event windows are (1) the three-day period around the acquisition announcement and (2) the time period from about one month before the announcement until the merger close (Andrade, Mitchell and Stafford 2001). The longer window encompasses the stock price impact of merger-related events such as bid revisions, while results from the shorter window are robust for different models selected. The calculation of estimated returns relies on the general market model (Sharpe 1963; Mandelker 1974) with the CRSP equally weighted index returns often employed as a benchmark (Brown and Warner 1985). The alpha (intercept) in the regression model indicates the market-based rate of return. An alternative is to calculate Jensen's alpha using an index specifically selected or constructed for the portfolio under investigation (Jensen 1968). I estimate acquiring-firm abnormal returns using Jensen's alpha relative to the S&P 500 for both event windows.

Jensen's alpha expresses the performance of a designated security relative to a market benchmark. In the present dataset, the security is the acquiring firm (later, the merged firm) stock price and the benchmark is the S&P 500 index. I selected this unweighted index tracking large firms because of the dispersed large market capitalizations of the companies under investigation. As a variant of the two-parameter market model introduced in the CAPM, Jensen's alpha compares the returns of the security and the benchmark. When Jensen's alpha is positive (negative), the security has performed better (worse) than the benchmark. For an acquiring firm compared to the S&P 500, the expected value of Jensen's alpha is zero, consistent with longstanding research finding null equity gain for acquirers.

Alpha is the intercept coefficient in a regression equation where the second coefficient, beta, is the volatility of the security relative to the benchmark. The equation takes the form:

$$R_{it} = \alpha_i + \beta_i (R_{mt}) + \varepsilon_{it}$$

where  $R_{it}$  is the daily rate of return for firm  $i$  on day  $t$ ;  $\alpha_i$  is Jensen's alpha for firm  $i$ ;  $\beta_i$  is the stock price variance of firm  $i$  relative to the variance of the market benchmark  $m$ ;  $R_{mt}$  is the daily rate of return of the market benchmark during month  $t$ ; and  $\varepsilon_{it}$  is the random error term. OLS regression estimates the parameters and significance of alpha and the overall model. If the model for each merger is valid and Jensen's alpha statistically differs from zero, the alpha quantifies abnormal equity returns from -28 trading days before merger announcement until merger close.

## RESULTS

From 107 regression models (one for each merger case in the preliminary sample), there are 93 models where the F-statistic corresponds to the  $p < 0.1$  or better level of significance. Those same 93 models have intercepts (alphas) statistically different from zero at a minimum  $p < 0.1$  level of significance. The mean alpha is statistically equivalent to zero ( $\alpha = -0.12\%$  daily abnormal return with 95% confidence interval -0.268, 0.029), and we cannot reject the null hypothesis that the alpha values are evenly divided between positive and negative (56 negative alphas, 51 positive alphas,  $\chi^2 = 0.0044$ ,  $df = 1$ ,  $\chi^2_{.05,1} = 3.84$ ). Yet the mean cumulative abnormal return using a three-day window around the merger announcement is statistically distinct from zero ( $CAR_{(-1,1)} = -3.80\%$  with confidence interval -5.47, -2.14).

Two extreme left outliers occurred in the Jensen's alpha distribution. The outliers represent the 1998 mergers of Travelers Group (acquirer) with Citicorp and NationsBank (acquirer) with BankAmerica. The Travelers intercept statistically differs from zero ( $\alpha = -5.89\%$ ,  $t = 2.624$ ,  $p = .0088$ ), while the NationsBank intercept does not ( $\alpha = -5.12\%$ ,  $t = 1.161$ ,  $p = .246$ ). I recalculated the mean alpha based on (1) the 93 significant models ( $\alpha = -0.080$  with confidence interval -0.196, 0.036), (2) the 105 models after the leftmost outliers were removed ( $\alpha = -0.017$

with confidence interval -0.062, 0.027), and (3) the 105 models with the leftmost outliers removed and the alphas in the insignificant models set to zero ( $\alpha = -0.022$  with confidence interval -0.061, 0.017). In all three alternate approaches, the 95% confidence interval includes zero. These findings support the previous research on both null returns to acquirers (even in the calculation including two unusual cases of large loss) and negative returns to large acquirers. Additional analyses and results are forthcoming.

## DISCUSSION

Preliminary evidence does not yet distinguish the performance outcomes of metamorphic transactions from those of M&A deals in general or large M&A deals in the 1990s in particular. By proceeding, I contribute to the growing literature identifying deal characteristics associated with diverse equity outcomes for acquiring firms. Current challenges of the study concern the operationalization of the metamorphosis construct and the measurement of postacquisition performance. The secondary sources used in the initial analyses may be insufficiently fine-grained to identify metamorphic transactions. Additional consideration and refinement of the indicators is suggested. Regarding acquiring-firm performance, instead of using the abnormal return percentage it is possible to calibrate returns by dollar abnormal return (Malatesta 1983). This dollar loss or gain is the three-day cumulative abnormal return multiplied by the equity capitalization of the acquiring firm. I continue investigation of the performance of metamorphic mergers as potentially illuminating of factors characterizing wealth-generating deals, which have been the largely elusive goal of dealmakers for over a century.

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# **THE RELATIONSHIP BETWEEN EDUCATION BUSINESS PROGRAMS AND NEW ENTREPRENEURSHIP: AN OVERVIEW OF THE U.S. SITUATION**

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## **ABSTRACT**

*The purpose of this paper is to analyze the business education programs promoted by universities in the United States and its critical role in the process of new business creation by stimulating the entrepreneurial aspirations of young students and supporting the potential entrepreneurs in developing personal capabilities, skills, and competences. We will study some representative examples and its specific entrepreneurial activities and programs for undergraduate and graduate students. A theoretical model (the MAIR model) will be used to classify the activities and underline the special challenges on business education and the role of higher education in an entrepreneurial process.*

## **INTRODUCTION**

Could higher business education programs promoted by universities play a crucial role in the process of new business creation? And, could a positive relationship be found which links universities to new entrepreneurship? We believe the Universities with high quality teaching and business education programs can:

- educate potential entrepreneurs to transfer more codified knowledge into marketing, administrative, financial, technological, and other areas aiding the process of new ventures creation
- stimulate the entrepreneurial aspirations of young students and support the potential entrepreneurs in developing personal capabilities, skills and competences (Chrisman *et al* 1995, Fiet 2001, Vallini and Simoni, 2006).

Most of the research that investigate new business start-ups concentrate on both internal and external factors that seem to influence the success of a start-up. In fact, the creation of a new firm is the result of a complex process involving the personal characteristics of the potential entrepreneur and an adequate combination of vocation, capabilities, resources and knowledge. Another relevant factor is the large percentage of new ventures that fail for absence of entrepreneurial culture and professional competences necessary to cope with the increased complexity of a new firm. Therefore, during the process it is necessary to pay particular attention to the creation, setting-up and integration of the different skills, knowledge and know-how that different individuals need to have in order to successfully start a new venture. Recently, the studies that investigate new business start-ups are focusing on the role that Universities and entrepreneurial centers can and should play in sustaining and stimulating the development of entrepreneurship through its research and education services (Carlsson, 2005).

In particular we stress the role that Universities can play in supporting and stimulating both internal and external factors (Sorrentino, 2003) (that seem to influence the success of a start up) offering higher education programs, transferring technology, and providing services to start-up companies.

Recently, more and more universities have been integrating entrepreneurial and business activities into their courses and programs, which stimulate 'awareness' of entrepreneurship and which allow students to develop the basic skills and abilities needed for any entrepreneurial process (Hynes 1996, Finkle and Deeds 2001, Garavan and ÓCinneide 2003, Katz 2003, Frank 2005, Vallini and Simoni 2006). In the USA this phenomenon is firmly established, beginning in the early 30s at Harvard University and then spreading substantially to other campuses

in the early 60s (Ivancevich 1991). At present, business activities in American Universities generally include orientation meetings with students, internships and work experiences within companies to facilitate and reinforce the student's knowledge and capabilities. Moreover, there are a large number of partnerships with incubators and science parks for transferring the results of the scientific research and facilitating the high tech start-ups.

Stemming from the above observations, the purpose of our study, is to analyze the relationship between universities and new entrepreneurship, paying particular attention to the role that higher education programs can play within it. In this paper higher business education programs is intended as the process, or series of activities, that allows an individual to develop knowledge, skills and capabilities needed to evaluate and solve specific entrepreneurial problems (Hynes, 1996). Specifically, we discuss some representative examples of American Universities that can be critical centers for the diffusion of entrepreneurship having implemented in the last years entrepreneurial activities and innovative and well-rounded business programs.

The structure of this paper is the following: first, we present the research questions and the methodology adopted, then we discuss the U.S. situation and we propose an application of an interpretive model (MAIR Model) to carry out an analysis on the impact of business education programs on vocation, motivation, capabilities, and performance of the potential entrepreneurs. Finally, we draw some conclusions and future research proposals.

## THEORETICAL FRAMEWORK, ASSUMPTIONS AND METHODOLOGY

From a perspective of universities at an international level, higher education programs are becoming increasingly more strictly related to the need to spread knowledge and know-how as a means for training new entrepreneurs and, consequently, for creating new entrepreneurship. It is precisely from this standpoint that business programs promoted by universities may become a strategic factor for generating new entrepreneurship, for the qualification and competitiveness of new ventures and for the development of human resources at the highest level. We may then point out that the promotion and setting-up of these programs allows future entrepreneurs to find themselves within a system of networks which:

- legitimates and supports their entrepreneurial decisions (through *legitimation networks*) creating a climate of shared values having a substantial influence on entrepreneurial decisions
- increases the possibility to evaluate and choose market opportunities (*opportunity networks*)
- provides access to information and material and intangible resources (*resource networks*)

Having access to such networks can therefore be positively linked to the creation of new firms and to the possibility to achieve good performance in their first years of life (Aldrich *et al.* 1986, Naphiet and Ghoshal 1998, Liao and Welsch 2005). On one hand, the networks legitimate, encourage and stimulate the processes of new business creation, and, on the other hand, they facilitate the access to pivotal resources and information needed for the successful start-up.

In term of content, we argue that universities can activate and stimulate the above-mentioned system of networks

- offering education and training activities and scientific production;
- supporting spin-offs and incubation activities transferring technology and patenting;
- promoting stable relationships and fruitful partnerships with entrepreneurs and capitalists.

In fact, Universities with high quality teaching and scientific production can, first of all, be potential engines for the economic and entrepreneurial development of a country. Second, spin off and incubation activities can aid future entrepreneurs in the creation of a start-up facilitating the access to material, financial and relational resources. Finally, Universities can educate potential entrepreneurs transferring more codified knowledge into marketing, administrative, financial, technological and other areas.

Our work is based on three assumptions

1. universities, with high quality teaching and scientific production, are potential engines for the economic and entrepreneurial development of a country
2. higher education activities and business programs can support collaboration between universities and entrepreneurship and aid future entrepreneurs in the creation of a start-up
3. higher education activities and business programs are strictly related to entrepreneurial competences and to the consequential success rate of start-up companies.

Stemming from the above observation, the purpose of our study is to analyze the business education programs promoted by Universities in the United States focusing on the following research questions:



1. Can business education programs support collaboration between universities and entrepreneurship and aid future entrepreneurs in the creation of a start-up?
2. How can business education programs encourage students to apply entrepreneurial thinking in start-ups?
3. How can American Universities educate potential entrepreneur to transfer skills and competences acquired from the higher education programs to new business start-ups?

We assume the *research perspective* of potential entrepreneurs interested benefit from relationships, resources and abilities developed through higher education programs. To evaluate our research questions and interpret, which an exploratory approach, the phenomenon under study, we selected some representative examples of American Colleges and its specific entrepreneurial activities and business programs for undergraduate and graduate students. We used multiple sources of evidence, such as interviews, direct observations, physical evidence, analysis of corporate balance sheets, documents, web sites and secondary data collected from newspapers, magazines and trade journals.

The *unit of analysis* is the entrepreneurial activities and business programs promoted and their relationship with the new business creation process. For the selection of the specific activities we used a theoretical model: the MAIR model (Motivation, Abilities and Skills, Ideas, and Resources) (Gibb and Ritche 1982, Hartshon 1998). It was previously applied in 2004 by NCGE (National Council for Graduate Entrepreneurship) to monitor the support offered to students at the affiliated universities (figure 1). As result of the application of this model, we carried out an analysis on the impact of higher education and business programs on motivation, knowledge, opportunities, resources, and performance and we tried to underline the role of higher education in an entrepreneurial process.

**Figure 1: MAIR Model and business activities**

| <b>MOTIVATION</b> and<br><b>CONFIDENCE</b> | <b>ABILITIES</b> and <b>SKILLS</b><br><b>DEVELOPMENT</b> | <b>IDEAS</b>                 | <b>RESOURCES</b>              |
|--|--|------------------------------|-------------------------------|
| Role Model and Case studies                | Courses and classes                                      | Idea Workshops               | Enterprise learning           |
| Networking opportunities                   | Conferences, workshops and talks                         | Networking opportunities     | Techonology Transfer Activity |
| Enterprise forum and clubs                 | Works Experiences and stages                             | Idea concept banks           | Incubation                    |
| Enterprise Events and Awards               | Entrepreneurial Summer School                            | Research idea prototyping    | Funding                       |
| Mentoring                                  | Business Plan Competition                                | Business Concept Competition | Central support union         |
|  |  | Idea Workshops               | Spin off activities           |

## **BUSINESS PROGRAMS AND NEW ENTREPRENEURSHIP IN AMERICAN COLLEGES**

Each year, many specialized journals ranke college programs in business, education, engineering, law and medicine to outline the best schools in the USA (see for example US News and World Report, The Princeton Review, Financial Times and BusinessWeek). Stemming from the 2006 data in United States there are 1926 colleges (about 100 outside the USA territories). In regards to business and entrepreneurial schools, at present, there are 1354 colleges that promote programs in business, management, marketing and related support services and 75 colleges that promote programs about entrepreneurship and entrepreneurial studies. In 2008, the top 5 schools that have demonstrated leadership in preparing and supporting students on the field of management are: Harvard University, Stanford University, Northwestern University, University of Michigan-Ann Arbor, and University of Pennsylvania (Warton College). On the field of entrepreneurship, for the 15th straight year, Babson College was chosen by the US News and World Report as “best US college in the entrepreneurship field” and ranked among the top executive education schools worldwide by both the Financial Times and BusinessWeek. To identify and rank the schools on the list, they collected in the fall of 2007 both statistical indicators and survey results from more than 1.200 programs.

The common mission of these universities is to lead the global advancement of business education and practice through the development of academic, research, and outreach initiatives that inspire entrepreneurial thinking and cultivate entrepreneurial leadership in all organization and society. The management, organization and promotion of educational and research activities dealing with business and entrepreneurship is carried out by Business School and Entrepreneurial Centers, which are considered the hub for business programs and the main starting point for all the other entrepreneurial activities promoted by the universities. The programs promoted

enable potential entrepreneurs to be exposed to a global network and a system of alliances made up of relationships, contacts, exchanges of ideas as well as research and study activities.

The offering of interdisciplinary curricula and co-curricula focusing on the development of entrepreneurial and managerial competence and capabilities could be considered the crucial factor in the higher education process. Typically, the education and training activities are set up in different programs: undergraduate programs, graduate program (MBA), Post Graduate programs and Executive and co-curricula programs. The undergraduate curricula integrate core competences, key business disciplines, and liberal arts into basic, intermediate, and advanced level courses based on classes in accounting, management, marketing and finance.

For example, Babson College offers 22 elective courses for its MBA program and a similar number of undergraduate student programs carried out in cooperation with the Entrepreneurial Faculty of Babson College and with the F.W. Olin Graduate School of Business, Faculty of Engineering.

Another representative example is Northeastern University, ranked 34th by BusinessWeek in its “Best Undergraduate Business Schools” and 1th in internship. The undergraduate program is also distinguished by Princeton Review and Entrepreneurial magazine as one of the U.S. top 25 entrepreneurship programs. Northeastern University College of business administration established in 1922, provides its students – undergraduate, graduate and executive – with the education, tools, and experience necessary to launch and accelerate successful business careers. The College offers a comprehensive range of undergraduate and graduate programs (6 undergraduate colleges, 8 graduate schools, and 2 part-time divisions) characterized by lessons on theory, case studies, simulations and integrative and supplementary projects.

The Kellogg School of Management (Northwestern University) awarded its first doctoral degree in 1927 to develop useful frameworks and insights for the business environment, and a culture of business management.

Furthermore, in order to establish a series of relationships and contacts between universities, companies and other institutions and to create and proliferate an entrepreneurial climate and culture (essential element to stimulate the creation and starting of the process of new entrepreneurship) these universities are currently active in the promotion of outreach programs and events. In fact, a fundamental part of the higher education process is the array of extra-curricula activities (Abilities and Skills variable of the MAIR model) offered by organizations and clubs aimed to connect, support and aid all students in their studies. For instance, in order to stimulate the creative process for new ideas, at Babson College, the Babson Alumni Association in cooperation with the Entrepreneurial Club organize monthly meetings and workshops for students to draw up business plans to be assessed by business angels and venture capitalists (Ideas e Resources variables of the MAIR model).

One of the most well advanced university in this activity is Massachusetts Institute of Technology (MIT) with 390 registered organizations that represent the engine for the creation of network, relationships and contacts which allow students to develop varied skills, and are better to adapt to an ever-changing business environment. They also favor the spreading of entrepreneurial initiatives by legitimizing them and providing support to students (Figure 2).

**Figure 2: Organizations and clubs at MIT**

|   |     |  |
|---|-----|--|
| <b>Number of registered organizations</b>         | 390 | Clubs, Organizations, groups, classes  |
| <b>Main categories</b>                            |     | academic activism arts athletics campus media cultural fraternity sorority independent living groups (FSILG) government, interest recreational religious service social technology                 |
| <b>Student activities</b>                         | 17  | e.g choral groups, concert band, theatre, magazine, student film society   |
| <b>Sport activities</b>                           |     | e.g basket, baseball, athletic   |
| <b>Clubs and Organizations</b>                    |     | e.g alumni association, entrepreneurship forum   |
| Honor societies:                                  | 11  | e.g Alpha Chi Sigma, Alpha Nu Sigma, Chi Epsilon, Eta Kappa Nu, Phi Beta Kappa, Pi Tau Sigma, Sigma Gamma Tau, Sigma Xi, Tau Beta Pi; ecc.   |
| Religious organizations:                          | 27  | e.g. Asian Baptist Student Koinonia; Asian Christian Fellowship; MIT Baha'i Ass.; Black Christian Fellowship; MIT Buddhist Community; ecc  |
| Minority and international student organizations: | 64  | African Students Association; Arab Student Organization; Asian American Association; Association of Indonesian Students; Association of Puerto Rican Students; MIT Ass. of Taiwanese Students; ecc |
| Number of fraternities:                           | 28  | members 55%  |
| Number of sororities:                             | 5   | members 26%  |

The business organizations and clubs have the objective to steer students into a business career establishing a close collaboration within universities and firms needed to provide further benefits, including the possibility of planning and promoting significant extracurricular activities (e.g meeting with venture capitalists and business angels, brainstorming to find new business ideas, business plan competition). Indeed the students who join become a member of a community, which helps to build contacts and can enable them to interact directly with their professors and the other entrepreneurs.

Moreover, students may also take part in co-curricula programs offered by the entrepreneurial organizations for students (e.g Babson Entrepreneurial Exchange at Babson College, Venture Mentoring Service and MIT Enterprise at MIT, Kellogg Alumni Entrepreneurs at Northwestern University) that provide the needed link between people, ideas and resources that all entrepreneurial process require.

The approach adopted by American Universities for the creation of entrepreneurial figures also involves a consistent and continual commitment in further studies, research and conference activities, organization of international events and the setting up of partnerships, all specifically aimed at

- disseminating research outcomes dealing with entrepreneurship (*Motivation and Confidence* variable),
- the exchange, sharing and pin-pointing of new potential business ideas (*Ideas* variable) and
- the creation of international networks and relationships (*Resources* variable) which allow potential entrepreneurs to establish contacts with potential financiers and work world

The University of Pennsylvania Wharton College carries out a consistent and committed dedication to developing research and conference activities dealing in business management and entrepreneurship that are specifically aimed at the cultural, entrepreneurial and managerial shaping of the students and potential entrepreneur. Babson College for over 25 years, invites yearly academic leaders from around the world to participate in the Babson Kauffman Entrepreneurship Research Conference. The best papers from the conference are published annually in the *Frontiers of Entrepreneurship*.

Harvard University organizes frequent lectures, meetings and symposia from across the University about the management and business issues. In addition, they publish the *Harvard Business Review* that is recognized as the most diffuse journal management in the USA with more than 250.000 copies sold.

Alongside its academic and research programs, American Colleges has been involved in intensive technology transfer and spin off activities in order to provide incentives for new entrepreneurship. In fact, they adopt an approach that include specific offices for the transfer of technology (OTT) or incubation facilities, to facilitate a possible development of new entrepreneurship and new enterprises. For instance, Stanford University, more than any other institution could be considered the catalyst in the development and growth of the new high tech business in California. Professors and students started more than 2400 new firms as Sun Microsystems, Cisco System, HP and, Google. The MIT is another example. Since 1990, every year it creates more than 150 new firms, with a total of more than 4000 spin offs created, more than 1 million people employed and, with an annual revenue of 232 billion of dollars.

## SOME SPECIFIC LESSONS FROM U.S. UNIVERSITIES

To better understand the relationship between business activities promoted by American Universities and new entrepreneurship, we can categorize and divide the activities cited above applying the MAIR Model and its four variables. We underlined 5 different activities for each variables that can (Figure 3)

- motivate potential entrepreneurs by influencing personal and motivational variables (variable MAIR: motivation and confidence) (e.g. meetings, conferences, study and work groups, spin off activities)
- create network of relationships that connects students, professors and the business world, motivating and legitimating entrepreneurial activity (variable MAIR: motivation and confidence)
- increase and develop an entrepreneurial climate and culture where students can work and mature academically and professionally
- share entrepreneurial abilities, competences, skills and capacities (variable MAIR: Abilities and Skills Development)
- assist and facilitate the start and development of new entrepreneurial ideas (variable MAIR Ideas)
- facilitate the access to material and financial resources (variable MAIR: Resources) (Incubator, spin off activities, technology transfer, work experience, and stages)

**Figure 3: An application of MAIR model at the American Universities**

| MOTIVATION and CONFIDENCE                      | ABILITIES and SKILLS DEVELOPMENT   | IDEAS                              | RESOURCES                   |
|--|------------------------------------|------------------------------------|-----------------------------|
| Post graduate program, PhD and MBA             | Education and training activities  | Conferences and worksops           | Incubator                   |
| Extracurricula activities                      | Post graduate program, PhD and MBA | Entrepreneurial Club Activities    | Spin offs activities        |
| Entrepreneurial Club Activities                | Conferences and worksops           | Post graduate program, PhD and MBA | Laison office (OTT)         |
| Alumni Association activities                  | Outreach activities                | Outreach activities                | Work exeperience and stages |
| Possibility to enter into the incubator system | Alumni Association activities      | Enterprise Events and Awards       | Outreach activities         |

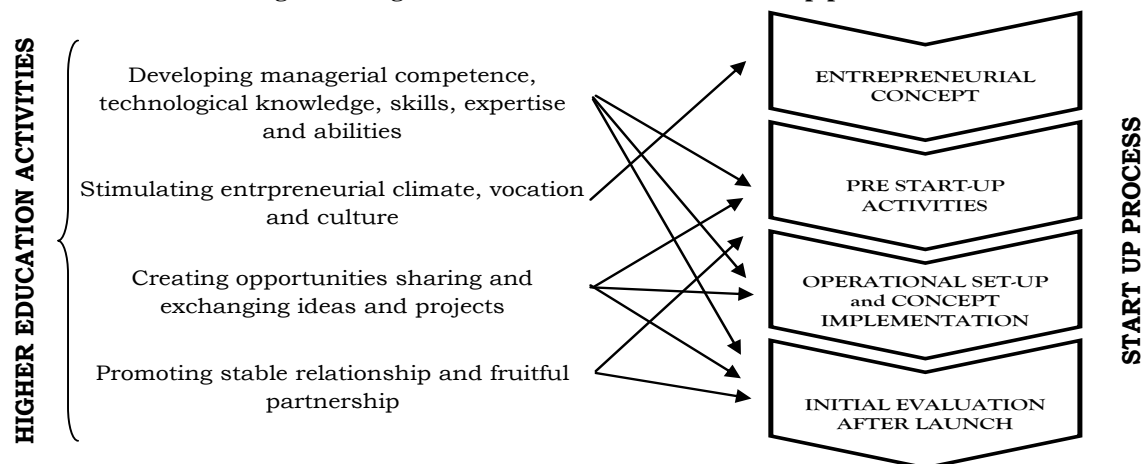
As result of the application of MAIR model is clear how the higher education and business programs offered by American Universities (exemplified by their innovation, methodological quality and content) can certainly create the conditions for future entrepreneurs:

- to acquire managerial competence and technological knowledge, skills, expertise and abilities and share and exchanges ideas, projects and business plan
- to be able to exploit important opportunities, and to acquire strategy, management, relational skills that are indispensable for the solution to problems that all entrepreneurs must face in the start up phase
- to network individuals and institutions such as investors, potential partners, business angels and VC

An integral part of the higher education process is the promotion of research and conference activities needed for the communication of newly developed know-how or innovative ideas through the organization of conferences, workshops and seminars for the discussion of studies and research of scientific interest. This type of commitment is a fundamental source of new ideas (MAIR Ideas variable) and a direct result of the exchanging and contrasting of projects, study results and research. Moreover, the sharing of experiences and ideas offers an opportunity for reciprocal learning-teaching, and for the adoption and use of innovations so that a virtuous circle of ideas and learning is the result. The manner in which such activities are promoted is showing a gradual shift from one way of thinking based on education and training of the sole individual to a new way of thinking concentrated on reaching results by way of groups and teams of students and professors. As result, abilities are put to better use and results achieved and experience matured are exploited more productively, producing changes and new influences that impact on the entire system (MAIR Resource variable).

The new learning practices that American Universities have been adopting for its MBA and open courses can influence the process of creating new ideas and, consequently, potential entrepreneurship. In addition, the success of a new entrepreneurial process will inevitably depend on the ability to recognize, evaluate and exploit opportunities that a potential entrepreneur may be exposed to. In this sense, the potentiality of higher education programs can be measured by the propensity and capability to facilitate a potential entrepreneur to evaluate new entrepreneurial ideas, to exploit and interpret a possible technological finding or research results, and to recognize a potential market demand. Then, a potential entrepreneur can exploit the relationship and opportunities opened by higher education programs in the subsequent steps of the start up process (Figure 4).

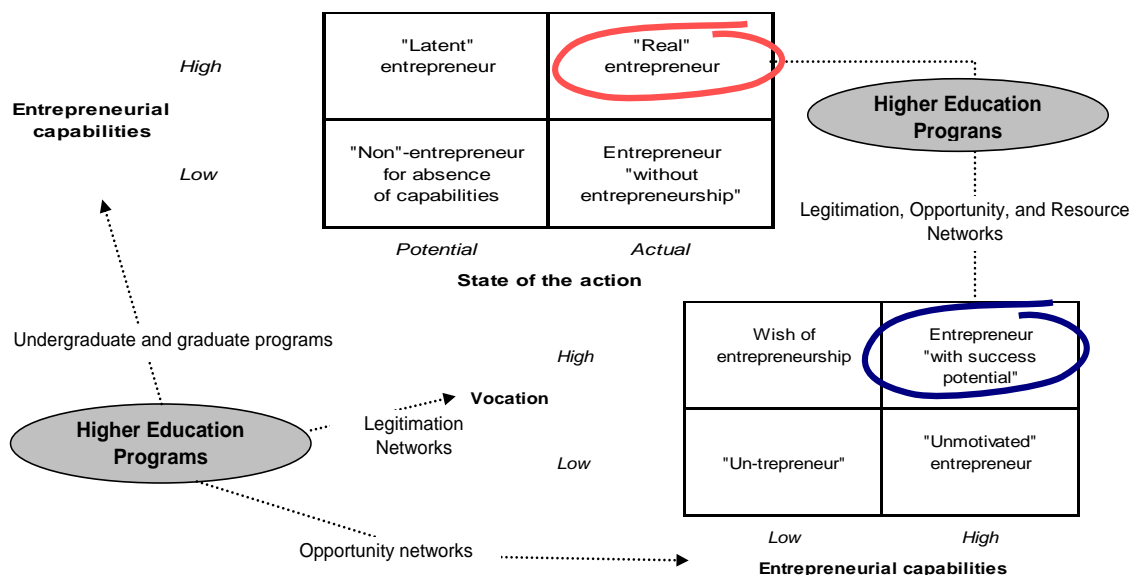
**Figure 4: Higher education activities and start up process**



In fact, higher education programs significantly can affect motivational, behavioral and personal variables (Peterman and Kennedy 2004) of the “will-be” entrepreneur and his success potential. For instance, with reference to entrepreneurial taxonomy (Vallini and Simoni 2006) effected on the basis of two variables, ‘entrepreneurial capabilities’ and ‘state of action’, it is understandable how higher education programs promoted by universities contribute to the acquiring of a series of capabilities able to transform a “non entrepreneur for absence of capabilities” into a “real entrepreneur”. Considering the taxonomy effected on the basis of the two variables ‘vocation’ and ‘entrepreneurial capabilities’ it can be seen how the acquiring and subsequent possession of entrepreneurial capabilities allows for the passage from a mere “wish of entrepreneurship” to an

“entrepreneur with success potential”. Lastly, all other activities connected to higher education programs (alumni and extracurricular activities) and related services supplied to entrepreneurs offer the possibility for the “entrepreneur with success potential” to render this success potential real, effective and concrete (Figure 5).

**Figure 5: Higher education Programs and Taxonomy of entrepreneurs**



If, however, on one hand higher education programs can facilitate the development of entrepreneurial processes, the programs by themselves may not be sufficient. The commitment of universities to produce beneficial effects on the increase of new entrepreneurship should go beyond the mere education and training of the individual. A constant and consistent commitment should also be made on the creation of networks for local cooperation and development of entrepreneurial services (e.g. in terms of activity for technology transfer or spin off activities). This is all the more true with regard to American Universities which, in its organization of entrepreneurial activities dedicates resources to the creation and marketing of innovations and research results to be put towards the creation of new entrepreneurship (see for example Stanford University an MIT). It is recommendable, therefore, to promote a holistic approach in the managing entrepreneurial activities (exemplified and discussed here with the MAIR Model) by the promotion of activities (including incubation, spin off, technology transfer) that can and should be carried out in addition to education and training programs to supplement and integrate know-how. Adopting and following this integrative holistic approach a potential entrepreneur could be able to fully exploit the knowledge powered by universities.

In conclusion, the Universities that have achieved excellence in the promotion of higher education programs with results that have great potential to distinguish themselves in terms of entrepreneurial opportunity. In addition, it can be concluded that a greater commitment may be developed in other types of activities (spin off, OTT, incubators) that a relevant number of Universities currently promote in accordance with its mission. In fact, these are strictly related to the process of higher education and could allow the community to benefit from technologies developed in academic institutions. Only under these conditions, the business and entrepreneurial activities promoted Universities may facilitate the opening of new entrepreneurship which can evolve into successful new business and therefore new job opportunities and supporting economic development.

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# MANAGING SUPPLY UNCERTAINTIES: A CASE OF THAI SHRIMP INDUSTRY

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## ABSTRACT

*Not knowing shrimp size distribution in a pond causes shrimp processors to acquire unwanted-sized shrimp during supply procurement. This acquisition of unwanted-sized shrimp comes at a cost to the processors. In this study, an application of shrimp growth estimation, database management, and mathematical programming are demonstrated to facilitate a processor procuring plan. Based on an estimation of shrimp growth and size, the processor can set supply procurement scheduling that will minimize the inventory cost. The proposed framework shows 10 – 45 % potential saving for the industry.*

*Keywords: supply procurement, growth function, supply chain management, inventory management*

## INTRODUCTION

Shrimp farms are highly sensitive to environmental factors such as feed supply, temperature, etc. which cause variation in shrimp growth and size distribution (Yu et al., 2006a). The variations are natural and inevitable but this poses difficulties to shrimp processors. Because shrimp is sold by size (the number of shrimp per pound or per kilogram), while shrimp size in a commercial pond is not uniformly distributed. When selected sizes are demanded, processors have to decide for ponds to be procured to satisfy the demand. Desirable sizes will be processed and unsold shrimp sizes will be kept in a cold storage. Therefore, unplanned shrimp supplies procuring will lead the processors to accumulate an inventory of unwanted shrimp sizes (Pathumnakul et al., 2007).

Thai shrimp processors have long experienced these difficulties. In the past, processors bundle unwanted sizes with demanded sizes, forcing sales to their customers. Due to recent fierce competitions from China and Viet Nam, this forced sales strategy is no longer effective. Some processors implement alternative strategies such as selling the unwanted shrimp size under its cost.

In this study, we propose an estimation shrimp growth and a better supply chain management to ease the problem. Estimation will facilitate harvest planning, hence, reduce the inventory of unwanted shrimp size. Knowing the availability of shrimp sizes in current and future periods enable processors to set a harvesting plan according to the demand for each shrimp size. The purpose of this study is to demonstrate the combination of a shrimp growth model, database management and a heuristic algorithm to set shrimp procurement scheduling such that the processors' inventory cost is minimized.

## LITERATURE REVIEW

The shrimp harvesting schedule is another form of multi-product dynamic lot-sizing. The examples of lot-sizing problem are the study by Wagner and Whitin (1985); Florian et al. (1980); Pochet and Wolsey (1991); Hindi (1994); Chung et al. (1996); Lee et al. (2001); Basenet and Leung (2005); Hwang and Jaruphongsa (2006); Jans and Degraeve (2007). However, the shrimp problem discussed here is more specific toward the nature of agro-industry. While demands for shrimp sizes in each period can be classified as a dynamic demand for multi-products, the supply of shrimp does not fall in a regular manufacturing pattern because of its uncertain size

distribution. Unlike the agro industry, supply uncertainty for manufacturing cases usually causes by machine down time rather than the uncertain nature of raw materials. To harvest a shrimp pond with multiple sizes of shrimp, it inevitably cultivates unwanted shrimp sizes causing high inventory cost.

To generate a harvest schedule, we need capability of predicting shrimp growth. A popular tool to perform such as task is the shrimp growth function. Yu et al., 2006a; Tian et al., 1993; Leung et al.(1990); Yu and Leung (2005); Tian et al., (2000) have applied the shrimp growth to optimize harvesting schedule. Shrimp growth is usually expressed as functions of important growth factors such as temperature, feed supplied, stocking density etc. (Tian et al. 1993). Popular growth functions are such as linear, Polynomial, Log reciprocal, Von Bertalanffy, Gompertz, Logistic and Exponential.

Generally, shrimp sizes vary in an actual harvest (Yu and Leung, 2005). Applying shrimp growth function will result on the average weight of a shrimp (e.g., Yu et al., 2006b; Franco et al., 2006; Tian et al., 1993). Harvest size distribution plays a crucial role because it directly affects inventory level of shrimp processors. Hence, the information regarding harvest size distribution has an important impact on optimal scheduling. In order to capture the size distribution, Yu and Leung (2005) categorized harvested shrimp into certain size categories using a specified percentage, while Leung et al. (1990) assumed the weight density function was normally distributed. In this study, we base our estimation of shrimp population structure upon past records being stored in a database, so that estimated shrimp distribution reflects farmer' skills and environmental factors surrounding the ponds.

## CONSTRUCTING THE PROCUREMENT FRAMEWORK

The estimation of shrimp supplies that Thai shrimp processors currently conduct is based on quite rigid assumptions. Although processors' harvest teams visit farmers on a regular basis to obtain information of shrimp production (e.g., production cycle starting dates, stocking density, farm location, farmer identity, size of pond, feeding rate, production difficulties, shrimp size being sampling) and record them in a database, many important pieces of information have not fully been utilized. Several processors estimate the amount of shrimp supplies from multiplying a standard survival rate by stocking number and apply a fixed percentage shrimp size to overall shrimp population to determine size distribution at a particular age. Hence, the actual present information regarding shrimp size and growth has been overlooked. The traditional estimation of shrimp supplies for procuring a plan is typically based upon human judgment. After a pond being harvested, a actual size distribution is recorded in the database. A summary of these processes are shown in Fig. 1. These processes are done on a daily basis. Decision makers have to consider a vast amount data from hundreds of ponds for procurement decision. Due to its complexity, the traditional method is prone to errors especially when number of ponds increase.

### Proposed Shrimp Supplies Estimation and Procuring

Alternative methods suggested in this study involve utilizing a shrimp growth function and historical data of shrimp-size distribution for a farmer to enhance prediction accuracy. The distribution of shrimp size can be estimated using current and post-harvest data recorded in a database, while average shrimp size can be estimated using a growth function. Past studies usually assume homogeneous production technology across the shrimp farms. In reality, the technologies used by farmers—including management styles and skills of farmers — vary widely from one another. Hence, assuming homogeneous distribution would likely to bias the estimation. The studied framework takes this crucial piece of information into account for procuring plan. Estimated shrimp size distribution for each pond then is fed into the mathematical based algorithm to set a harvesting plan. A summary of these processes is shown in Fig. 2.

Fig. 1. Shrimp supplies estimation and procuring processes in Thailand



### Current Process

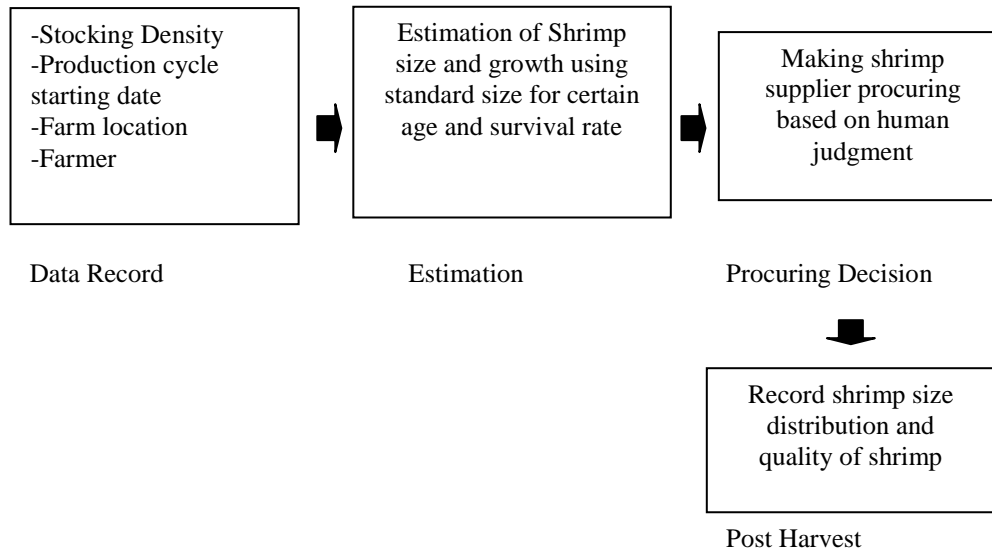
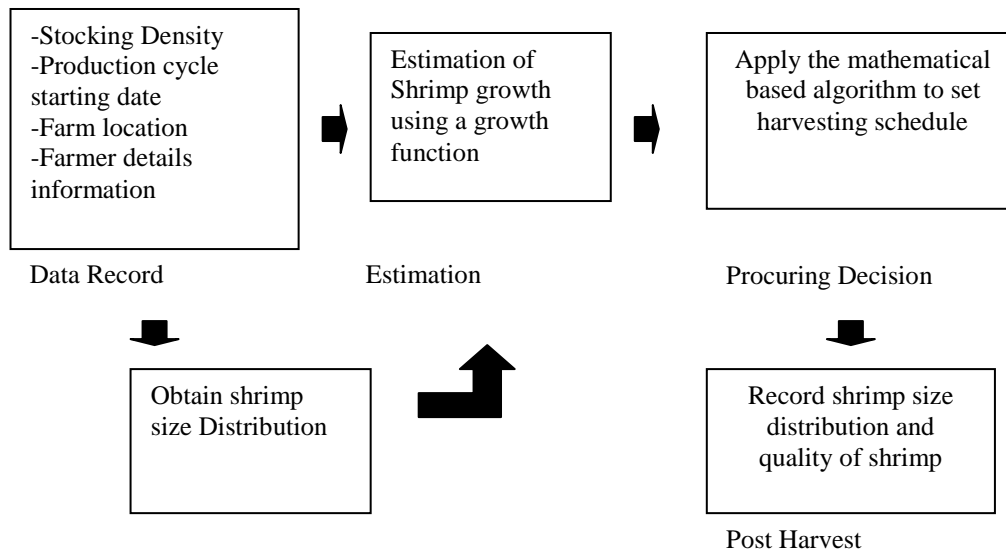


Fig. 2. Alternative procuring processes proposed

### Proposed Process

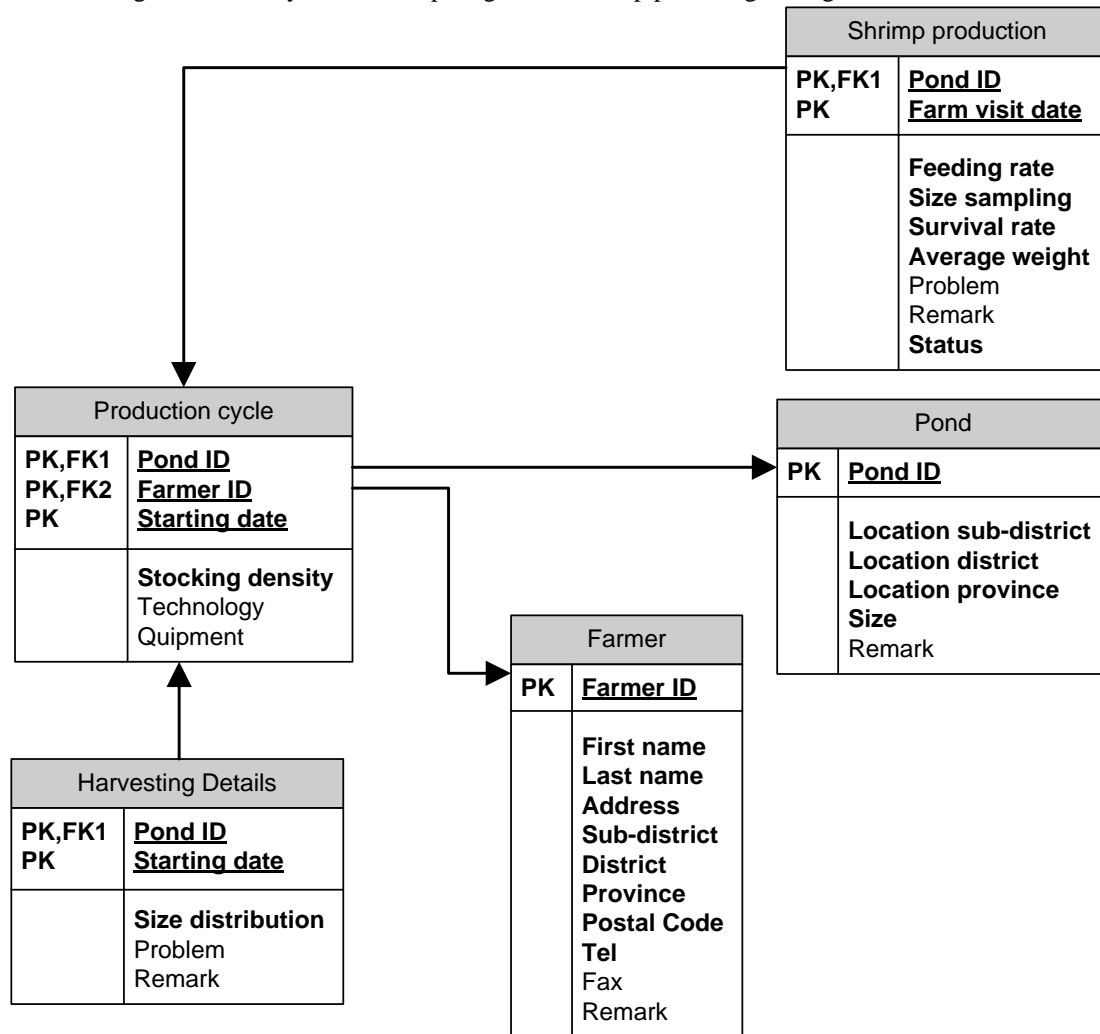


## Database Construction

All data necessary to build the shrimp supplies procuring plan is stored in a relational database. The schema of this database is presented in Fig. 3. The database is composed of five main tables: "farmer," "pond," "production cycle," "shrimp production" and "harvesting." Table "farmer" includes all contact details of all farmers. Table "pond" contains physical details of all ponds, especially its location and size. Table "production cycle" contains stocking density and additional production management. Primary keys of this table are composed of Pond ID, Farmer ID and date cycle started. These keys will uniquely identify information regarding each production cycle. Farmer ID is one of the primary key in the table "production cycle" because shrimp farm rental

practice is a normal practice in Thailand. The same pond can be cultured by different individuals at different production cycles. Hence, Farmer ID is added as a part of the key to facilitate estimation of shrimp growth according to farmers' skills. The "stocking density" attribute is used to estimate initial shrimp population in a pond while shrimp population structure is estimated using the actual historical size distribution (from Table "harvesting details") and current size distribution being sampled during farm regular visit (contained in Table "shrimp production"). Table "shrimp production" contains all crucial actual information collected during a farm visit that can be used as input variables (such as feeding rate, size distribution, and survival rate) for a growth function.

Fig. 3. The Entity-Relationship diagram of shrimp procuring management databases



In summary, input factors required by the Yu et al. (2006b) model can be obtained as follows: 'age of shrimp' from the date the production cycle start (table "production cycle"), 'biomass at the beginning of the week' from estimate average weight of shrimp from the previous week (table "shrimp production"), 'daily water temperature' from Thai Meteorological department, where location of the meteorological station is identified using pond location (table "Pond"), 'quantity of feed supplied within a week' from feeding rate (table "Shrimp production"). After obtaining an average weight of shrimp, shrimp distributions can be added according their historical records (from table "harvesting details" and table "shrimp production").

## Harvesting Schedule Algorithm

After obtaining the estimated shrimp size distribution for each pond in the database, the optimization approaches should be used to set up the harvesting plan. The optimal harvesting schedule in order to minimize cost including production and inventory holding costs can be obtained. The algorithm was developed based on the following mixed integer linear programming:

$$\text{Minimizing} \quad S \sum_{j=1}^M \sum_{t=1}^T X_{jt} + \sum_{j=1}^M \sum_{t=1}^T C_{jt} X_{jt} + H \sum_{i=1}^N \sum_{t=1}^T I_{it} \quad (1)$$

$$\text{Subject to} \quad I_{i(t-1)} + \sum_{j=1}^M Q_{jit} X_{jt} - D_{it} = I_{it} \quad \forall i, t, \quad (2)$$

$$\sum_{t=1}^T X_{jt} \leq 1 \quad \forall j, \quad (3)$$

$$\sum_{i=1}^N I_{it} \leq I_{\max} \quad \forall t, \quad (4)$$

$$I_{it} \geq 0 \quad \forall i, t, \quad (5)$$

$$X_{jt} \in \{0,1\}, \text{ integer}, \quad \forall j, t, \quad (6)$$

Let  $N$  number of shrimp sizes,  $M$  shrimp farms, and  $T$  number of periods.  $X_{jt}$  is a binary 0-1 variable representing purchasing decision of farm  $j$  in period  $t$ . If farm  $j$  is purchased in period  $t$ , then  $X_{jt} = 1$ , it is equal to 0 otherwise.  $S$  and  $H$  denote the preparation cost and the holding cost.  $I_{it}$  denotes the amount of by-size inventory of the  $i$ -sized shrimps in the period  $t$ .  $I_{\max}$  denotes the maximum inventory.  $C_{jt}$  is a bidding price for farm  $j$  in period  $t$ .  $D_{it}$  is demand for  $i$ -sized shrimps in period  $t$ .  $Q_{jit}$  denotes the expected amount of  $i$ -sized shrimps of farm  $j$  in period  $t$ .

The heuristic algorithm is more practical than the mixed integer linear program because there are hundreds of ponds to be considered during procurement decisions.

## RESULTS: A CASE STUDY

To examine our proposed application, we simulated seventy problems based on genuine situations of shrimp harvesting in Thailand. In a problem test, two elements of farming environments were considered: 1) the locations of shrimp ponds and 2) the distribution of shrimp growth. Shrimp farms were assumed to have been located in five different locations with different surrounding environment factors suggested by Yu et al. (the previous period's average weight, biomass, current temperature, feed applications rates). Initial stocking was assumed to be 390,000 1-2 g animals. The average water temperature varied from about 21 °C to about 33 °C in Southern part of Thailand. Hence, daily water temperature was generated from uniform distribution of  $U$  (21, 33). The difference between AM and PM temperatures was assumed to be similar to the findings in Yu et al. (2006b), which was about 2 °C. Due to its recent popularity in Thailand, Pacific white shrimp (*Litopenaeus vannamei*) was assumed to be the species being cultured in all ponds. Biomass is calculated by multiplying estimated total number of shrimp by its average weight. The simulated growths for five locations are shown in Fig 4.

Three distribution functions of shrimp growth, which were Laplace, Normal, and Logistic were added to simulate shrimp growth as representing high, medium and low skills farmer respectively as shown in Fig 5. From interviewing the processors, skillful farmers are likely to raise uniform shrimp size. Hence, the shrimp size distribution raised by low skill farmers tends to disperse from the mean represented by the Logistic distribution in this study. Likewise, shrimp distribution cultured by a skillful farmer tends to disperse around the mean and represented by the Laplace distribution. The assumption made relating to the processors' ability to predict shrimp growth is that processors have access to necessary information such as feed supply, a starting date for a growout cycle, water temperature, biomass for each pond and farmers' skills. To assume processors have access to this information is not too far from reality given the easy access to such fields through the internet. As stated earlier, several advanced processors keep information for each pond including historical harvested shrimp sizes in their databases.

Fig. 4. Simulated shrimp growth for five assumed locations

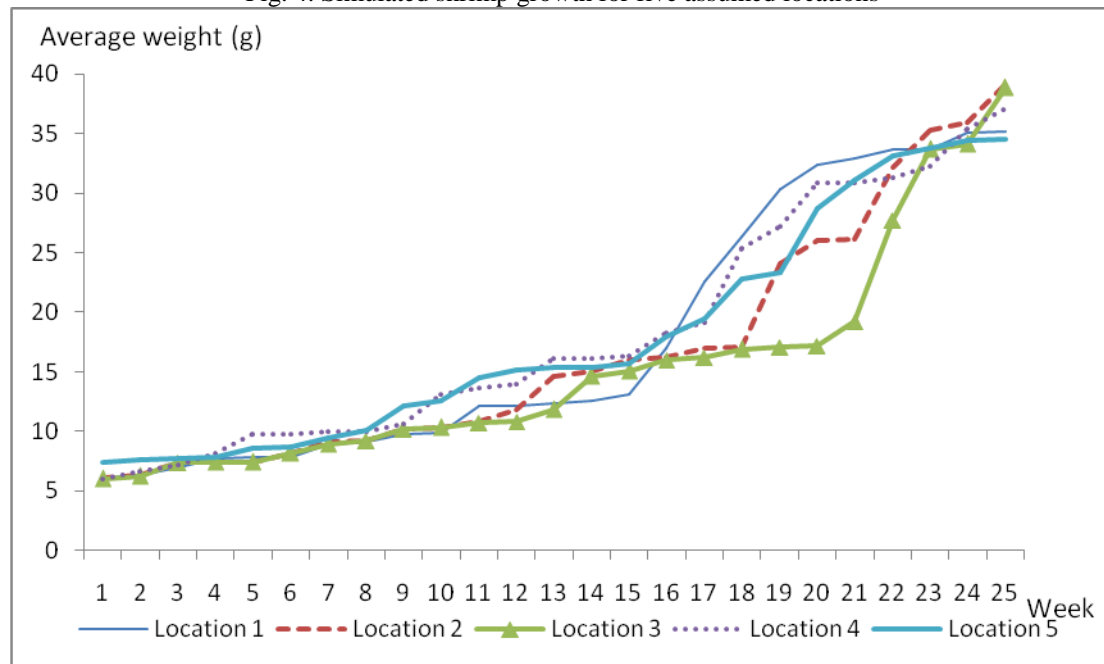
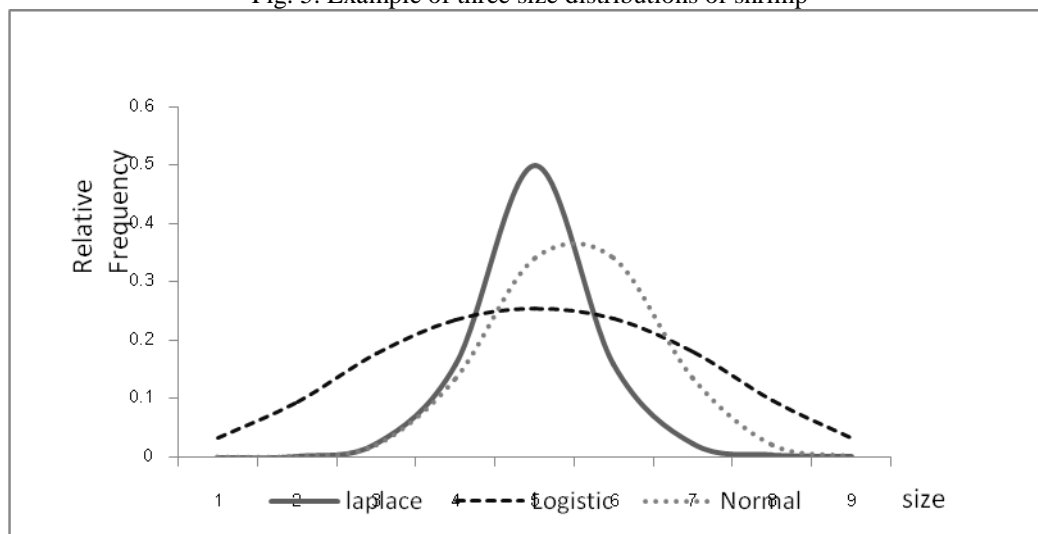


Fig. 5. Example of three size distributions of shrimp



For each distribution, two sets of distribution parameters were used. Hence, there were six different distributions in total (2 parameters  $\times$  3 distributions). A problem tested consists of 125 simulated ponds (5 farming locations  $\times$  25 farms with randomly drawn size distributions). Shrimp growth was simulated for forty-five periods. Demand was created from uniform distributions.

A comparison between the inventory costs obtained from proposed method A and the two traditional harvest decision methods were used to demonstrate the potential benefit of the model. The two traditional methods were procuring decisions based on the shrimp's age, which in turn implied an estimation of standardize shrimp size for all ponds. The accuracy of the method then relies mainly on the experience of the decision-makers. In this study, two guidelines were established reflecting the traditional method. First, the traditional methods were used to select a pond that had the maximum quantity of desirable shrimp size. Second, traditional methods were used to select a pond based on weighted average size, which is a product of shrimp size and expected amount of shrimp in each size dividing by total amount of shrimp in a particular pond.

Table 1 indicated that the inventory cost, derived from applying the two traditional guideline, was around 12-46% higher than the cost used in the proposed method with an average of 17-25% higher cost. The potential saving.

**Table 1. Comparison of inventory cost between suggested heuristic and two traditional harvesting guidelines**

| Descriptive statistic | Inventory cost       |                                       |                         | % different between (a) and (c) | % different between (b) and (c) |
|-----------------------|----------------------|---------------------------------------|-------------------------|---------------------------------|---------------------------------|
|                       | weighted average (a) | Maximum quantity of demanded size (b) | Heuristic algorithm (c) |                                 |                                 |
| Average               | 3,545,347            | 2,801,298                             | 2,372,992               | 25.01                           | 17.49                           |
| Max                   | 6,752,348            | 3,204,263                             | 2,760,996               | 45.51                           | 26.38                           |
| Min                   | 2,438,999            | 2,432,814                             | 2,035,328               | 21.36                           | 12.32                           |
| S.D.                  | 1,049,743            | 203,029                               | 192,176                 | 15.38                           | 3.44                            |

## CONCLUSION

This paper addresses the used of shrimp growth distribution, a database, and heuristic algorithm to solve inventory problem for Thai frozen shrimp industry. A step-by-step procedure predicting shrimp growth and shrimp size distribution from information stored in the database was shown. The three compositions of the framework are equally important for managing shrimp supply chain. Without the shrimp growth functions, the estimation of shrimp growth would not reflect its environmental factors (i.e., water temperature) and farming practice (i.e., number of stocking, feeding rate). Bias estimation is likely to result when relating variables are not included. This means a planner would unable to obtain accurate weight average and unable to set quantity of shrimp to be cultured to satisfy the demand. Without the record of farming skills, the precise estimation of size distribution cannot be obtained. And, the precise allocation plan cannot be completed. Planner would not be able to match the orders with their shrimp supply resulting from farming skill. Without the mathematical model, considering all information to retrieve the optimal plan will be difficult. Because a normal human brain cannot process these enormous information altogether, the heuristic algorithm is essential to the task.

The proposed framework has illustrated the situation when processes and farmer are not highly integrated. The procuring plans were set given availability of shrimp size and ponds. However, the model can be extended to the other case when processors and farmers are closely coordinated to jointly set restocking as well as harvesting schedule. Although, such plan has yet been investigated, as the industry is more vertical integrate and relationship between farmers and processors grows stronger, the joint plan is worth for further analysis. The strong coordination among all members in chain has potential to reduce demand and supply mismatching. All parties in the chain are likely to better serve their customers under a more competitive cost.

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# **COMMUNION ECONOMY PROJECT: JOINING ETHICS AND COMPETITIVE ADVANTAGE**

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## **ABSTRACT**

*This paper is a result of a three year research of Communion Economy Project – EdC. The author analyzed in depth the characteristics of four Brazilian companies that belong to this framework, trying to compare their behavior with the guidance of Stakeholder Theory. The main goal of this study is to estimate whether or not these four companies have improved their competitiveness due to EdC distinctive characteristics. To reach such goals, the four companies have been visited, so that it could be possible to interview some internal and external stakeholders. Besides that, several contacts have been made with unions and other representatives, and an exploratory survey has been developed in order to reach all ninety EdC companies in Brazil. The research's conclusion is that there is a great source of competitive advantage by following the EdC framework, although it is pretty hard to reproduce such behavior outside its walls.*

## **FIRST WORDS**

Linking an ethical behavior to profit is, nowadays, every society's dream. There are groups pushing up governments to implement laws that could support other interests rather than the shareholders'. Some other concerns include recent cases of multinational companies being caught under a doubtful behavior such as, for example, MCI, Enron and Parmalat. These few cases point out that the main shareholder, or the CEO, may even be in a good position, eventough the enterprise may be about to sink down affecting thousands of people. To pay a fine for polluting a river, for instance, may be cheaper than implementing environmental control polices, and no one would ever say that it is an ethical behavior. Nonetheless, those in charge of a company know how difficult it is to compete in a worldwide market where plenty of such doubtful behaviors may exist – as it was once said a lamb can not survive in a land of wolves. If doing things right, under acceptable ethics may have led some companies to bankruptcy, destroying jobs and taxes as consequence, it seems that there is a gap between the desired behavior and the real competitive framework of a company.

However, there is a group of companies that announced their compliance with a rigid ethical conduct and, even more interesting, that they give a great part of their profits to “helping others”, although they are players of competitive markets. These companies are part of the Communion Economy Project - EdC, which was launched in Brazil in 1991, and is now spread all over the world. This researcher has visited some of these companies to understand if and how they can overcome the challenges mentioned before.

## **THE METHODOLOGY OF THE RESEARCH: VISITING EdC**

This research had three different moments. It began with the attendance of two EdC International Meetings that took place in Mariópolis Ginetta, in 2005 and 2006. At that moment, the researcher intended to understand how deeply engaged and motivated the group was by the EdC conditions. Both meetings lasted three days, and it was possible to record many reports of owners and employees of EdC companies sharing their experiences. Besides that, some unstructured interviews – without any recorder - were made, in order to get closer to key-persons of the Movement. People of headquarters were contacted, the most relevant and advanced companies, according to the Project orientation, were identified, and it was also possible to get in touch with some of their owners. These facts allowed the researcher to:

- 1) Understand and identify the religious framework that rules the project and its links to the Focolare Movement;
- 2) Map the right persons and companies that could better represent the whole group;
- 3) Understand, through the experiences reported, the difficulties of being ethical, which is demanded by their convictions, while competing within a non-ethical environment;
- 4) Assign a visiting schedule with these companies;
- 5) Find out what to look for when visiting the companies.

All the impressions felt and stories heard were recorded and used later as an additional check against the data collected by the field work.

The second part of this research was a pilot visit to the first EdC company in the world, a small clothing plant named La Tunica. It is located in Cotia, close to Mariápolis Ginetta, in an industrial area specially built to receive EdC companies - Pólo Industrial Spartaco. There, it was possible to test a structured questionnaire and get closer to the reality of EdC on a daily basis. The researcher stayed there for a couple of days interviewing most of the employees, three owners, some buyers and suppliers. At this time, all the conversations were recorded. The main figures of the companies including sales figures, growth rate, profit, and so on – were collected to be used in a follow up research.

The final part included a visit to three of these main companies of the Project, and a stay at Mariápolis Ginetta in order to interview the people that lived there. The companies visited were in São Paulo and Paraná, both regions in the south of Brazil. The first was FEMAQ, a medium sized steel company in Piracicaba, in the state of São Paulo with about 100 employees and a total reported revenue of US\$ 500,000 a month. This company main clients are the automobile industry and other multinationals companies around the world. That is the most important company of EdC in Brazil by now. The researcher stayed there for three days, and could interview a great number of employees, managers, suppliers, buyers, government representative people and the owners. Again, the main numbers were collected.

The second company was a health clinic, also medium size, located in Cotia, São Paulo –and it is called Policlínica Ágape. Ágape means “true love”, the deepest and most intense love one can have for another. Ágape has about 30 full time employees, about 30 part-time doctors, and has reported a revenue of about US\$ 30,000 a month. The same procedure done at FEMAQ was repeated here

The last company visited was a kind of a broker that sells medicines to hospitals and to Brazilian State Governments – ProDiet, with about 80 employees, and reported revenue of US\$ 500,000 a month. This company is a large sized company within Paraná standards, but when compared to São Paulo companies it becomes medium sized, and even smaller it becomes when compared to multinationals companies that dispute the same market.

All four companies’ speeches (the main three plus the pilot one) were compared according to Robert Yin’s framework for a case study (Yin, 2003). That gave an intrinsic consistence to the research, as it was possible to verify the same procedures and behaviors in different companies, located in different parts of the country. It also allowed the researcher to identify some characteristics that make the efforts of EdC companies quite unique in their search for an improved competitiveness.

A survey, with questions under Likert scale, was sent to the companies that could not be contacted personally, in order to identify any kind of deviation of the main behavior.

Altogether, there were 87 interviews, all of them recorded. Ninety questionnaires were sent to all companies associated with EdC (only 14 went back), and many unstructured interviews were done at the EdC International Meetings. During all this time the researcher stayed in Mariápolis Ginetta. Besides these actions above, frequent contacts by phone and by Internet were made with the EdC headquarters in Brazil and with the EdC World Headquarter in Italy.

## THE COMMUNION ECONOMY PROJECT - EdC

The Communion Economy Project comes from the Focolare Movement, whose roots are linked to the World War II, in Italy. Under the intensive attacks of the Allied Forces, a group of people noticed that material things and personal belongings were not the most important issues in life: everything around could be destroyed at a glance. The only “thing” that was able to resist in such a hostile environment was solidarity. Then, they started **sharing** - that is the magic word – everything they had: food, clothes, hope. We can confirm that these practices were rather close to the Catholic way of understanding life, being Italy a catholic country in its great majority, making these people go through a cutting edge experience.



After the war, this group has become larger and these ideas have been spread all over the world but still under a religious framework. Some “witness cities” – Mariápolis for example - have been built since then, having this idea that people could share their lives and belongings. The Catholic Church recognized and accepted this initiative as a valid movement, and named it “Maria’s Work”. It survived due to spontaneous donations by those who supported the ideal of a real new world, without starvation and poverty (Araújo, 1998; Parolin, 2003). In 1997, there were more than two million people involved in this Movement, covering 182 countries (Ressl, 2000). This figures increased to 192 countries in 2001. At this time, in Brazil, 7,384 poor people were under Focolare Movement watch (Brandalise, 2003).

Although it was an outstanding experience, these results could not change the world, as it was expected at the very first moment. Visiting Brazil in 1992, Chiara Lubich, the most important person of this Project, and the one that made things happen at those rough initial times, noticed that there was an increasing poorness around São Paulo, in spite of all efforts. She decided that something else should be done beyond charity and individual gifts. Having this in mind, she launched, in 1991, in Mariápolis Ginnetta, headquarters of the Movement in Brazil, the Communion Economy Project – EdC (Lubich, 2000). Some companies were born during this time, bringing an astonishing ideal to reality. Some have compared Chiara’s speech to a “bomb of love, that could spill the sharing experience throughout the world” (Calliari, 2000:35). These companies should split their profits into three major objectives: first, to improve competitiveness and survive; second, to build up a “new man”, meaning it, spiritual education; third, to be able to assist to those who need help around the world, even if they are far from the company or either unknown.

In 1992, there were 59 companies in Brazil associated to EdC and 230 in the world. In 2002, this amount has reached 89 in Brazil, and almost a thousand in the world (Brandalise, 2003).

The main difference among these efforts and others is that there is no charity involved. As Bruni (2002) said, in charity, one gives to another, and that is all there is to it. There is no involvement. At EdC, everybody shares, and even that person who has nothing to give may share his poorness. Everyone does things together, and profit is not a way of enrichment but rather a mean of changing a reality that is “upside down”, Starvation is not perceived as “natural” having alongside richness. In such idealist framework began EdC, and the main question should be: “is it possible for a company to survive in a competitive environment giving a great share its profit?” At this point, one should take a closer look on the differentials of EdC enterprises.

## VISITING THE THEORY

The links between religion and business are not new. Weber (1958) showed that capitalism indicates an economic action based on the profit expectation. There are “magic forces” that push a legalist and technical rationalism, which allowed a specific kind of a business behavior. This drive is religion. In that case, the religious characteristics of Protestantism, rather than its materialist vector, developed the modern capitalism approach to reality and its specific ethos.

With the consciousness of standing in the fullness of God’s grace and being visibly blessed by Him, the bourgeois business man, as long as he remained within the bounds of formal correctness, as long as his moral conduct was spotless and the use to which he put his wealth was not objectionable, could follow his pecuniary interests as he would and feel that he was fulfilling a duty in doing so. The power of religious asceticism provided him in addition with sober, conscientious, and unusually industrious workmen, who clung to their work as to a life purpose willed by God.” (Weber, 1958, ps. 176-177).

More recently, some authors have shown an increasingly “search of God” by business men (Nash, 1994; Nash e McLennan, 2001; Chappell, 1993; Cima and Schubeck, 2001). The search of a harmony with God demands an intense link with community and straight moral action. If, in one hand, such relationship is important to the success of the enterprise, in the other, it is vital for the business men to stay in peace with the Lord. Some thinkers understand it as a pendulum movement going on to capitalism, leaving the protestant ethic and getting closer to a catholic one (Bruni, 2002). Volunteer work, to help others, to give and to share are initiatives allied to an improved notion of mankind, that “puts the man in the middle of all thinks”, as it was repeatedly said in EdC International Meetings. Profit now becomes a *way*; not the *final goal*.

This new perception of business emphasizes the relationships among the players that surround an enterprise. The formal contract loses importance as the partnership and confidence becomes stronger. In other words, the individualist way of being is overtaken by a notion of unity, nevertheless accepting the diversity (Lubich, 2000; Nash, 1994). Mirroring it to EdC praxis, it led the research to notice a bunch of relational behavior, that can be supported by the conceptual framework of the Stakeholder Theory.

Although the concept of stakeholder is not new and can be found at Igor Ansoff works at the 60's (Carroll, 1998) and at Stanford Research Institute – SRI, in 1963 (Freeman and Reed (1983), it was Edward Freeman (Freeman, 1984) who has made it popular among business scholars, linking it to the competitiveness of a company. The term stakeholder is a counterpoint of stockholder, the one who owns the shares of company and points out that there are other interests beyond the owners'. The employees, the suppliers, the buyers, the society, the environment etc. have a *stake* of the company, as they are all affected by its actions.

Many authors (Stoney and Winstanley, 2001; Logsdon and Yuthas, 1997; Harrison and Freeman; Phillips et al.; 2003) usually break apart an understanding that Stakeholder Theory is the final goal - a normative approach - or that it is a way to help the company reach its true goal, its profit – an instrumental approach. By the former, one can argue that humanity includes an ethical way of life, even whether it reduces profit, meaning that no one is allowed to pollute, to bribe or to cheat, even if there is a legal way to do that. By the later, one can say that there is a legal framework that the company respect, but it is not of their responsibility if the law in a country, for instance, is not as rigid as it is in another, and it is valid to a company to use this spread in order to maximize its profits. Another example could be a rise up of the company value by improving its image, e.g. doing donations or embracing an environmental cause under television watch.

A huge problem with this concept is to define who is, in fact, a stakeholder. Those who censure the idea, show that if there are many objectives spread all over the world (stockholders, buyers, environment etc), it is very difficult, and sometimes impossible, to set priorities, and this is the main responsibility of a CEO (Jensen, 2001). Others infer that there is a core that must be considered by all means, and that includes the owners, the buyers, the employees, the competitors and the legal representatives (Carroll, 1993; Freeman and Reed, 1983). These thinkers understand that it is possible to a CEO to balance all the interests, without losing control or bankrupting. This person should only encourage the traditional array of players to set a dialogue with. By doing that, the balance of the life in a complex society could be redeemed.

## THE RESULTS

The research identified a big concern with the quality of the relationships in the four companies visited. During the conversations with the owners some expressions came up like for instance “we are a family”, “I don't need too much money to survive”, or “It is better doing good than being rich”. All the owners see the employees as a part of their family, and they mix home-firm very often. The workers go to the company owners' house and vice-versa and sometimes, a worker from the company may trade places with a personal house worker – for example, a former family baby sitter is now working as a cook in ProDiet. The owners see the competitors as a complement, and try to work together with them, even under rough competitive environment. It was reported that important help was given many times to those that “normal” companies would fight against. Concerns with ecological issues were frequently mentioned and the survival of the all players should be preserved, even if they are competitors. The owners said they believed in what their workers say and do, and there is no need for an exhaustive control system, as “they would not do that with their sons, at home”. They share the company reports with the employees, without hiding anything, and discuss monthly with them the problems and the market options of the company. There is always a place for those who want to pray, and the owners get together in saying the “Words of Life” every single day.

The interviews with the employees show that they have total confidence in what the owners say to them. “They don't look like the traditional owners, because they are always among us”, one said. They see the owners as protectors: “They helped me many times. When I was in jail (*he did not say the reason*), they gave my salary to my wife and, when I went out, they accepted me again”. The ethical behavior is recognized: “I am proud of working here. You see: The owners here don't want to be rich. They work to change the world, and it is nice to be part of it”. The productivity is a real concern: “We work hard, here. Nobody here does only their duties. We are always doing more and more, because we know that profit is distributed to us and to others. When I see someone stealing something, I show him it is bad for all of us. It never happens again”. It was reported by an employee of La Tunica that, when sales were not good, they picked up some of the clothes sold in the company and tried to sell them to their neighbors. The owners do not even control which clothes had been taken, until they are sold.

The interviews with the buyers show a kind of a blind trust coming on. It was rather important to Ágape – as a health clinic – but it was also noticed in all four companies. One of them said: “If it comes from FEMAQ, we don't even check it. We know that they don't try to mislead anyone. So, I gain productivity”. Another one said,

referring to ProDiet: “If there is any problem, they don’t even argue. They come here and change the goods. They know they have the right to discuss with us (*it was a public hospital*), but they trust us, as we trust them”. A supplier of ProDiet said that he loved being there, because “everyone here treats us with love. It is not only a commercial contact. I feel as a part of the family. I’d like to work here”.

It was also identified some efforts to preserve environment, mainly in FEMAQ, as it deals with a kind of technology that may pollute the environment. They use sand to shape a car profile but after the traditional use, this sand causes pollution and it cannot be simply disposed. In order to solve this problem, they have been able to produce a brick using this same sand and then distribute these bricks among the employees to help them build their own homes. FEMAQ main entrance wall is made of this kind of bricks. This company spent a huge amount of its profit in environmental preservation projects, which resulted in receiving many international awards given from environmental and universities officials.

In all four companies, employees have work there for a long time. They were asked if they would change to another company if they had a salary increase. Most of them said “no” immediately. Some said that they would consider it if the salary was higher. No one mentioned leaving the company as an option. The four companies recorded outstanding growth, even in a much higher rate than Brazilian economy, and faster than its specific markets. ProDiet, which was established in 1992, has a share of 5% in the Brazilian market; FEMAQ has improved its productivity, in tons/men, occupying a much higher position in the market today than its Japanese and American competitors; When it first opened, Ágape had no financial resources. Twelve years later it has reached a strong position in the market being also recognized as one of the largest research institute in Brazil by Universidade de São Paulo – USP.

There is a story told by the owner of Ágape that may show the ethical behavior of this group. They had real difficult times a couple years ago, and had to ask for the help of a famous consultant. He noticed that the X-Ray equipment had a low rate of usage, although it was a very expensive one. His suggestion was to implement a usage quota with the doctors, who should always recommend this kind of procedure to the patient, even if it was not necessary. He continued by saying that this was the usual procedure adopted by most clinics in Brazil. The owner screamed at him, asking him to leave the premises and never to go back to her company. As she said: “People come here because they trust us. I’ll never take advantage of their trust, even if I have to lose money”. This kind of speech represents the very spirit of EdC.

## CONCLUSION

This research began with a question: is it possible for a company to survive in an aggressive market acting in an ethical way? The usual answer is that the behavior of each one depends of the competitors, and the general conditions of the industry (Porter, 1980). The need for a new way to do business, that could smash the traditional pragmatic equation - the worst the behavior, the more profitable the company - has ended with the finding of a group of enterprises that can do both, be ethical and competitive.

As it could be noticed, there is a huge competitive advantage in the way these firms do business. There are relational assets they carefully developed with their stakeholders. Among the employees, it was shown that the trust means less turn over, and harder work, but not in a sense of exploitation, but better related to self motivation. It can be said that such behavior is under a religious framework, and this can be true. However, no one would stay in a company for a long period of time without being respected, and a lack of motivation could easily become a frustration. The fact that those companies have better performance than its competitors, even in a global analysis, suggests that these subjective assets can become an objective profit. Here, one can list less turn over, less expenses with basic training, less union pressure and more productivity as differentials.

From the buyers perspective, it is possible to truly identify that these companies have many competitive aspects when compared to its competitors. There are no games, no fine lines in the contracts. On the contrary, there is an outstanding quality of the product and service in addition to that nice “plus” of being ethical and working towards a better world. Even in very competitive market, as the one ProDiet is in, it is possible to feel the differences.

From the suppliers perspective, there is a sense of partnership, in a real win-win relationship. Everybody knows that they are together forever, even if it may not last forever – just like a marriage. People here do not expect any kind of dirty tricks, just because there is a legal possibility for doing so. The motto “I love you as I love myself” is filled with truth and confidence, as it is felt by all the stakeholders.

The leadership behavior is essential to gain credibility among the players. If anyone weakens, all the fragile castle of confidence falls down. If any employee notices that any of this stuff of “doing good” and “changing the world” is fake, his/her behavior will change and the chain will easily be broken.

Perhaps, the successful experience of EdC can only flourish in a religious environment, where people bring their deepest beliefs from church to business. Perhaps, it can be limited only to medium-to-small sized companies, where the owner’s behavior can be perceived very clearly. Nevertheless, this research shows that it is possible to live and do business in a normative form of the Stakeholder Theory. Maybe in a long term it may even overtake the instrumental way.

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# DATA MINING APPROACH IN RELATIONSHIP MARKETING DATABASE

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## ABSTRACT

*Customer Relationship Management (CRM), from a Marketing and Information Technologies (IT) perspective, can be understood as a process, known as Database Marketing (DBM), for establishing a profitable interaction with clients. Currently DBM is mainly approached by classical statistical inference, which may fail when complex, multi-dimensional, and incomplete data is available. An alternative is to use Data Mining techniques, which aims at automatic pattern extraction.*

*This paper presents a Data Mining approach for DBM, with the intention of finding a set of simple rules which explain clusters of clients with homogeneous behaviours. This strategy was applied in a huge relationship marketing program database taken from a multinational organization. The dataset was created after a direct marketing project, where discount vouchers have been offered to thousands of potential clients, through a own branded magazine. Each coupon included a personal inquiry, with a total of five questions. The final aim was to find the adequate customer profile for each product.*

*To support this study, a specific hygienic product was targeted, since it presented high sales. The aim was to correctly classify which clients use (or not) the voucher, using the five answers as inputs. The work involved validation and elimination of irrelevant data, extensive data pre-processing, data visualization, exploratory clustering using a Self-Organizing Map (SOM), and finally the application of a decision tree in order to achieve the set of classification rules.*

## INTRODUCTION

Due to the advances in information and communication technologies, corporations can effectively obtain and store transactional and demographic data on individual customers at reasonable costs (Naik and Tsai 2006). The challenge now is how to extract important knowledge from these vast databases in order to gain a competitive advantage (Cohen 2004). Firms are increasingly realizing the importance of understanding and leveraging customer level data, and critical business decision models are being built upon analyzing such data. Emphasis on customer relationship management makes the marketing function an ideal application area to greatly benefit from the use of Data Mining (DM) tools for decision support. Through DM, organizations can identify valuable customers, predict future behaviors, and make proactive, knowledge-driven decisions. This includes understanding the customers' preferences through facts and customers' behavior through analyzing their transaction data. There has been much research done in this direction, and clustering transactions to learn segments has been one research stream that has generated a variety of useful approaches (Tao et al., 2003)(Verhoef 2007).

DM techniques are used in several areas, such as fraud detection (Wheeler and Aitken, 2004), bankruptcy prediction (Cielen et al., 2004), intensive care medicine (Silva et al., 2004), civil engineering (Santos et al., 2006), just to name a few. Their use for marketing decision support highlights unique and interesting issues such as customer relationship management, real-time interactive marketing, customer profiling and cross-organizational management of knowledge (Shaw et al., 2006).

The Database Marketing (DBM) activity has changed significantly over the last several years. In the past, database marketers applied business rules to target customers directly. Examples include targeting customers solely on their product gap or on marketer's intuition. The current approach, which has widespread use, relies on

predictive response models to target customers for offers. These models accurately estimate the probability that a customer will respond to a specific offer and can significantly increase the response rate to a product offering. The old model of “design-build-sell” (a product-oriented view), is being replaced by “sell-build-redesign” (a customer-oriented view). The traditional process of mass marketing is being challenged by the new approach of one-to-one marketing.

DBM departments face several types of business constraints. Typically there are:

- Restrictions on the minimum and maximum number of product offers that can be made in a campaign;
- Requirements on minimum expected profit from product offers;
- Limits on channel capacity;
- Limits on funding available for the campaign;
- Customer specific ‘do not solicit’ and credit risk limiting rules; and
- Campaign return-on-investment hurdle rates that must be met.

Recently, some DM methodologies and applications have been developed to explore the practices and planning methods of sales and marketing management between customers and sellers in the market (Changchien and Lu, 2001).

In this paper, the DBM process involved a development of models to correctly classify which clients use (or not) a voucher, using five answers as inputs, predicting the customer response, enabling the commercial organization to offer products suitable to the right customers. First, a description of the adopted data is given. Then, a brief presentation of KDD is performed. Next, experiments are presented and the results analysed. Finally closing conclusions are drawn.

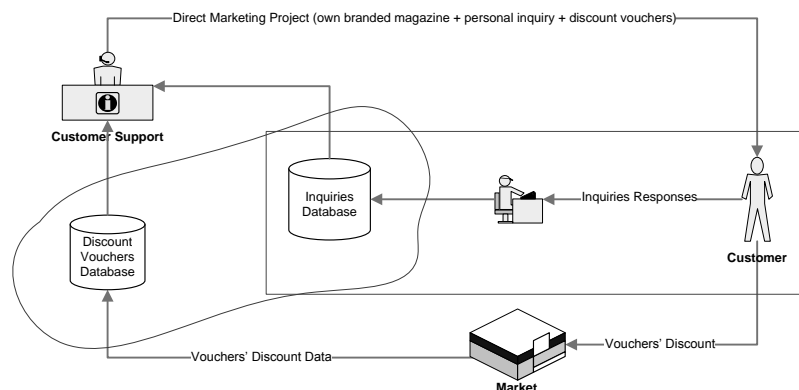
## MARKETING DATA

In this case-study two *Databases (DB)* of the same organization were used: one containing personal information about registered customers (including the response to the inquiries mailed in direct marketing projects with discount vouchers, and by renting of external DB), and another with the transactional data with the registered discount of the vouchers in the supermarkets.

The first phase of the project consisted in merging of the two DB, in order to make possible the DM task (64 482 customers were registered and 63 961 discount vouchers were mailed). This project focused on the *Most Valuable Consumers (MVC)*, which received the discount voucher of a specific hygienic product (19 382 customers). The classification rule for consumers according to a pseudo-code is depicted below:

**If** *household* >=2 **and** *dishwater*=yes **and** *washing machine*=yes  
**Then** Consumer= MVC

**Figure 1: Data Acquisition Schema**



The database of this project presented several problems, mainly in terms of the inquiries' data (Figure 1). The inquiries DB contained several missing data, which had to be treated (described in Section 3). However, this drawback did not occur in the discount vouchers DB, due to the automatic acquisition of the data. After the merging process, a single dataset was created. Table 1 shows a synopsis of the main attributes of this data.

**Table 1: Database attributes**

| Attribute                  | Domain   |
|----------------------------|--|
| 1. Household               | {Non response, 1, 2, 3, 4, 5, 6 or more}   |
| 2. Dishwater               | {Non response, Yes, No}  |
| 3. Monthly Consumption (€) | {Non response, [0...150], [151...350], [351...500], [501...650], [651...]}                 |
| 4. Household Income (€)    | {Non response, [0...500],[501..750], [751...1000],[1001...1500], [1501...2250], [2251...]} |
| 5. Childs                  | {Non response, No, Yes}  |
| 6. Number of Childs        | {Non response, 1, 2, 3, 4, 5, 6, 7, 8, 9, [10...]}   |
| 7. Voucher Use             | {No, Yes}  |

## DATA MINING IN MARKETING DATABASE

The second step consisted in a visualization task, pursued in order to identify the missing data origin (Brown and Kros, 2006). In this task, the following problems were addressed:

a) Several registers of the first six attributes contained blank values. As presented in Table 1, this is missing data, because in the domain it is considered one value (*Non response*) for the customers that do not respond to the addressed question. This is due to a refusal when some respondents find some questions personally or sensitive (e.g., political, religious affiliation, education level, income, age) and procedural factors (human factor) in the introduction in DB. The impact on *Knowledge Discovery from Databases (KDD)* process can generate serious problems and is greater when database is constantly refreshed with new data (such as this one).

b) Inconsistency in the related questions: *Childs* and *Number of Childs* (Table 2).

**Table 2: Answers to questions *Childs* and *Number of Childs*.**

| Childs (5)   | Number of childs (6) |      |      |     |     |    |    |   |   |   |      |       |
|--------------|----------------------|------|------|-----|-----|----|----|---|---|---|------|-------|
|              | 0                    | 1    | 2    | 3   | 4   | 5  | 6  | 7 | 8 | 9 | 10 + | Blank |
| Yes          | 9                    | 4213 | 4597 | 929 | 236 | 57 | 24 | 8 | 4 | 4 | 20   | 224   |
| No           | 222                  | 8    | 4    | 5   | 1   | 2  | 0  | 0 | 0 | 0 | 1089 | 3004  |
| Non response | 2                    | 65   | 56   | 12  | 3   | 1  | 0  | 0 | 0 | 0 | 10   | 785   |
| Blank        | 23                   | 0    | 0    | 0   | 0   | 0  | 0  | 0 | 0 | 0 | 77   | 3688  |

c) Too much classes in attribute *Number of Childs*. A significant bias occurs due to natural and inadequate questionnaire options. A work of levelling was done reducing the number of classes, in order to enhance the learning phase (Figure 2).

### 3.1 Pre-Processing

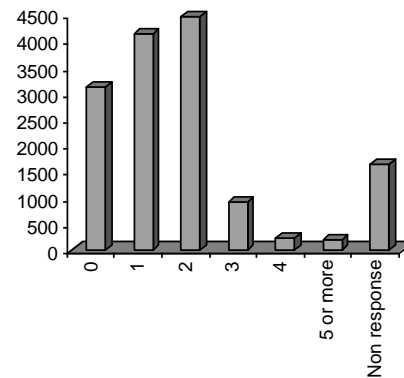
To solve the problems of missing data addressed in previous section, some techniques were used, taking in account several aspects regarding statistical significance issues after pre-processing the data.

The *blank values* were considered *Non Response*, assuming an error in introduction of data by the operator, reinforcing the necessity of validation mechanisms in the software used.

Attributes *Childs* and *Number of Childs* were processed together regarding the important issue of concordance between the information of one and another attribute. For example, when *Childs* equal to *No* and *Number of Childs* equal to *Non Response* ( $n=3004$ ), the value of *Number of Childs* was changed to 0. In cases such as *Childs* equal to *Yes* and *Number of Childs* equal to 0 or *Non Response*, or *Childs* equal to *No* and *Number of Childs* not equal to 0 and *Non Response*, the cases were discarded. The number of classes of the attribute *Number of Childs* was reduced (Figure 2), merging the classes 5, 6, 7, 8, 9, 10 or more, in the class 5 or more. After this cleaning stage, the number of cases was reduced to 14 710.



**Figure 2: Attribute *Number of Childs* Distribution after discretization.**



## 3.2 Data Mining

All experiments reported in this section were conducted using the *Clementine Data Mining System* version 6.5 (Spss, 2007).

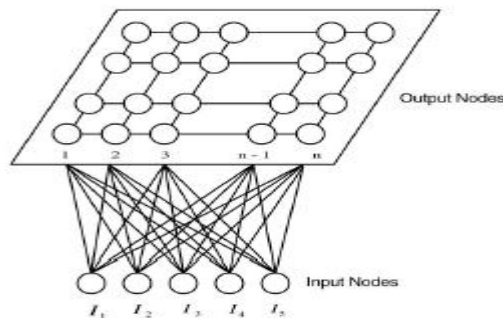
Initially, a decision tree algorithm, the C5.0 algorithm (Quinnlan, 2007), was applied in the whole dataset, in order to achieve a set of rules which could explain the *Voucher Use* behaviour in terms of the set of 5 golden questions. However, the algorithm produced a single naïve rule (*Voucher Use* equal to *No*), which presented a classification accuracy of 75%, corresponding to the percentage of *No* uses.

In order to improve the predictive results and to obtain more explainable information about the clients' behaviour, a different strategy was pursued. A clustering approach was adopted, in order to find clusters of clients with homogeneous behaviours. This task consists of two essential modules: one is the exploratory clustering module based on a neural network, a *Self-Organizing Map (SOM)*, and the other is the rule extraction module by employing a decision tree that can extract association rules for each homogenous cluster. According to different cluster's characteristics, different marketing strategies could be adopted by making use of the set of classification rules.

### 3.2.1 Self-Organizing Map

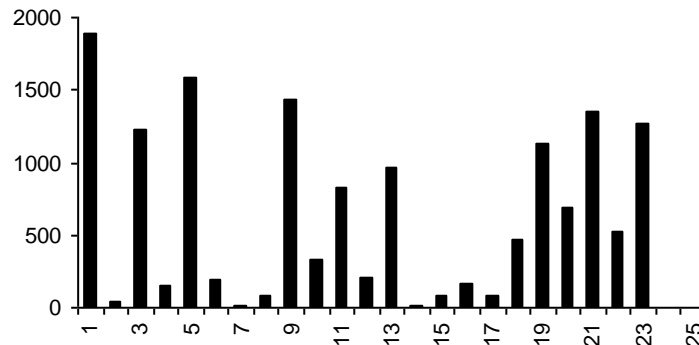
The SOM architecture (Kohonen, 1995) (Flexer, 1999) was proposed in 1982, being an unsupervised two-layer network that can recognize a topological map from a random starting point. Input nodes and output nodes are fully connected with each other, and each input node contributes to each output node with a numeric weight (Figure 3).

**Figure 3: Neural Network structure of SOM.**

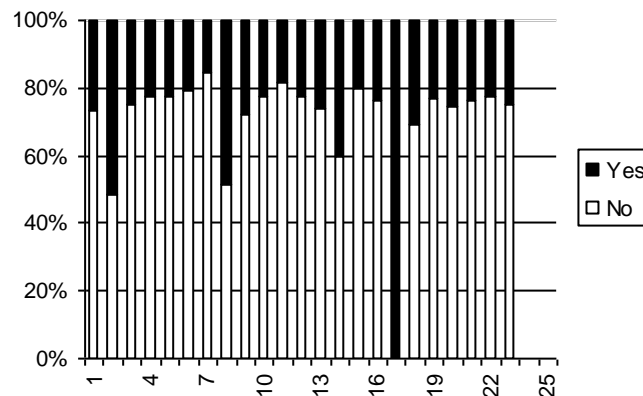


In the SOM neural network modelling, several parameters were experimented, being the final topology set to 20 input nodes and 25 output nodes, with a map of a 5x5 grid, corresponding to 25 clusters. Figure 4 plots the number of cases contained in each of these clusters, while Figure 5 shows the distributions of each cluster.

**Figure 4: The number of cases for each cluster.**



**Figure 5: Clusters vs Voucher Use.**



It should be stressed that in 60% of the data, the *Voucher Use* distribution within a cluster is higher than the original dataset (75%). This means that in such cases, the prediction given by the SOM is better than the one given by the default C5.0 naïve rule.

### 3.2.2 Generation of Rules

The C5.0 algorithm (Quinnlan, 2007) was applied to each of the 25 clusters (given by the SOM), in order to obtain a set of explanation rules. The training sets used a random sample with 2/3 of the data while the test sets contained the remaining 1/3. The set of classification rules, given by the C5.0, provided accurate results, with a 99.93% predictive accuracy to describe the SOM clustering.

As an example, the rules for *Cluster 5*, which are simple to understand, are depicted below:

#### **Rule 1**

```
Dishwater? Yes
  Childs? Yes
    Household? 4
      Monthly Consumption? [151...350],[501,750],[750...]
```

#### **Rule 2**

```
Dishwater? Non Response
  Childs? Yes
```

## CONCLUSIONS

In this work, a Data Mining approach was used in a DBM project, regarding discount vouchers of a hygienic product. To achieve this, several pre-processing tasks were required: merging personal and transactional data, reducing/eliminating inconsistencies and levelling attributes. Next, mining phase was performed, where the use of a clustering approaches allowed an improvement, in terms of predictive accuracy, in the majority of the clusters. Then, a decision tree was executed over each cluster, in order to gain a comprehensive knowledge of the customers' profile assigned to each cluster.

The novelty of this proposed clustering approach is that allowed the generation of homogeneous clusters according to personal and transactional characteristics and the rule extraction that characterizes each cluster, what favoured the accuracy of proposed models and the readiness of the rules. These can help DB marketers to perform their customers/products fragmentation and one-to-one marketing.

The obtained results, although not authoritative, are encouraging. Furthermore, this study allowed the identification of important issues, which need to be improved in future DBM/DM projects, namely: reviewing of the inquiries questions and options of response, using automatic validation of the responses (in order to reduce inconsistencies and missing data), and merging of data from more databases (e.g. credit card and geographical data). If these questions are regarded in future direct marketing projects, intelligent systems could be developed, taking in account more characterization attributes.

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# **DO YOUR EMPLOYEES' IDEAS ENHANCE INNOVATION AND COMPETITIVENESS IN THE GLOBAL ECONOMY? SOME EMPIRICAL EVIDENCE**

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## **ABSTRACT**

*Suggestion systems could be tracked back for many years and they consist of formal procedures; its success will depend on a number of factors. This paper reports on research of suggestion systems executed through qualitative research with structured interviews in 21 organisations in New Zealand of which 90.48% are from the private sector and 9.52% are from the public sector. A 100% response rate was achieved. Different ways are used to generate ideas; most importantly the method used must be clear, straight forward, and open to all potential participants. To be effective in the idea generation process it will help to train all the people involved. Software should be used to administer and to manage the process effectively and efficiently. Recognition programmes use various forms of rewards such as cash, merchandise etc. With any system there are advantages and disadvantages. It was found that managers will always remain a kingpin in the success of the suggestion system and they are engaged in evaluating the suggestions. Important issues are pointed out in the implications for managers section.*

## **INTRODUCTION**

In order to survive in the current competitive economies globally, organisations should be creative and innovative and use any possible management tool that contributes to their survival. One of the most under valued management tools available is the suggestion system. A suggestion system consists of a formal procedure which encourages employees to think innovatively and creatively about their work and work environment, and to produce ideas which will benefit the organisation for which the employee will receive recognition, in one or another way, if the ideas are useful for the organisation.

The success of the system will, however, depend on a number of factors, such as management commitment and involvement, proper policies, procedures and rules, an affective administration and processing process, objective evaluation of ideas and a fair recognition system.

This paper covers a literature review and reports on qualitative research with structured interviews. The evaluation of submitted ideas by employees, the implementation of ideas and the recognition and rewards are discussed in the results and discussion section; the recommendations and conclusion form the last part of this paper.

## **LITERATURE REVIEW**

Although the use of suggestions systems could be tracked back to almost the industrial revolution, one of the first valuable books to be written on the subject of suggestion systems was sixty years ago by Seinwerth (1948:1) where he claimed that: "Idea power is the most tremendous human force in the world". Nothing has changed since then. It is just a matter of how this idea power is been utilised. Simply having a suggestion system in place is not necessarily enough. To a creative, innovative and competitive organisation the suggestion

system will be only one of the instruments that will be used to extract that idea power from employees. According to Darragh-Jeromos (2005:18) a suggestion system should be integrated with the organisation culture. More recently Crail (2006:30 & 31) reports that a common aim of a suggestion system is to achieve greater employee involvement which eventually leads to greater tangible benefits such as cost savings, and higher sales and intangible benefits like higher levels of morale.

Stone (2008:487) is of the opinion that employees have ideas regardless of whether or not the environment is conducive but the employee will not submit it if the environment is not seen as supportive; this view was supported a decade ago by Frese, Teng & Wijnen (1999:1139). To establish a climate for innovation, an innovation process should include a system for encouraging employee suggestions that remove any possible barriers (Prather & Turrell, 2002:13). At the car manufacturer in Oxford, where the Mini, owned by BMW, is produced, such opportunities are created. Every fortnight the production line is shut down for 45 minutes to enable employees to get together in groups to discuss the progress of new ideas and come up with more suggestions (Anonymous, 2004:8).

To be a successful and innovative organisation, the following process should be in place according to Wood (2003:22):

- An effective and innovative idea generation system
- A way to handle ideas quickly
- An effective evaluation process
- A way to ensure that ideas are implemented
- A method for recognition or rewarding those involved

There are different ways to generate ideas but it is important that the method used must be clear, straight forward, and open to all potential participants (Wood, 2003:22). To be effective and innovative in the idea generation process it will help to train all the people involved. The ideal will be to create a culture and attitude of participation within the organisation. According to Frese et al (1999:1139) suggestions can be developed as creative behaviour and as initiative. Creative behaviour conceptualises suggestions as creative acts while initiative adds one particular facet to the creative process idea.

The administration of the suggestion system seems to be a major hurdle to overcome. Love (1998: 11) therefore suggests that the system should start small and grow only if necessary. Administrative delays result in the employees getting the impression that the organisation does not view their ideas as worthwhile. An early acknowledgement of receipt of the suggestion is essential. Suggestion boxes, traditional ones and electronic ones, should be “cleared” on a daily basis. The suggestion system coordinator should make sure that employees who submit an idea receive a personal response to thank them.

Sweetman (2005:45) reports that failure to acknowledge ideas is far more damaging than not seeking employees’ views at all. Wood (2003:22) postulates that if supervisors are well trained to encourage ideas through the normal work teams or groups they are usually the gatekeepers of those ideas; which mean that much of the initial administration of refusing and reviewing the ideas will be eliminated. Available software should be used to manage the process effectively and efficiently. The software not only replaces the traditional suggestion box, but is able to acknowledge receipt, handle duplicated ideas, link ideas to evaluators and allow everyone to search for existing ideas and build on.

According to British Gas PLC (2006:43) the submission of suggestions online increased the number of suggestions because the process is more transparent and enables the employees to track their ideas from the point they suggest then right through to evaluation and implementation.

In her study Nel (2008) found that two discouraging elements are the length of time taken to evaluate a suggestion and delay in recognition through sometimes poor communication channels. This was supported in research reported by The American Productivity Centre (1982) where it was found that there is a correlation between the number of suggestions submitted and the time taken to give feedback to the suggestor. The longer the time to give feedback and recognition, the fewer the suggestions submitted. The more immediate the feedback and recognition the more powerful it will be.

Du Plessis (2007: 8) reports that objectivity, open-mindedness and fairness are some of the principles of sound suggestion evaluation. The initial view should be the assumption that all suggestions are beneficial until the evaluation proves otherwise. According to Wood (2003:22), the second biggest reason for suggestion system failure is ineffective evaluation of ideas. He mentioned the following reasons for failure:

- Because evaluators are not always recognized for their role in the process they cannot see the benefit of their participation.
- The behaviour of the managers of the evaluators does not portray the appropriate caring behaviour.
- Evaluators don't receive the appropriate training.
- Evaluators are afraid of failure because they believe that failures are never forgotten.

Every suggestor thinks their idea is brilliant. Therefore, the burden of proof should be put on the suggestor. A well designed evaluation system will thus make provision for a self screening process, in other words, self evaluation which examines the idea's merit. This is done by means of answering the following questions. Does the idea:

- Increase revenue?
- Decrease costs?
- Decrease cycle time?
- Improve safety?
- Increase customer satisfaction?
- Enhance market share?
- Improve a process?

If the answer to any one of the above questions is "NO", it is most probably not worth the time and effort to submit the idea (Darragh-Jeromos, 2005:18 & 19). The following guidelines could contribute to a regulated evaluation of suggestions:

- Start the evaluation with a discussion with the suggestor
- Make sure the idea is the suggestor's own idea
- Evaluators must maintain their objectivity and remain neutral
- Evaluators should take care to eliminate personal bias
- The evaluation should not be affected by the negative attitude of any other employee or supervisor until such time as the evaluation is finalised.

The question can well be asked if employees are entitled to any recognition, reward or award for participating in the suggestion system. Some organisations have recognition programmes which are a form of individual incentive that is usually outside the remuneration system. According to Stone (2008:497) recognition programmes use various forms of reward such as cash, merchandise, travel, and time off with pay, plaques and certificates. As with any system there are advantages and disadvantages. To ensure that recognition is immediate and separate from the normal reward system and added psychological value associated with peer recognition are two of the main advantages. High administration costs, "repeat" winners and favouritism are some of the disadvantages.

Du Plessis (2007:58) refers to culture as an important consideration for recognition. In cultures where status differentials are minimised and more individualistic in nature (for example New Zealand, Australia and the USA) a more egalitarian reward system is used rewarding individuals. This reward system includes rewards for suggestions made through the suggestion system. The implementation thereof is not rewarded.

In the implementation of the submitted idea is the proof of the pudding. No idea is worth anything unless it is implemented. Not only is the implementation of the idea a huge morale booster for the suggestor (and other employees) but it is a conformation of management's commitment. The quicker the implementation of ideas, the more visible will the results be for the employees of the submitted ideas.

The major concern is not the implementation of the "big" ideas (they usually are implemented) but the "small" ones, those which seem to be trivial. The cost savings or the gain increase of a number of small ideas could easily take to the same amount as a single big idea. According to a manager of one of the motor manufacturers in Germany competitors will in less than 48 hours after a major breakthrough idea try to copy it while they probably never heard about the small incremental ones that result in improvements (Wood, 2003:22).

Thus, remember to encourage small suggestions that constitute continuous improvement. No matter how small the idea, if it contributes to cost saving, increased revenue or add to productivity improvement in any way it must be implemented. The progress of submitted ideas should be monitored by the software in use and that includes implementation. The implementation of ideas should also be part of the supervisor's performance appraisal.

## PROBLEM STATEMENT AND OBJECTIVE

It is expected that, due to the fact that most of the suggestion systems driven in New Zealand, are to a great extent of an informal nature, the evaluation of ideas and the implementation of good ones are neglected. This in turn could be contributed to the absence of proper policy guidelines and procedures, a lack of awareness and publicity programs and the acceptance of responsibility by all levels of management.

The objective of this article is to report on empirical research undertaken by both the University of Pretoria, (South Africa) and Unitec New Zealand, Institute of Technology, (New Zealand) on suggestion systems as applied in New Zealand.

## METHODOLOGY

A number of critical success factors for suggestion systems were identified from the literature. From these critical factors the ten most important once were identified. A questionnaire was compiled by the University of Pretoria (UP) to establish to what extend these critical factors are complied with in organisations. The same questionnaire was used with permission from UP after minor modifications for an identical survey in New Zealand. Minor modifications involved updating and scrapping of some questions because the questionnaire was too long for use during short interviews in New Zealand.

The questionnaire was used and completed during personal interviews which were conducted in four main business areas, namely Auckland, Greater North, Manukau and Waitakere City. Table 1 below is a profile of the distribution of the respondents in the four business areas. A 100% response rate was achieved.

**Table 1: Profile of respondents by business area**

| <b>Business Area</b> | <b>Number of organisations</b> | <b>Percentage of organisations</b> |
|----------------------|--------------------------------|------------------------------------|
| Greater North        | 6                              | 28.57%                             |
| Auckland             | 10                             | 47.62%                             |
| Manukau              | 4                              | 19.05%                             |
| Waitakere City       | 1                              | 4.76%                              |
| <b>Total</b>         | 21                             | 100.00%                            |

The number of employees employed by the organisations varies from a minimum of six employees to a maximum of 110, as reflected in table 2 below.

**Table 2: Profile of respondents by organisation size**

| <b>Number of employees</b> | <b>Number of organisations</b> | <b>Percentage of organisations</b> |
|----------------------------|--------------------------------|------------------------------------|
| 6-29                       | 8                              | 38.10%                             |
| 30-49                      | 8                              | 38.10%                             |
| 50-110                     | 5                              | 23.80%                             |
| <b>Total</b>               | 21                             | 100.00%                            |

From the 21 organisations 19 (90.48%) are from the private sector while two (9.52%) are from the public sector. A total of 89.47% (17) of the private sector organisations are from industry.



## RESULTS AND DISCUSSION

From the empirical study only four (19.05%) organisations claimed to have a formal suggestion system. That means they have an official policy, certain structures and procedures in place. It is interesting to note that none of the organisations, whether formal or informal, have an exclusive name for their system. It could therefore be concluded that organisations will refer to “the suggestion system or suggestion scheme”. Not one of the respondents believes that the name of the system will contribute to the success on the system.

One could ask: “What is in a name?” Crail (2006:30) refers to it as “branding”. It is essential to choose a name for the suggestion system that people, ideas and innovation could be associated with. It should be “smooth on the tongue”, not too long and easy to handle in publicity. Almost three decades ago Alexander (1982:379) places a high priority on the correct name for a system. According to him it should be the first step in planning a suggestion system, because any further development and research could then be associated and identified with the name. Buchanan and Badham (2008:302) support this but also go one step further in saying that employees must have a conceptual understanding of the system and the name linked to it.

The following should be borne in mind when choosing a name for the suggestion scheme:

- It should not be linked to previous programmes or systems, especially any which were unsuccessful.
- It should describe the aim of the scheme.
- It should be short and to the point.
- It should be easy to remember.
- It should be unique.
- It should offer the opportunity for publicity and advertising.
- In addition, extreme care should be taken with the name, when using acronyms, such as PIP for Productivity Improvement Program and TIM for Telecom Idea Management.

It is therefore clear that a suitable name for the suggestion system might have advantages that will contribute to the success of the system.

### Evaluation of suggestions

There was consensus (100%) among all the respondents that the evaluation of suggestions is completed in less than 90 days after it was submitted. This is an indication that organisations and their management is open for suggestions and that they value the suggestions or ideas of their employees. Employees could therefore be satisfied that management will deal with their suggestion or idea within 90 days. On the other hand, if they have not received any feedback from management within this period, the employees can then regard their suggestion or idea as not valuable enough for management.

### Feedback to suggestors

The fact, however, that 71.43% of the respondents either disagree or do not know whether suggestors are getting feedback on a regular basis during the evaluation period places a question mark on the commitment of management and their positive answer (100%) in the previous question that evaluations are dealt with in 90 days is also doubtful. Furthermore, the question could well be asked if the employees’ ideas enhance innovation and competitiveness for the organisation to sustain their competitive advantage in a global economy, if they don’t care to give feedback to suggestors.

The commitment of management should be made known so that employees realise that management are serious about innovation and sustained competitive advantage and that they really consider the suggestions and act on the usable ones. Therefore feedback to suggestors is of the utmost importance. There are many ways on how management could keep this commitment and engagement: get actively involved in the strategy planning and goal setting of the suggestion system; view the suggestion system as an important tool to improve effectiveness, efficiency, productivity and eventually profitability; suggestion system reports should be put on management meeting agendas and should insist on reports from the head of the departments reviewing the

results and the future plans and management should make public their support for the initiative and actively participate in reward ceremonies and insist on press coverage.

## **Appropriate training**

The fact that 19.05% of the respondents agree that their suggestion evaluators haven't received proper training for the programme and evaluation techniques, proves a serious lack of commitment from management to ensure that ideas from employees get the necessary attention. An alarming 80.95% don't know whether suggestion evaluators do receive appropriate training in the reasons for suggestion systems and evaluation techniques show that management could get substantially more involved, at least in training their employees in "the why" and "the how" of the programme.

## **Performance reviews**

Three quarters (76.19%) of the respondents reported that management does not include idea evaluation as part of performance reviews for the evaluators. Almost a quarter of the respondents (23.81%) don't even know if it is included. It can be deduced that a quarter of the management that participated in this research has no definite procedures in place for performance reviews. As a result management also do not measure the performance of the evaluators' teams of whom they take charge of.

Management's involvement in the effort to make the suggestion system a success creates a cascade effect down to baseline employees, which will encourage them to become active in the system.

## **Recognition process**

The question was put forward to the respondents whether management ensures that suggestion evaluators are part of the recognition process. Only 19.05% of the respondents agreed that evaluators' efforts are recognised by management. It is disappointing to have to report that far more than half (61.90%) of the respondents did not know about the involvement of evaluators in the recognition process. An equal amount of respondents that agreed also disagreed (19.05%) that there is any recognition given to the evaluators. Holland, Sheehan, Donohue and Pyman (2007) link recognition and awards to the psychological contract. Although it might not be a written clause in their employment agreement, employees do want to be recognised or awarded for their efforts and achievements in the organisation under the psychological contract.

## **Implementation of ideas**

With reference to the implementation of ideas only 14.29% of the respondents believe it is the suggestor's line manager's responsibility to see to it that accepted suggestions are implemented while 14.29% disagree and an alarming high percentage, more than three quarters (76.19%) are not sure. If the line manager does not take the responsibility, who must? Surely, the suggestor cannot implement the suggestion without the approval of the line manager? It can be deduced that if there is agreement on this, then it is the responsibility of the line manager and, according to the respondents, they are not even sure that it is one of their duties as line manager.

The employee and the line managers are the people with the most knowledge of the job. Therefore, without the line manager's support, it is hardly likely that subordinates will come up with new ideas. Line managers should be an important link in the suggestion system and they should get more involved. If there is an air of negativity, it will pervade down to the subordinates with the result that participation dwindles. The line manager's role is an important aspect in the success of the scheme.

Clegg, Kornberger and Pitsis (2008:8) are clear on certain reasons why line managers must accept responsibility and be accountable for what is happening in their work sections for which they are designated. Some of the reasons are that suggestions originating in a specific section are usually referred to the line manager; they decide whether the suggestion will be accepted or implemented, especially when it relates to their particular

area of supervision. If they suppress the initiatives of their subordinates, they will be unable to motivate their employees to participate. A further reason is that the line manager is the communication channel through which employees can exchange and submit ideas to management. If the line manager blocks this channel, the suggestions cannot be taken further and management will remain unaware of these ideas.

If the line managers do not take responsibility for the implementation of the suggestions it is understandable that not in one of the participating organisations implementation of suggestions form part of the line managers' performance appraisal.

## IMPLICATIONS FOR MANAGEMENT

Suggestion systems will always have implications for management. Most of the resistance and resentment of employees result from lack of knowledge. It is therefore important that line managers are trained in how they and their subordinates can benefit from the suggestion system, how to evaluate ideas, how to administratively assist subordinates and how to encourage ideas, which means they must know how to develop ideas from their group. Line managers will always remain a kingpin in the success of the suggestion system. Management is engaged in evaluating the suggestions or ideas, therefore they are instrumental in determining the advantages of the it. Managers should maintain a good relationship with their subordinates and motivate them to submit their suggestions. Feedback to suggestors should be documented and managers should also become active in the system to make it a success.

## CONCLUSION

The success of a suggestion system will depend on management's commitment and involvement, proper policies, procedures and rules, an affective administration and processing process, objective evaluation of ideas and a fair recognition system. To establish a climate for innovation, an innovation process should include a system for encouraging employee suggestions that remove any possible barriers. There are different ways to generate ideas but it is important that the method used must be clear, straight forward, and open to all potential participants.

Software should be used to manage the process effectively and efficiently and is able to acknowledge receipt, handle duplicated ideas, link ideas to evaluators and allow everyone to search for existing ideas. Recognition programmes use various forms of reward such as cash, merchandise, travel, and time off with pay, plaques and certificates. As with any system there are advantages and disadvantages. Recognition should be immediate and separate from the normal reward system.

Employees must be given the opportunity to share their ideas with their colleagues and superiors through the suggestion system. Use their brains extensively; it's already been paid for. Tap those ideas that lie like golden nuggets, ready to be reaped. Idea power is the most tremendous human force in the world. It is just a matter of how this idea power is been utilised.

Therefore, to have an innovative, creative, competitive and successful suggestion system, management should be actively involved by creating the opportunities for employees to submit their ideas, get those ideas properly evaluated, give feedback and recognition when it is due and implement the useable ones as soon as possible. The motivational effect thereof must never be underestimated.

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# **BILLBOARDS ADVERTISING IN SOUTH-AFRICA: AN EXPLORATORY STUDY**

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## **ABSTRACT**

*While the value of outdoor advertising is undisputed as part of an integrated marketing communications medium, recent changes on the political front of South Africa resulted in a wave of social, demographic and other changes. One of them is the phenomenal growth in a segment of the black market, called the “Black Diamonds”. This segment was traditionally exposed to outdoor (mainly billboard) advertising in the townships where they lived. The challenge would be to reach this lucrative market, while avoiding the mistakes made in the past by marketers who communicated to the South African Black consumer.*

## **BACKGROUND**

South Africa has been in a process of transformation and is continuously developing new non-discriminating policies and practices. Communication via mass media in South-Africa, a multi-cultured country with eleven official languages, is challenging and has evolved over time partly due the changes in the political and economical environment (Hugo-Burrow in Kloss & Abe, 2001). During apartheid and even thereafter advertising and marketing communication were generally targeted at the most affluent white population group, or if aimed at a different audience the white/western lifestyle was presented as the ideal to aspire (Nagel & Louw, 2004). In the new democratic South-Africa the distribution of income has change radically and there is continues debate on how marketers and advertisers should communicate to the new emerging black market also known as “Black Diamonds” (Africans who are well educated, ambitious and creditworthy, with an average spend of R6 000/month, TAXtalk, 2007 ). Some marketing practitioners warn that the Black Diamonds concept is just another example of how white people continue to misunderstand and misconstrue black culture into what they perceive it to be rather than what it actually is (Jekwa, 2007), while some others consider the influence of the Black Diamonds in virtually every consumer segment of the South-African economy to be extremely positive (TAXtalk, 2007). It is clear that new research on how to reach, communicate and meet the demand of this complex market and redefining the largest audience group by re-interpreting race from a South-African Perspective are crucial (Hugo-Burrow in Kloss & Abe, 2001).

In an economic environment that turned towards the negative, questions would be asked about attracting the right kind of money to the company. South Africa has seen an overall economic growth of 3,7% during 2004. In 2005, growth rate slowed down slightly to 3,5%. This growth was driven mainly by consumer demand. This in turn was fuelled by a stable monetary unit (as measured against the \$US), low inflation and low interest rates. However, currently (2008), the economic growth has declined. While consumer demand is still strong, rising interest rates, world fuel prices and inflation has put the brakes on the economic boom as experienced in the first half of the 2000’s. The dilemma that marketers sit with currently is to know which consumer spend to isolate and target.

# OUTDOOR ADVERTISING

Outdoor advertising is a popular advertising medium especially in developing countries with multi-language, multi-ethnic and illiterate population groups (Jefkins, 2000:114). Outdoor advertising (also referred to as out-of-home advertising) includes all forms of advertising that provide out-of-doors exposure. The major types of outdoor advertising include billboards, street furniture (for example advertising on bicycle racks, buss shelters, displays or advertising outside or inside convenience stores, shopping malls and kiosks), transit media (for example advertising at airport terminal, on the out- or inside of busses, taxi, trains, cars or trucks and alternative forms (including airborne displays, digital displays, blimps or custom inflatable, postcard advertising and various other) (Outdoor Advertising Association of America, 2008). Billboards, however, remain the predominant form of outdoor advertising and are the focus of this study. It includes all of the several formats and types widely used in South-Africa: 12 Sheeteters (1.5mx3.0m), 48 Sheeteters (3.0mx6.0m), 96Sheeteters (3.0mx12.0m), CitiLites (Various sizes), gantries (4.5m x18.0m sites over highways), street pole ads (1.8mx1.3m), portraits (6.0mx 4.0m), super signs (5mx20m next to highways), unipoles (9.0mx6.0m sites on one pole) and spectaculars (SAARF, 2008).

Billboards enable advertisers in South-Africa to reach semi-urban and rural black communities who doesn't have access to televisions and can not afford magazines or newspapers (Nagel & Louw, 2004) and are also used to communicate vital messages regarding the prevention of HIV/AIDS to as many people as possible when there are little or no other media opportunities available (Von Bormann, 2003 & Coulson, 2001).

Expenditure on outdoor advertising in South-Africa was R 788 189 580 in 2005 increasing to R 1023 305 378 in 2006, with a growth of 30% (Outdoor of Home Advertising Association of South Africa, 2008), while it exceeded \$6.8 billion in America in 2006 (Outdoor Advertising Association of America, 2008). Despite revenue growth, outdoor advertising has received relatively little attention in the marketing literature and the advertising industry calls for research on audience exposure to the various types of outdoor advertising and the factors driving its effectiveness as advertising medium (Leo Burnett Media, 1997).

## GLOBAL RESEARCH ON OUTDOOR ADVERTISING

Studies on the effectiveness of specific media and types of outdoor are limited to a few: billboards from the perspective of advertisers or users (Taylor & Franke, 2003; Taylor & Franke, Bang, 2006), posters in the promoting of cultural events (Berneman & Kasparian, 2003) as well taxis advertising (Veloutsou, & O'Donnell, 2003).

Some of the limited research on the effectiveness of outdoor advertising will now be overviewed. Bargvu and Donthu took some initiative and were the most prominent researchers on outdoor effectiveness the 90's. In 1993 Donthu, Cherian and Bargvu (1993) examined factors influencing the recall of billboard advertising found that the following six factors had a significant influence: Position of the advertisement (billboards on the right hand side of the road are more effective than on the left hand side), Location of the advertisement (billboards on highways are effective than those on byways on arterial roads), Colour of the advertisement (black and white billboards have a higher recall than full colour billboards), Number of words (billboards with 7 or less words are effective than those on with more text), Attention to billboards (respondents who were more involved with billboards paid more attentions to them than those who were less involved), Attitude towards advertising (Attitude towards advertising lead to more billboards being ads being recalled). The study failed to consider the potential influence of other media, type of billboards and the type of product being advertised. Some of these issues were addressed when Bargvu, Donthu and Caron (1994) collaborated with the industry to analyse data of 282 outdoor campaigns over an extended period. The main purpose of this study was to find ways to improve the effectiveness of outdoor by examining the relationship between recall scores and executional factors with the, They presented a model consisting of exogenous factors: sampling characteristics and covariats (time period and product type) and controllable factors: the media and weight, overall creative, illustration and text related aspects. This study had a much more IMC perspective. In 1999 Bargvu and Donthu used experimentation to investigate sales response (as opposed to just awareness or recall) to outdoor advertising (Bargvu & Donthu:

1999) From an IMC perspective this study is significant because the effectiveness outdoor is not considered in isolation but when used to communicate promotional messages as well as in a multimedia campaign.

Veloutsou and O'Donnell conducted exploratory research in 3 areas in Scotland on the overall attitudes and feelings towards advertising, outdoor advertising and taxi advertising from the perspective of the targeted audience (2003). This study confirms the high reach of outdoor and found that effectiveness of taxi advertising is dependant on the level of exposure, area of habit (work, live and travel) and the amount of information that outdoor advertising conveys. It is suggested that Taxis advertising should be used as a secondary medium in an IMC campaign to reinforce a message, to support an already established brand or to inform on developments related to the advertised brand.

## **RESEARCH ON OUTDOOR ADVERTISING IN SOUTH-AFRICA**

Regions in South-Africa where large portions of the population cannot be adequately reached through the traditional mass media for example in rural or semi urban communities where many people do not have access to televisions or can not afford to buy newspapers billboards can be used successfully to target commuters waiting for public transport. (Nagel & Louw 2004). If the penetration of the major type of media in South-Africa is considered it can be seen that the penetration among total adults were the lowest for Cinema (9.6%), Magazines (35.1%) and Newspapers (41.6%). The penetration for radio and billboards were much higher with 92.7% and 83.9% respectively. The penetration of billboards was high for all race groups: 93.5% for the Indian population, 90,5 for the white population, 82.8% for the coloured population and 82.5% amongst the black population (OMD, 2007)

Two studies examining the effectiveness of billboards when targeting Black South-Africans were recently published: Pauwels (2005) examined posters and billboards used for health communications of TB- and HIV/AIDS-related messages. This study considered general principles of message design in a multicultural society and suggested that outdoor advertising (posters and billboards) should be used to communicate a single strong message together with other elements of the marketing communication mix allowing more in in-depth information such as face to face counselling and brochures in a health context. Nagel and Louw (2001) investigated the response of black South-Africans towards billboards in Limpopo. a semi-urban-/ rural area. The majority of the black South-Africans had positive attitude towards billboard advertising although the Westernized approach of the advertising agencies creating these communication message was criticized for not customizing or adopting the message to an African context or more specifically to the communities own traditional values and usages.

The past few years SAARF (South-African Research Foundation) and AC Nielson attempted to develop and define an accurate, reliable and comparable measurement for media planners and owners in the outdoor advertising industry of South-Africa. An electronic device (known as Npod which is a portable device carried with respondents that collects and saves GPS locations) was used to collect travel data of respondents. The visibility zones of the different types of outdoor advertising sites were also taken account to calculate the GRP (Gross Rating Points is a standardized measured for media and calculated by multiplying Reach (% of people who are exposed to at least 1 site) with Frequency (the number of times sites were passed) (SAARF, 2008). Counts of traffic passing various outdoor sites and estimates of exposure based on people's travel and commuting patterns are essential (Leo Burnett Media, 1997), but the most important element in effective outdoor advertising is the target audiences' perceptions (Veloutsou & O'Donnell, 2003).

## **PURPOSE OF THIS STUDY**

From a theoretical perspective, the this paper contributes to the existing body of knowledge on the effectiveness of outdoor advertising: First, unlike research conducted by practitioners which tends to only focus on the effectiveness of a specific advertising campaign, the scope of the study is somewhat different and broader by investigating the effectiveness a specific media. Second, as far as could be determined, this is be the first study of the exploring the effectiveness of billboard advertising targeting African consumers in South-Africa. Third,

the study makes a unique contribution by investigating the relationship between the attitudes towards outdoor advertising and its effectiveness in a ethnic segment. This will help to understand what might irritate South-African consumers and lead to their discontented with advertising and billboards (Maskulka, 1999) and could help town councils in the development of policies dealing with the regulation of outdoor (Taylor & Franke, 2003).

This main purpose of this exploratory study is to identify possible factors affecting the effectiveness of billboard advertising particularly in an African and South-African context through a review of the existing literature on the effectiveness of mass media as well as the literature on outdoor advertising. Previous research efforts have been appraised by summarising, comparing and contrasting them in order to highlights trends, acknowledges, opposing perspectives in the literature and pointing out potential for future research.

## **OUTDOOR ADVERTISING TO BLACK DIAMONDS IN SOUTH AFRICA**

As noted earlier, the term “Black Diamonds” refer to Black South Africans who are well educated, ambitious and creditworthy, with an average spend of R6 000/month. The rise in number of this group has resulted in predictions that the black population in South Africa will command the highest share in the food, education, household equipment, cigarettes and tobacco, clothing, footwear, alcoholic beverages, washing, cleaning and dry cleaning product groups (Nagel & Louw, 2004). South Africa's black middle class has grown by 30% in just over a year, with their numbers increasing from 2-million to 2.6-million and their collective spending power rising from R130-billion to R180-billion ([www.southafrica.info](http://www.southafrica.info)). Perhaps the most important of these figures is that 12% of South Africa's black population account for over half (54%) of all black buying power. This compares with 10% accounting for 43% of black buying power 15 months ago. Black households in upper income bracket (R154 000+ per annum) grew 368% from 1998 to 2004. This represents a growth in number of households from 120 000 to 440 000. The comparative growth for White households was only 16%. Keep in mind that during the apartheid years, White consumers were the dominant (and therefore targeted) group. It is thus clear that the rise in “Black Diamonds” is the most significant social change in the consumer history of South Africa.

It must be noted, however, that the rift between rich and poor in South Africa is larger than ever. Unemployment is a problem and predictions are that it will not change quickly, as suggested by our Human Development Index (*a measurement of socio-economic development according to life expectancy at birth, per capita income and level of adult education*) that slipped from 93 in 1992 to 115 in 2003. Paradoxically, the per capita GDP puts South Africa between the top 50 countries ([www.uct.ac.za](http://www.uct.ac.za)).

In 2005, many respondents living in South Africa's townships expressed the desire eventually to move to the suburbs. This prediction has proved correct, with the number of black middle-class families living in suburbs in South Africa's metropolitan areas growing from 23% to 47% in the past 15 months. The latest estimates reveal 1.2-million “Black Diamonds” adults in the suburbs (47%) and 1.4-million in the townships (53%). This resulted in a sharp rise in the price of houses generally, while the retail demand shifted from traditional townships to the affluent, previously white dominated retail outlets. These figures must be read with the following statistics in mind. During the 2004 census estimation, the South African population was estimated at 45,5 million people, of which almost 80% is Black. A small percentage shift in the demographics of Black South Africans could thus see quite a change in the number of people. The South African population is not expected to decline in the foreseeable future.

Makwena Poopedi is part of this new middle class. She grew up in the Katlehong township east of Johannesburg, but moved to one of the city's formerly white districts 11 years ago. She started her own beauty salon there and is now having a house built in a new residential development north of the city, the first she will own after years of rented flats. She also helps support her mother and her sister's two children, who still live in Katlehong but go to school in more affluent suburbs miles away, where education is better (The Economist, 2007).

The astronomical rise in the numbers of this group has caught most marketers unaware. Suddenly marketers who traditionally focused on the White affluent consumers, are struggling to understand how to reach the newly



affluent (and very large) consumers. What do they think about the value of formal banking services, life insurance, debt, communication products, the Internet and so much more? Keep in mind that most Black South Africans had funeral policies, while more sophisticated insurance products like life, car, household and medical aid were the domain of the White consumers. Studies are still underway to understand and segment this market further. Research to better describe and understand the “Black Diamonds” is mostly done by the University of Cape Town’s Unilever Institute for Strategic Marketing ([www.uct.ac.za](http://www.uct.ac.za)). They currently focus on the origins and drivers of this economic phenomenon, the aspirations and realities of the South African middle class, media consumption and products/services affected by this market.

One of the challenges for marketers will be to keep up with changes in media consumption for this group. Would traditional beliefs about black consumers and advertising still hold? For instance, Nagel and Louw (2004) found that adapting a Western/First world/European concept or myth to persuade South Africa’s Black population was ineffective. The study reflected on outdoor advertising specifically, but was done in a semi-urban area.

An analysis of the current and ideal marketing communication budget allocation options in South Africa revealed, amongst others, that South African firms on average spend 59 per cent of their marketing communication budget on above-the-line advertising. The remainder (41%) is spent on below-the-line advertising (Tustin, 2004). Above the line advertising is regarded as advertising activity in conventional mass media such as television, radio, magazines, newspaper, cinema or outdoor (Muller, 2004). Below the line advertising is regarded as advertising or promotions outside conventional mass media, such as direct mail, pamphlets, point of purchase material, competitions, give-aways, etc. (Muller, 2004). Tustin (2004) found that the most prominent among the above-the-line advertising modes are television (43,2%) and press (24,0%), followed by radio (9,6%), outdoor (2%) and cinema (0,8%). Outdoor advertising is regarded as a less preferred advertising method that below the line’s direct marketing (6,8%), public relations (6,8%) and sales promotions (5,2%). He also found that respondents regard television, radio and press advertising as the top above the line marketing communication tools that will be used to support long-term brand building. Outdoor advertising does not seem to be regarded as that important by South African brand managers, whether in a current or a future context.

When the wide spread of functional illiteracy and poor coverage by some conventional media is considered, it is perhaps surprising to see the low preference for outdoor advertising. In countries who face the same type of communication challenges than South Africa, investment in outdoor is higher. For instance, Pakistan, Mexico, India and Columbia’s outdoor spend as a percentage of advertising budget ranged between 4,9% and 9,6% (Gordon, 2004). Maybe part of the answer in getting brand managers more excited in outdoor advertising lies in matching the image of this medium to the glamour of the awards ceremony held for outdoor advertisers. The winning outdoor advertisement is nothing that compare to the one dimensional traditional billboard that outdoor advertising is associated with. The billboard features a giant luminescent photo of a J&B bottle emitting a beam of light. Eye-catching against the Johannesburg night sky, the glowing bottle appears almost suspended in the air ([www.ohmsa.co.za](http://www.ohmsa.co.za)).

All the benefits of outdoor advertising have been there for marketers to see. For instance, a traditional feature of U.S. outdoor industry operating practice is the thirty-day posting period. From a brand-building perspective these lengthy posting periods can be seen as repositories of long-term brand image and favorable consumer attitude accumulation; in some ways analogous to banks creating and storing financial wealth. The de facto lasting impression delivered month-after-month as a by-product of the 30 day posting periods advances the idea of permanence (distinct from continuity) in marketing communications (Maskulka, 1999). However, it is still not certain to what extend the “Black Diamonds” would react to outdoor. It was found that “Advertising on taxis is ranked in the middle of the outdoor advertising media in terms of contact.” (Veloutsou & O’Donnell, 2003). However, mini bus taxis are still the mode of transport used by most black people in South Africa. The current levels of taxi usage amongst the “Black Diamonds” are not certain.

## **FUTURE DIRECTION**

Information about outdoor advertising to specifically the Black Diamonds in South Africa is not readily available and here some of the many potential areas for future research

- To explore how aspirations changed for Black Diamonds in South Africa
- To investigate how effective is billboard advertising in targeting Black Diamonds moving out of their traditional living spaces where they were traditionally exposed to billboards
- To investigate possible age, income and ethnic differences in the relative levels of likeability and effectiveness of billboard advertising
- To compare the effectiveness of billboards, outdoor media and mass when media targeting Black Diamonds.
- To determine the overall attitudes and feelings towards outdoor and billboard advertising in South Africa
- To determine if “driver by” recall billboards/out of home media better than captive commuters ”
- To explore which factors and to which extent do they influence recall when targeting black diamonds including aspects such as
  - Executions (Is bigger always better? What do Black Diamonds find unique and gets their attention? What are the best locations for billboards based on their new travel and lifestyle patterns of Black Diamonds?)
  - Messages (How to address serious subjects (for example abortion, AIDS and drug abuse) in order to communicate effectively? Which celebrities are effective when targeting this market? Should head scratchers / teasers campaigns be used?)

## PRELIMINARY CONCLUSION

While the same fundamental principles of advertising planning and management should be used when dealing with outdoor advertising, it can be more complex than other media. It should be kept in mind that media planning is a component of marketing communication which once again is a subpart of the marketing. The planning of outdoor media needs to be addressed in a media plan, whether it is used as only-, support- or primary media in a marketing communication strategy. Accurate and reliable research should be used when matching the target market with the chosen media vehicle. Although more research is needed, the South African Research Foundation (SAARF) recently included outdoor advertising in the All Media and product survey (AMPS), and also changed the SAARF Universal Living Standards Measure to reflect the changes in South Africa population.

Outdoor advertising in South Africa is expected to rise to more than 1 billion rand to compare with the 5% to 11% Adspend in developing countries. The other major trend in South-Africa is the emerging black market (Black Diamonds) leading to several opportunities for marketers. This paper explored how marketers and advertisers should communicate to this new market using outdoor advertising and indicated how many questions are still unanswered.

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# TRADE OPENNESS AND ECONOMIC GROWTH: EVIDENCE FROM TRIVARIATE CAUSALITY

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## ABSTRACT

*The study seeks to examine, if the degree of openness can be determined to Granger cause the economic growth, or economic growth can be determined to Granger cause the trade openness. For this purpose, we first use a bivariate error correction model within a Granger cause framework, as well as adding foreign direct investment as an explanatory variable, creating simple trivariate analysis for each of these two variables. The combined results of both bivariate and trivariate modeling suggest that openness and economic growth are cointegrated and they have bidirectional causality between them in the Indian economy during the period 1970-2005.*

## INTRODUCTION

The foundation of credible national security is based upon the level of economic prosperity and wellbeing of the people in the country. There are various ways that can be achieved and one of such way is degree of trade openness in the economy. This is because openness offers a significantly better life and substantially more socio-economic opportunities to individuals in both developing and developed countries. At a purely economic point of view, trade openness is widely used a positive sum game for all countries (Karunaratne, 1996). However, based on theoretical and empirical research, the relationship between openness and economic growth is very controversial. That means there is no uniform relationship between openness and economic growth. It varies across countries and over time. This is because openness can affect the economy through various channels. The received literature has proceeded at two levels.

The first set of studies is of the view that trade openness is a fundamental determinant of economic growth and represented as trade-led growth hypothesis (Kavoussi, 1984; Afxentiou and Serletis, 1991; Bhamani-Oskooee and Alse, 1993; Ben-David and Loewy, 1997; Giles and Williams, 2000; Deme, 2002; Yanikkaya, 2003; Gao and Wang, 2004). The empirical tests of this hypothesis, either in the form of regression analysis or in the form of error-correction modeling, have yielded results that differ considerably from country to country. The other set of studies is of the view that economic growth is a fundamental determinant of trade openness and named as growth-led trade hypothesis (Darrat, 1986; Harrison, 1995; Henriques and Sadorsky, 1996; Wei et al., 2001). The empirical works again in either standard regression forms or error-correction modeling finds diverse results. In addition to above, a third groups tends to give some context-specific explanations between economic growth and trade openness, which ensures bidirectional causality between them (Ghatak, 1995; Liu et al., 1997; Shan and Sun, 1998; Doyle, 2001).

Although each line of enquiry has thrown interesting light on the phenomena, in either case has the assumed causative process been subjected to rigorous empirical pre-testing? Purely a priori judgments for choosing between the two competing postulates are rendered difficult for at least three reasons: First, there is possibility of feedback in macro relations, which tend to obscure both direction and nature of causality; Second, the nexus between openness and economic growth fails to account for omitted variables can give rise to misleading causal ordering among variables and in general, yields biased results; Third, if cointegration among the variables of the system is admitted, then the error-correction term would provide an additional source of causality. Indeed, a principal feature of cointegrated variables is that their time paths are influenced by the extent of any deviation from long-run equilibrium. Hence, omission of the error correction terms would entail a misspecification error

and potentially bias the results. In the context of trivariate systems such an outcome is very possible because the introduction of a third variable in the system can alter the causal inference based on the simple bivariate system.

The principal aim of this paper is to empirically evaluate the causal link between trade openness and economic growth within the bivariate and trivariate framework. The combined analysis of bivariate and trivariate tests offer a rich menu of possible causal patterns. We conducted three different specifications: first, we test for a causal link between economic growth and trade openness at the bivariate level and then integrate the same with foreign direct investment at the trivariate level. The rest of the paper is divided into four sections including earlier introduction. Section II highlights the model and data descriptions. Section III presents the empirical results and section IV concludes with policy implications thereof.

## MATHEMATICAL MODELING AND DATA DESCRIPTIONS

The notion that there is a long-run tendency for trade to grow relative to economic growth or vice versa has been issue in economics that is rarely questioned. Hence, if the variables trade openness and economic growth are considered as stochastic trends and if they follow a common long-run equilibrium relationship, then these variables should be cointegrated. According to Engle and Granger (1987), cointegrated variables must have an Error Correction Modeling (ECM) representation. The main reason for the popularity of cointegration analysis is that it provides a formal background for testing and estimating short-run and long-run relationships among economic variables. Furthermore, the ECM strategy provides an answer to the problem of spurious correlation.

If the two variables are cointegrated, an ECM representation could have the following form:

$$\Delta GDP_t = \alpha_0 + \alpha_1 \Delta OPEN_t + \alpha_2 (GDP_{t-1} - \mu OPEN_{t-1}) + \xi_t \quad \dots\dots\dots [1]$$

$$\Delta OPEN_t = \beta_0 + \beta_1 \Delta GDP_t + \beta_2 (OPEN_{t-1} - \eta GDP_{t-1}) + \zeta_t \quad \dots\dots\dots [2]$$

Where, GDP represents Gross Domestic Product (in US \$ Millions), a proxy to economic growth and OPEN represents trade openness (in US \$ Millions), the total of exports and imports. The error correction term in (Eq. 1) is the lagged value of the residuals from the OLS regression of openness to economic growth ( $GDP_{t-1} - \mu OPEN_{t-1}$ ), while the error correction term in (Eq. 2) is the lagged value of the residuals from the OLS regression of economic growth to openness ( $OPEN_{t-1} - \eta GDP_{t-1}$ ). It is assumed that both variables are stationary at the first differences. Accordingly, the above two model represents a bivariate mechanism in the first differences augmented by these error correction terms, indicating the ECM model and cointegration are equivalent representations.

According to Granger (1988, 1986), if two variables are cointegrated then there must be causality at least in one direction. However, it is possible that the causal link between openness and economic growth estimated from the ECM formulation could have been caused by a third variable. Such a possibility may be explored within a trivariate framework adding foreign direct investment as an explanatory variable, which represents a considerable determinant of economic growth and trade openness respectively. Therefore, the causal relationship between openness and economic growth can be examined in the following ECM model:

$$\Delta GDP_t = \alpha_0 + \alpha_1 \Delta OPEN_t + \alpha_2 \Delta FDI_t + \alpha_3 (GDP_{t-1} - \mu_1 OPEN_{t-1} - \mu_2 FDI_{t-1}) + \xi_t \quad \dots\dots\dots [3]$$

$$\Delta OPEN_t = \gamma_0 + \gamma_1 \Delta GDP_t + \gamma_2 \Delta FDI_t + \gamma_3 (OPEN_{t-1} - \partial_1 GDP_{t-1} - \partial_2 FDI_{t-1}) + \zeta_t \quad \dots\dots\dots [4]$$

Where, FDI is Foreign Direct Investment (in US \$ Millions),  $\xi_t$  and  $\zeta_t$  are random component. The difference between ECM models (Eq. 1) and (Eq. 2), and (Eq. 3) and (Eq. 4) is that the introduction of foreign direct investment could alter the causal inference based on the simple bivariate system. It is to be noted that Granger causality tests are very sensitive with respect to lag length selection and for that, we use Akaike Information Criterion (AIC).

However, the first and foremost condition of ECM technique is to test the stationarity of variables and their cointegration. We use Augmented Dickey Fuller (ADF) test to examine the stationarity (Dickey and Fuller, 1979) and Engle and Granger test to explore the cointegration (Engel and Granger, 1987). The test procedure of ADF is as follows:

$$\Delta Y_t = \beta_1 + \beta_2 t + \delta Y_{t-1} + \sum_{i=1}^p \alpha_i \Delta Y_{t-i} + \varepsilon_t \quad \dots\dots\dots [5]$$

Where  $\Delta$  is the difference operator,  $t$  is time trend and  $\varepsilon_t$  is the variable that adjusts the errors of autocorrelation. The coefficients  $\beta_1, \beta_2, \delta, \alpha_1, \alpha_2, \dots, \alpha_p$  are being estimated. The null and alternative hypothesis for the existence of unit root in variable  $Y_t$  is as follows:  $H_0: \delta = 1$  against  $H_A: \delta < 1$ .

The test procedure of cointegration involves three steps. First, make sure that all the individual variables are integrated of order one [i.e.  $I(1)$ ]. Second, there is availability of linear relationship among the variables. Third, the obtained residuals must be stationary [i.e.  $I(0)$ ]. To illustrate the same, let us assume that we have three variables, say,  $X_t, Y_t$ , and  $Z_t$ . Applying OLS technique, the estimated models can be represented as follows:

$$\hat{U}_t = Y_t - \hat{\beta}_0 - \hat{\beta}_1 X_t - \hat{\beta}_2 Z_t \quad \dots\dots\dots [6]$$

Here the coefficients have to be significant and  $U_t$  should be stationary. However for stationarity, we use ADF test and the procedure of this test follows the estimation of below equation:

$$\Delta u_t = \phi u_{t-1} + \sum_{i=1}^n \alpha_i \Delta u_{t-i} + \varepsilon_t \quad \dots\dots\dots [7]$$

Here the null hypothesis against the alternative hypothesis for the existence of unit root in variable  $u_t$  is as follows:  $H_0: \phi = 1$  against  $H_A: \phi \neq 1$ .

It is to be noted that the distribution of the ADF statistic is non-standard and the critical values tabulated by Mackinnon, 1991.

The model is empirically investigated for the Indian economy during the period 1970-2005. We use three variables, namely trade openness (export plus imports), economic growth (measured by GDP) and foreign direct investment inflows. The data are secondary in nature and have been collected from International Financial Statistics Yearbook, International Monetary Fund (IMF) and World Investment Report, United Nations Conference on Trade and Development (UNCTAD).

## RESULTS AND DISCUSSION

The study basically discusses the relationship between openness and economic growth in a bivariate and trivariate framework by adding foreign direct investment as an explanatory variable into the system. The standard test applied for the same is cointegration and Error Correction Modeling (ECM) technique. The empirical investigation highlights three things: test of integration, test of cointegration and causality test.

### A. Test of Integration

The

Augmented Dickey Fuller test has been used here to know the stationarity or order of integration of the variables. Table 1 reports the results of ADF test for economic growth, openness and foreign direct investment. The study uses the logarithms of variables so that first differences mechanically correspond to growth rates. The estimated results represent that all variables are non-stationary at the level data. This is since the null hypothesis of a unit root in the logarithm is not rejected for any of these three variables [that is as per the test statistics reported by Mackinnon, 1991]. However, these variables are stationary at the first differences, as the null hypothesis of a unit root is rejected here. Therefore, all variables are integrated of order one [i.e.  $I(1)$ ].

### B. Test of Cointegration

Since the order of integration of all the three variables is same, cointegration technique can be applied to know the existence of long run equilibrium relationship among them. We test the same at a bivariate modeling, where the cointegration is studied between openness and economic growth and trivariate modeling, where the cointegration is studied between openness and economic growth along with the inclusion of foreign direct investment as an explanatory variable into the system. We used Engle Granger two-step procedure to examine the same. Table 2 reports the results of cointegration test at a bivariate and trivariate format. The results indicate that openness and economic growth are cointegrated, as the estimated coefficients are statistically significant and

the obtained residuals are stationary. This suggests that there is long run equilibrium relationship between openness and economic growth in India during the period 1970-2005.

### **C. Test of Causality**

The results of cointegration has already confirmed that openness and economic growth have a tendency to converge towards an equilibrium in the long run [long run equilibrium between openness and economic growth], but they may diverge from an equilibrium path in the short run [short run equilibrium between openness and economic growth]. Therefore, the disequilibrium between short run and long run values in lagged year would be corrected/ adjusted quickly by the changes in openness or economic growth through appropriate macro economic policies. Here the effectiveness of macro economic policies in correcting the disequilibrium can be scanned on the basis of ECM. The effective macro economic policy in correcting the disequilibrium reflects the responsiveness of change in openness or economic growth to previous deviations of actual openness or economic growth from the long run equilibrium. In other words, the equilibrium term that entered the ECM as an explanatory variable allows examining the effectiveness of macro economic policies to move towards a new equilibrium. This has also further investigated by a trivariate format by incorporating foreign direct investment as an additional explanatory variable.

The estimated results, based on ECM representation, for bivariate and trivariate causality tests are reported in Table 3. The results suggest that there is bidirectional causality between economic growth and openness. That means openness Granger cause economic growth and economic growth Granger cause openness in the economy. In other words, openness seems to be significant factor that determines economic growth and also economic growth is a significant factor that determines openness in the India economy during the period 1970-2005. The coefficient of ECM, which gives an indication of short run deviations from the long run equilibrium, is positive from economic growth to openness but found negative from its reverse direction. However, the coefficients are not statistically significant. The results are considerably true by both bivariate and trivariate causality error correction modeling with the involvement of foreign direct investment as an additional explanatory variable in the relationship between openness and economic growth. This represents that openness and economic growth are very interdependent to each other in the Indian economy during the period 1970-2005.

## **CONCLUSION AND POLICY IMPLICATIONS**

Understanding the time series dynamics between openness and economic growth has received much attention in the recent literature. The study has attempted to make some contributions to this line of research. It examines the causal relationship between openness and economic growth, using Error Correction Modeling (ECM) technique, in a bivariate and trivariate format in the Indian economy over the period 1970 to 2005. It finds that openness and economic growth are cointegrated, indicating the presence of long run equilibrium relationship between the two. In other words, openness and economic growth are not drifting apart from each other in the long run in the Indian economy during the reference period. The presence of cointegration between openness and economic growth has also obtained from the trivariate analysis, adding foreign direct investment as an additional explanatory variable into the system. The ECM finally confirms the existence of bidirectional causality between openness and economic growth. That means openness Granger cause economic growth and economic growth also Granger cause openness in the economy. However, the introduction of error correction term in the modeling is not found significant. This means the presence of disequilibrium between short run and long run equilibrium relationship between economic growth and openness is not so serious in the Indian economy during the period 1970-2005. Hence, we can conclude that openness acts as an engine of economic growth and economic growth acts as an engine of openness in the Indian economy during the reference period. The paper eventually suggests that macro economic policies should create an environment for increasing openness in the economy in order to facilitate its economic growth and vice versa.

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## APPENDIX

**Table 1: Results of Order of Integration**

| <u>Variables</u> | <u>Level Data</u> |            |                  | <u>First Differences</u> |            |                  |
|------------------|-------------------|------------|------------------|--------------------------|------------|------------------|
|                  | <u>C</u>          | <u>C+T</u> | <u>Inference</u> | <u>C</u>                 | <u>C+T</u> | <u>Inference</u> |
| GDP              | -1.496            | -2.140     | NS               | -5.721*                  | -5.842*    | S                |
| OPEN             | -0.369            | -1.706     | NS               | -3.588*                  | -3.447*    | S                |
| FDI              | -2.125            | -2.619     | NS               | -8.080*                  | -7.910*    | S                |
| 5% CV            | [-3.567]          | [-2.963]   |                  | [-3.567]                 | [-2.963]   |                  |

**Note:** ADF: Augmented Dickey Fuller: C: Constant; C +T; Constant plus trends; FDI: Foreign Direct Investment; GDP: Gross Domestic Product; OPEN: Trade Openness; CV: Critical Value; NS: Non Stationary; S: Stationary; and \*: Indicates Statistical Significance.

**Table 2: Results of Cointegration**

| DV                | Constant                    | Coefficient of Predictors    |                              | FDI                          | R <sup>2</sup> | DW     | ADF    |
|-------------------|-----------------------------|------------------------------|------------------------------|------------------------------|----------------|--------|--------|
|                   |                             | GDP                          | OPEN                         |                              |                |        |        |
| Bivariate Format  |                             |                              |                              |                              |                |        |        |
| GDP               | 5.64<br>(0.018)<br>[31.73]  |                              | 0.648<br>(0.017)<br>[38.02]  |                              | 0.97           | 0.26   | -4.47* |
| OPEN              | -8.26<br>(0.50)<br>[-16.83] | 1.51<br>(0.04)<br>[38.02]    |                              | 0.97                         | 0.26           | -4.38* |        |
| Trivariate Format |                             |                              |                              |                              |                |        |        |
| GDP               | 5.60<br>(0.236)<br>[23.77]  |                              | 0.653*<br>(0.027)<br>[24.55] | -0.003<br>(-0.11)<br>[-0.25] | 0.97           | 0.26   | -4.63* |
| OPEN              | -7.67<br>(0.67)<br>[23.77]  | 1.452*<br>(0.059)<br>[24.55] |                              | 0.020<br>(0.016)<br>[1.270]  | 0.98           | 0.28   | -5.37* |

**Note:** R<sup>2</sup>: Coefficient of Determination; DW: Durbin Watson Statistics; ( ): The Parenthesis Indicates Standard Error of Estimates; [ ]: The Parenthesis Indicates the t-statistics of Estimates; Other notations are defined earlier.

**Table 3: Results of Error Correction Model**

| <u>DV</u>  | <u>Intercept</u>            | <u>ΔGDP</u>                | <u>ΔOPEN</u>                | <u>ΔFDI</u>                 | <u>Bivariate Format</u>      |                      |          | <u>Inference</u> |
|------------|-----------------------------|----------------------------|-----------------------------|-----------------------------|------------------------------|----------------------|----------|------------------|
|            |                             |                            |                             |                             | <u>ECT-1</u>                 | <u>R<sup>2</sup></u> | <u>F</u> |                  |
| ΔGDP       | 0.0175<br>(0.013)<br>[1.39] |                            | 0.44*<br>(0.082)<br>[5.39]  |                             | -0.113<br>(-1.24)<br>[-1.24] | 0.53                 | 18.06    | OPEN => GDP      |
| ΔOPEN      | 0.042<br>(0.019)<br>[2.23]  | 1.067<br>(0.196)<br>[5.44] |                             |                             | 0.024<br>(0.096)<br>[0.25]   | 0.53                 | 18.06*   | GDP => OPEN      |
| Conclusion |                             |                            |                             |                             |                              |                      |          | OPEN <=> GDP     |
| <u>DV</u>  | <u>Intercept</u>            | <u>ΔGDP</u>                | <u>ΔOPEN</u>                | <u>ΔFDI</u>                 | <u>Trivariate Format</u>     |                      |          | <u>Inference</u> |
|            |                             |                            |                             |                             | <u>ECT-1</u>                 | <u>R<sup>2</sup></u> | <u>F</u> |                  |
| ΔGDP       | 0.018<br>(0.012)<br>[1.44]  |                            | 0.449*<br>(0.083)<br>[5.43] | 0.006<br>(0.007)<br>[-1.24] | -0.11<br>(0.09)<br>[-1.19]   | 0.54                 | 12.2*    | OPEN => GDP      |
| ΔOPEN      | 0.039<br>(0.019)<br>[2.00]  | 1.095*<br>(0.02)<br>[5.54] |                             | 0.006<br>(0.007)<br>[-1.24] | 0.001<br>(0.986)<br>[0.01]   | 0.52                 | 11.11*   | GDP => OPEN      |
| Conclusion |                             |                            |                             |                             |                              |                      |          | OPEN <=> GDP     |

**Note:** DV: Dependent Variables, all other notations are defined earlier.

**Source:** Calculated by Author.

# CORPORATE SOCIAL RESPONSIBILITY AS A TOOL OF CORPORATE GOVERNANCE IN GLOBAL ECONOMY

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## ABSTRACT

*From the global perspective, modern Corporate Governance is a tool designed for interdisciplinary use. Currently, the role of economy in developing corporate governance is the primary focus.*

*It is back in the first half of the 1990's that the concept of corporate governance emerged based on a belief that the non-formal social norms are no less important than the formal ones. In modern times, it is mostly the principles of social responsibility that have an increasing impact on the performance of corporations at least as much as the formal, that is, the legal norms.*

*In the 2000's, informal norms help make the institutional structure more flexible, which results in improved business activities such as resource allocation. They can also be used to meet the global social and environmental challenges.*

*This paper uses the methodology of a fuzzy expert system to track the key corporate social responsibility (CSR) parameters, as a management focus viewed by corporate governance. This is a unique deployment of artificial intelligence to model CSR parameters.*

## INTRODUCTION

In the beginning of the 21<sup>st</sup> century, globalization has become part of a business environment to which corporations have to adapt being responsible for the way this change takes place.

Due to the internationalization and globalization of economy, corporations face tasks and have to deal with questions never faced before. These include:

- Can countries still control the current economic development?
- In the global economy, who are the winners and who are the losers?
- Does the globalization of markets represent multiplicity without unity, which needs to be reflected mostly in the competition?
- Is the concept of closed areas in world's economy becoming obsolete?
- Have all the world's current economic phenomena and processes locally global character?

Globalization of markets may be viewed as a multidimensional, ambivalent, and unique process in which the economic, social, and environmental processes are confronted with each other (Beck 2007), which necessarily requires a **systematic implementation of social responsibility** of all the market entities, companies in particular, for their acts and behaviour.

It is the duty of large corporations, whose income exceeds the GDP's of a number of countries, to deal with the issues of social responsibility as their economic power weakens the position of national governments that can significantly control the behaviour of society. In this way, corporations become powerful players in the global marketplace with their behaviour setting a standard for the general corporate culture and ethics. This strengthens the large corporations' economic and legal responsibility and, even more so, their ethical, environmental,

political, and philanthropic accountability, which is exactly how they can serve as an example for smaller business entities.

Under the new circumstances, large corporations also have to face problems of global corporate governance. The corporate governance system that deals with such questions has been undergoing rather a dynamic development. The simple organisational and legal monistic or dualistic model of corporate governance has been changing in favour of sophisticated systems of business management of large corporations. Moreover, in the beginning of 21<sup>st</sup> century, it is also the **cultural and ethical objectives** that begin to gain importance. In this connection, there is a "rediscovered" superstructure system emerging of ethical governance of corporate social responsibility (CSR).

The present CSR system is based on a concept of holistic thinking, which also corresponds to the 3P concept - people-planet-profit. Apart from the strictly viewed competitiveness in terms of profit, production volume, quality of assets, company image, goodwill, etc., this multi-tier approach offers the companies a broader view closely related to ethical values such as trust and responsibility.

## MODERN CONCEPT OF CORPORATE GOVERNANCE

Corporate governance is mostly defined as the management and governance of large corporations. The aim is to harmonize the interests of the top management preferring profit or business responsibility with those of the owners who in turn prefer the exercising of proprietary rights in the long run as well as the optimum appreciation of long-term investments.

### Development of corporate governance

The system of corporate governance emerged in 1960's with the basic effect being the formation of governance boards in shareholder companies. Preference was given mostly to organisational and legal objectives (Hlaváček 1999).

However, in 1980's also economic and financial objectives gain ground. More emphasis is placed on cooperative and decent behaviour rather than on a mere profit. In this period, the responsibility of the top management to the shareholders is being preferred and it is in this context that the question of trust and responsibility of the governing bodies becomes paramount. Thus also a more exact definition is of primary concern specifying that it is "structures, processes, cultures, and systems that condition success of organizations" (Kaessey et al. 1997). Also the problem of **efficient governance of corporations** that should create harmony between ownership and executive decision-making becomes the centre of attention. Due to this problem, the behaviour of companies often did not follow the ideal of maximum profit and minimum costs.

Two dominant models emerged in 1980's:

- a) **Anglo-American model**, also referred to as a financial model in terms of corporate governance, is based on the assumption that capital markets, especially the highly efficacious ones, serve as an efficient limit of managerial decisions while the shareholders' votes should guarantee full use of the corporate resources to **maximize the value for the shareholders**, that is, to maximize the market value of the shares.
- b) **Euro-Asian model** combines the traditional theory of corporate governance with the theory of stakeholders. The use of the theory of stakeholders in corporate governance is of key importance reflecting both the European (German) and Asian (Japanese) microeconomic environment. In this case, one of the aims of a corporation's governance is also to achieve the prosperity of long-time company adherents as they must be credited for its long-term **success in particular marketplaces**. This places emphasis on the **cooperative features of governance** and on the issues of **fellow feeling**.

The above models draw the attention to achieving efficient business management able to guarantee a **company's sustainable development**. The topics that maximize the benefit from the business shared by all its stakeholders begin to be much debated. Already in 1990's some multinational companies adopted a strategy of keeping to the rules of business culture and ethics to beat their competitors. As a reward, at present they can much more easily

than others apply the **cultural and ethical objectives** to corporate governance. Business strategies harmonized with the basic values of business ethics help companies to succeed in the marketplace by maximizing the long-term profit, increasing the efficiency of exercising the ownership rights and increasing the long-term return on investment. Respecting the ethical values such as trust and responsibility in corporate governance improves a **company's goodwill** helping it achieve major economies in transactional and promotion costs.

After the Enron, WorldCom, and Parmalat scandals in 2002, much emphasis was placed on the cultural and ethical objectives of corporate governance with focus on CSR. Some changes have also been made in the holistic objectives of corporate governance with the **correlation between sustainable development and quality of life** coming to the forefront.

In resolving the complex problems, help is sought in stressing the **corporate culture and ethics** in the application of ethical principles and standards. At present, these principles and standards have an increasing impact on the business performance and thus the competitiveness of corporations.

The informal norms of 2000's improve the perception of businesses making the institutional structure more flexible, which results in improved allocation of resources and adaptation to local or national cultures and ethical values.

The present influence of Asian culture becomes more dominant along with the increase in the economic power mostly of the globally strong India and China. This also brings about changes in the value system as their traditional national and corporate cultures have to be accepted. If the above economies achieve major success, the emergence of a new corporate governance model based on alternate value systems may be expected.

Corporate culture and ethics should be introduced to form an integral part of the ethical management of companies with the following aspects being stressed: respect, integrity, communications, uniqueness of production as well as company organisation.

The aim of the modern corporate governance strategy in corporate culture is to build a strong system of business culture and ethics with its underlying principles as well as spiritual and material artefacts forming an integral part of business strategy.

At present the concept of corporate social responsibility is becoming a key factor in the efforts to build an efficient system of corporate governance. The aim of CSR, as a super-structure system of ethical management, is to integrate the traditional corporate governance values, that is, trust, transparency, controllability, and authority.

## **HISTORY OF CSR – ITS CHARACTERISTIC AND DEVELOPMENT OUTLINE**

CSR-related issues may be seen as an integration basis for **responsible** business management of large corporations. This involves a complex process necessitating the creation of business conditions for CSR implementation. The underlying factor is social perception with the CSR being tied to those social environment parameters that condition the quality of "good business" and the concept of "enterprise as a good citizen".

### **Development of social responsibility**

According to some authors, (Hindle 2003), the beginnings of social responsibility date back to the era of development of shareholder companies and they even think that in some cases such issues were already dealt with in the 19<sup>th</sup> century. By building dormitories for their employees, for example, the company owners, apart from increasing the efficiency of well-lodged labourers, signalled their belief in strengthening the ties between management and employees. The intuitive form of care and responsibility as part of the company policy was succinctly phrased by Anita Roddick, the founder of The Body Shop, as: "*Being good is a good business.*"

Since the end of World War II, this concept has been widely extended. The increasing importance of corporate social responsibility fuels the propagation and amalgamation of different concepts. Authors often combine different approaches while using the same terminology. The dynamic and unrestrained development is also reflected in the ambiguous terminology and the numerous projects and models to be covered by corporate social responsibility.

Corporate social responsibility is viewed as a generic concept without an unequivocal definition. It involves, for example, the concept of "sustainable development" or that of "a good citizenship." The classification of CSR rests on three basic pillars: economy, society, and environment.

Social responsibility is manifested by an open dialog with all the groups involved that influence the running of a company. Perhaps the responsible efforts of the stakeholders themselves to be helpful and become reliable partners should also be stressed.

The following two theories are perhaps the most deeply founded and receive the most references:

### **Theory of stockholders**

It presents as classic a view that has been forming since the 19<sup>th</sup> century. According to this view, perfect competition will remove from the market those manners of behaviour that are detrimental to the market as such and to its participants. Maximization of the owners' profit is itself the criterion of responsibility. Milton Friedman is the most noted representative of this school of thought.

According to Friedman, „*there is one and only one social responsibility of business – to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud*“ (Friedman 1970). Friedman says that, while the governments should set the rules, businesses should keep to such rules in maximizing common profits (in Cochrane 1996).

### **Theory of Stakeholders**

In response to the preceding classic view and the natural development in corporations, a theory of stakeholders emerged. According to this theory, the requirement of moral integrity should also extend to any company. Gradually, this thesis gave rise to a theory which has been gaining popularity ever since – a **theory of stakeholders** (Freeman 1984):

According to the underlying requirement of this theory, no preference should be given to a single group (the owners) while subordinating to this group the interests of other groups (managers, customers, suppliers, and the local community). Such groups may not serve as a means to achieve the goals of other people (this would contradict Kant's categorical imperative (Bohata 1995).

Differences between the European and Anglo-American approach to CSR

### **European approach**

In 2006, the EU issued a Commission Document no. 136, "Implementing partnership for growth and employment: making Europe a centre of excellence in corporate social responsibility, which was also reflected in an amendment to the Green Book of 2007.

Corporate social responsibility is a concept requiring corporations to voluntarily include social environmental issues in their business activities and in their relationships with the participating entities.

This means that such enterprises choose to step outside their legal obligations given mostly by collective agreements in order to deal with the needs of society. Regardless of their size and in cooperation with the involved entities, companies may even up the differences between the economic, social, and environmental objectives.

In recent years, the awareness, understanding, and acceptance of corporate social responsibility has been improving. However, the acceptance, implementation, and strategic incorporation of CSR in EU companies should still receive more attention. It is mainly the stakeholders that should play a more active role in this process, encouraging and appreciating responsible business behaviour.

The following aspects should be stressed in further promoting CSR:

- increasing the CSR awareness and applying best practices,
- extending the scope of information to improve transparency and trust in corporate governance,
- supporting interdisciplinary research of CSR,
- CSR should gradually become an integral part of the business practice of enterprises,
- global support for CSR to maximize the contribution of corporations to achieving the UN millennium development goals.

The EU vision of long-term prosperity, solidarity, and security also touches the international sphere. The EU commission is aware of the relationship between the CSR acceptance in EU and on an international scale believing that European corporations should behave with responsibility, in conformance with the European values, and the internationally approved standards wherever they may operate.

### **Anglo-American approach**

There is a certain difference in applying CSR in the US and in the UK. In both regions, the aim is to ensure more efficient business operations both in terms of sustainable development and quality of life.

In the USA, more attention is paid to CSR in the relationship between particular activities of a company and the internal and external environment. The aim is to monitor the tension between different social groups in a company but also within the local environment in which the company operates. The company management should choose such governance methods as to motivate the stakeholders to conduct business and lead them to better performance.

This stresses the relationship between CSR and integrated management systems (IMS). Integrating CSR into IMS, such as the Balanced Scorecard, is the key factor. Applying CSR to IMS may relieve the tension which exists between the stakeholders strongly inhibiting the discharge of managerial duties especially in large global companies.

Thus, CSR is mostly seen as a comprehensive process:

CSR may be viewed as a serious reasoning on a comprehensive integration of business activities (economic, social, environmental) into the social environment (Carroll, Buchholz 2006).

In this way, the problem of compatibility of the sustainable development of enterprises and the quality of life may be resolved efficiently.

Trnková (2004) summarizes the advantages as follows:

- stronger attraction and more transparency for investors, strengthened trustworthiness
- long-term sustainability of a company, more loyal and productive employees, better goodwill resulting in a better position in the market, reduced costs of risk-management
- increased political capital (improving the position in the current and future negotiations), lower risk of boycotts and strikes, more economy in dealing with environmental problems and competitive advantage with the consumers having better awareness of the company

It is the competitive advantage that is becoming highly topical. However strong the support may be for CSR acceptance by companies, there is still the underlying question to be answered: "Is the obligation to adopt CSR a factor that puts the companies that have adopted CSR at a disadvantage as compared with those that have not?"

This paper does not aspire to systematically examine such complex issues much less resolve them. Rather it aspires to present the possibilities of applying modern mathematical methods to such areas in which ordinary statistical methods are of little use. It uses fuzzy logic to examine the phenomena related to CSR application and competitiveness.

## **CSR AND COMPETITIVENESS**

There are fields of research such as economy, management, and finance where experiments are almost impossible. Events may be studied by quantitative or qualitative methods.

The problem is, however, that the only way to calculate the probability of an event is repetition. A particular object may only be studied once under particular circumstances. There is no way of repeating anything here.

The observed CSR events are rather unique and therefore it may be extremely difficult if not impossible or unreliable to apply statistics. Another difficulty encountered is that, in the characteristic of a company, there may be gaps with no concrete data obtained. This is the reason why it is very difficult to use the classical mathematical methods to formalize such unique events, relationships, and dependencies as occur in determining the optimum ethical behaviour (Dohnal et al. 2007).

An option could be to use expert systems. The underlying algorithm of expert systems uses a particular kind of vague logic. Vague logic is used to tackle a wide spectrum of problems. For this experience to be inserted in expert systems, it must be formalized in a clear and suitable manner. To model the CSR parameters, we used the capacity offered by fuzzy logic.

The problem is, however, that the only way to calculate the probability of an event is repetition. A particular object may only be studied once under particular circumstances. There is no way of repeating anything here.

### **The sample of companies used**

We used the data and evaluation of CZECH TOP 100 Companies - the best known and important companies of the Czech Republic. We were able to obtain data from 37 companies. The companies have one thing in common - prosperity and respect of experts who voted for them in the regular annual inquiry held in the Czech Republic. They include companies of different industries and of different sizes, multinational companies as well as medium-sized family businesses. This heterogeneous sample has been chosen on purpose as we want to test the CSR parameters across all industries.



## Modelling CSR parameters – methodology

In studying CSR, one has to deal with a wide spectrum of issues. To determine the correlation between CSR and the competitiveness of companies, the team of authors has decided to use modelling. An empirical enquiry served as a basis. In the enquiry, a questionnaire was completed supplying data in three subject areas: **CSR, company values, and competitiveness.**

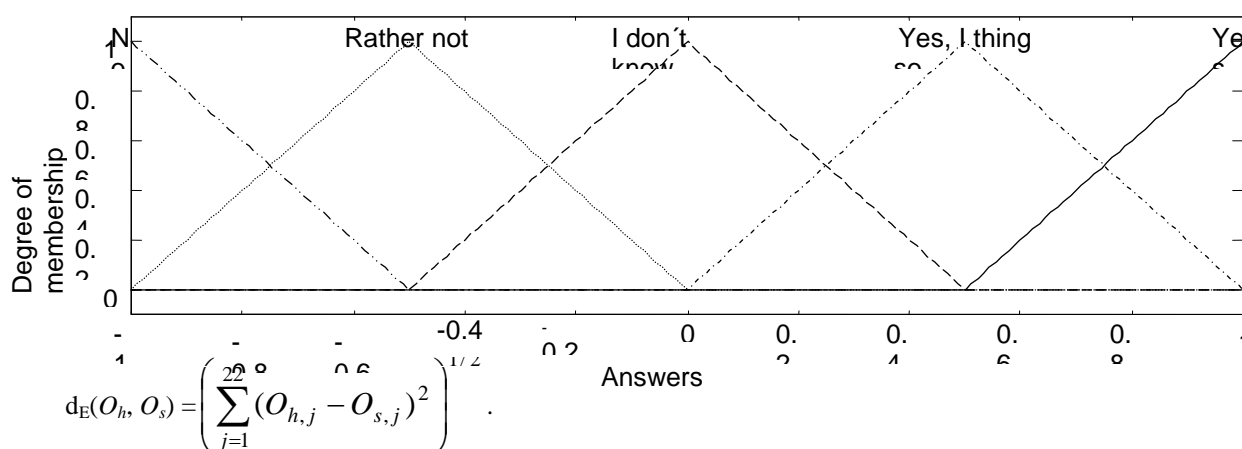
To answer most of the questions contained in the questionnaire, check boxes could be selected. The checkbox options were selected to cover the entire spectrum of predefined answers. For example, the answers to the question "Do you think that ethics has a bearing on business?" might include: **Yes, Rather yes, I don't know, Rather no, No.** Such answers may be thought of as linguistic values of a linguistic variable. To evaluate the answers, the linguistic values have to be described. This may be done using fuzzy sets. Each answer is assigned a fuzzy set used in further processing. The below figure shows fuzzy sets that might be used for the above linguistic values.

Using the **middle-of-maximum** defuzzification method, we obtained values replacing the answers provided to get a rough overview of the results and examine the potential relationships.

First we were interested in the correlation of the answers and the questions. Denote by  $O_{i,j}$  the value of the answer to question  $j$  in questionnaire  $i$ . Then the correlation of questionnaires  $h$  and  $s$  may be calculated as:

$$cor(h, s) = \frac{\frac{1}{m} \sum_{j=1}^m (O_{h,j} - \bar{O}_h)(O_{s,j} - \bar{O}_s)}{s(O_h)s(O_s)} \quad \text{where}$$

$$s(O_h) = \sqrt{\frac{1}{m} \sum_{i=1}^m (O_{h,j} - \bar{O}_h)^2}, \quad s(O_s) = \sqrt{\frac{1}{m} \sum_{i=1}^m (O_{s,j} - \bar{O}_s)^2} \quad \text{and}$$



Next a method of determining the non-similarity of clusters needs to be chosen. The centre of gravity of the clusters was used.

In non-hierarchy methods, the number of clusters must be determined.

## RESULTS



We believe that the application of fuzzy logic has helped to confirm CSR as a modern tool of management increasing the competitiveness. The fact whether a company is or is not ethically aware is limited neither by the company's industry nor size. It is obvious that the TOP 100 sample of companies points to successful and progressive firms that are or will become leaders in introducing and implementing CSR.

We are convinced that a research based on applying fuzzy logic and modelling the CSR parameters is the right way of investigating this phenomenon. Further research should focus on the differences in adopting this concept and on subject areas. Areas in which duplicate approaches and concepts may be eliminated, such as environmental policy, seem to be suitable candidates.

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# **A MODIFIED MODEL OF SERVICE PROVIDER SELECTION CRITERIA FOR DIFFERENT SERVICE TYPES**

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## **ABSTRACT**

*Selection of service provider in some services sectors is analyzed in length, especially in financial services. However, no common service provider selection model that would serve as a basis for all new researches in this field and allow comparing results from different researches exists. Since developed countries are dominated by the service sector and most of the population is employed by this sector, service provider selection criteria are of major importance to the whole service industry.*

*Service provider selection criteria largely depend on the service type and therefore three types of services are analyzed in this paper: professional services, service shops and generic (mass) services according to Ettenson and Turner and Collier and Meyer classifications. This wholly theoretical paper reviews the most important variables influencing the customer's choice of a service provider depending on the type of service. The literature review revealed that different researchers in different service provider selection criteria studies used different-weighted criteria and therefore these results are hardly comparable. This significantly reduces the overall value of most researches conducted in this area.*

*Thus in this paper the authors present an initial service provider selection criteria framework that could help service marketers to systematically analyze customers' choice behavior. This proposed three-level model is based on service provider selection process model offered by Day and Barksdale (1994), Keaveney's model for determinants of switching service providers (Keaveney, 1995) and a search-experience-credence services trichotomy. Such model offers a deeper understanding of service provider choice behavior allowing a three-layer analysis of choice criteria and provides service companies with a tool for identifying and capitalizing on the strategic opportunities within their respective target markets. Moreover, it reveals that each criteria category is constructed from a complex combination of many criteria variables that differs from one service to another.*

## **INTRODUCTION**

Understanding customer choice behavior is a necessary prerequisite for firms that want to compete effectively, whether it is in the manufacturing sector or in the services marketplace. A customer makes choice decisions at different levels within a hierarchical progression of decisions (Dorsch et al., 2000). Progression of customer choice refers to choice decisions from product class to specific brand or product / service.

Selection of service provider is a very important but challenging issue in service marketing. This is because services are generally characterized by intangibility, inseparability of product and consumption, difficulty of standardization and perishability (Hill and Neeley, 1988). Exploring such information would help service providers to identify appropriate marketing strategies needed to attract new customers. To understand the

service consumer is to understand the unique challenges they face as they attempt to make decisions and evaluations of their service purchases (Grace and O'Cass, 2003).

Service provider selection process initiates the relationship between a customer and a service provider and is the most important step in acquiring a new customer for a service provider. This fact is very important bearing in mind that consumers often buy products in a "hierarchical" order moving from relatively simple services to more complex and expensive ones (Devlin, 2002).

Unlike goods marketing, services cannot be evaluated prior to purchase and can be evaluated only during or after the service delivery. Because one of the main aspects of service marketing is the concept of intangibility, customers may be expected to face difficulty in assessing services offered. Some professional services (especially in health sector) cannot be effectively evaluated even after the service has been rendered because of high credence properties or lack of knowledge (Day and Barksdale, 2003).

This paper attempts to deepen understanding about consumer decision-making when selecting a service provider and what criteria are of most importance. It describes how decision to choose a service provider is made achieving better understanding of the overall selection process itself and determinant criteria for selection.

*The research question* is how service provider is selected and what selection criteria are of the most importance. *The object* of this paper is selection criteria by customers of a service provider. *The purpose* of this paper is to propose a more structured tool for analysis of the service provider choice criteria. This is achieved by reviewing scientific literature of the last decade on the selection of a service provider in different service types and by developing a model that helps to identify the criteria for service provider selection in more structured way that is based on a service selection decision process. *Research methods* used in this paper are scientific literature analysis and modeling.

The paper processes as follows: after an extensive literature review with service classification presented a service provider selection decision process model is shortly described following with a model for service switching behavior. These two models and service types' classification serve as a basis for choice criteria model that could be used for further researches of service provider selection in particular industries.

## LITERATURE REVIEW

There is a wide range of literature dating 1970-1990s concerning the selection of service providers (see, for example, Gerrard and Cunningham, 2001, Ta and Har, 2000, or Almossawi, 2001 for a comprehensive review of studies before 1994). Indeed, the vast majority of research on choice criteria for selecting a service provider is conducted in retail banking industry.

There is a number of service-related studies emphasizing professional services (that is those professions that have a recognized group identity and that require extensive training and advanced study in a specialized field, as health, legal, or financial specialists). Less is known about non-professional services (for example, dry cleaners, copy services, auto repair, etc). So within services market there is a number of inherent differences between specific service types (Grace and O'Cass, 2003).

Ettenson and Turner (1997) proposed five service dimensions (based on Kotler and Lovelock) for better understanding of differences between service providers:

- (1) Type of commitment between service provider and consumer,
- (2) Importance of the service to the overall welfare of the consumer,
- (3) Degree of customization required,
- (4) Degree of professional judgment exercised in rendering the service,
- (5) Whether or not the service is equipment- or people- based.
- (6)

Some other service positioning classifications are provided by Silvestro (1992), Kellogg and Nie (1995), Collier and Meyer (1998), with similar criteria (equipment/people focus, customer contact time per transaction,

degree of customization, degree of employee discretion, value added back office / front office, and product/process focus (Collier and Meyer, 2000).

Especially in professional services, the cost of service provider (doctor, architect, lawyer, etc.) usually represents a small percentage of total lifetime service cost, however, the selection process for these service providers can have a major impact on all other costs related to this area (Day and Barksdale, 2003).

*Professional services.* Professional services are analyzed mostly from corporate customers' point of view. Indeed, selection of an architect, accounting or advertising company or a lawyer is of critical importance to any organization. However, consumers use a lot of professional services, too. Any person willing to build a personal house needs an architect, and everybody needs a doctor or dentist or even a tax accountant or financial consultant for preparation of at least personal income statement or financial plan.

Hill and Neeley (1988) argue that decision process for professional and generic services is very different. They found that for generic services a buyer defines a problem and has experience in this field, a service provider has a little (if any) advisor role, sufficient information about services is available, but the buyer has relatively little willingness to expand search efforts, there are many alternatives to evaluate, and comparison is relatively easy, moreover, evaluative criteria are known and the choice is relatively clear-cut. The outcome of a service is uncertain but consequences are minimal, besides, "re-do" is possible. In addition, generic services find use in advertising. Quite the reverse, in professional services the buyer is dependant on the provider to define a problem and advice, advertising is of little use, buyers are willing to expend great effort in finding an appropriate service provider but because of insufficient information available usually use personal information sources such as referrals. In professional services the comparison of alternatives is difficult because evaluative criteria are not known, moreover, there are fewer alternatives to evaluate. The choice is more uncertain than in generic services, and the outcome is uncertain either, but consequences here are serious and even more, "re-do" may not be possible or desirable (Hill and Neeley, 1988). Therefore the selection and use of professional services involves a much higher level of perceived risk on the part of consumer, both physical and functional, including financial, thus here reputation and recommendations should play more important role than price.

In a research conducted by Scott and Walt (1995) of choice criteria for selection of an accounting firm, accessibility of key staff, ability to offer personal service and reputation for fast and efficient service were named as the most important criteria for corporate customers. They noticed that especially in selecting an accounting firm or a personal accountant, consumers seek and rely on information from personal sources thus reputation there plays an important role (Scott and Walt, 1995).

Day and Barksdale (2003) found that buyers of architecture and engineering services are looking for four most important dimensions when selecting a service provider:

- 1) Perceived experience, expertise and competence of the provider;
- 2) The provider's understanding of the client's needs and interests;
- 3) The provider's relationship and communication skills;
- 4) The likelihood of the provider conforming to contractual and other requirements.

The first two dimensions fall under the core service category, the third one could be classified as service encounter (that is, how service is delivered), and the last one definitely expresses reputation.

*Service Shops.* Service shops are mostly represented by studies in a banking market. In retail banking services sector, according Ta and Har (2000), early studies conducted before 1976's Anderson and Cox's study, revealed location as the most important criterion in bank selection decisions.

Anderson and Cox's study of bank selection study (1976) is considered the most important and most widely cited by researchers in bank selection studies. Anderson and Cox approach and determinants of bank selections are recognized as benchmark in this field and are compared with the results of other studies. Anderson and Cox found five most determinant bank selection criteria: friends' recommendations; reputation of the bank; availability of credit; friendliness of staff and service charges on accounts.

Since 1994, bank selection and switching criteria were analyzed by Haron et al. (1994), Zineldin (1996), Kennington et al. (1996), Levesque and McDougall (1996), Edris and Almahmeed (1997), Athanassopoulos and

Labroukos (1999), Ta and Har (2000), Almossawi (2001), Gerrard and Cunningham (2001 and 2004), Colgate and Hedge (2001), Colgate and Lang (2001), White and Yanamandram (2004) and Babakus et al. (2004) to mention a few. The main discussion between researchers concerned the consistency of the criteria found with previous researches.

These findings demonstrate how choice criteria evolve from bank location (before 1980s) to convenience in ATM locations and electronic services. Perceived financial risk (especially in Poland after bank crisis and Singapore after Asian crisis) places reputation and secure feelings on the top of choice criteria list. Financial issues like fees charged and interest rates paid are of high importance because of the essence of any financial product.

However, a lot of different results from different studies have been found. In general, researchers notice that studies pertaining to choice of banks and their services provide valuable pointers, however, they draw conflicting conclusions (Devlin, 2002). This could be explained by different market segments analyzed by age from students to mature customers (Ta and Har, 2000; Gerrard and Cunningham, 2001, Almossawi, 2001), religion (Muslims versus non-Muslims), service usage (beginners or advanced), income level, and by other demographical variables.

Though the vast majority of studies have focused on choice of a bank as an institution for basic transaction banking services, some studies were conducted in home loans (Devlin, 2002) market. Devlin (2002) found that the most important criteria for selection of financial institution in a mortgage or home loans market were professional advice, interest rate charged, choosing a mortgage from an institution that was prepared to lend the required amount. High importance of professional advice or recommendation shows that home loan services are considered differently from retail banking services.

Although the majority of all service provider selection studies are conducted in banking market, it is most evident that different researchers used different weight variables, comparing, for example Babakus et al.'s (2004) findings of the most important variables that could be grouped under pricing category, to Athanassopoulos and Labroukos' price. Besides, in a study by Athanassopoulos and Labroukos (1999), relationship marketing is of the most importance, and Haron et al. uses a friendliness of a bank personnel variable. This draws to conclusion that a common criteria evaluation model would be of great theoretical and practical use.

*Mass (generic) services.* Mass services are quite under-researched compared to professional services or retail banking. Only few studies investigating generic services could be found. It seems that generic services that are processed in large quantities by a typical service unit per day (Collier and Meyer, 2000) receive considerably less attention comparing to, for example, financial services.

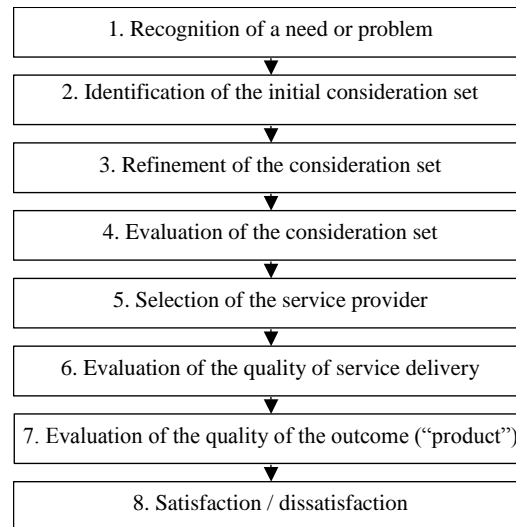
In a study of automobile insurance and copy services Arora and Stoner (1996) found that selection decisions were significantly influenced by name familiarity. Interestingly, the perceived service quality had a significant effect on attitude toward obtaining automobile insurance but had no effect in copy services. This fact was explained by multi-dimensional construct of service quality. While differences between professional and nonprofessional services were anticipated, differences between two mass service types were not (Ettenson and Turner, 1997). They proposed to review service classification dimensions adding frequency of use but this dimension was not supported by their own research results.

Because selection of service provider is closely connected with physical, financial and functional risk, these service classifications may include risk/consequences dimension in order to measure possible damage or costs for service failure. Obviously, for the services where outcome consequences are minimal and "re-do" is possible, price and location will be more important criteria than for more risky services where reputation and recommendations from social environment would play a major role.

## **Customer selection process**

Day and Barksdale (1994) state that selection of service provider consists of two stages ("first cut and final selection) and post-purchase evaluation also consists of two stages: evaluation of service delivery and of

final outcome (see Figure 1). According to Day and Barksdale (1994), stages 4 and 5 may be repeated in another elimination round and factually mean making a short-list of service providers. Recognition of a problem starts the service purchase process, and then, after purchase goals are set, consumers identify the initial consideration set of criteria. The criteria will vary for different services and for different stages of service provider selection decision process. The initial consideration set involves pre-qualification of potential suppliers, and refinement stage of the consideration set usually means developing a “short-list” of the finalists, usually from 2 up to 10 (depending on the service or number of potential suppliers).



**Figure 1: Decision process for selecting a service provider (Day and Barksdale, 1994)**

As a rule, evaluation of a consideration set usually is based on how much of a particular attribute a service provider possesses, and typically requires very subjective assessments, like personal “chemistry”. Selection of a service provider results from the assessment of how well each contender rates on each of the determinant attributes (Day and Barksdale, 1994).

After the service provider is selected and the service is rendered, a twofold evaluation of service delivery is carried out. This twofold evaluation is based on two dimensions of service quality, namely, technical quality or what is delivered and functional quality or how it is delivered (Scott and Walt, 1995). The outcome of this evaluation conducted leads to customer satisfaction or, unfortunately to service provider, dissatisfaction, and switching.

## Criteria for selecting a service provider

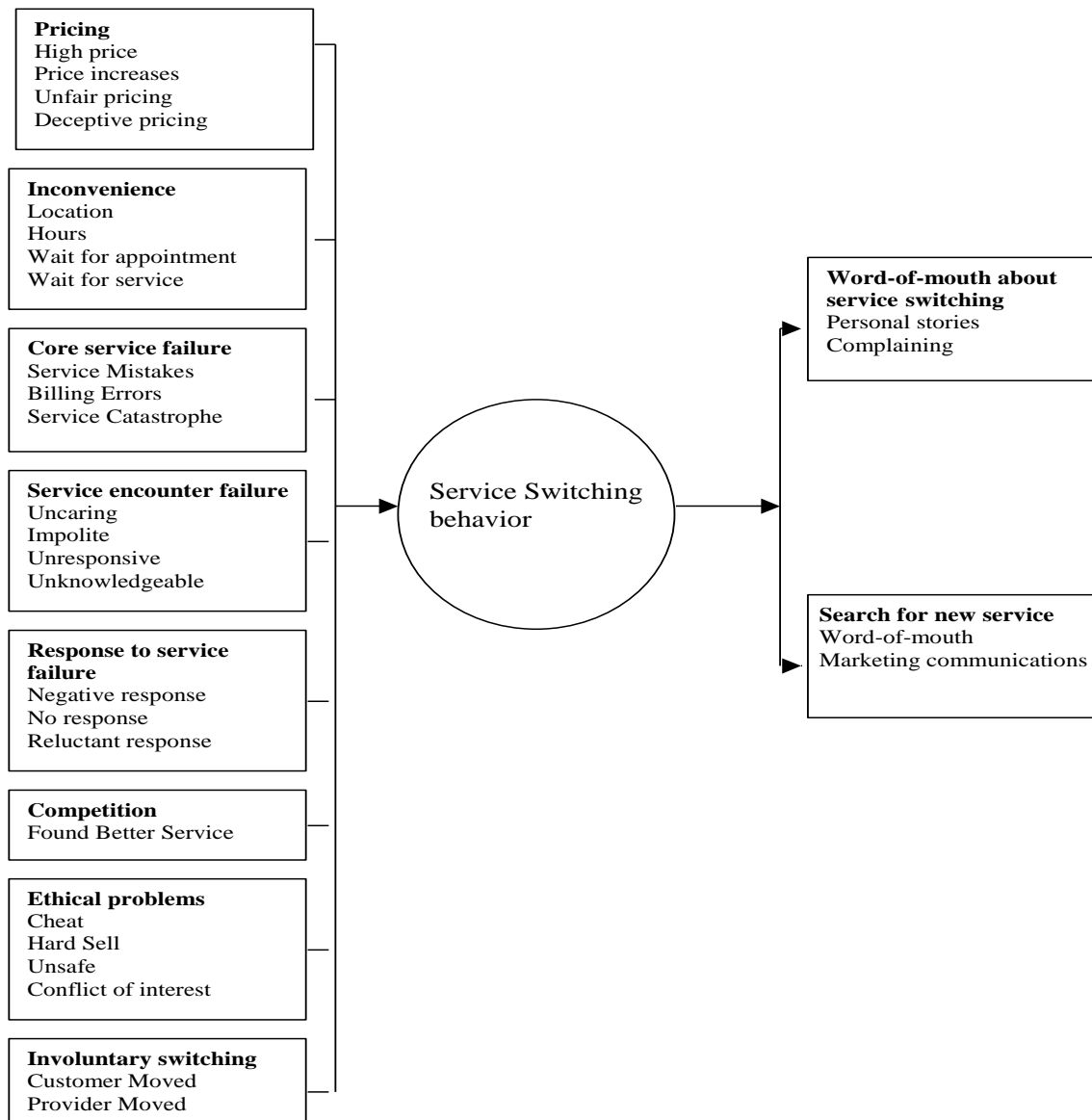
The literature review in the first part of this paper revealed the need of common used criteria for service provider selection analysis. Previously used different criteria provide valuable pointers; however, they draw conflicting conclusions and could lead to erroneous actions of service marketing specialists. Thus this paper attempts to present a basic model for choice behavior to supplement already existing and widely used model of switching behavior proposed by Keaveney in 1995 (Keaveney, 1995).

The switching model (see Figure 2) developed by Keaveney (1995) represents a major step in understanding consumer switching behavior across a broad spectrum of service providers (Gerrard and Cunningham, 2004). Keaveney’s exploratory research provided a valuable initial classification of the causal factors that induce service switching (Colgate and Lang, 2001).

This model was used as framework in other researches not only to determine switching behavior, but also to evaluate what induces selection of service provider (see, for example, Grace and O’Cass, 2003). The first five categories (pricing, inconvenience, core service failure, service encounter failure and response to service



failure) are actively controlled by the service firm (Colgate and Hedge, 2001). Word-of-mouth about service switching creates a reputation for a service company that is sought by other customers when selecting a service provider. This switching behavior model provides a conceptual framework upon which an industry specific investigation can be based (Keaveney, 1995, Grace and O'Cass, 2003). Since Keaveney's model is widely used in detecting consumers' switching behavior, a similar model for selection of a service provider would be beneficial for further research, which could be further enhanced with corresponding key issues related to

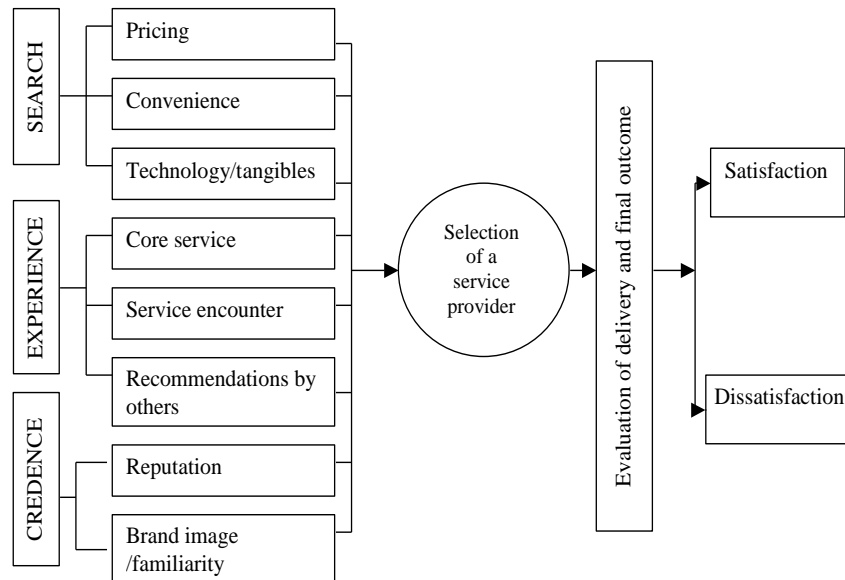


consumer choice criteria in specific industry.

**Figure2: Keaveney model for determinants of switching service providers (Keaveney, 1995)**

Criteria categories like price, convenience, etc., that include specific selection criteria for different kinds of services could be grouped into three broad groups – search, experience and credence - based on the degree of risk perceived, information search conducted and information sources used, and behavioral intentions associated with each criteria category. Search-based attributes are those that can be accurately evaluated prior to making a choice. They denote the highest pre-purchase knowledge and lowest perceived risk, lowest search time, reliance on mass media and lowest behavioral intentions. Experience attributes are those that can be accurately assessed

only after the services have been purchased and used. This modified service provider choice model (see Figure 3) brings together three different schemes: service selection decision process, service switching criteria model proposed by Keaveney which serves as a base, and a search-experience-credence trichotomy. In this model the authors removed some criteria categories from Keaveney's model inappropriate for the selection process as ethical problems or competition adding technology/tangibles dimension instead of inapplicable categories. Technology/tangibles category is added referring to the service quality measures used in a work by Levesque and McDougall (1996). They use three service quality measures: core (corresponds with the core service category in this model), relational (corresponds with the service encounter category in the model) and tangibles.



**Figure 3: A modified model of service provider selection criteria**

The importance of recommendations or word-of-mouth in the formation of attitudes in a service purchase decision-making context has been showed in many studies (Wangenheim and Bayon, 2004; Grace and O'Cass, 2003), especially in professional services (Razzouk et al., 2004; Ettenson and Turner, 1997). Consumers are encouraged to obtain information about experience attributes from people who have actually used the service (Babakus et al., 2004). The modified service provider choice model proposed by this paper authors could facilitate selection criteria analysis in three different layers: individual criteria layer, criteria category and criteria attributes. So the choice criteria could be combined into composite scores across the three dimensions and aggregate results can be compared against the competitors.

## CONCLUSIONS AND DISCUSSION

Since service companies are placing greater emphasis on understanding consumers' behavior to guide their strategic marketing decisions, the selection of a service provider is receiving much attention from marketing and consumer behavior researchers. An abundant scientific literature on consumer behavior in services exists, covering various kinds of services. This paper uses the classification of services to professional, service shops and mass (generic) services according to dimensions defined by Kotler and Lovelock, proposing that additional dimension of perceived risk / anticipated outcome.

Applying the professional services-service shops-mass services classification, a comprehensive review of researches in choice behavior is presented. Due to considerable inconsistency of choice criteria definitions used in different studies a general three-level model for choice criteria analysis is proposed. This proposed model offers a deeper understanding of service provider choice behavior and provides service companies with a tool for identifying and capitalizing on the strategic opportunities within their respective target markets. It should be noted that this model does not eliminate the need for making a list of concrete choice criteria for any specific service, however, since this model is the first step in attempt to present the useful systematic framework offering

a logical classification of criteria for easy use in further researches. Thus at least some exploratory research is required to test the validity of the proposed model.

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# **ORGANISING A SUPPLY CHAIN AND ITS PARTICIPANTS IN ORDER TO ADDRESS LONG TERM SUSTAINABILITY: AN EXPLORATORY STUDY OF THE TABLE GRAPE INDUSTRY**

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## **ABSTRACT**

*This paper is based on exploratory research done in the supply chain of Table Grapes in South Africa. The objective of the research was to get an understanding on the functionality of the chain as a whole by identifying the processes, the actors involved and the various roles and activities of each actor. The research questions include: "Who are the supply chain actors of an exporting supply chain from a South African perspective?", "What are the activities and roles of the various identified actors?" and "What problems are experienced by participants in the supply chain?". Answering these questions leads to identifying possible reasons on why producers do not export their produce themselves and thereby shortening their supply chain. This exploratory study used an empirical approach, where non structured open interviews were conducted as method for gathering information. The study reflects information gathered in four of the five table grape producing regions in South Africa. This paper emphasises the need for management to understand their role and importance in the chain and forms the basis for further research.*

## **INTRODUCTION**

Global trade is strongly growing and more and more getting connected to the issue of sustainable development. In recent years this has resulted in businesses putting demands on suppliers on their performance on corporate social responsibility and sustainable production (Vermeulen and Ras, 2006). From the perspective of countries at the supply side of global value chains, often being developing countries, being able to commit to these business-to-business requirements is essential for their economies and the creation of jobs. In this paper we look at these developments from the perspective of South-Africa, and its trade links with Europe and especially the Netherlands. This relatively new phenomenon of promoting sustainable development through market interaction is quite remarkable. Why would economic actors take up such public interests (abating environmental degradation and social injustice)? Although economic theory states that wealth is created through the market, one would not expect public goods to be an issue to be addressed in market transactions. The concept of the market implies entrepreneurial producers to create needed goods and services and present these on the market to be sold to the best bidding customer. Sellers and buyers compete on a crowded open and free market place and those that are able to combine the lowest price with the highest profit will survive. Though this 'image' of the marketplace is a core element in welfare economics, it presents a very rough simplification of reality. The process of serving consumer needs by producing and selling commodities is not by far a two actor game, but a much more complex social system.

Porter states that “every firm is nothing but a collection of activities that are performed to design, produce, market, deliver and support its product” and the value chain is “the whole series of activities business firms undertake to convert the raw materials or input resources to the goods and services required by a customer”. How efficient and effectively a firm performs these activities determines what quality of goods and services and at what cost the firm will be delivering to the consumers. The buyers pay the firm for the goods and services delivered (Porter 1985). So the value chain, or supply chain is a sequence of firms and finally an end consumer linked by a sequence of markets with their transactions. Simchi-Levi and Kaminsky (2004) states that in a typical supply chain, raw materials are procured, and items are produced, shipped to warehouses and then shipped to retailers and customers. This sounds like an easy, simplistic thing to do; a recipe to follow in order to be assured of success. In practice supply chains often involve firms in various countries, with raw material inputs coming from developing countries. How the sequence of activities is organized and who controls which links in the chain, is an essential in any competitive market and are an element of corporate strategy (Gereffi and Korzeniewicz 1994; Gereffi, Humphrey et al. 2005). Understanding the dynamics in such global product chains and the role of business-to-business pressures and the promotion of public goods by businesses requires an understanding of the interactions between the various economic actors in the value chain and the role of pressures put on them by governments and non-governmental organisations at the various sides of the value chain or supply chain what has been labelled by Lazzarini et al., a Netchain analysis (Lazzarini, Chaddad et al. 2001). Hardly any research has been done to analyse the nature of interactions on sustainable production requirements in global supply chains, but some first studies shows that the “simplified image” of economic actors engaged in a sequence of fair, open and free transactions is not a valid representation of reality (Ras, Vermeulen et al. 2007). Therefore in this paper we explore the practice of interactions in a specific case of the South African – European supply chain of table grapes to describe the nature of the transactions and the role of sustainability issues in this chain.

## **RESEARCH METHODOLOGY**

Cooper and Schindler (1998:26) states that empiricism “is said to denote observations and propositions based on sense, experience and / or derived from such experience by methods of inductive logic including mathematics and statistics...empiricists attempts to describe, explain, and make predictions through observations”. This study is therefore an empirical study, consisting of a literature review and findings of non-structured, open interviews with various participants in the table grape chain.

The literature review focus on academic theory regarding supply chains, while the findings reflect issues identified and observed during field research in the chosen industry.

Research questions to be asked are: (1) Who are the participants/actors in the chain? (2) What are the roles of all actors in the chain? (3) What are the activities in the identified supply chain? (4) What problems are experienced by actors in the chain?

The purpose of this paper is to answer the research questions in order to get an understanding on the functionality of the chain as a whole by identifying the processes and in such understanding the impact of the supply chain on managers of each activity. Limitations to the study include availability of more producers as all five regions harvest on different times of the year, and the study had to be concluded according to a specific schedule. Another limitation relates to mistrust from actors and a consequent reluctance to initially participate in such a study.

The table grape industry is investigated as a case study. This paper identifies all the participants and their activities in the table grape chain, from the supply perspective of an exporting chain. The sample of the study involved interviews with 43 table grape producers (n=43) of the total population of 478 (N=478), spread in four regions over South Africa. Five exporters and other stakeholders including the South African Table grape Industry (SATI) were interviewed in order to ensure a complete picture and understanding of the chain from a South African perspective. The total population of exporters cannot be determined as various exporting agents enter the market on an annual basis, just to leave after an undetermined time.

## **SUPPLY CHAINS AND MANAGEMENT**

Quayle (2006:7) is of the opinion that the phrase supply chain is inadequate to capture the full complexities of the interconnections between different organisations. The primary function of the supply chain is to provide goods and/or services required by customers and to provide appropriate form, time, place, and quantity utilities in the package offered; this is supported by Saunders (1994:123). The chain however also acts as a medium for the exchange of information and the communication of orders or instructions, as well as providing for the flow of products and the flow of money from customers which is the normal reward for suppliers. Saunders (1994:3) regards a supply chain as the interface between customer and supplier in order to plan, obtain, store and distribute as necessary, supplies of materials, goods and services to enable the organisation to satisfy its external and internal customers. Quayle (2006:8) further indicates that the supply chain is undergoing constant transformation. Consumer pressure for lower prices and higher quality of services are forcing retailers, manufactures, and distributors to achieve greater cost efficiencies and improve lead times, making supply chain efficiency a key factor in gaining competitive advantage. The result is that both manufactures and retailers are looking across the supply chain to form seamless partnerships to the end consumer.

Lussier (2005:546) regards supply chain management as the process of coordinating all the activities involved in producing and delivering it to the customer. This implies that the supply chain includes every organisation the producer buys from and supplies to, including those that help the producer sell and deliver the produce to the final customer. According to Quayle (2006:7) supply chain management is the management of all activities in order to satisfy the ultimate consumer. The importance of the customer in the supply chain also gains importance in the definition of Longenecker (2006:292): "A system of management that integrates and coordinates the means by which a firm creates or develops a product or service and delivers it to customers". According to Longenecker attention is being directed in supply chain management towards a more competitive, customer driven supply chain.

Ballou (2005:7) is of the opinion that the terms "logistics" and "supply chain" are interrelated and is a collection of functional activities such as transportation, inventory control, etc. These functional activities are repeated many times throughout the channel which raw materials are converted into finished products and consumer value is added. Ballou further indicates that a single firm generally is not able to control its entire product flow channel from raw material source to points of the final consumption; however this is seen as an emerging opportunity.

## **THE SOUTH AFRICAN SUPPLY CHAIN AND FUNCTIONS**

The South African table grape industry supplies the local and international market with a heterogeneous product. The total number of producers active in the industry are 478, operating in five different geographical areas across South Africa. These areas are the Northern Region, Hex River Valley, Berg River Valley, Olifants River Valley and the Orange River Valley. According to the census conducted in 2007 there are thirty different cultivars that eventually reach the global market place. The average cost to provide the export market with a box of grapes is according to the producers R39-00, however the exchange rate has a huge impact on the profit the producer receives in the end. A weak rand (exchange rate) will ensure bigger profits.

Each regions grape cultivar is ready for the market at different times of the year. The Northern region is first in the market followed by the Orange River. Being first in the market with a certain cultivar provides these producers with a certain advantage with regards to price, as during December the market is not yet flooded. This is where the free market forces of demand and supply determine the price. Price is usually much higher in the beginning and as more grapes move into the market surplus occurs and price tends to decrease. The 478 producers all export grapes to various overseas markets. The producers make use of a variety of exporters to export their produce on to the market. The producers have indicated that they face several problems in the process from exporter to the price they eventually receive. The one big problem they face is the uncertainty with regards to the price they will receive for their produce and what the exchange rate will be at the time of sale. The exporter approaches the producer and offers him/her a price for the produce, this offer can be offered to the producer any time from cultivation until just before harvest or during harvest. Most producers make use of an exporting agent. Many producers supply a certain percentage of their produce to the local market, which do not

have the strict regulations of the European or America market. However, the local market is too small to consume the grapes produced within the country and exports are essential to generate income. To enter the global market producers have to comply with the criteria as set out in:

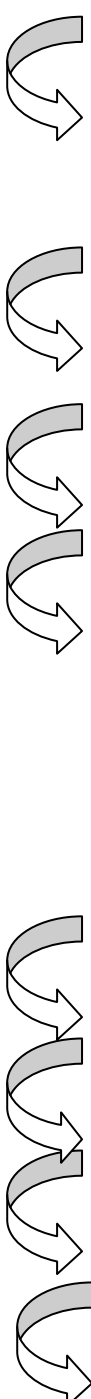
- Eurepgap (Since 2008 known as Globalgap)
- SAgap
- Nature's Choice (Tesco)
- Fairtrade

The above is just some of the various criteria that have to be met in the supply chain of these producers in an effort to get their produce on the global market and specifically the European and United Kingdom market. These criteria are moved down the supply chain from the demand side to the supplying producer in South Africa. The different markets supplied, each determines its own criteria that must be adhered to by the South African producer. The purpose of the criteria is to make sure safe products reach the market place and customers are satisfied. It also includes social and environmental compliance, forced upon the producer. This compliance is a cost to the producer as the production unit has to be audited by each compliance system to determine if the minimum requirements are met, as determined by the market. The total costs to the producer include that of erecting physical structures and systems, as well as payment for the auditing to be done.

Table 1 provides the sequence of the stages in the supply chain as well as the activities. It is important to mention that, should any of the produce not be sold by the chain stores or is a consumer not satisfied with the product, the returned product moves back down the supply chain to the producer. This loss is carried by the producer who has no remedy to claim any losses from any other actor identified.


Table 1 also indicates the various actors in the supply chain of the produce. The chain followed by the producers is, according to Longenecker (2006:293), an indirect channel. The observed chain makes use of export and import agents or brokers to deliver the final produce to the consumer. The Table Grape "channel" therefore differs from the conventional as described by Longenecker in having an additional actor namely an agent or broker on the European side.

TABLE 1: THE TABLE GRAPE SUPPLY CHAIN



| Stages               | Activities and inputs   | Actors       | Responsibility for produce/actor liable for losses |
|----------------------|---|--------------|--|
| Farm supplies        | <ul style="list-style-type: none"> <li>- Seeds/plants</li> <li>- Manure/nutrients</li> <li>- Water</li> <li>- Pesticides</li> <li>- Labour</li> <li>- Machinery</li> </ul>  | Producer     | Producer   |
| Cultivating vineyard | <ul style="list-style-type: none"> <li>- Prune</li> <li>- Dormex</li> <li>- Blooming: <i>First predicted price by export agent</i></li> <li>- Bunch preparation: <i>Second predicted price by export agent</i></li> <li>- Towards maturity: <i>Third predicted price by export agent</i></li> </ul>   |              |  |
| Harvesting           | <ul style="list-style-type: none"> <li>- Employing contract workers</li> </ul>  |              |  |
| Pre-cooling          | <ul style="list-style-type: none"> <li>- Once the grapes have been harvested, it has to be cooled to a temperature of 15 degrees, this is done in the packaging store</li> </ul>  |              |  |
| Packaging            | <ul style="list-style-type: none"> <li>- Grapes are groomed (cutting out the bad grapes).</li> <li>- Decides on grading.</li> <li>- Packing then takes place into 4,5 kg, 9kg, 500g</li> <li>- Moved onto pallets to cold storage</li> <li>- PPECB inspection. Consignment note is given to producer in order to obtain export certificate.</li> <li>- Exporter takes export certificate to Department Agriculture to get photo sanitary certificate</li> </ul> |              |  |
| old storage          | <ul style="list-style-type: none"> <li>- Temperature are systematically brought down to required degrees</li> </ul>   | Export agent |  |
| Distribution         | <ul style="list-style-type: none"> <li>- Cold storage trucks distribute cargo to harbour</li> </ul>   |              |  |
| Harbour storage      | <ul style="list-style-type: none"> <li>- Special storage facilities for grapes that have to stored before shipping can take place</li> </ul>  |              |  |
| Shipping             | <ul style="list-style-type: none"> <li>- PPECB inspection to ensure</li> </ul>  |              |  |





|                  |  |              |  |
|------------------|--|--------------|--|
|                  | loading of grapes is according to required regulations<br>- Pallets are loaded onto ships  |              |  |
| Overseas storage | - Shipment is received and stored until sold to next actor in the chain<br>- Inspection of the produce takes place again   | Import agent |  |
| Wholesale/Retail | - Grapes are sold to various chain stores buying in bulk.<br>- The price is determined by the market forces of demand and supply.<br>- Agreements with certain agents to supply certain quantity and quality.<br>- Grapes are stocked and promoted | Buyer        |  |
| Consumer         | - Consumer buys South African grapes according to preference   | Consumer     |  |

## Some Problems Experienced by the Actors in the Chain

Interviews with producers lead to identifying various problems. It is clear from the above that producers take all the risk and responsibility for the produce without receiving any guarantee of payment or price. Producers were asked why they do not shorten their supply chain/channel to a direct channel as a solution for reducing risk. The result of these discussions can be summarised as follows in table 2.

TABLE 2: JUSTIFICATION FOR NOT SHORTENING THE CHAIN

| Export Self (Direct Channel)  | Group Export (Indirect Channel)   | Market Requirements   |
|---|---|---|
| Production process to diverse and big<br>- citrus<br>- table grapes<br>- maize<br>- corn<br>- vegetables<br>- live stock<br><br>To small to do it alone.<br>Must employ someone to do the marketing (additional cost).<br>Must go self and find markets.<br>Knowledge of how not sufficient | It can work and it has been done before.<br>Problems that occur are<br>- grows to fast<br>- gets to big<br>- eventually becomes just another export company eventually<br>- moves away from its original objective to export table grapes | Consistency of supply is of utmost importance for the awarded program. Should an over supply exist quality is used as a criterion. The opposite is also true if a shortage occurs the market accepts what ever the offering is to meet consumer demand and price is higher. |

A very small group of the producers have tried to be producer-exporters, exporting their own produce. Most of these producers identified the window of opportunity in the beginning but did not realize that they were not the only person that identified the opportunity. At the stage that these producers operated on their own as exporters in a direct channel the market was blooming and good profits was obtained. Producers planted more table grapes and more producer-exporters entered the market. Change in this channel occurred when competition

started moving in from Brazil and Chile as well as rising input costs. These producer-exporters started finding themselves in tight spots by committing to an overseas program as well. A program can be described as a commitment from the producer to deliver a certain grape cultivar, certain quality, and certain quantity at a specific time to a specific market. If the commitment towards the program is not honoured the producer is replaced by one that can deliver. Thus a highly competitive market situation has been created putting pressure on the producer-exporter. Being entrepreneurial in their orientation, strategies were put in place at any cost to meet the program obligations and keep them. The producer-exporters started to over procure, resulting in a change in market forces and a surplus of produce entered the market place. These producer-exporters create a market surplus in order to safeguard their programs that they have secured with places like Tesco, Sainsbury.

## **MARKET FUNCTION**

In other supply chains/channels practice's, sellers usually fix their prices, and prospective buyers shop around to find the best bargain, the ideal situation for any supplier with a product that has a long shelf life. However with a product with a short shelf span this does not happen in practice. The tables are in a way turned around and the supplier hopes to find a buyer as quickly as possible and in many situations the supplier sells to the buyer offering him the best price at that point in time to prevent the possibility of a loss. Various market forms can be identified in the product chain/supply chain.

The market, from a supply side can be defined as a pure competitive market with in the country of production. This is based on the number of producers and in South Africa there are 478. The next phase in the market supply moves to a more monopolistic market and this is the exporters function. The exact amount of exporters is difficult to determine as there are a number of large ones, and a number of small ones. From the exporter the market takes a more oligopoly market form when it reaches the international market. Here are a few big buyers that have certain programs that must be met. At this phase the buyers tend to shop around to get the best price and quality. The amount of suppliers stand queue to sell the produce and the buyers can shop around. The produce that is not bought by the "main" buyers such as Tesco etc is sold to local buyers in that country at a price determined by the forces of demand and supply.

## **MARKET PROBLEMS**

The exporter in South Africa and or the importer in the UK or EU manage their side of the supply chain very much like the airways. The airways will always overbook a flight as far as possible and should more passengers arrive to catch the flight various excuses are used and most of the times passengers are silenced with vouchers in various forms. This same principle over overbooking as a strategy is used by the importers and exporters they over procure. The market agents for a place like TESCO will have a certain program for the year this means a certain time of the year they want certain grapes and certain times of the year they will be running "specials". It is then important for the exporter/importer to ensure that they have the correct quantity and variety. Should they not have what is demanded they can lose their contract and some one else will be found and used, another problem that can occur in the market then is that product space can be lost in the chain store. This is when open spaces for a product occur in the chain store because of a lack of supply this open space must be filled with another product. This further impacts on the consumer as well. Consumers have certain buying patterns and if it is changed because of market shortages the consumer will find another fruit which now becomes part of his/her buying pattern. So the exporter/importer if he/she has a program obligation will rather over procure than lose the program. The implication is that the producer losses at the end. How does this work? TESCO will in its program demand for example 100 000 boxes of a certain grape cultivar; the exporter/importer goes to the producers and buys the produce from the producer. The exporter/importer has many suppliers and as such buys produce in excess of the demand of the program. Why do they then over procure? The exogenous factors of nature such as sudden rain or frost can cause a severe shortage and as mentioned earlier this can cost the exporter/importer his/ her program. So an exporter/importer will over procure to save his program at the cost of the producer. If shortages occur in the market the exporter/importer find them with a surplus. So once the produce has delivered according to the program the surplus is sold on the open market. On the open market the forces of demand and supply are ever present and active. On the whole sale market a surplus usually occurs and forces the price down of the produce per box offered. The exporter/importer's only objective at this stage is to

sell the produce irrespective of price received and how it can impact down the chain to the producer. The exporter/importer takes their 8% of the turnover and then pays the balance to the producer.

## CONCLUSION

This paper puts in perspective the activities in an agricultural chain and the actors and their functions. If this is not understood, the chain and individual functions cannot be effectively and efficiently managed. The Table Grape producer in South Africa provides the market with a product that has a short shelf life and this creates tension on the side of the producer. Should any of the produce not be sold or temperatures not be kept according to procedure and produce goes bad, the producer is to carry the cost. The last time the producer has any control over the produce sold is when the exporter loads it at the storage facility in the distribution stage. From there onwards the producer has to trust the rest of the actors down the supply chain to take responsible care of the produce and to pay a profitable price after six to twelve weeks at the mercy of an agent or broker. The functioning of the Table Grape chain is different to other product chains. In other product chains the products are sold from one chain actor to the next, where as in the Table Grape chain the chain actors are merely intermediaries. Further, the producers have invested about R150 000-00 in every hectare of table grapes that he/she has planted. To pull this out and replace it with another product to generate an income will be a very expensive exercise and thus not an option. It is clear that strategies must therefore be put in place to address the identified problems. To ensure long term sustainability it is necessary that notice should be taken of recommendations offered in this paper.

## RECOMMENDATIONS

- Producers should attempt to shorten their supply chain and thereby gaining more control.
- Producers should investigate local demand and market mechanisms.
- Agents/brokers used, should have a proven track record.
- Research should be done on the demand side in Europe and the UK to try and gather information as to the exact expectations and also in order to start educating actors in the chain, other than the producers on the responsibilities and activities in the chain.
- Ultimately such responsibilities should be shared and market mechanisms must come into play in order to ensure sustainability to the supply chain as a whole.

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# **THE EFFECT OF CULTURE ON CONSUMER INTELLECTUAL PROPERTY THEFT: AN EXPLORATORY ANALYSIS**

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## **ABSTRACT**

*This research integrates current knowledge and theory to develop a model to explain the consumer decision with regard to the effect of culture on the theft of intellectual property. Specifically, the UK (Weak UA), Belgium (Strong UA), and Lithuania (a transitional economy) are compared to examine the effect of Uncertainty Avoidance and Rule Adherence on the propensity to illegally download music. The results suggest that cultural dimensions have a significant indirect impact on downloading by affecting individual level risk perceptions.*

## **INTRODUCTION**

The growing use of the Internet and online retailing has greatly increased the opportunities to legally buy or burn intellectual property. Sales of CD albums in the U.S. were 588.2 million units for 2006, a 25 percent decline since 2000. Conversely, sales of digital singles were up 2.930 percent since 2003, with 581.9 units sold in 2006 (Hiatt and Serpick 2007). The sales of downloadable movies and television programs are expected to grow as more movie production companies allow legally paid downloads through online retailers such as Amazon.com's Unbox and iTunes (Shields 2006).

Nonetheless, millions have chosen to steal these digital products rather than legally buy or burn them. Indeed, even though illegal downloading has slowed over the past two years, the average number of people illegally sharing files have almost doubled since 2002 (Hiatt and Serpick 2007). A recent survey of youth ages 8-18 found that 32% of them continue to illegally download music, 25% games, 14% software, and 10% movies (Clark and Ward 2006). In the music industry alone, the RIAA estimates that the music industry loses as much as \$4.2 billion to piracy worldwide, with much of this due to illegal downloading (RIAA 2006).

Because of the immediate importance of intellectual property rights to numerous U.S. industries (e.g., music, movie, books, etc.), the issue has become central to the discussions in the popular and industry press. A recent survey of 1,000 people ages 18-65+ identified several problems facing the music industry: (1) 74% say

that full CD prices are too expensive, (2) 58% believe that the quality of music is getting worse, (3) 80% surveyed believe that downloading music without permission is stealing, while (4) 61% of those that downloaded music illegally indicated they did not care if it was copyrighted (Hiatt 2006). The results of this survey provide a good summary of the problems faced by digital copyright holders. The purpose of this research is to integrate current knowledge and theory to develop a model to explain the consumer decision with regard to the theft of intellectual property.

## **OVERVIEW OF RELEVANT THEORIES/MODELS**

This paper examines how the cultural dimensions of Uncertainty Avoidance and Rule Adherence affect the consumers' view of Risk, and therefore affect illegal downloading of music. Below we cover the relevant concepts – Uncertainty Avoidance, Rule Adherence – and propose hypotheses.

### ***Uncertainty Avoidance (UA)***

Several articles have documented the role of cultural characteristics in advertising. However, most attention has been devoted to the relationship between cultural variables and the prevailing advertising practice (see, e.g., Albers-Miller and Gelb 1996; Caillat and Mueller 1996; Cheng and Schweitzer 1996; Han and Shavitt 1994). Only a limited number of studies address the impact of cultural values (see e.g., Aaker and Williams 1998; Han and Shavitt 1994), or specifically Uncertainty Avoidance (see e.g., Aaker and Williams 1998; Hoeken et al. 2003), on behavior.

Hofstede (2001, p. 161) defines Uncertainty Avoidance (UA henceforth) as “The extent to which the members of a culture feel threatened by uncertain or unknown situations”. The U.S. scores typically low on UA whereas European and Asian countries are found at the top, in the middle and at the bottom of the list (Hofstede, 2001 p. 151). Work by de Mooij (1998) indicates that people from higher-UA countries tend to buy less ice cream and confectionery, and invest less in stocks. Instead, they buy more mineral water and fresh fruit, and invest more in precious metals. As will be argued below, we expect that UA takes up a particularly important role in the context of illegal behaviors by moderating the perception of risk.

### **Rule Adherence**

Rule Adherence is a relatively new cultural dimension defined as a societal tendency to follow laws and rules. All countries have some restrictions on consumer usage of intellectual property – in addition to many others. However, the tendency/ability and interest level of governments to both investigate and/or prosecute these crimes differs dramatically. In addition, the propensity of citizens to flaunt/bend or ignore rules also differs significantly between cultures.

### **Becker Model of Crime**

The Becker model of crime assumes that criminals are rational individuals maximizing their utility. Thus criminals deciding on the best course of action evaluate both costs (e.g., time and probability/severity of punishment) and the expected value of the return from the activity. The standard economic decision rule applies: if benefits outweigh costs the behavior is undertaken (Becker 1968).

According to the theory, if expected utility is positive, crime pays. In support of Becker's work, Ehrlich (1973) explained that a criminal prospect has a choice to violate the law or to remain law abiding. If a violation occurs, the offender has two probable outcomes: getting away or getting caught. The first outcome produces an increase in wealth, while the second results in a penalty. Based on the Becker approach, Ehrlich's models include the idea that an increase in probability of getting caught and punishment once caught affect the decision of whether or not to engage in a criminal activity.

## **HYPOTHESES DEVELOPMENT**

According to Becker's Model of Crime, increased risks should have a direct and negative impact on crime. In fact, many studies have found a significant relationship exists between increases in the offender costs and probability of conviction with reduced crime rate (Ehrlich, 1973; Witte, 1980; Viscusi, 1986; Grogger, 1991; Levitt, 1997; Corman and Mocan 2000). Other studies have found either weak or nonexistent relationships between the variables (Myers, Jr., 1983; Cornwell and Trumbull, 1994).

In the case of intellectual property theft, specifically music theft, there are two relevant risks to consider: Channel Risk and Personal Risk. Relative Channel Risk is defined as the risk of using one channel to access a product versus another. In this case that is the internet versus stores. Personal risk is the risk inherent in getting caught conducting an illegal activity and the degree of sanctions the consumer will likely face.

H1: As the perceived risks of using the internet increase, the probability of downloading music illegally will decrease.

H2: As the perceived risks of personal harm increase, the probability of downloading music illegally will decrease.

What has not been previously examined is the effect of general cultural dimensions on personal perceptions of risk. In this study we propose that a general cultural tendency toward risk aversion will cause individuals to increase the perception of the personal risk associated with any given act. Essentially, the higher the risk avoidance of any culture will reflect as an environmental force to push the risk of any given objective situation higher. Thus:

H3: The stronger the cultural uncertainty avoidance, the higher the perceived channel risk.

H4: The stronger the cultural uncertainty avoidance, the higher the perceived risk of personal harm.

Alternatively, those cultures that have low social pressures to follow the rules (weak rule adherence) will perceive lower individual risk for any given situation. The norm of not following the rules allows them to adapt this norm to their specific behaviors.

H5: The stronger the cultural rule adherence, the higher the perceived channel risk.

H6: The stronger the cultural rule adherence, the higher the perceived risk of personal harm.

## METHODOLOGY

This study focused on the intellectual property theft of copyrighted recorded music. These unauthorized copies were created by burning CD's, copying tapes, and storing data files on a computer or MP3 player. The theft of recorded music was chosen for this study for two reasons. First, a substantial portion of the population has engaged in it. The study met that requirement for "the ideal data set" thought by Trumbull (1989, p. 423) to be too costly to achieve.

Second, people seem to be comfortable discussing their participation in downloading music illegally, quite likely because of its widespread acceptability. For instance, in a survey of 2,306 adults, Harris Institute (2003) found that three in four people agreed with the statement, "Downloading and then selling music is piracy and should be prohibited, but downloading for personal use is an innocent act and should not be prohibited." Some of the people interviewed for our study expressed reservations about revealing their age or household income. None expressed reservations about disclosing the method by which they obtained their last recorded music.

### Sample

Self administered interviews with 665 college students in three countries (UK, Belgium and Lithuania) who reported acquiring recorded music during the six months immediately prior to their interview provided the

data for the study. These countries were chosen on the basis of two criteria: (1) convenience and (2) because they represent significant differences in cultural uncertainty avoidance and rule adherence. This demographic group was deemed particularly relevant due to the relatively high incidence of downloading and listening to music.

## Measures

The focus of the study's dependent variable, BURN, was the illegality or legality of the method used by each respondent for her/his most recent acquisition of recorded music. Two categories were formed, those purchasing music legally or illegally downloading music from the internet. In Table 1, the measures for the independent variables are presented.

**Table 1: Measures**

| Construct/Items   | Alpha |
|---|-------|
| <b>Uncertainty Avoidance (UA)</b> (Strongly Agree - Disagree)<br>I avoid taking gambles in life<br>I would rather be safe than sorry<br>I like situations that are safe   | 0.751 |
| <b>Rule Adherence</b> (Strongly Agree - Disagree)<br>In my culture, strict adherence to the rules depends on the situation<br>Rules shouldn't get in the way of progress<br>Rules are guidelines, not absolutes   | 0.621 |
| <b>Channel Risk</b> (Strongly Agree - Disagree)<br>Buying products from a local store is much less risky than the internet<br>The probability of being cheated is much lower in a local retail store than from the internet<br>In general, the risk of losing personal information is much lower in retail stores than the internet<br>It is much easier to get a refund from local stores than internet stores | 0.762 |
| <b>Personal Risk</b> (none-great)<br>If you illegally attained music, what is your chance of getting caught<br>If you should steal music and got caught, how severe do you think your penalty would be  | 0.647 |

Factor scores were computed for each construct and are shown in Table 2.

**Table 2: Descriptive Statistics**

| Variable                                   | All   | UK            | Belgium       | Lithuania     |
|--|-------|---------------|---------------|---------------|
| n  | 665   | 205           | 257           | 203           |
| % Steal Music                              | 59.2% | 52.6%         | 53.7%         | 72.6%         |
| Factor Score – UA<br>Uncertainty Avoidance | 0     | -0.154<br>Mid | 0.252<br>High | -0.303<br>Low |
| Factor Score – RA<br>Rule Adherence        | 0     | -0.454<br>Low | 0.148<br>Mid  | 0.272<br>High |
| Factor Score –<br>Channel Risk             | 0     | -0.167<br>Low | 0.096<br>High | 0.047<br>Mid  |
| Factor Score –<br>Personal Risk            | 0     | 0.306<br>High | -0.064<br>Mid | -0.229<br>Low |

## Model/Analytical Method

Given the binary nature of the dependent variable, it was necessary to use a piecewise path analysis – consisting of Logit and Regression. While SEM is typically used for reflective measures, it does not accommodate binary dependent variables. Thus, factor scores were used as the independent variables. The results are shown in Table 3.

**Table 3: Results**



| Hypotheses | Antecedent     | Dependent     | Coefficient | p-value | Result    |
|------------|----------------|---------------|-------------|---------|-----------|
| H1         | Channel Risk   | BURN          | -0.156      | 0.025   | Supported |
| H2         | Personal Risk  | BURN          | -0.159      | >0.001  | Supported |
| H3         | UA             | Channel Risk  | 0.151       | >0.001  | Supported |
| H4         | UA             | Personal Risk | 0.154       | >0.001  | Supported |
| H5         | Rule Adherence | Channel Risk  | 0.127       | >0.001  | Supported |
| H6         | Rule Adherence | Personal Risk | -0.026      | 0.247   | Rejected  |

## DISCUSSION

The entertainment industry has long used separate licensing agreements, delayed distribution and other techniques to distribute content worldwide. Some in the industry are examining different paradigms to reduce theft. For example, the Lord of the Rings movies were the first to be released worldwide on the same schedule, but this innovation was not really adopted by the rest of the industry. Here we examined how basic cultural dimensions affect the propensity to download intellectual property. With the uncertainty avoidance measure widely available from Hofstede's studies, we suggest that entertainment companies may wish to use this, in conjunction with these results, to reexamine their schedules. Companies would want to weigh the market potential (an internal calculation) and the propensity of the people to download/steal in deciding release schedules and/or licensing restrictions. This research suggests that, in general, societies that have strong risk avoidance and weak rule adherence tend to download most – and therefore such countries would probably tend toward the end of a release schedule.

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# CONSUMER DISSATISFACTION WITH SELF-SERVICE TECHNOLOGIES: AN EMPIRICAL EXPLORATION OF ITS ANTECEDENTS

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## ABSTRACT

*Self-service technologies (SSTs) are commonplace for consumers' use, which is reflected in the growing body of literature that pertains to SSTs. The bulk of this literature has focussed on the adoption of SSTs, while relatively little attention has been given to consumers' consumption and evaluation of SSTs. Arguably, this is an area worthy of exploration in the light of frequent reports of consumers' dissatisfaction with SSTs. Therefore, this paper examines the antecedents of consumers' overall dissatisfaction with an SST encounter, and finds that consumers' dissatisfaction with the attributes of the SST and consumers' perceptions of causal controllability explain 50 per cent of the variance in consumers' overall dissatisfaction with the SST. Insights into removing the causes of SST dissatisfaction are offered to managers, which are, arguably, important for consumer retention.*

## INTRODUCTION

Reports of consumers' unsatisfactory encounters with SSTs, including machine-assisted and electronic services, are detailed in both the academic literature and in the business press. SSTs often leave consumers frustrated and annoyed due to poor service, including inadequate customer support, flawed interface design, and failing technology. In the light of this, it has been suggested that SST providers are concentrating too much on gaining new consumers rather than on retaining them (Yen 2005), with high levels of consumer attrition having been reported in the SST context (Lankton and Wilson 2007). Similarly, the SST literature to date has primarily focussed on issues surrounding the adoption of SSTs, particularly the factors that drive or inhibit SST adoption. However, unsurprisingly, SST providers rely on both initial adopters and continued users. Satisfaction is expected to influence consumers' continued use of SSTs that, arguably, influences the survival of SSTs (Lankton and Wilson 2007). Therefore, research that addresses consumers' consumption and evaluation of SSTs is valuable and has been encouraged (Lankton and Wilson 2007).

In reviewing the SST literature, two key papers were found that explore the factors that influence consumers' dissatisfaction with SSTs. The seminal article by Meuter et al. (2000) is the first of these, which qualitatively assessed, via the critical incident technique, the determinants of consumers' satisfaction and dissatisfaction with SSTs. It found that failure of the technology, design problems in regard to both the technological interface and the service that it offered (including post-purchase service), and customer-driven failures, e.g., forgetting one's personal identification number (PIN), were the main causes of consumers' dissatisfaction with SSTs. In a business-to-business context, Pujari (2004) replicated Meuter et al.'s (2000) study, with similar conclusions drawn as to the causes of dissatisfaction with SSTs.

Drawing on these papers and the broader SST literature, this paper proposes four antecedents of consumers' overall dissatisfaction with SSTs, which is defined as consumers' general dissatisfaction with the SST experience based on their evaluation of it. The antecedents examined include attribute dissatisfaction, SST self-efficacy, SST powerlessness, and attribution of blame. These constructs are quantitatively measured and their association with consumers' overall SST dissatisfaction is examined.

# HYPOTHESES DEVELOPMENT

## Attribute Dissatisfaction

Attribute dissatisfaction refers to consumers' subjective dissatisfaction judgements resulting from observations of the attribute/feature performance (Oliver 1993) of the SST. As per the Meuter et al. (2000) and Pujari (2004) studies, attributes of the technological interface, including its design and the service it offered, were found to be influential in consumers' evaluations of their overall SST experience. Attribute dissatisfaction has been found to influence overall dissatisfaction in "traditional" product contexts (see, for example, Spreng and MacKenzie 1996). Similarly, the relationship has been supported empirically in the online services context (see, for example, Evanschitzky et al. 2004). Unsurprisingly, when consumers choose to use SSTs, factors associated with the technology become important. Therefore, the following hypothesis is proposed in the SST context: **H<sub>1</sub>: There is a positive association between consumers' attribute dissatisfaction and consumers' overall dissatisfaction with an unsatisfactory SST experience.**

## SST Self-Efficacy

SSTs require considerable participation from consumers to produce the service themselves. As such, consumers can be considered as autonomous in the SST context, resulting in them becoming more independent and exerting control over the SST encounter. As service provision is left to consumers, in concert with the technology, consumers need to be able to operate SSTs effectively in order to derive satisfaction. In the light of this, it is argued that SST self-efficacy, which refers to consumers' judgment of their capability to use a given SST, will influence consumers' general dissatisfaction with the SST. If consumers doubt their capability to use an SST, it is likely to result in dissatisfaction. Yen (2005) indicated that consumers with greater attitude, ability, and willingness to adopt technology would be more likely to enjoy and express satisfaction with SSTs than those with lower technology readiness. Similarly, Lankton and Wilson (2007) found that self-efficacy in using an e-health service influenced satisfaction directly and via expectations. In the light of these findings, the following hypothesis is raised: **H<sub>2</sub>: There is a negative association between consumers' self-efficacy with the SST and consumers' overall dissatisfaction with an unsatisfactory SST experience.**

## SST Powerlessness

SSTs are promoted as increasing consumers' sense of power, control, independence, and liberation. However, SST failures leave consumers helpless, with little control over the service encounter (Menon and Bansal 2007), precipitating feelings of SST powerlessness, i.e., consumers' feelings of SST dominance. Arguably, the experience of power in a service setting has implications for consumers' evaluations of the experience, including dissatisfaction (Menon and Bansal 2007). The more powerless consumers feel relative to the SST, the more likely they are to be dissatisfied with the SST encounter, such that the following hypothesis is put forward: **H<sub>3</sub>: There is a positive association between consumers' feelings of SST powerlessness and consumers' overall dissatisfaction with an unsatisfactory SST experience.**

## Attribution of Blame

Attribution of blame refers to the assignment of causality to past events, e.g., SST failure. Arguably, attribution of blame is as an important area for research on SSTs, as the increased consumer control in SST encounters is expected to change the nature and the flexibility of the attribution process. Causal locus, causal stability, and causal controllability are documented as the three dimensions of causality (Russell 1982). Causal locus refers to whether the cause of the problem is perceived to reside within or outside of the consumer. Causal stability refers to consumers' perceptions regarding the permanency of the problem's cause. Causal controllability is the degree to which consumers perceive that the cause of the problem could have been prevented. It is important to include all three dimensions of attribution of blame, which various studies have failed to do, as it increases precision in mapping relationships between causes and consumers' evaluation.

In regard to loci of causality in the SST context, consumers are unlikely to attribute service failure to themselves in line with the self-serving bias. Once locus is perceived, consumers' resultant level of dissatisfaction is determined (Machleit and Mantel 2001). Failure attributed to the organisation has been found to be more likely to result in reduced satisfaction and anger (Machleit and Mantel 2001). On the other hand, failure attributed to consumers or something outside of the realm of both consumers and the organisation may result in lower levels of dissatisfaction. For example, in the context of a portal site, Riel et al. (2001) argued that technical failures that are attributed to consumers' own computers or to the Internet connection may be tolerated better than technical failures that are attributed to the organisation. Therefore, the following hypothesis is proposed: **H<sub>4a</sub>: The greater consumers' external locus, the greater their overall dissatisfaction with an unsatisfactory SST experience.**

External attributions that are controllable can be damaging for organisations, often leading to emotional reactions on the part of consumers, e.g., dissatisfaction. In terms of assessing causal controllability in the SST context, consumers' performance, i.e., in creating the service outcome, may be attributed to the organisation inasmuch as how the organisation could have controlled for negative outcomes. It is the organisation's responsibility to ensure that consumers can perform their role sufficiently to provide satisfactory outcomes. Similarly, consumers' performance will also be influenced largely by the technology itself. SSTs need to be easy to use and maintained by the organisation in order to ensure that they are functioning properly. For example, an "out of order" ATM or a ticketing machine that is difficult to use may well be perceived as a problem that is controllable by the organisation, with sufficient maintenance and in the latter case, consideration of consumers in the design process. In regard to the relationship between controllability and the level of consumers' dissatisfaction, consumers are likely to be more dissatisfied when they perceive that the organisation could have controlled for the service problem, but failed to do so (Bitner 1990; Gail and Scott 1995; Swanson and Kelley 2001). Therefore, the following hypothesis is proposed: **H<sub>4b</sub>: The more that consumers' perceive the SST problem to be controllable by the organisation, the greater their overall dissatisfaction with an unsatisfactory SST experience.**

In the SST context, the temporary unavailability of a Website and a currently "out of service" ATM are unstable causes of an SST failure. On the other hand, a technology design problem, such as the SST being difficult to use, would be likely to be perceived by consumers as a more stable cause of failure. SSTs may be perceived as unlikely to change in comparison to dealing with different service personnel in the interpersonal services context (Bitner 1990). For example, consumers are likely to use the same Web site to book tickets online through a particular provider; consumers do not confront a different Web site on each encounter. Therefore, if there is a problem with the SST, this is unlikely to be perceived by consumers as changing. The concept of temporary and permanent causes, therefore, might differ in the interpersonal versus SST contexts. Concerning the relationship between stability and dissatisfaction, in the interpersonal retailing context it was found that when long queues at the supermarket's checkout counter were perceived to be constantly occurring, i.e., perceived as stable, consumers became more dissatisfied (Gail and Scott 1995). It seems logical that if a service problem is perceived to be a rare event, it will be more likely to be tolerated and cause lower levels of dissatisfaction than a problem that is perceived as stable, so that the following hypothesis is advanced: **H<sub>4c</sub>: The more that consumers' perceive the SST problem to be stable, the greater their overall dissatisfaction with an unsatisfactory SST experience.**

## METHOD

A range of SSTs, across different technologies and purposes (Meuter et al. 2000), provided the context for the study. The population of interest was defined as males and females aged 18 years or over, living in Australia, who were Internet users and who had recently, i.e., within the last six months, experienced, and could recall, an unsatisfactory encounter with an SST. The qualification of "Internet user" was based on the presumption that consumers' use of the Internet was an indicator of SST familiarity and usage. The sampling frame was an online panel of Australian consumers. This minimised the potential wastage associated with selecting a random sample of the "general" population and asking respondents to pre-select themselves if they had used an SST within the last six months, let alone experienced dissatisfaction with one. A "closed" Web-based questionnaire was used to collect data. A random sample of online panelists was sent an opt-in e-mail

message inviting them to participate in the study, including a link to the questionnaire. The incentive for participation was five dollars for a completed questionnaire.

Existing items that were sourced from past studies, and adapted to the SST context, were employed to measure each of the constructs. Two items were used to measure general SST dissatisfaction drawn from Zeelenberg and Pieters (2004). At the time of the current study being conducted, attribute level dissatisfaction had not been measured in the SST context, to the researchers' knowledge. Therefore, based on a review of the literature pertaining to SSTs, seven specific attributes of SSTs were measured. The instrument used to measure SST self-efficacy was an adapted version of the Compeau and Higgins (1995) instrument of computer self-efficacy, comprising seven items. Five items taken from the "computer alienation" instrument by Abdul-Gader and Kozar (1995) measured SST powerlessness. Finally, items sourced from Hui and Toffoli (2002) measured the three-dimensional construct of attribution of blame, i.e., locus (self), controllability and stability (two items per dimension). All of the measures utilised a seven-point scale.

## **DATA ANALYSIS AND RESULTS**

A response rate of 41 per cent was attained, with the typical respondent being male, aged 35 to 44 years, whose occupation was manager or administrator, and whose highest level of education achieved was a bachelor degree. Following the removal of multivariate outliers, 453 usable responses remained. Confirmatory factor analysis was used to verify the dimensionality of the constructs, and to ensure that the items used were reflective of each of the constructs. The measurement model was found to fit the data adequately (see Table 1), following the removal of two items that measured attribute dissatisfaction and one item that measured SST self-efficacy, which could be justified theoretically. Finally, composite reliability and average variance extracted (AVE) were calculated per construct, all of which were found to be above the 0.5 level recommended. To demonstrate discriminant validity, the researchers took the square root of each of the AVE values which appear along the diagonal (shown in bold) of Table 2 and compared them to the correlations in the corresponding rows and columns. The square root of the AVE values was shown to be greater than the correlations in the equivalent rows and columns, supportive of discriminant validity.

For each construct, composites were created following the process outlined by Joreskog and Sorbom (1989). Multiple linear regression analysis (MLR) was used to test the main effects of the four antecedents on consumers' overall SST dissatisfaction. Multicollinearity between the independent variables was assessed using both the variance inflation factor (VIF) and tolerance values, which were well within their accepted cutoff thresholds. The independent constructs were simultaneously entered into the regression with overall dissatisfaction as the dependent variable. The results of the analysis are provided in Table 3. As shown, only attribute dissatisfaction and the controllability dimension of attribution of blame were found to predict ( $p < 0.001$ ) general dissatisfaction, with attribute dissatisfaction being the stronger predictor. In order to ascertain which of the attributes of the SST was associated with overall dissatisfaction, each of the items representing the attributes of the SST was regressed on overall dissatisfaction, with all features of the SST, with the exception of convenience, helping to explain it ( $p < 0.05$ ). The remaining dimensions of attribution of blame, i.e., locus and stability, SST self-efficacy and SST powerlessness, did not offer any unique explanatory power to overall dissatisfaction. This model explained 50 per cent of the variance in overall SST dissatisfaction.

## **DISCUSSION AND MANAGERIAL IMPLICATIONS**

The purpose of this study was to explore empirically the antecedents of consumers' general dissatisfaction with an unsatisfactory SST encounter in order to offer guidance to SST providers on minimising, and ideally preventing, dissatisfaction with SSTs. The results obtained indicate that consumers' dissatisfaction with the attributes of the SST is the strongest predictor of their general dissatisfaction with it. This is in line with findings from "traditional" goods and services contexts and the online services context. Unsurprisingly, when consumers choose to use SSTs by themselves, the properties of the SST are influential in their evaluation of their experience with it. When the SST attributes of speed, enjoyment, control and user-friendliness were perceived by consumers to be worse than expected in their encounter with the SST, general SST dissatisfaction was heightened. Arguably, the attribute of convenience was not found to be related to general dissatisfaction as it is a motivating factor (Yen 2005). In the light of these findings, SST providers need to ensure that the attributes of

the SST are customer focussed, thereby at least meeting, but ideally exceeding, consumers' expectations in order to minimise dissatisfaction. SSTs provide organisations with unprecedented opportunities to satisfy consumers, yet they also present the threat of failure and resultant consumer dissatisfaction. The results indicate that such dissatisfaction can be a function of several attributes of the SST, which can be managed by the organisation.

**Table 1: Final Measurement Model Results**

| <b>Model Fit</b>   |                   |             |                  |                             |              |
|--|-------------------|-------------|------------------|-----------------------------|--------------|
|  | <b>Chi-square</b> | <b>df</b>   | <b>GFI</b>       | <b>CFI</b>                  | <b>RMSEA</b> |
|  | <b>464.27</b>     | <b>231</b>  | <b>0.92</b>      | <b>0.96</b>                 | <b>0.05</b>  |
| <b>Construct</b>   |                   | <b>Mean</b> | <b>Std. Dev.</b> | <b>Standardised Loading</b> | <b>CR</b>    |
| <b>Overall dissatisfaction</b>   |                   | <b>2.9</b>  | <b>1.4</b>       |                             | <b>0.86</b>  |
| Overall, how dissatisfied were you with your experience with the SST?                        |                   | 3.2         | 1.5              | 0.75                        |              |
| Overall, how did you feel after this experience?   |                   | 2.9         | 1.4              | 0.98                        |              |
| <b>Attribute dissatisfaction</b>   |                   | <b>3.2</b>  | <b>1.4</b>       |                             | <b>0.90</b>  |
| Speed of the SST   |                   | 3.2         | 1.4              | 0.68                        |              |
| Level of control felt in using the SST   |                   | 3.1         | 1.6              | 0.82                        |              |
| Convenience of the SST   |                   | 3.8         | 1.8              | 0.85                        |              |
| Enjoyment of using the SST   |                   | 2.9         | 1.6              | 0.86                        |              |
| User-friendliness of the SST   |                   | 3.2         | 1.5              | 0.82                        |              |
| <b>Self-efficacy with the SST</b>  |                   | <b>5.6</b>  | <b>1.4</b>       |                             | <b>0.91</b>  |
| I could use the SST if there was no one around to tell me what to do as I went               |                   | 5.6         | 1.6              | 0.67                        |              |
| I could use the SST if someone showed me how to use it first                                 |                   | 5.9         | 1.5              | 0.84                        |              |
| I could use the SST if someone else had helped me get started                                |                   | 5.6         | 1.6              | 0.87                        |              |
| I could use the SST if I had only written instructions for reference                         |                   | 5.4         | 1.7              | 0.84                        |              |
| I could use the SST if I could contact someone for help if I got stuck                       |                   | 5.6         | 1.7              | 0.73                        |              |
| I could use the SST if I had seen someone else using it before trying it myself              |                   | 5.5         | 1.7              | 0.84                        |              |
| <b>SST powerlessness</b>   |                   | <b>4.7</b>  | <b>1.4</b>       |                             | <b>0.64</b>  |
| This SST dehumanizes society by treating everyone the same                                   |                   | 4.8         | 1.8              | 0.79                        |              |
| I feel that the SST controlled me rather than I controlled it                                |                   | 5.1         | 1.5              | 0.74                        |              |
| I felt helpless when using the SST   |                   | 4.3         | 1.8              | 0.80                        |              |
| This SST has the potential to control our lives  |                   | 3.9         | 1.9              | 0.68                        |              |
| I found that I had to adapt my needs to fit the SST, rather than it adapting to fit my needs |                   | 5.0         | 1.6              | 0.73                        |              |
| <b>Causal locus (self)</b>   |                   | <b>1.9</b>  | <b>1.3</b>       |                             | <b>0.89</b>  |
| I was responsible for my own unsatisfactory experience                                       |                   | 2.0         | 1.4              | 0.89                        |              |
| The unsatisfactory experience was the result of my own doing                                 |                   | 1.9         | 1.4              | 0.89                        |              |
| <b>Causal controllability</b>  |                   | <b>5.7</b>  | <b>1.1</b>       |                             | <b>0.83</b>  |
| My unsatisfactory experience could have been controlled by this organisation                 |                   | 5.6         | 1.3              | 0.69                        |              |
| Something could be done by this organisation to stop my unsatisfactory experience            |                   | 5.8         | 1.3              | 0.79                        |              |
| <b>Causal stability</b>  |                   | <b>4.2</b>  | <b>1.5</b>       |                             | <b>0.75</b>  |

|   |     |     |      |  |
|---|-----|-----|------|--|
| The reason for my unsatisfactory experience will always be the same | 4.3 | 1.6 | 0.87 |  |
| The reason for my unsatisfactory experience will never change       | 4.1 | 1.6 | 0.67 |  |

**Table 2: Correlation Matrix and AVE Statistics**

| Construct                    |                |                |                |              |                |                |      |
|------------------------------|----------------|----------------|----------------|--------------|----------------|----------------|------|
| Construct                    | 1              | 2              | 3              | 4            | 5              | 6              | 7    |
| 1. Controllability           | 0.74           |                |                |              |                |                |      |
| 2. Locus (self)              | <b>-0.44**</b> | 0.89           |                |              |                |                |      |
| 3. Stability                 | <b>0.28**</b>  | <b>-0.17**</b> | 0.88           |              |                |                |      |
| 4. SST self-efficacy         | <b>0.11*</b>   | <b>0.18**</b>  | <b>0.05</b>    | 0.80         |                |                |      |
| 5. Attribute dissatisfaction | <b>-0.36**</b> | <b>0.35**</b>  | <b>-0.28**</b> | <b>-0.01</b> | 0.81           |                |      |
| 6. SST powerlessness         | <b>0.34**</b>  | <b>-0.20**</b> | <b>0.22**</b>  | <b>-0.08</b> | <b>-0.43**</b> | 0.75           |      |
| 7. Overall dissatisfaction   | <b>-0.45**</b> | <b>0.37**</b>  | <b>-0.22**</b> | <b>-0.07</b> | <b>0.67**</b>  | <b>-0.35**</b> | 0.87 |

\*\*p ≤ 0.01, \*p ≤ 0.05

**Table 3: Regression Results for Overall SST Dissatisfaction**

| Independent Variables     | Unstandardised Coefficients |            | Standardised Coefficients | t - value | Sig. | VIF  | Tol. |
|---------------------------|-----------------------------|------------|---------------------------|-----------|------|------|------|
|                           | β                           | Std. Error |                           |           |      |      |      |
| Attribute dissatisfaction | 0.58                        | 0.04       | 0.56                      | 14.25     | 0.00 | 1.43 | 0.70 |
| SST self-efficacy         | -0.03                       | 0.04       | -0.03                     | -0.76     | 0.45 | 1.06 | 0.95 |
| SST powerlessness         | -0.03                       | 0.04       | -0.03                     | -0.65     | 0.52 | 1.32 | 0.76 |
| Locus (self)              | 0.08                        | 0.04       | 0.07                      | 1.80      | 0.07 | 1.34 | 0.75 |
| Controllability           | -0.25                       | 0.05       | -0.20                     | -5.07     | 0.00 | 1.42 | 0.70 |
| Stability                 | -0.14                       | 0.03       | -0.01                     | -0.41     | 0.68 | 1.12 | 0.89 |
| F value                   | 76.11                       |            |                           |           |      |      |      |
| df                        | 6                           |            |                           |           |      |      |      |
| R-square                  | 0.51                        |            |                           |           |      |      |      |
| Adj. R-square             | 0.50                        |            |                           |           |      |      |      |

As predicted, causal controllability, i.e., the degree to which consumers perceived that the cause of the SST problem could have been prevented, was also found to be related to consumers' general dissatisfaction with the SST encounter. This is in line with findings from the interpersonal services context that indicated that consumers are likely to be more dissatisfied when they perceive that the organisation could have controlled for the service problem, but failed to do so (see, for example, Swanson and Kelley 2001). To the researchers' knowledge, this is the first time that this relationship has been tested in the SST context. To this end, organisations need to focus on enhancing the aspects of the SST experience that they are able to influence. Arguably, such elements would include providing consumers with adequate support in their role as "service producer". It is the responsibility of the organisation to direct consumers to the "self" that they need to play in order to use SSTs effectively and efficiently. Consumers evaluate the service experience based on the amount of support that they receive in playing their role. Organisations can support consumers in various ways in their participatory SST roles, by socialisation of consumers through formal training and the provision of organisational literature and environmental cues. Such support is critical in the SST context, where it is expected that consumers' satisfaction is, at least in part, the result of consumers' own performance, which is influenced largely by the level of support that organisations provide in the SST context. Although not reported frequently, "consumer-driven failures" have been found to be a source of consumer dissatisfaction with SSTs (Meuter et al. 2000), and, therefore, organisations need to work to minimise this type of failure by providing consumers with appropriate SST support.



Contrary to expectations, the locus and stability dimensions of attribution of blame were not found to be related to consumers' general dissatisfaction with the SST encounter. Given that these relationships have not been tested previously in the SST context, it is difficult to account for this result. One possible explanation for these non-significant relationships is that the two-item measures of locus and stability might not be tapping adequately the dimensions that were sought to be measured, thereby masking the relationships as a result of measurement error. Another explanation might be found in the controversy regarding the causal ordering of attribution, affect and behaviour. The consumer behaviour and psychology literatures suggest the sequence of "attribution – affect – behaviour", as opposed to the original sequence reported in earlier satisfaction literature, that is, "affect – attribution – behaviour". It might be that attribution of blame is an antecedent of behaviour, as opposed to consumers' affective state in the current context. For example, consumers who perceive SST failures to be permanent are likely to feel that identical results will recur in the future and, therefore, exit from using the SST in the future, which could be unmediated by affect.

Surprisingly, SST self-efficacy and consumers' general dissatisfaction were not found to be related. A possible reason for this is the nature of the sample employed in the current study, i.e., respondents presumably had experience with SSTs. As such, SST self-efficacy might not be an issue that is contemplated by more experienced users of SSTs when evaluating an SST encounter. The perceived ability of consumers to proficiently control and successfully use the SST should influence the SST usage/adoption decision, but perhaps not the evaluation of SST consumption.

Finally, inconsistent with H<sub>3</sub>, SST powerlessness was not found to be associated with overall SST dissatisfaction in the current study. On reflection, it might be that general dissatisfaction because of SST failure causes feelings of SST powerlessness, as opposed to the directionality that was tested in the current study.

## STUDY LIMITATIONS AND FUTURE RESEARCH

The findings of the current study are subject to several limitations that restrict the generalisation of the results, and which provide guidance for the direction of future research. Firstly, the study findings are limited in the light of the final measurement of some of the constructs of interest. For example, only two items measured the dependent variable of overall dissatisfaction initially. Over 15 years ago, Prakash (1991) argued that much more work was needed on the conceptualisation and operationalisation of dissatisfaction, however, little has been done to improve the situation since this time. A second limitation arises from the cross-sectional design of the study as the predictor variables and the outcome variable were collected at the same time. Therefore, correlational rather than causal inferences are drawn. A final limitation is that the data were aggregated without regard for specific types of SSTs. The current study was designed to examine SSTs generally to broaden its scope. However, one may question whether the findings obtained in the current study are universal when considering explicitly different types of SSTs. In the light of this, it would be valuable to examine the extent to which the findings of the current study could be generalised across the various specific types of SSTs. It might be that the associations between the antecedent variables and general dissatisfaction differ across SST types. Such fine-grained research will help to reveal the antecedents of overall dissatisfaction for specific SSTs, so that more narrowly focused recommendations can be made to organisations offering specific types of SSTs. This research and other efforts to better understand customer interactions with SSTs should help managers to better utilise SSTs in satisfying and retaining their consumers.

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# MANAGERS' CONCEPTIONS ON ORGANIZATIONAL STRATEGY IN A BRAZILIAN FIRM IN TELECOMMUNICATIONS

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## ABSTRACT

*Managers' conceptions on Organizational Strategy (OS) in a Brazilian firm in telecommunications were investigated at the present work. This firm is in process of transition from the classical model to the personnel management model by competence and our work aimed to verify if these managers' conceptions were aligned with the theories sustaining the new model. 72 managers answered the question: "What do you understand by Organizational Strategy?" There was no consensus among the managers about the OS conceptions and the majority of them still conceives it according to the classical management model. This, undoubtedly, compromises the current model.*

## INTRODUCTION

Struggling for competitive advantages, firms, in general, have been searching new management models which can respond to constant and fast transformations within the different sectors of society. Personnel management model by competence emerges as the most appropriated one to face this challenge. Despite being innovator and defended by authors as Fleury and Fleury (2000), Quinn (2003), Dutra (2004), Prahalad and Hamel (2005), et al, this model is, in practical terms, very complex. Because of this, there are, in literature, very few data showing its efficacy related to satisfactory results for the firm.

Although they are not prevailing characteristics in firms, nowadays, the following traits can be largely observed: strictness signs, as well as verticalization and hierarchization in work relationships and in the organizational structures - pillars sustaining the mechanistic and taylorist/fordist models. These traits act negatively at the moment of implantation and maintenance of new management models and can cause them to fail. Many of the organizational structure models in use are initiating and cannot hold technological advances, new management models and society and work relationship evolutions. Failures of new management models can also be assigned to other factors, as: partial implantation of the new model with characteristics of the current model being kept and conflicting with the ones of the new model; disregard to cultural and structural aspects in the firm; and the fact that new management models provoke deep changes in organization and demand new practices all over the management process.

Using the personnel management model by competence, the strength of the firm will depend, in long terms, upon the organizational learning process management. Such management will create and develop new competencies linked to Organizational Structure (O S). The OS is also passible of renovation since it deals with ways the firm employs its resources in order to compete in a constantly moving market.

At the beginning of the current century, new management models are found on the strategy conception of Prahalad and Hamel, as the case of personnel management model by competence, whose main principle is the link between OS and competencies. According to Moura and Bitencourt (2006), in this model, strategy appears bonded to the firm competencies and its implication in individual and group competencies, passes over hierarchic levels and work teams. The organization effectiveness is the product of the ability of linking its

strategic course with the firm and teams competencies, and, moreover, with single competencies. Therefore, “setting the strategic course, aligned to organizational competencies and unfolded in competencies, either group or single ones, implies reflecting about culture and management model”. (MOURA and BITENCOURT, 2006, p. 1).

This reflection is emphasized by Prahalad and Hamel (2005) when they mention the role of senior managers in the differentiation between competing for present or for future. “Competing for the future demands both redefinition on the organizational strategy and redefinition on the role of high management in strategy creation” (p. 34).

King, Fowler and Zeithaml (2002) also believe that the adjustment of strategic perspectives and subjects related to its implementation is an attribution of intermediate managers. The authors listened to 200 managers in 17 firms, aiming to evaluate if they agreed about the choice of certain competencies considered essential in the search of competitive advantage. Results showed that there was a “consensus” about competency if it were related to the idea of high performance and that there was not a “consensus” if it were related to low performance. Despite these results could not show the clear relationship between high and low performance to the major or minor competitive advantage, the authors observed that “the acquiescence and the communication help to generate agreement about the main sources of competitive advantage within the firm, help to concentrate the efforts in the organization and help to enhance the probability of a successful implementation”. (KING, FOWLER and ZEITHAML, 2002, p. 39).

If, in the personnel management model by competence, strategy and competencies must be linked so that the implementation is successful, it is possible to state that the “consensus” is also important concerning to the managers’ OS conception. This being the case, if this model is based on the OS conception created by Prahalad and Hamel, it is presumed that the managers’ consensus is aligned to such conception. However, as it was mentioned before, the classical model, based on the SWOT analysis has been being used for a long time in firms, and besides this, the transition from a model to a new one is not fast and linear. Thus, it is possible that, during the transition process there are hybrid periods, indefinite periods or even conflicting periods. It is fundamentally important that the managers understand quite well the process, so that they can intervene to guarantee a rapid and efficacious implementation of the new model, avoiding, that way, harms to the firm.

From what have been exposed, this research paper aimed to investigate if the managers’ OS conception in a Personnel Management System by Competence (PMSC), introduced in a firm eight years ago, was aligned to its theoretical basis. To accomplish the goal, it was asked the managers what they understood by OS. The research was carried out in a firm located in an inner region of Sao Paulo State, Brazil. It is prominent in the field of telecommunications.

This research is justified by the lackness of empirical studies that investigate the managers’ perception about the theoretical basis to support their practices in the development of a given management model. Also, by the importance - in the organizational learning - of the managers’ reflection about their own management practices. May the results contribute to students and professionals of the management area, as well as of related areas.

## METHODOLOGY

This is an exploratory research that, as Yin says (2005, p. 34/35), is used to explore those situations in which the intervention being evaluated does not show a simple and clear set of results. The author also adds that in this kind of study only the “analytical generalization” is possible; so, from a specific set of results, it is allowed to the researcher to produce theoretical assumptions that would be applicable to other contexts.

Data about the managers’ profile and their OS conception were collected through an on-line questionnaire sent from the Human Resources Manager to every manager in the firm, being: 11 managers (Support area); 30 managers (Commercial area) and 67 managers (Technological area), totalizing 108 managers. The on-line questionnaire was answered by 11 Support area managers (100%); 21 Commercial area managers (70%) and 40 Technological area managers (60%). In all there were 72 participants, that is, 67% of the total number of managers.

Interpretation of the obtained results analyzing the managers' answer to "What do you understand by OS?" was made area by area. Then this interpretation was confronted with bibliographic data collected from primary and secondary sources, as follows.

## **ORGANIZATIONAL STRATEGY**

Relying on management models used since the 1950's, António (2002) observes that in the evolution of OS conception, its peculiar aspects "consubstantiate in the long run and in the integrator view" (p. 2). The author advises that the meaning of OS has been being established after the contribution of persons like Peter Drucker, Ansoff, Kenneth Andrews, Mintzberg, among others, considering that each epoch produces its proper concepts, practices and management instruments.

António (2002) remarks two important moves in OS evolution: Move I - POSITION and Move II - MOVEMENT. At move I, "the organizational strategy assumes an adjustment to the involving ambience to obtain a prevailing position and proceeds to its defense continuously" (p. 2), thus a strategic adjustment occurs. From the analysis SWOT (Strengths Weaknesses, Opportunities and Threats), it would be possible for the organization to fix competitive advantages. The analysis SWOT has been being questioned along the years, so it has been developed and transformed.

The economy fall, due to the first oil impact at the beginning of the 1970's, made firms to pursue other ways of competitive advantage besides cost: quality and technological innovation. Along with the adjustment model, the idea of "strategic planning" arises and means, at that moment, that OS "is nothing more than a scheme of plans and objectives aiming to previously defined goals." (ANTÓNIO, 2002, p. 5).

According to the same theoretical assumption, the involving ambience typological tendency and the segmentation tendency join, what means "the delimitation of coherent concurrent entities, for which key-factors delimitation is homogeneous". (ANTÓNIO, 2002, p. 8). In result, there is delimitation in strategic activity domains, whose objectives are summed up in choices of products / markets positioning and of a competitive advantage. A synthesis of this approach can be found in Michael Porter's studies.

The decade of the 1980's is distinguished by the emergence and generalization of new ways of creative and innovator competitions, what generated hypercompetition in whose core is the idea that it would be impossible to keep a ranking place for very long, due to the velocity of evolution in concurrence and markets. By this time, Prahalad and Hamel discuss the OS classical approach and recommend "the pursuit of a new vision (ambitious and at long term) and the development rested in a record of central competencies" (ANTÓNIO, 2002, p. 9).

Move II came to be a rupture with the assumptions of Move I - in which Michael Porter is included (1999) - and is represented by Prahalad and Hamel (2005). It concerns with OS based in resources, centered in intention and movement, aiming, chiefly, the permanent transformation either of the competition way or of the firm itself. These authors insist on the idea that firms must anticipate to market changes, demands and future opportunities, concerning to their strategies and their sectors.

Besides António's studies (2002), presented above, this paper aimed to understand particularly the OS conception postulated by Michel Porter and Prahalad and Hamel, in face of the discussion intensity and application of their ideas in the current times. Mintzberg and Lampel's contribution (2007) was also considered to be important from these authors' points of view, when they evaluate both OS conceptions.

### **Michael Porter's Conception**

From a detailed study based on the business scene of the 1970's and 1980's, Porter (1999) alerts that "little by little, in an almost imperceptible way, the managerial tools replaced strategy. As the managers work to improve on all fronts, they progressively move away from the feasible competitive positions." (PORTER, 1999, p. 47). The authors note that the profitability of a firm is the result of the calculation between its costs and the

price paid by the customer for a product or a service. To overcome its competitor, the firm is used to act in three different ways: by adding a higher value to its product; by keeping a similar value to that of the competitor but with a lower price; or, at the same time, by adding value to the product and a lower price. Any of the described situations demands different activities, from planning/ creation up to end products assembly and staff training.

According to the author, “costs are generated by performance of activities, and cost advantages result from the practice of given activities in a more efficient way than that practiced by competitors. Likewise, the differentiation emanates from the choice of activities and from the way they are performed.” (PORTER, 1999, p. 47). The author elucidates that strategic positioning “means performing distinct activities from those practiced by rivals, or performing the same activities in a distinct way.” (p. 48). If a firm intends to keep itself in a superior rank to that of the rival for a long time, it must worry with “productivity frontier” and with “competitive convergence”, which are correlated.

The firm attempts to reach the maximum value which it is “able to provide with the supply of certain product or service, at a given cost, using the best available sources in terms of technology, skillness, managerial technique and input from third-parties”. (p. 49), but the competitors copy their practices, expanding the productivity frontier more and more, thus making it difficult the maintenance of the obtained superior rank. Strategies are alike among firms due to several reasons: for the *benchmarking practice*; for the firms rely their activities on the same service providers, and, also, for they force their rivals to improve quality, to reduce cycles and to set partnerships with suppliers. In order to leave this context, the author suggests that firms create “a valued and exclusive position, involving a valuable set of activities.” (Porter, 1999, p. 53).

The sustainable strategic position demands excludent options, i.e., firms must learn to deal with competitors’ imitations, that, according to the author can happen through two manners: one, when the competitor re-establishes itself as a clone of the established firm to reach other kinds of clients; another, the vacillating, when the firm adds successful position characteristics, services or technologies to its current activities. In these cases, the firm must exert “excludent options”, which “result from incompatibility of activities.” (p. 66) To the author, the excludent options force the firms to choose the best activity teams, since the competitive advantage depends on the combination of demanded activities by the choice of a certain positioning, i. e, it depends on the way how activities are made compatible and become strong. “The competitive advantage emanates from the totality of activity system. Compability among activities causes meaningful cost reduction or differentiation increase. Moreover, the competitive value of single activities - or skillnessess, competences or associated sources - cannot be unbound from the system or from strategy.” (PORTER, 1999, p. 71).

António (2002) remarks that Michel Porter outlines analysis modalities of an activity sector, searching to understand the contours and what determines the competition game in order to identify success key-factors and the binary profitability/ risk. Porter also proposes generic strategies, or the great strategies which lead to a prevailing position, addressing us to three forms of value creation: costs, differentiation and focus. The value chain, “allows us to understand how a firm builds its strategy and its competitive advantage (following a generic strategy choice), without losing control and coherence”. (ANTÓNIO, 2002, p. 8).

Opposed to the idea of “adjustment”, Prahalad and Hamel propose a “strategic intention”. OS would be faced to transformation and to renovation of the rivalry conditions; this, according to António (2002), places the firm in the center of OS formulation, transforming the rules of the competition game and creating new spaces.

## **Prahalad and Hamel’s Conception**

For Prahalad and Hamel (2005), there is not an exclusive position; a position cannot be kept, or defended, it has to be constantly reinvented. The responses given by the firms nowadays would not be the same as those the firm would give after ten years to questions related to clients, to the means used to reach the clients, to its competitors, to the basis of its competitive advantage, to the origin of its profits, to its skillness or abilities to be unique and to the kind of end products market it belongs. To the authors, if the firm wants to be ahead, it has to predict the different needs of the market that will occur in the following period and, from then on, reinvent its sectors and regenerate the specific strategies.

The authors point out to the acting way and to the very moment when the firms decide to make the transformation to face competition: if the atmosphere signals to crisis or, if the transformation occurs before it, therefore, with more reflection and serenity. In conformity with the authors, transforming sectors and regenerating OS, in a comprehensive manner, four elements are necessary: (1) understanding that the competition for future is a different one; (2) a discovery and perception process of future opportunities; (3) ability to energize the whole firm from the top to the bottom and (4) capacity of overcoming the rivals and first reach the future, without excessive risks. To develop these elements, the firms must recognize “the new paradigm of strategy”. (p. 27).

To the application of this new paradigm, a shared vision of future, one with intelligence and imagination would be necessary. This vision would have to be shared by all managers and employees, who must foresee the deep revolutions occurring in the genetics, in materials, in digital area and, mainly in information because these transformations will alter ,specifically, sectors as Education, Medical Assistance, Transportation, Banking, Publishing Industry, Telecommunication Sectors, Pharmaceutical Industry, Retail firms, etc. These transformations will be responsible for great business opportunities, such as “domicile information systems, manufactured drugs by genetical engineering, financial services, advanced materials, or any others.” (PRAHALAD and HAMEL, 2005, p. 35).

The authors alert to the unequal speed in which markets will emerge around the world and “any firm willing to have a leadership role will have to collaborate and learn from the first clients, technology suppliers, or suppliers in general, no matter the place they are. The global distribution will be necessary to catch leadership awards and totally amortizes the associated investments.” (PRAHALAD and HAMEL, 2005, p. 31). In such case, in order to guarantee space in the future, firms need to revolutionize their sectors, because the ones to obtain profits will be “firms having a clear and premeditate vision towards the position they intend to take the sectors upon they act and are able to orchestrate resources in and out the firm to reach there ahead ”. (PRAHALAD and HAMEL, 2005, p. 32).

Either Michael Porter’s conception, considered as an OS classical approach, as well as Prahalad and Hamel’s , considered being an innovator one, received some critiques.

### **Critical points in Porter’s and Prahalad and Hamel’s conceptions, in Mintzberg’s view**

Mintzberg and Lampel (2007) retake, from the book “Strategy Safari” by Mintzberg, Ahlstrand and Lampel (2000), the ten schools idea (of *design*, of planning, of positioning, the enterpriser, the cognitive, of power, the cultural school, the environmental and the school of configuration), in which they shape strategy, locating it in time and in relationship to management models and their respective defenders. The authors demonstrate that the evolution of OS concept is not a linear one, since one school can originate another, can be a counterpoint to another or even join another. The OS conception defended by Porter can be, according to Mintzberg and Lampel (2007) associated with two schools: the positioning and the power schools. In the positioning school, prevailing in the 1980s strategy can be summarized as follows: “generic positions, selected through industrial conjuncture formalized analyses” (p. 3). According to the authors, the planner becomes, thus, an analyst and, and consultants and academics, from solid data, promoted their “scientific truths” in newspapers and corporations. This literature grew in every direction to include strategic groups, value chains, game theories and many other ideas - always with this analytical tendency.

In “power school” it seems to have two distinct orientations: one, of political character, involves negotiation, persuasion, and confrontation among people sharing the power; and another “ which considers organization as an entity using its power over others and among its partners in alliances, *joint-ventures* and other kind of net relationship to negotiate group strategies aiming its own benefit .” (MINTZBERG and LAMPEL, 2007, p. 4).

The authors believe that Porter describes the strategic process as being deliberated and deductive, not only despising strategical learning, but denying its existence as well. They justify their critique reminding Porter’s statement about the perspective of strategy has been widened to include employee and organizational conditions. To Porter, this would be everything that the firm does and everything in which it consists. This not

only makes the subject more complicated , but makes the causality chain obscure, expanding it from the competitive surrounding to position, activities, organization and employees' competence.

The authors do not agree with the idea that OS cannot be everything the firm does and everything in which it consists. They think Porter treats OS as a causality chain heading an only and single direction. The problem with Porter's OS conception lays on the fact that he defends that "in order to have success and sell, the champions must defend their positions, raising barriers around its points of view while despising and denying others". (MINTZBERG and LAMPEL, 2007, p. 6). It's important to register that, although the idea of strategy to Porter is not everything the firm does and everything in which it consists, he doesn't untie the competitive value from strategy individual activity (or abilities, competencies or associated resources.)

As for Prahalad and Hamel's theory about OS, Mintzberg and Lampel (2007) consider that the essential competencies, called by them "nuclear competencies", and strategic intention are a hybrid between the "learning school" - more prescriptive and oriented toward practice- and the "cultural school" - more descriptive and turned to research. As for the leadership approach, Prahalad and Hamel would be close to "cultural school" focusing on competencies rooted in the organization essence (its culture), and this would not be the great concern for the theoreticians whose argumentation is based on resources as in "design school".

Mintzberg and Lampel (2007) add that some theories are placed as absolutely innovators, but it is forgotten that though the strategy schools represent a lineage line crossing history, this lineage never can be by replacement. Most former schools contribute to the more recent ones, in a complex and, often, surreptitious way. They keep on surviving in practice, bringing in new framings, taking different masks" (p. 8).

To the authors, Porter's theory fits the prescriptive schools, whose followers adopt a knowledge approach in terms of a "managed growth" and seek forms to control disturbing influences. According to the authors, this theory, although being clear and coherent - what makes its transmission and idea discussion easy - may, at the same time, promote sterility both in thought and in application. Now, about Prahalad and Hamel's theory, Mintzberg and Lampel (2007) relate it to the descriptive schools, which prefer a "more natural growth" yet it introduces novelties to the strategic formation. The authors remind that despite tending to be a more complete and richer theory, what permits greater experimentation and innovation, it can generate "several contingencies and multiple perspectives that make its application very difficult" (MINTZBERG and LAMPEL, 2007, p. 9).

From these authors' point of view, the strategic formation has to worry about making questions rather than raising hypotheses and about investing more to improve the practice rather than searching for clearer theories. Strategic formation must be seen as a whole, including in its contradictions for it needs either value judgment and intuition; transformation and perpetuation; intellectual knowledge and social interaction; cooperation and conflicts, besides this, it needs a prior analyses, a later programming and an in course negotiation.

## **RESULTS AND DISCUSSION**

Data about the managers' profile and their conceptions related to OS were collected through a web questionnaire sent by the Human Resources Manager to all firm managers, as follows: 11 managers (Support area); 30 managers (Commercial area) and 67 managers (Technological area), adding up 108 managers. 73 managers (67,5%) answered to the questions related to their profiles , being 11 of the Support area (100%); 22 of the Commercial area (73,5%) and 40 of the Technological area (60%). 72 managers (66,5%) answered to the question " What do you understand by Organizational Strategy?" , being 11 of the Support area (100%), 21 of the Commercial area (70%) and 40 of the Technological area. (60%).

Data presentation was made by area and the obtained results from the question "What do you understand by Organizational Strategy" were confronted with bibliographical data, collected from primary and secondary sources.

### **Results about the participating managers' profile**

The majority of the three area managers are men: Technological area (75%); Commercial (90,9%) and Support (63,6%). All managers have , at least, High Education, being most of them the Commercial and



Support areas and 42,5% of the Technological area have MBA. Having a Master degree are 25,5% in the Technological area; 18,2% in the Commercial area and 9,1% in the Support area. 12,5% in the Technological area and 13,6% in the Commercial area have a Doctor degree. In the three areas, most managers are between 41 and 50 years old. They have been in the firm for more than 21 years: 52,5% in the Technological area, 45,5% in the Commercial area and 36,4% in the Support area. Only 11% of the total participating managers have been in the firm for less than 6 years.

Data have shown that all participating managers were completely able to formulate a concept about OS, especially a concept concerned to their practice perceptions of the new management model: the BCMS, either by their education level or because most of them were there when the new system was implemented.

## Results of answers to the question “What do you understand by Organizational Strategy?”

**Table 1 – OS conception TECHNOLOGICAL AREA – (40 participating managers)**

| Identification     | Quantity | Percentage | Terms used by managers   |
|--------------------|----------|------------|--|
| Prahalad and Hamel | 7        | 17,5%      | “path to be pursuit”, “behavior in relation to environment”, in the present and future”; “constant innovator thought”; “preparing the organization for future requests”; “continuous growth”; “dealing with change conditions”; “perspectives at long terms”; “portfolio of products”. |
| Michel Porter      | 8        | 20%        | “positioning adopted by the firm”; “evaluation of the contemporary scene”; “performance for a given period”; “maintenance and perpetuity of the firm”; “determined objectives in determined periods of time”   |
| Strategic Planning | 21       | 52,5%      | “rules”, “premises”, “directresses”, “actions”, “measures”, “policy”, “orientations” and “ways” in expressions that reveal “for the firm to reach defined goals” or “for the firm to reach the expected results”   |
| Undefined          | 4        | 10%        | “strategy is the firm’s strategy”  |

**Table 2 – OS Conception – COMMERCIAL AREA (21 participating managers)**

| Identification     | Quantity | Percentage | Terms used by managers  |
|--------------------|----------|------------|---|
| Prahalad and Hamel | 5        | 24%        | “dynamic and competitive scene”; “actions at long term”; “evolution of the firm”; “focus on the way”  |
| Michel Porter      | None     | 0,0%       | None  |
| Strategic Planning | 15       | 71%        | “procedures, means, forms, plans, actions, directresses, policies. definitions, concepts, manner, orientations, directions, qualified position, tactical plans” followed by the expressions “for the firm to reach the expected results”, or “for the firm to reach its goals.” |
| Undefined          | 1        | 5%         | “value and mission”   |

**Table 3 – OS Conception – SUPPORT AREA (11 participating managers)**

| Identification     | Quantity | Percentage | Terms used by managers  |
|--------------------|----------|------------|---|
| Prahalad and Hamel | 4        | 36,5%      | “vision of future”, “trace paths”, “to be prepared for changes and transitions”, “changeable environment”, “continuous and endless building |

|                    |      |       |  |
|--------------------|------|-------|--|
|                    |      |       | process”   |
| Michel Porter      | None | 0,0%  | None   |
| Strategic Planning | 5    | 45,5% | “forms”, “means”, “directioning”, “way through which”, followed by the expressions “for the firm to reach the expected results”, or “for the firm to reach its goals.” |
| Undefined          | 2    | 18%   | “Strategy is the firm’s strategy”  |

The debate considered “strategic planning” and Michel Porter’s theory on OS as belonging to the classical management model and Prahalad and Hamel’s theory, as an innovator one, on which the implanted BCMS is based. Results have shown that:

- a. the majority of managers are not identified with Prahalad and Hamel’s conception about OS.
- b. there was a difference among the areas as concerns to the number of managers identified with this conception and
- c. the most significant consensus among the managers has occurred as for the OS classical model.

Results have shown there was no consensus among managers as for Prahalad and Hamel’s thoughts, base of the new model; on the contrary, the managers’ perception converges to the classical management model. Those findings may denote that eight years of implementation of the new model were not enough to the assimilation of the new OS conception by all managers. It may also denote that this new model has been being followed by only a part of managers. Or yet, it may exist even a contradiction between what the managers think and what they do. As Mintzberg and Lampel (2007) observed in relation to the passage from a school to another, it can happen that some ideas of former models survive in practice, taking many disguises.

The authors also observed in relation to Prahalad and Hamel’s theory : despite of permitting greater experimentation and innovation, it becomes difficult in applying , what can be noted in some tasks the firm is supposed to accomplish to be admitted in the “ new strategy paradigm” - competing for the future -, as, for example, to unlearn great part of its past . Fragments of the managers’ speech reveal they are still rooted to the classical management model: “organization directresses that rule the activity planning”; “aims within the firm business proposal ”; “measures headed to corporative results, oriented by a managerial planning”; “the appearance the firm wants to be seen by the market and by its users”; “what is used by the firm to reach its aims , like income, technological qualification, market positioning” ; “to guarantee the maintenance and perpetuity of the firm”.

The idea of authority, in accordance with the school of Power, that Mintzberg and Lampel (2007) connect to Michael Porter’s thought, appears in the following words: “... accomplishment of a mission and attainment of the vision pre-defined by the top management”; “set of directresses and policies expressed by the top administration”; “corporative strategic orientation that originates in superior instances”. The managers’ voice did not signalize concern with other aspects raised by Prahalad and Hamel, as “to create goals which overcome limits”. The “goals” always appear linked to “defined objectives” and to “expected results”. References to “resources leverage”, mentions to “future sectors”, “origin of future demands” or “global preemption time” could not be identified, too.

As for the managers’role in the OS practice , as Prahalad and Hamel (2005) remark, when they say that “ competing for the future demands not only the redefinition of organizational strategy, but also the redefinition of the top management’s role in strategy creation” , only 5 managers have mentioned the importance of collaborators’ performance: “directresses generating actions which must be feasible by all”; “ having a strategy where every member of the organization is responsible for its fulfillment” ; “knowledge absorption and constant effort of its collaborators”; “organizing teams, dividing work and defining responsibilities”; “actions that must be incorporated by all those who participate in the organization”. Only 1(one) made a direct reference to the manager with the following: “path the firm should follow after discussion with all managers”.

Therefore, it’s possible to infer that decisions are not in managers’ hands, as the BCMS theoretical base proposes. The distance between the managers’speech and the base conception of the management model

implanted in the firm arises also when it's observed that from 72 managers, just 3 connected strategy to competence, being this relationship the founder idea of personnel management model by competence.

There were moments, in the managers' speech, when signals of the two theories - the classical and the Prahalad and Hamel's theories - appear, as in the case of "actions turned to internal process improvement, market positioning, innovation", corroborating both António's (2002) and Mintzberg and Lampel's opinions (2007) when they tell about the passage from a management model to another, when they say that this passage does not occur linearly and that the characteristics of both models can be joined even in contradictions.

It attracts attention the fact that the managers speak about strategy in a general manner, but in a few times referring to its practice within the firm. This may have occurred either by the content of the question, which allowed this kind of answer, or it can reflect disconcertedness between theory and practice, in other words, they cannot distinguish their practice within the base theory of the current management model. Or, actually, they are still practicing OS in the classical management model. Although the question presented this limitation, it was possible to note, in accordance to the objectives of this study, that managers, in their great majority, are not able to understand OS conception in the same way as the base theory which was used to implant BCMS on the firm.

Results also have shown differences among the managers' conceptions from each activity area. The Technological Area was the most identified with the classical management model (72,5). This area "comprehends positions turned to the development, use or incorporation of technologies which make solution obtainment to internal and external clients feasible, or which lead to improvement of processes and products, from technical / technological analyses and investigation". It's the area in charge of end-activities such as the development of researches and softwares.

Two aspects are of extreme relevance in the base theory of the personnel management model by competence: attention to the global preemption time and anticipation to the future. It is known that communication technologies are among those which more rapidly move forward; therefore, a firm in telecommunications, as the one investigated, cannot be satisfied with incorporation of existing technologies; but the firm itself must generate new technologies, anticipating, that way, for the future needs of clients, not only improving products, but creating new ones. By conceiving OS within the classical management model, the firm is trying to defend its market position, but it is not competing for the future.

Subsequent to the Technological Area, the Commercial Area had 71% of its managers identified with the idea of "strategic planning". The way the firm conceives this area denotes that it is linked to the classical management model; it is defined as an area "which involves positions connected to customer support and customer service, as well as to the firm positioning and to the positioning of its products in the market". It also comprehends corporative sales, accounting management, etc. The Commercial Area is, therefore, responsible for the linking between the external and internal medium, and reflects the firm policy. If its strategy conception is still attached to the classical management model, this means that the firm conducts its business within "defined objectives" and does not break paradigms. In other words, the firm does not "penetrate into uncertainty clouds to develop the ability of predicting the whereabouts of tomorrow market" and does not "create goals to overcome limits and challenge the staff in order to achieve what is apparently impossible", as it is suggested by the innovator management model.

Though the number of participating managers in the Support Area has been much inferior to those of the other two areas, it's significant that 100% (11 managers) answered to the questionnaire and this reveals concern with this kind of reflection. The Juridical, Financial and Human Resources Departments are in the Support Area. Of the three investigated areas in the firm, the latest was the most identified with the base theory of the personnel management model by competence. This area "embodies positions turned toward the management support and toward information systematization that will help all the acts of managerial decision-making".

It's possible to deduct, from the results, that the Support Area - dealing with important information to the other two areas - has a greater perception of the market movements and for this, is able to anticipate needs and opportunities. However, this perception seems not to influence on decisions in the Technological and Commercial Areas, causing, thus, disconcertedness between the Support Area and the others. Another possibility

to explain the fact that the other areas don't make good use of the Support Area information may be because the decision power in the firm, according to the managers speech, belongs to superior instances , or positions.

Retaking King, Fowler and Zeithaml (2002, p. 39), when they state that “the approval and the communication help to generate agreement about the main competitive advantage sources of the firm, help to concentrate the organization efforts and help to enhance the probabilities of a successful implementation”, it can be said that BCMS is being prejudiced either by the lack of approval from the Technological and Commercial Areas to the Support Area information or the communication among areas is truncated or further yet, the managers don't have the approval of superior instances to take action, even knowing about the market impositions and about future needs and opportunities. Moreover, there is the matter of consensus, mentioned by King, Fowler and Zeithaml (2002), who noted that consensus is related to high performance and lack of consensus to low performance.

## CONCLUSIONS

The implementation process of a new management model, as demonstrated by António (2002) and Mintzberg and Lampel (2007), besides being long, is not a linear process. The results of this research have shown that the thought, in which the implemented model is based, after eight years, is not constituent of the OS conception for the majority of managers yet. Mintzberg and Lampel (2007) also refer to the greater clearness of the classical management model, close to Michael Porter, in relation to the innovator model proposed by Prahalad and Hamel. Indeed, there was no mention to “essential competences”, to “future opportunities”, to “sector renovation” or any concern with “constant strategy movement” during the managers' speech.

To have a more accurate idea about OS managers' practice in relation to their concerns with market future demands and opportunities, as suggested by the implemented management model, it would be necessary to know if the firm is investing in this kind of research or if it has been creating and testing revolutionary products, anticipating, this way, to its rivals. This can suggest future researches which will help understand, in experience, the matter about futureness brought by the model.

One of the responsible factors by the failure of new management models is the implementation of the new model in a partial frame, by keeping features of the former model; this can also be related to cultural and structural issues of the organization. As they are used to the classical management model, in which the decision power was in hands of a few, it is really very difficult to the top managers realize what sharing power means, specially sharing with intermediate managers. So, even if they believe in the benefits of the personnel management model by competence, they end up conducting the firm strategy following the former model. Therefore, the best utilization of the organization competences - individual, collective or of the other resources, as proposed by the new implemented model, does not occur.

Another subject is the incompatibility between theory and practice. If the firm discourse defends ideas of the new model, but addresses the practice toward the former model, this can generate conflicts among managers, among managers and the top directors and among the activity areas themselves. Thus the organizational learning process and the development of the firm as a whole will be prejudiced. In that manner, the firm draws away from the intended competitive advantages with the new model implementation.

It is not possible to say, from the results of the present research, which would be the implemented model impact, in terms of competitive advantage. To do so, other researches should be carried out. Also, from the obtained data, it cannot be stated that OS managers conception is not aligned to the theoretical base of the model due to the model inefficiency, to its complexity or to failures during implementation; some hypotheses about this were raised, though. However, results have shown that it is of relevant importance that firms are constantly evaluating its management practices and, in case of implementing new models, these evaluations must occur even more frequently in order to make necessary adjustments. It is known that new models implementation occur at long term, and by then, as Mintzberg and Lampel (2007) affirm, the strategic formation must be seen as a whole, taking into account its contradictions and its transformation process.

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# CHARACTERISTICS AND RETURN ASSESSMENT OF SPONSORSHIP PROJECTS: PROPOSITIONS FOR NEW APPROACHES

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## ABSTRACT

*This study paper proposes to raise the main characteristics of sponsorship projects and evaluate the effectiveness of a specific case of sports sponsorship. In the first stage we define the characteristics used by decision makers and experts during the project evaluation process. It was verified that the importance of these characteristics is influenced by the nature of the desired objectives. In the second stage, a measurement of the receptiveness of the Brazilian National Soccer Team sponsorships was done with a recall test. The data obtained was treated as with the statistical techniques of factorial analysis, multiple linear regression and logistic regression. The results show that some factors have greater influence for recall prediction than others. The evidence suggests that the influence of each factor has distinct consequences for the sponsors that were analyzed.*

## INTRODUCTION

The increase in leisure, cultural, sports, and social activities can be observed on a daily basis, which bring together a great number of direct participants, either directly or by television. To take advantage of this audience, many companies invest in event sponsorships, in an attempt to gain recognition or brand promotion.

In the past, sponsorship was considered purely a way to secure financing for projects (STOTLAR, 2001; POPE & VOGES, 2000). These projects were not necessarily part of the company's strategy planning, and normally consisted of isolated initiatives, with no greater importance to the business objectives of the firm. The return on the investment from the sponsorship was not evaluated by the sponsoring companies, which also did not explore the full range of benefits the sponsored events provided.

However, sponsorship activities are been perfected over time and growing worldwide. D'Astous & Bitz. (1995), Amis, Berrett & Slack (1999) e Stotlar (2004) observe in their studies this rising importance of sponsorships in general, as well as relative to other common marketing tools. D'Astous & Bitz (1995), in particular, show that the expenses with sponsorship in North America increased during the 1990's at an average rate of 20% per year, compared with 5.5% spent in publicity and 7.6% in sales promotion.

According to Bennett (1999), sponsors potentially have of a large amount of entities and activities which can be chosen to be sponsored: sports, arts, community service, charity, teams, tournaments, personalities, events, fairs and shows. According to The World Sponsorship Monitor (SPORT BUSINESS, 2007), amongst the diverse targets of these investments, the sponsorship of events has the greatest amount of deals closed worldwide. Of these, the sports sponsorship leads with 78% of the total funds, with soccer receiving the greatest volume of investment, with an estimated US\$2,620 million in 2006.

According to Harvey et al (2006), sponsored events today generate more revenue than the total spent in all investment in media advertising combined (considering the sum sponsor investment and ticket sales). Despite the potential benefits or profits that the investment in sponsorships can bring to companies, there are two important questions which companies ask themselves, and are often hard pressed to answer: what to sponsor and how to measure the return on this investment? Since each audience requires a distinct form of communication, and each brand brings has its own identity, it is natural that companies search for answers to these questions.

Ghros et al. (2004) point out that, at least until the mid 1990's, managers identified the media coverage as an important item in a sponsorship project. However, the authors noted that currently an item which has won

importance in project evaluation is the capacity to increase brand awareness for the sponsor, by linking its image with that of the event.

The many characteristics of each event contribute to the subjectivity of sponsorship, thus making it harder to determine the correct value of the projects. According to Tripodi et al (2003) and Grynberg (2007), this issue has not yet been clarified in the literature. Based on this, it is increasingly important to understand the value of a project and how adequate a particular sponsorship is to the business objectives of the firm in order to further research in the field, as well as to assist decision makers on how to optimally allocate their promotional resources.

Despite the fact that event sponsorship activities continue to attract increasing levels of interest and investment as a form of marketing and corporate communication, the literature on this topic is scarce. (VENKATARAMANI & PHAM, 2006). Thus, the two main objectives of this study are: (a) to identify the characteristics that influence the perception of the value of a sponsorship project of events by the sponsors and (b) to measure the effectiveness of some of these characteristics in the case of the sponsorship of the Brazilian National Soccer team.

## **Defining Sponsorship**

At the very beginning of sponsorship activities, the main objective was to support activities, usually by means of financial aid. Today companies do not seek to provide financial support, but purchase sponsorship packages with the intent to achieve market objectives. Nowadays, the concept of sponsorship is wider, and is defined more strongly by the benefits that the activity can achieve for the companies.

According to Meenaghan (1991) sponsorship is an investment in an activity in exchange for the access to potential commercial exploration associated with this activity. Although this definition is sufficiently ample and clear, the definition of sponsorship definition had been changing according to changes in its functions and activities.

Javalgi et al. (1994) state that sponsorship is the hiring of a special event to support the company's objective by the improvement of the corporate image, by increasing brand awareness or by directly stimulating the sales of goods and services.

Hence, sponsorship is an element of the communication mix, where a company provides financial support to an entity, be it a sportsman, an organization or a group, allowing it to develop its own activities while also seeking to obtain benefits from this association in terms of image and knowledge. According to Cornwell & Maignan (1998), sponsorship can be defined then as an exchange between sponsor and an event, where the latter receives a fee and the first obtains a right to associate itself to the event to promote this association. This definition summarizes the conception of sponsorship.

## **Types of Events**

Any activity organized with certain criteria can be considered an event, from wedding parties to a sports competition such as the FIFA World Cup. All these are events that can be sponsored. This study evaluates the characteristics of events which possess some commercial value to companies and specifically, it evaluates the sponsorship of a soccer team. To facilitate understanding, researchers classify events into categories.

Gwinner (1997), for example, states that events can be categorized in at least 5 areas: sports, music, festivals, arts and professional reunions. He also presents a distinction between existing events (scheduled on the calendar) and sponsors created. The existing events are those which already are scheduled to occur periodically. An example is the FIFA World Cup, which takes place every 4 years. No event that already exists has known characteristics; has a history. D'Astous & Bitz (1995) state that one advantage associated to the sponsoring of existing events is that the sponsor can evaluate the value of this investment prior to the event. Even though there is logic behind the authors reasoning, the information relative to the event is not always clear or accessible to allow this evaluation.

Still on the topic of classification, the act of sponsoring can be continuous or it can be a one-time investment. The "one-time" investment occurs when a company sponsors an event that happens only once. The continuous sponsoring occurs when the event is repeated at regular intervals and the company continues to be its sponsor (D'ASTOUS & BITZ, 1995)

In summary, sponsoring of events is can be subdivides into: sports, entertainment, festivals and fairs, cause-related marketing and arts. They can be further classified as one-time or continuous, as well as existent or sponsor created.

## **Exposure**

The common conclusion found in cognitive learning studies is that the absorption of the communicated message increases according to the exposure of the individual to it. Other studies also point out that the larger the involvement of the individual with the communicated message, the larger the absorption (GROHS, WAGNER and VSETECKA, 2004). Thus one can speculate that the larger the exposure of the individual to a sport sponsorship project, the larger the company's recall will be. This hypothesis was tested in this paper.

## **Involvement**

The concept of fan involvement refers to the extension of the identification, motivation, engagement and affiliation of consumers with their personal leisure activities (MEENAGHAN, 2001). Crimmins and Horn (1996) argue that connecting a highly valuable object – a sporting event, for example – to an object with equal or less value – for example, a sponsoring brand – creates a relationship between the two which could indirectly influence the evaluation of the sponsoring brand from the consumer's perspective.

Meenaghan (2001) studied focus groups in his work with spectators of the 1998 Soccer World Cup. The author noted that individuals who defined themselves as “very interested” in the World Cup had better levels of retention and recognition of the companies sponsoring the event, and also correctly mentioned their brands with greater frequency than the other interviewees.

Aside from the involvement with a team, the individual may have a parallel or specific interest for a particular sport genre. Fisher and Wakefield (1998) found empirical evidence that the relevance of a action is an important dimension in the development of the identification of individuals with a determined group. This dimension was named by the authors as “involvement with the domain”. According to the authors, this involvement is positively associated to the recall of the sponsors and can work along with the involvement of the audience with the team or with an individual athlete. For this reason, well known players from the sports world are hired by companies to associate their brands to their images.

## **Similarity**

In the literature on “sports sponsorship”, many words and terms are used to describe the similarity between the sponsors and sponsored. Words such as synergy, link, fit, or adjustment are usually used (GROHS, WAGNER e VSETECKA, 2004)

The available studies on the subject create a distinction between functional similarity and image similarity. Functional similarity tells us about the thematic relation between the sponsor and the sponsored. In other words, it occurs when the sponsor's products are used or consumed during the sponsored event. On the other hand, the image similarity relates to the associated attributes to both sponsor and sponsored, requiring that the spectators notice a connection of image between the two (JOHAR and PHAM, 1999).

Due to the fact that consumers confuse sponsor and non-sponsor companies in recall tests, it is important to understand the motive by which certain people remember correctly the sponsors while other do not. One of the reasons given as influential in this differentiation is the perception of similarity by part of the consumers between the sponsoring company and the sponsored team. Some studies on the subject indicate that companies or brands which exhibit greater levels of similarity with the sponsors have greater chances of being mentioned in recall tests (GWINNER and EATON, 1999; JOHAR and PHAM, 1999; GROHS, WAGNER and VSETECKA, 2004).

The central idea is that consumers use the perception of similarity between the sponsoring company and event (or team) as a source of information to construct an interpretation of the association between them (GROHS, WAGNER, and VSETECKA, 2004). Due to this, it is desirable that the sponsors try to increase the perception of similarity (fit) from their consumers. This phenomenon was considered in the conclusions of this study.



## Event Sponsorship Objective

Companies decide to participate in a sponsor project for multiple reasons: increased brand recognition, to launch a new brand, to strengthen a current brand in relation to public opinion or change the brand somehow (MEENAGHAN, 1991; CROWLEY, 1991). These objectives are related to the managing of a company's image. It is relevant to understand that objectives related to image, very common when sponsorship tools are used, exist primarily because events have their own defined image. This way, firm and event can mutually lend each other their attributes.

Considering these objectives related to image, Harvey et al (2006) explains that to invest in a sponsorship product makes the company be seen as more positive, indicating that somehow they are helping an artistic event be preserved, among other examples. Still according to this author, the positive perception relative to the sponsor's brand can influence the purchase intentions, as result of the public's gratitude. Other authors cite the personal objectives of the decision makers in the sponsoring firms as important factors for the choice of the event to be sponsored (JAVALGI et al. 2004).

Another common objective of the sponsors is the financial return in the form of increased product sales, which may be short-term or long-term. However, it is extremely difficult to conclude that an eventual increase sales is due to a sponsorship. In spite of the difficulties to correlate causality in this sense and the efforts to measure the gains through the recall test, there are those who believe that it is not possible to evaluate the sponsorship in general without relating it to sales somehow (NARDONE & SEE, 2007).

Crompton (2004) lists a large number of objectives tied to the desire of companies to sponsor events, many of which are not necessarily related to sales. They are: increase in recognition of the brand, improving the company's image, using the sponsorship as a showcase for new products, improving employee morale and experimenting of products.

Fahy, Farrelly & Quester (2004) state that the positioning of the company's brand is a predominant concern in sponsorship deals, since it relates directly to the "Alignment of the image of the property to be sponsored"

Considering the objectives of sponsorships, the American company IEG which specializes in this field, did a test with 110 decision-makers on this kind of investment. The results were ranked according to the importance of the objective at the time of the decision as to which project to sponsor. The results are summarized in Table 1:

Table 1 – Relation of Sponsor's Main Objectives

|   |     |
|---|-----|
| Increase brand visibility                         | 79% |
| Raise consumer brand loyalty                      | 71% |
| Change/ Strengthen brand's image                  | 71% |
| Increase circulation in point of sale             | 52% |
| Stimulate sales and product experimentation       | 51% |
| Demonstrate social responsibility                 | 46% |
| Distribution / exhibition / product demonstration | 43% |
| Client Relationships                              | 25% |

Source: Copa America Sponsor Summit, 2004. IEG/Performance Research Sponsorship: Decision Makers Survey

Summarizing the above information, it is possible to synthesize the sponsor objectives in 3 categories: "Image Promotion" (MEENAGHAN, 1991; CROWLEY, 1991; JAVALGI et al, 1994; BENNET, 1999; CROMPTON, 2004; IEG, 2004; FAHY, FARRELY e QUESTER; 2004), "Strengthening ties with internal and external public" (MEENAGHAN, 1983; CROWLEY, 1991; CROMPTON, 2004; IEG, 2004), and increase in sales (CROMPTON, 2004; IEG, 2004; NARDONE & SEE, 2007).

## Evaluation of the Characteristics of Events: The Perception of Value

The association made by individuals in relation to a certain event greatly depends on what already exists in his memory in relation to its attributes. Past experience can create a recall in the individuals mind, defining a behavior and providing a more consistent evaluation on the event.

The perception of value of an event can take place through two perspectives: the consumers and the sponsoring company. The consumers may create their values through effective participation in the event, through transmitted images, through media coverage and opinions from other individuals. For the sponsor company's individuals, the same is true.

Pham (1992) demonstrated that when there is a large consumer involvement with an event, the information absorption process is affected. It can be assumed that a consumer with a higher involvement will have more positive attitudes in relation to the sponsor. Pascale and Farrelly (1998) also assume that the involvement and loyalty to an event can be transformed into loyalty to the sponsoring brand, if a strong and persuasive association is created in the consumers mind.

The attitude in relation to a certain event can vary due to the amount of information and existing perceptions. Independent from media information and those related to the event, a pre-conceived image may exist and influence the value evaluations and the selection of which project to sponsor. According to Roy and Cornwell (2004), the image transfer from event to brand is easier to occur on consumers with previous knowledge of the event.

According to Gwinner (1997) the intensity level of aspects also influence the perception of the general image of the event, and these aspects are: size of the event, professional status of participants (amateur or professional), tradition or history associated to the event, hosting of the event and promotional visibility.

Pascale and Farrelly (1998) consider the emotional relation between the audience and the event as another important aspect. The greater the love for the event, the greater the possibility that this audience will perceive the company's brand with love. Hence, an event with a large emotional relationship possesses a greater value for participants. The clear understanding of emotional impact of sponsorship is important to understand its value.

The frequency with which the event takes place may also influence the image of the event, as noted previously (D'ASTOUS & BITZ, 1995). Another important characteristic is the necessity of a strong understanding of sponsor brands and used properties, as explained by Fahy, Farrelly, Quester (2004). The authors state that a good adequacy of demographic and psychographic characteristics of the target-audience of the event with the sponsor influences the value of the event.

## **Measuring Return**

Given the set of characteristics identified as creators of value through sponsorships, the decision-maker must develop a way to measure them in order to confirm the expected return on investment. The increase of the brand recall level is usually considered one of the main objectives for companies which invest in sports sponsorships (CORNWELL et al., 2001; CORNWELL and MAIGNAN, 1998; GWINNER, 1997) and, hence, serve as criteria for evaluation. Recall can be defined as a part of a message that is retained in the memory of a person exposed to a stimulus. The larger the retention capacity, the greater the efficiency of the communication effort. In this study in particular, the factors capable of influencing the recall of companies sponsoring the Brazilian National Soccer Team –Nike (sportswear), soft drink brand Guaraná Antarctica and telephone company Vivo- were researched.

## **METHOD**

The research was performed in two distinct stages. As seen, firstly to raise variables from the sponsoring decision making process to identify how companies make their project choices. Based on this, the desired objectives with the projects and methods for evaluation used by companies were identified. Lastly one of the evaluation methods was applied to a specific case.

In the first exploratory stage, the research was done by professionals from the companies that participate in the decision making process of event sponsorships in Brazil. The sample was done by access to the answers. Questionnaires were sent to 80 professionals from national and multi-national companies, of which only 17 had validated answers. The sample was composed of professionals from large companies.

The construction of the questionnaire was based on literature and professional experience of researchers. Some respondents were consulted in a preliminary stage of the field research to aid in the construction of the list of project characteristics and pertinent questions. The resulting questionnaire was tested through the internet with a new sub-sample of 5 respondents, considering 22 characteristics.

After completing the analysis of the answers, small adaptations were made in the questionnaire, dividing it into 3 parts and then submitting it to the field. The first part had the objective of learning from the respondents their opinions on the most important characteristics of a sponsorship project (no stimulus). In the second part, with stimulus, all the identified characteristics were listed and respondents were asked to indicate the level of importance of each characteristic, considering a scale of 10 points. It was also asked that the respondent consider in his answers different objectives to be reached with the sponsorship, such as: promoting brand image, public relations or sales. At the end of the second part of the questionnaire, the respondent was invited to include some characteristic not mentioned in the list of the 22 that were evaluated. In the third and final part of the questionnaire the respondent informed if his company possesses a structured method to select projects and measure the results with sponsorship.

In the second stage of the study, the return on investment of the Brazilian National Soccer Team was measured. The criteria used was the recall and recognition of the sponsoring brands, seen in the literature as the most common and cited by part of the respondents in the previous phase. For this, a questionnaire based on the words of Gwinner and Eaton (1999), Gwinner and Swanson (2003), and Grohs, Wagner and Vsetecka (2004) was created and used.

The sponsors recall was measured primarily as an open question with no stimulus. In a second test, the recall was tested with stimulus, in other words, aided by a list of sponsoring companies, which was presented to the interviewees, made up by the official sponsor and three other competitors of the same category, along with the option "I don't know".

The perception of similarity between sponsors and the Brazilian National Soccer Team was measured in two aspects: functional and image. The measurement was done through the use of questions for each of the aspects, utilizing answers in a Likert 5-point scale. The questions were made in relation to each of the 3 official sponsors of the Team.

Two models were proposed to verify the factors with the interviewees which can or cannot influence sponsor recall levels. The first model used as a dependent variable the quantity of correctly named sponsors in the recall test. The second measured individually the recall levels for each sponsor, using as a dependent variable the naming or not of each sponsor

The data was collected between the 6th of November, 2006 – the day following the last friendly match of the Brazilian National Team in 2006 – and 8<sup>th</sup> of December, 2006. 382 questionnaires were considered valid and analyzed statistically.

The sample was composed by 52.4% of male respondents and 47.6% female. The age of the respondents varied between 15 and 59 years of age, with an average of 25.5. Due to the fact that the research involves a large number of young students, 56.5% of the sample was composed by individuals with an incomplete college degree, 42.4% were individuals with college degree, and the remaining had completed high school.. In relation to social classes, 59.9% are class A, 36.0% class B, according to the classification criteria of the ABEP (Brazilian Association of Research Firms).

## **Formulation and Research Hypothesis Test – Stage 1**

To reach the objectives of the first stage, statistical tests were conducted to initially identify differences between the attributed values to each variable in relation to the 3 possible objectives. This is, to identify if there is a perception of difference in each variable when the objectives differ. Later, the higher averages were listed, consequently they were considered as the most important in the decision making process.

Prior to the process of comparison of averages, normality (Kolmogorov-Smirnov) and variance homogeneity (Levene) tests were carried out. Since some characteristics violated some basic premises, the Kruskal-Wallis non parametric test was used, and for the significant differences, compare them through the Bonferroni Test.

The H0 Null hypothesis test was done for each of the 22 listed characteristics: *"The average value of importance of characteristic does not have any significant differences when the main objective of the sponsor is promote image, improve public relations or sales"*.

The alternate hypothesis that was considered was presented as follows: *"At least 1 of the average values of importance of characteristic have a significant difference when the main objective of the sponsor is promote image, improve public relations or sales"*.

The results of the Kruskal-Wallis test register the significance (p-value) of the difference between the averages, considering 3 types of different objectives. The chosen level of significance for the hypothesis test was 5%.

Three classifications were made based on the value of the “Means of the grades attributed to each characteristic”. Each classification refers to a different objective. The 5 highest and 5 lowest averages were chosen from each classification, and the similarities and differences between them were analyzed, considering the three objectives. Later, these higher average characteristics were compared to those listed spontaneously by respondents in part 1 of the questionnaire.

## Formulation and Research Hypothesis Test – Stage 2

For the realization of the second stage the following hypothesis were adopted for each model:

### Model 1: quantity of correctly named sponsors on the recall test:

H1: The exposure to the Brazilian National Team matches is positively associated to the quantity of sponsors mentioned in the recall test.

H2: The involvement with the Brazilian National Team is positively associated to the quantity of sponsors mentioned in the recall test.

H3: The interest for soccer (domain) is positively associated to the quantity of sponsors mentioned in the recall test.

H4: The interest in watching sports is positively associated to the quantity of sponsors mentioned in the recall test.

### Model 2: Recall for each sponsor:

H5: The perception of similarity between one sponsor and the Brazilian National team is positively associated to the sponsor being recognized.

H6: The exposure to Brazilian National Team matches is positively associated to the sponsor being recognized.

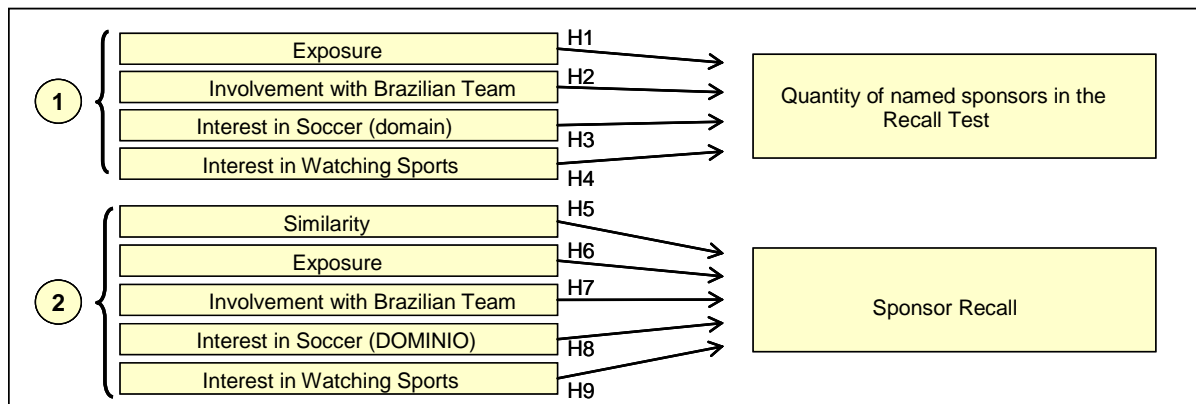
H7: The involvement with the Brazilian National Soccer team is positively associated to the sponsor being recognized.

H8: The interest for soccer (domain) is positively associated to the sponsor being recognized.

H9: The interest in watching sports is positively associated to the sponsor being recognized.

The model 1 was done only once, while model 2 was done three times: one for each sponsor of the Brazilian National Team. Figure 1 shows both models along with the hypotheses postulated

*Figure 1: Illustration of models and hypothesis tested in stage 2*



Prior to proceeding with the regression of models 1 and 2, the independent variables were treated by the factorial analysis method. The definition of used factors in grouping was done previously by the researcher, according to the “a priori” method, where each factor was obtained, grouping the related questions to each specific constructs proposed in this study for the formation of variables

All the factors met the following criteria as proposed by Hair et al. (2005): Bartlett sphericity test, sample adequacy measure, commonality of variables and the explained variance percentage

To test the hypothesis referring to the first model in this study, multiple linear regression technique was used. To test hypothesis relating to the second model the logistic regression technique was done three times, once for each of the three sponsors of the Brazilian National Team

## RESULT ANALYSIS

### Raising of Sponsorship Project Characteristics

The bibliographical research and field work done with experts who work with sponsorships had as main objective identify the considered variables of the decision making process in sponsorship projects. None of the studies found in literature present a complete relation of them. Thus, the first result of this study was a compilation of the 22 variables identified as relevant in the evaluation process in projects of this nature, as follows.

#### Relation of Variables in Literature

1. Similarity of event image and brand/company image.
2. Amount of sponsors in event.
3. Levels of sponsorship: main, co-sponsor and support.
4. Quality (recall / reputation) of event participants.
5. Size of the event – number of participants in general, be it as competitors or artists.
6. Geographical coverage of the event.
7. Event Tradition.
8. Use of product during the event, be it experimental, demonstrative or by acquisition.
9. Sales of product at the event or through the event.
10. Credibility of company responsible for the event.
11. Possibility of development of promotional actions through the sponsor at the event or through the event.
12. Programmed promotional actions (created and developed by the events organizing company)
13. Existence of relationship activities such as: infra-structure for VIP area, hospitality center, VIP tickets, etc.
14. Quantity of media inserted into project, through which the sponsor can exhibit his brand.
15. Capacity of spontaneous media generation.
16. Brand visibility at events locale.
17. Knowledge of event by the public in general.
18. Level of emotional involvement of the audience and the event.
19. The volume of audience (expected crowd) in the event.
20. Expected profile by the events audience – age, sex, social class, appropriate to the product or brand of the sponsor.
21. Price of sponsorship quota.
22. Possibility of brand use and logo of event in public or promotional campaigns.

### Identifying the Main Characteristics

In the field work of the stage 1 the degree of importance of each one of the characteristics listed above, according to the perception of value given for the respondents of the sponsorship projects. The statistical analyzes carried out, as well as the quantitative results obtained, will not be presented in this text, although they are available for consultation. In Table 2 we show the relations of the characteristics considered more relevant as a function of the objectives of promotion of image, relationship and sales (Table 2).

**Table 2 – List of 5 Characteristics with Greatest Averages for Each Objective.**

|   |   |   |
|---|---|---|
| The 5 greatest averages for the “Image” objective.<br>(7 are listed, since 3 of them have the same average)                       | The 5 greatest averages, for the “Relationship” objective.  | The 5 greatest averages for the “Sales” objective.  |
| Image similarity of the event with the brand/product of the company (9.47).   | Existence of relationship activities such as: infrastructure for VIP area, hospitality center, VIP tickets, etc (8.94). | Expected profile of the public at the event – age, sex, social class – appropriate to the product or brand of the sponsor (9.00). |
| Amount of media included in the Project, through which the sponsor can display its brand (9.41).                                  | Level of emotional involvement of the public with the event (8.82).   | Product’s sales on the event or through the event (8.65).   |
| Quality (recognition/reputation) of the participants of the event (9.35).   | Possibility of developing promotional actions by the sponsor at the event or through the event (8.59).                  | Possibility of developing promotional actions by the sponsor at the event or through the event (8.59).                            |
| Public’s level of emotional involvement with the event (9.35).  | Use of the product in the event, either as experimentation, demonstration or acquisition (8.41).                        | Possibility of using the brand (logo) of the event in publicity and promotional campaigns (8.41).                                 |
| Generation capacity of spontaneous media (9.23).  | Image similarity of the event with brand/product of the company (8.35).   | Use of the product in the event, either as experimentation, demonstration or acquisition (8.29).                                  |
| To have brand visibility in the place(s) in the event (9.23).   |   |   |
| Expected profile of the public at the event – age, sex, social class – appropriate to the product or brand of the sponsor (9.23). |   |   |

One can observe that there are differences in value or importance of the characteristics as a function of the objectives. This suggests that, depending on what is intended with the event’s sponsorship, the manager must consider different project

profiles. Among the features classified with the 5 greatest averages, none are repeated for the 3 different objectives. However, 5 of them are present in at least 2 objectives. They are: (a) the image similarity between the event and the brand or the company’s product; (b) the level of the public’s emotional involvement with the event; (c) the expected profile of the public; (d) the possibility of the use of the brand and the products in the event; and (e) the use of the product in the event. These results are consistent with the searched literature. Table 3 provides the ranking of the variables considered most relevant to each type of objective.

**Table 3 – Summary of Comparisons of the variables by Objectives**

|  |
|--|
| Summary of the comparisons of value (importance) of the characteristics of the sponsorship’s projects considering the objectives “image, sales and relationship” |
| A – The relationship of the characteristics with important values that is independent of the objectives  |
| 1. Number of sponsors of the event.  |
| 2. Being the main sponsor  |
| 3. Size of the event – number of participants in general, be they competitors or artists.  |
| 4. Geographical coverage for the event.  |
| 5. Event’s tradition.  |
| 6. Use of the product in the event, be it by testing, demonstrating or purchase.   |

|  |   |
|--|---|
| 7. Product's sales at the event or through the event.  |   |
| 8. Possibility of developing the promotional actions by the sponsors at the event or through the event.                    |   |
| 9. Promotional action in the project (created and developed by the company organizing the event).                          |   |
| 10. Public's knowledge of the event.   |   |
| 11. Expectation of the volume of public (number of people at the event).   |   |
| 12. Characteristics of the public at the event: age, sex, social class, appropriateness to the product or sponsor's brand. |   |
| 13. Sponsor's price of the event.  |   |
| 14. Possibility of use of the brand (logo) of the event in public and promotional campaigns.                               |   |
|  |   |
| B- Relationship of the characteristics with value of importance that depends on the objective's definition                 | Significant difference between averages |
| 1. Existence of similarity of the event's image with the brand/product of the company                                      | + Image and Sales                       |
| 2. Knowledge of the participants' quality of the event.  | + Image and Sales                       |
| 3. The credibility of the company that is producing the event  | + Image and Sales                       |
| 4. Existence of relationship activities – <i>hospitality center</i> , VIP tickets.   | + Relationship and Sales                |
| 5. Amount of media inserted in the project through which the sponsor will be able to display their brand.                  | + Relationship and Sales                |
| 6. Capacity to generate spontaneous media.   | + Relationship and Sales                |
| 7. Brand's visibility at the place(s) of the event.  | + Relationship and Sales                |
| 8. Public's emotional involvement with the event.  | + Image and Sales                       |

As can be seen, some characteristics have great similarity with a specific objective and stand out as being of great importance. For the objective "Image", the characteristic "Existence of similarity of image of the event with the brand/product of the firm" has the greatest average. Also, the variables "Knowledge of the quality of the participant of the event" and "Credibility of the firm the produces the event" are relevant. For the objective "Relationship" the characteristic "Existence of relationship activities", involving specific infrastructure has the greatest average, and also has the second greatest average for the objective "Sales". The expectation of media generation and the consequent brand visibility are also relevant. The objective "Sales" has its highest average in the characteristic "Expected Profile of the Public at the event", although there are also significant weights on the variables A, B and C. These results seem coherent with the arguments found in the literature.

The result of the comparison between averages of the value of the importance of the characteristics of the sponsorship projects leads to the conclusion that the pre-defined objectives must affect the perceived value of these characteristics.

Table 4 provides a list of the characteristics indicated by the respondents as the most relevant in a sponsorship project of event, without stimulus. The extension of the citations fell short of the list found in the literature review. This result suggests that the decision makers consulted on sponsorship projects may not be considering a wide enough range of variables in their choice process. The observation of the relative absence of formal criteria for project selection at the end of the questionnaire supports this proposition.

**Table 4 – List of Characteristics Cited as Most Important for Assessment of Sponsorship Projects (without stimulus)**

| Characteristics chosen as most important by the respondents | Total citations |
|---|-----------------|
| Media coverage  | 8               |
| Targeted public of the appropriate event                    | 8               |
| Similarity between the event's and the sponsor's brand      | 6               |
| Event's size  | 6               |
| Project's budget  | 6               |
| Visibility of brand at the event                            | 4               |
| Producing company of the event reliable                     | 4               |
| Products' Sales   | 3               |
| Spontaneous media   | 2               |
| Targetted public's involvement                              | 2               |
| Relationship activities                                     | 2               |
| Participants quality  | 1               |
| Promotional opportunities                                   | 1               |

Curiously some characteristics cited in this stage have not been found in the literature or mentioned by the *experts* during the exploratory phase (pre-survey), thus enriching the list of considerations to be made in future work. The inclusion of these new variables raises to 25 the considerations that must be analyzed by the decision-makers of sponsorship projects. They are:

- Information available of cost estimated for each thousand people harmed;
- Existence of social stocks on the project; and
- Use of physical incentives

### ***Recall of the Sponsors***

*With the objective to develop a systematic assessment for three operating sponsors in Brazil, a memory test of the brands associated with the Brazilian soccer team was made. Nike was the company who presented the highest biggest levels of recall in the research. Cited by 49.0% of the interviewed as the first memory (top of mind), Nike obtained 76.4% of the positive answers in the spontaneous test and reached 92.4% when the answer was stimulated. The results for the Guaraná Antarctica sponsor followed right after with 24.9%, 57.6%, and 76.2% of citations in the same categories listed above. Vivo reached percentages of 6.8%, 30.1% and 62.8%, respectively. These results are shown in Table 1.*

**Table 1: Recall of the Brazilian Soccer team's Sponsors**

| <i>Sponsor</i>            | <i>Top of Mind</i> | <i>Recall without Stimulus</i> | <i>Recall with Stimulus</i> |
|---------------------------|--------------------|--------------------------------|-----------------------------|
| <i>Nike</i>               | <i>49,0%</i>       | <i>76,4%</i>                   | <i>92,4%</i>                |
| <i>Guaraná Antarctica</i> | <i>24,9%</i>       | <i>57,6%</i>                   | <i>76,2%</i>                |
| <i>Vivo</i>               | <i>6,8%</i>        | <i>30,1%</i>                   | <i>62,8%</i>                |

### ***Model 1 Results***

Linearity was tested by simple regression of each independent variable with the dependent variable, from Levene's test and the graphical analysis of residues. The heteroscedasticity of the data was accessed through the plot of the residues against the dependent variable. No signs of violation of the assumptions in the model were found. On the other hand, normality was tested graphically (histogram of the variables and the residues) and by Kolmogorov-Smirnov's test. In this case, minor violations of the assumptions were found. However, the result was expected, according to the variables characteristics. Such fact was not considered as relevant to have significant impact on the model.

The independent variables present in the final model were selected by the Stepwise method from the software SPSS 13.0. The model showed good adjustment of the data ( $f = 142.7$  with significant  $< 0.01$ ). Despite the fact that four independent variables showed positive correlation with the amount of sponsors cited, only two variables – interest for soccer (Domain Factor) and interest in watching sports (Interest for Sports) –



were maintained in the final model. The two independent variables explain a very reasonable percentage of variance in the amount of sponsors cited, with the value of the adjusted  $R^2$  of 42.7%. The exposure to the Brazilian National Team (Exposure Factor) and the involvement with the Selection (Involvement Factor) did not remain in the final model due to their inexpressive contribution to its prediction power, thereby respecting the principle of parsimony. The variable with greatest forecast influence in the model was the interest for soccer (Domain Factor), as the table shows below.

**Table 2: Model 1 Beta Coefficients (dependent variable: recall - quantity)**

| <i>Independent Variable</i> | <i>Beta</i> | <i>Significance</i> |
|-----------------------------|-------------|---------------------|
| <i>Domain Factor</i>        | ,464        | ,000                |
| <i>Interest on Sport</i>    | ,235        | ,000                |

## **Model 2 Results**

Initially the sample was divided into two groups, following orientation of Hair et al (2005). The first group, used to estimate the model, accounted for approximately 65% of the sample – selected randomly by the software SPSS 13.0. The second group, used to validate of the model, accounted for the remaining 35%.

The models were run using the method Forward: Wald of software SPSS 13.0. The model showed good adjustment of the data for the three sponsors (significance < 0.01 and test of Hosmer and Lameshow > 0.10, in all the cases). The  $R^2$  value of the Nagelkerke, which varies between 0 and 1, where 1 indicates optimum model adjustment, showed a value of 0.258 for the Nike model, 0.331 for the Vivo case and 0.416 for Guaraná Antarctica. The results indicate that all the models had reasonable forecast capacity of recall from the sponsors, with the model of Guaraná Antarctica demonstrating the best capacity.

The Classification Matrix indicated that all three models had good capacity to classify the data correctly. Relative to the estimation group, Nike, Vivo, and Guarana Antarctica showed classification percentages of 79.0, 78.6, and 73.4 respectively. In relation to the validation group, the percentages were 76.1, 71.6 and 81.3 respectively. These figures shown demonstrate that the technique of binary logistic regression was appropriate to test the data.

The independent variables in the models of the three sponsors are detailed in the table 3. In line with the outcome of the first presented model, the interest for soccer (Domain Factor) and the interest in watching sports (Interest for Sports) were kept in the final model of the three sponsors. The exposure to the Brazilian National Team (Exposure Factor) and the involvement with the Team (Involvement Factor) will not remain in the final model in either of the three. The similarity was measured in two distinct ways: functional and image. The variable functional similarity (fator\_sim\_fun) was significant for predicting the recall only for the Nike brand, while the image similarity (fator\_sim\_ima) showed significant only for forecasting the recall of Guarana Antarctica.

**Table 3: Model 2 Beta Coefficients (dependent variable: recall of each sponsor)**

| <i>Sponsor</i>                 | <i>Independent Variable</i>   | <i>B<br/>eta</i> | <i>Wal<br/>d</i> | <i>Significance</i> |
|--------------------------------|-------------------------------|------------------|------------------|---------------------|
| <b>NIKE</b>                    | <i>Fator_Sim_Fun_Nik</i>      | ,6<br>39         | 14,9<br>38       | ,000                |
|                                | <i>Fator_Domí<br/>nio</i>     | ,4<br>19         | 2,82<br>0        | ,093                |
|                                | <i>Interesse_Es<br/>porte</i> | ,4<br>47         | 6,14<br>0        | ,013                |
| <b>VIVO</b>                    | <i>Fator_Domí<br/>nio</i>     | ,9<br>00         | 14,7<br>65       | ,000                |
|                                | <i>Interesse_Es<br/>porte</i> | ,3<br>53         | 5,72<br>4        | ,017                |
| <b>GUARAN<br/>Á ANTARCTICA</b> | <i>Fator_Sim_I<br/>ma_Gua</i> | ,4<br>07         | 6,43<br>0        | ,011                |
|                                | <i>Fator_Domí<br/>nio</i>     | 1,<br>203        | 24,0<br>50       | ,000                |

|  |                               |          |           |      |
|--|-------------------------------|----------|-----------|------|
|  | <i>Interesse_Es<br/>porte</i> | ,2<br>81 | 3,31<br>2 | ,069 |
|--|-------------------------------|----------|-----------|------|

## CONCLUSIONS

The present study sought to understand the universe of projects for sponsorship of events, mainly with the goal to answer the following question: which are the main variables that influence the perception of value of a project for sponsorship of events, by business sponsors, and consequently in the decision to sponsor it?

Regarding the identification of the existing features in the constitution of the project of sponsorship of an event and that influence in the decision of the sponsors, were found 25 potential features, being 22 compiled from an ample bibliographical revision and 3 identified in the field. A relation of this amplitude was not found in any published work until the present moment. The revelation of these 25 features should expand the capacity of the managers to evaluate the sponsorship projects and in the future could facilitate a better definition of how and how much each one of them influence the decision-making process. It could also serve as a parameter for assessment of other variables that may arise in the proposals submitted to them due to proper dynamics of the subject and the sprouting of new types of events.

Regarding the objective of identifying the relative importance of the characteristics of the projects, considering the different main objectives with the sponsor, according to the results there is strong evidence that the previous definition of objectives influences directly in the value noticed of each characteristic that make up the project. Among the list of 22 characteristics evaluated in the field, 14 of them does not show significant difference between the averages of degrees given by the respondents, therefore, suggesting not to vary much in accordance to the main objective defined.

Therefore, it follows that for some of the variables analyzed; the definition of the previous goals to the sponsors apparently had little influence over the value within the project. That is, when they exist in a sponsorship project, they may be independently assessed from the objective defined by the company, be they of elevated or reduced value.

This result provides interesting contributions to the decision makers, since it can assist in the formatting of a sponsorship model, facilitating in the identification of the number of variables that must deserve a greater or lesser attention of its part when the assessing the opportunities for sponsorship. These characteristics are: (a) the number of sponsors of the event; (b) being the main sponsor; (c) size of the event, translated by the number of participants in general, be them competitors or artists; (d) the geographic coverage of the event; (e) the tradition of the event; (f) the use of the product at the event, be it testing, demonstration or acquisition; (g) the possibility of selling products at the event, or through the event; (h) the possibility of developing promotional stock for the sponsors at the event, or through the event; (i) existence of promotional stocks created and developed by the organizing company of the event; (j) the public's knowledge of the event; (k) the expected public's volume at the event; (l) the characteristics of the public at the event, be it age, sex, or social class appropriate to the product or the brand of the sponsor; (l) the price of the sponsor of the event; and (m) the possibility of using the brand of the event in promotional public campaigns.

However, other variable shows signs of variation of importance depending on the type of objective expected for the project. That is, its value depends on the main objective defined by the sponsor. Analyzing this group of 8 characteristics, one observes which objectives influences in the difference of its value. When the objective is "image promotion" or "raise sales" the results show that the value of the listed characteristics below is always different and always with the greatest value for "image" than for "sales". They are: (a) the existence of similarity of the event's image with the brand/product of the company; (b) the previous knowledge of participant's quality of the event; (c) the producing company's credibility of the event; and (d) the public's emotional involvement with the event.

The feature "image similarity" has direct relation with the objective "image" defined by the sponsor. According to the bibliography examined, it is clear in this case that the sponsor could've had implications of the image if the similarity is bad. The reasoning is similar for the characteristics "participants' quality" and "producer's credibility". If the participants or the producer are not of high level of excellence, it affects the event. However, the damage is potentially greater to its image and the sponsor associated rather than the proper sales connected to the sponsorship. When the objective is "image" or "relationship", the value of the following characteristics is different, always with greater value for "image" than for "relationship". The following variables are involved in this judgment: (a) the amount of inserted media in the project, through which the sponsor will be able to display their brand; (b) the ability to generate spontaneous media; and (c) the brand's

visibility at the place of the event. The analysis of the listed characteristics suggests that when the objective is to strengthen ties, the visibility and the exposure of the brand are not so important.

In relation to the objectives “strengthen ties” and “raise sales” the existence of activities or infrastructure for special guests represents a different value, always with a greater value for those companies that wish to use the event to get closer to certain guests rather than promote immediate sales. However, the difference of value for this variable was not found for the objective “image”, suggesting that, in this case, it has similar importance for both objectives.

Therefore, it can be concluded that the main objectives that must be achieved with sponsorship, defined previously to the projects, influence directly in the importance of certain characteristics of the sponsor projects, at the moment of its evaluation.

Finally, with regard to the structured methods used for the evaluation of projects of sponsors, among the 17 respondents, only 6 use some method of assessment to select the project; 6 claim to use methods of evaluation for both selection of projects as to measure the sponsor's results, while no respondents states to use methods of evaluation of sponsorship only for measuring the results. These results suggest that there is still much to done in the process of evaluating this type of investment.

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# LESSONS LEARNED THROUGH BALANCED SCORECARD IMPLEMENTATION

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## ABSTRACT

*This study aims at understanding the manner in which knowledge transference occurs during a Balanced Scorecard implementation, according to consultants' perspective. Through qualitative research a study was conducted to identify the critical factors involving knowledge transference. The investigation was based on the assumption that, within organizations, common organizational aspects may promote or inhibit both knowledge transference processes and Balanced Scorecard implementation. Five consultants were interviewed and the analyses of such material reveal that the following topics are the key success factors involved in the process of implementing the Balanced Scorecard and in organizational learning: leadership commitment, assimilation of methodological assumptions by members of the organization and external mediation carried out by the consultants.*

## INTRODUCTION

According to Kaplan and Norton (1997, 2000), Balanced Scorecard concepts were formulated in the beginning of 1990, since traditional methods to measure organizational performances based strictly on financial measures were becoming obsolete. Although Epstein & Manzoni (1998) also at that time highlight that organizations were already calculating financial and non-financial measures, it was Kaplan and Norton who made important headway regarding the manner in which such measures were organized and key performance measures exhibited, aligning them to organizational perspectives beyond financial measures. However, this framework is in a constant process of improvement, due to the authors, experience in this implementation field. Taking these facts into consideration, it is possible to say that an organization and its members will go through the process of apprenticeship, that demand change and adaptation, inasmuch as at the beginning, they will have to adjust to a new management model while, at a later stage, they will reflect, evaluate and continually review the hypotheses of this model. Under this perspective, it is appropriate to explore issues involving the Balanced Scorecard management as they relate to the learning process occurring in organizations and assimilated by employees. Thus, since organizations hire consultants to develop and implement this framework, as well as train the executive board and their employees in order to guarantee that decisions are aligned to the objectives traced by the new management model, a motivation emerged to reveal through qualitative research the consultants' viewpoint concerning the Balanced Scorecard knowledge transference process. To that end, this study was organized in five sections: the present introduction; the theoretical framework on which the study was based; methodological procedures; the results and, last, the final considerations.

## THEORETICAL FRAMEWORK

This section, divided into two topics, presents the literature upon which the research process was developed. It will, thus, introduce the Balanced Scorecard and its assumptions, as well as the implications involved in the implementation process. It will also bring forth notions regarding knowledge transference in the organizational environment, in other words, organizational and individual learning.

### **Balanced Scorecard – the tool and its implementation**

Building scorecards is a process initially involving a description of idealized organizational objectives and the strategies utilized to reach these aims. The organizational objectives mentioned should then be distributed under four perspectives, namely, the financial one, the customer-oriented, internal processes, and learning and growth. Each strategic objective requires the identification and definition of one or more key measures allowing a performance analysis of the goals traced for each of them. Based on the results obtained and, in order to evaluate the organization's strategy, an analysis was conducted by Kaplan & Norton (1997) to show the relationships among situations in which the goals of the objectives were reached and those in which they were not. This was done because, according to the authors, "...an adequately elaborated scorecard should tell the story of the business unit's strategy through a sequence of cause and effect relations" (Kaplan & Norton, 199, p. 155).

According to Kaplan & Norton (1997) aligning the organization's executive board to the perspectives and strategy of the business, above all with respect to the sponsorship of the project by these managers, requires an architect, in other words, someone capable of structuring and facilitating the scorecard's building phase, someone who will interview organizational members with the purpose of collecting data which will be key factors in the definition of the scorecards. As concerns this issue, Edenius & Hasselblad (2002) emphasize that this architect will have to be able to capture from all the emerging data, those key factors which will determine the organization's success. This is relevant because, according to these authors the organization will benefit from choosing in advance those key factors which will lead to success. The data collected by the architect make up the strategic building resource. The experience of implementing scorecards made possible for Kaplan and Norton (2000) to organize and present these objectives in a visual template, which they referred to as strategy map. Strategy maps, according to the authors, are graphic representations that "illustrate how an organization plans to convert its various assets into desired outcomes" Kaplan and Norton (2000, p.5), while also pointing out the cause-and-effect chain between the strategic objectives and the four perspectives. Based on this explanation, it is possible to observe that this management framework enables organizations to elaborate an objective report, which provides elements for an excellent company overview performance and strategic follow-up. After designing the objectives description, its indicators and its cause-and-effect relationships, it is suggested by Kaplan and Norton (1997, 2000) that organizations create a chronogram that embeds the framework implementations and the first data evaluation. Once the objectives have been described, the indicators and the cause-and-effect relationships established, Kaplan and Norton (1997, 2000) suggest that organizations create a chronogram including the framework implementations as well as an evaluation of the initial data.

The authors recognize that a management system, as the one proposed by this framework, should be gradually introduced and, at the same time, should promote a change in the management processes patterns, making sure that a perfect assimilation to the new model is taking place.

As Senge (2002) highlights, a great number of managers know that for different reasons good ideas are not implemented and ideal strategies cannot be put into action. Kaplan and Norton (1997) affirm that, Balanced Scorecards fill this need, due to the fact that their purpose is to put the described strategy into action. Senge (2002) asserts that one of the obstacles during the implementation phase of this resource is that people are confined to their mental models. This phenomenon is due to the fact that individuals are often limited by their own vision and understanding of the world. This habit tends to affect the way they think and observe what happens around them, as well as the way they act. Furthermore, the author asserts that these mental models can be simple generalizations or complex theories based on premises that are going to influence their manner of thinking, observing an event and an action. Therefore, architects and the implementation organization team should exchange ideas in order to promote shared vision. This shared vision, as Senge (2002) explains, is a resource that enables people to build the unified purposes and are, consequently, committed to vision integrity. As they move from the building scope to the tool implementation scope, Epstein and Manzoni (1998) point out the importance of taking in consideration some aspects as: lack of shared vision on the part of the executive leaders; occasional excess of work load for several of the members involved; resistance on the part of members of the organization and confinement to old decision-making processes on the part of the management. In addition, another aspect extremely relevant is that some employees feel threatened by Balanced Scorecard increases transparency with respect to information. These aspects can inhibit Balanced Scorecard implementation since it demands that managers spread out their analyses, and avoid being restricted to financial performance indicators analyses.

Kaplan and Norton (1997) admit that executives from different industries fail when they come to implementing this management resource. Some of the problems they faced might have been related to the following: structural

flaws at the moment of defining the key performance measures; organizational problems found in the construction process of the Balanced Scorecard; and lack of commitment on the part of the executive board. Taking these aspects into consideration, it is possible to affirm that the Balanced Scorecard scope is to manage an organization strategy, keeping a focus on the key performance indicators and on its adjustments involved, as well as defining needed correcting actions in order to guarantee that the objectives traced be reached. Under this perspective, it is reasonable to say that once this tool is implemented, the organizational decisions should be based on the scorecards results and on a reflection process based on the cause-and-effect relationship analyses.

## Individual and organizational learning

According to Fiore Lyles (1985), the concept of learning is usually mistaken for the change and adaptation. As a result, the literature refers to the learning issue in several ways among which we quote: new insights or knowledge; the creation of new structures; the starting of new systems; simple strategies from changes or even a combination of some of the listed factors (FIOL; LYLES, 1985). In the midst of such conceptual lack of definition, Fiore Lyles (1985, p.803), suggest the following: “Organizational Learning stands for the processes of improvement strategies in the way of higher knowledge and better understanding”. Nevertheless, while aware of the inherent contradictions in the term Learning Organizational, Fiore Lyles (1985) found some consensus in their research. These areas hold together some aspects regarding which analysis theorists seem to agree. These aspects are presented in Table 1 that follows below:

Table 1: Areas of consensus regarding the organizational learning concept

| <b>Consensus Areas – Organizational Learning Concepts</b> |   |
|---|---|
| <b>Consensus Level</b>                                    | <b>Ways of manifestation</b>  |
| Importance of Alignment                                   | Direct relations between organization and its competitive environment. It implies in the organization ability to learn, relearn and unlearn according to its past behavior.   |
| Individual versus Organizational Learning                 | Organizational learning cannot be reduced to the sum of each individual learning. As organizations develop and maintain learning systems that not only influence their members, but also, transmit to other generations through its history and norms.  |
| Context   | Factors related to organizational context that influence its learning skill.<br>Culture: Norms that affect members of organizational behavior and cognitive development. Therefore, learning involves the restructure of the normative system.<br>Strategy: It influences learning since it drives decision-making guidelines, and also affects environment perception and interpretation.<br>Structure: More centralized structures tend to stress past behavior. On the other hand, more decentralized structures can motivate new decision-making, behavioral and learning changes.<br>Environment: If both external and internal environment is too complex and dynamic, learning may not take place. |

Elaborated by the authors (based on Fiore and Lyles, 1985).

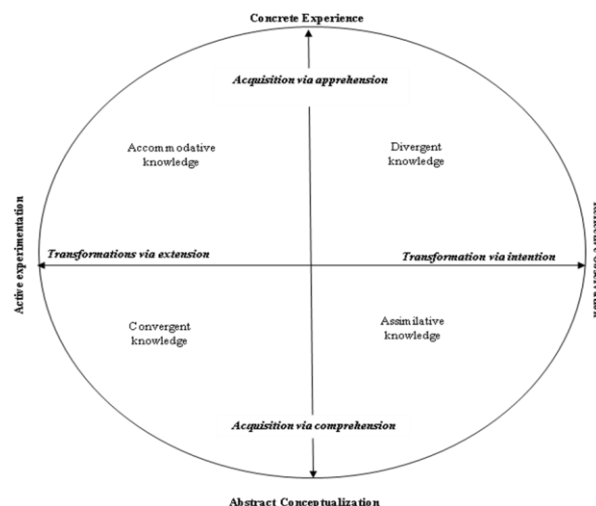
Regarding the learning concept, Fiore and Lyles (1985) present two levels of organizational learning based on a hierarchy of construction of associations and insights levels. The categories are high and low learning level. At the low learning level would be included all the learning which is a result of routines and repetitive actions. On the other hand, high learning, does not apply to a particular behavior. This learning level involves the creation of reference models capable of being applied to various similar situations. Beyond the learning level segmentation in low and high, Fiore and Lyles (1985) present other authors that do not use this kind of distinction. Fiore and Lyles (1985) also show the differentiation between cognitive and behavioral development. Cognitive development is directly associated to structural changes, usually individual changes, which modify the way in which the environment is understood. Meanwhile, behavioral development is associated to behavior changes related to the organization strategy accomplishment.

According to Kolb (1994) both learning process and individual development are related to the experiences lived, which generate reflections and implicate in new knowledge. Kolb (1984) also highlights that this is an continuous process influenced by experiences, perceptions and individual behavior. The author also stresses the

importance of continuous learning when it comes to current competitiveness “[...] the dizzying rate of change, and the exponential growth of knowledge all generate nearly overwhelming needs to learn just to survive [...] For individuals and organization alike, learning to adapt to the new “rules of the game” is becoming as critical as performing well under the old rules” (Kolb, 1984, p. 2). As based on of Lewin, Dewey and Piaget models, Kolb (1984) describes the learning process, formulates his own interpretations of it and presents a structural approach of learning from lived experience e. The models studied by Kolb (1984) can be understood as knowledge generation cycle which involving perception, adaptation, integration, synthesis, and formulation of what was learned. According to Kolb (1984) still on the basis of the Lewin, Dewey and Piaget models, experience is a key factor in the learning process. This is so because each time an individual or an organization completes the mention cycle, the experience gained becomes a part of his or her acquired experience. Kolb (1984) also highlights that learning can occur by divergence, assimilation, convergence and accommodation. According to him, divergent learning is related to experience acquisition by apprehension (lived experience or observation), and transformed into intention. Where as experience acquired through comprehension and transformed into intention results in learning by assimilation. On the other hand, the learning process is convergent when experience acquired through comprehension is modified by extension. This is so because practical application is a result of a theory, or an abstract model. Finally Kolb (1984) explains that experience acquired by apprehension and transformed by extension results in learning by accommodation, which means that, based on concrete experience, the individual is capable, through practical application, change a situation. Figure 1 depicts the learning process according to Kolb (1984, p. 42).

As a result of the above, it follows that learning and consequently the knowledge built derives from the individuals’ involvement in new experiences, his or hers understandings of these experiences, the reflection upon these experiences and their analyses based on different perspectives. According to Kolb (1984), from the observation of the environment, the individual integrates his or her experiences with the theories, which allows for generalizations related to reality, as well as to hypotheses which one tested give rise to new experiences and new observations. Although the learning models presented do not exhaust the subject matter, they demonstrate the origins of the learning process, its attributes, and the way in which the process happen, while also revealing the importance of experimentation and reflection to the apprenticeship. Taking these approaches into consideration, it is possible to note that an individual and the knowledge generated depend on the capacity to combine and transform acquired experiences.

Figure 1: Structural Dimensions Underlying the Process of Experiential Learning and the Resulting Basic Knowledge Forms



Taking into consideration what was explained, it is possible to point out the relevance of learning process for organizations. Kolb (1997) asserts that competitive advantage is each time more related to experienced derived from continuous exploration of novelties, and because of that Kolb (1997) argues that both managers and



organizations should reserve an exclusively time to learn by their experiences. Complementing Kolb's vision, Garvin (2000) alerts to the organization capability to promote improvements, when there is not capacity to learn something new. Garvin (2000) asserts that in a context of absence of learning both organizations and their members repeat old practices and just promote changes that are superficial and intuitive or low effective improvements. According to Garvin (1993, p.80) vision "A learning organization is an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights". From what was explained it is possible to affirm that Garvin (2000) understand ideas as organizational advances drivers, but to operate this organizational practice, changes on labor methods are mandatory; otherwise, everything will be reduced to potential improvements, because the ideas, themselves are not able to promote organizational learning. One of characteristics of learning organization, according to Garvin (2000) vision is the ability to learn by its own experiences, while it systematically analyzes its successes and failures. This organization skill, as was mentioned before, guarantee organization success according to Kolb (1997) vision.

Garvin (2000) also explains that learning should be disseminated over organization in a rapid and efficient way. Argyris (2000), in turn, adds that people should abandon their defensive thought and assume a productive one. In order words, a transparent thought which will lead them to learning and thinking about their behavior in new and more efficient ways, as for example, when debating unquestionable issues. According to Argyris (2000) an organization should promote an adequate environment to allow this kind of behavior. Once people adopt productive thoughts, defenses which inhibiting organizational learning are broken. Complementing Argyris' (2000) point of view, in relation to an adequate organizational environment, Knowles (1997) explains that learning is a continuous process and it is seen as a different perspective by adults. Due to this fact, the understanding of this viewpoint is relevant when someone wishes to have an organization capable of learning. Knowles (1970) clarifies that, at school-age children and teenagers understand education as a knowledge accumulation process. As a result of that, in the author's opinion, learning occurs despite the immediate application new knowledge. However, according to Knowles (1970) adult motivation to learning is related to knowledge immediately applicable and which trains individual in some skill which enables him to handle currents problems effectively. Taking into account learning scope differences between school-age and adult-age, andragogy, according to Knowles (1970) aims both understand these differences and propose an orientation to adult process of learning. However, Knowles (1970) highlights that andragogy contributes not only to human being learning but also to children and teenagers education. Andragogy premises are based on the following assumptions about the characteristics of adult learners: self-direction (independence), accumulated experiences, that becomes an increasing resource for learning, readiness to learn associated to the development of skills to manage life situations and immediate application of knowledge. Regarding the above, it is possible to highlight some aspects of learning process as viewed by Knowles (1970). On the basis of these approaches, it is possible to note that an individual's ability to learn and the knowledge acquired are a direct result of his or her ability to rearrange experiences, as well as and his or her commitment with regard to the situation.

## **METHODOLOGY**

According to Yin (2005) a strategy research defines the way the data will be collected and analyzed. Regarding Yin's (2005) perspective there are five main research strategies on social science: experiment, survey, record analysis, historical research and case study. Each one is related to the following conditions: research type of question, researcher's control extension above behavior events and approach level regarding contemporary happenings in opposition to historical ones. The objectives of this study are the following: a) to understand the way by which knowledge transference of Balanced Scorecard concepts occurs during its implementation process; b) to understand how Balanced Scorecard implementation affect's or is affected by organizational learning according to consultants' perspective. In order to reach these objectives, some evidences were considered, such as documents and interviews carried out with people involved in Balanced Scorecard projects. Taking into account this fact and the characteristics and goals of this study, as well the possible methods to conduct a research (Yin, 2005) we concluded that the more adequate strategy would be a survey. To run it, we opted for a qualitative research, based on content analysis. According to Rubin and Rubin (1995) when a scholar conducts a qualitative research he or she must be aware of the symbols and metaphors used by the interviewee. Thus, it was possible to anticipate that the main challenge imposed by the method which had been adopted would be the proper interpretation of interviewee words and symbols. Beyond that, according to Vergara's

(2000) taxonomy this is an explanatory study; it aims at clarifying the factors which contribute to the successful implementation of the Balanced Scorecard.

Taking into account the scope of this study, the source for the data collection was an interview based on a script. The questions were elaborated with a basis on the literature reviewed and it included the issues related to Balanced Scorecard framework and knowledge transference. Aside from the literature reviewed, the experience of one of the researchers who took part in the Balance Scorecard construction and implementation between May 2005 and May 2006 at the company for which she works, was taken into account. It is important to clarify that in order to avoid bias in questions and answers, neutral questions were formulated so as to avoid either pressing the interviewee in a specific direction or inhibiting his responses. In the case of each question its objective was defined because, as Yin (2005) suggests, interviews should be conducted in a way that guarantees the accomplishment of the objective of each question in the questionnaire while, at the same time, making sure the interviewee does not feel threatened to answer the questions. The face-to-face interviews were recorded following authorization by the interviewees and each interview lasted approximately sixty minutes. The field research took place between April and June 2007, with five consultants who participated in Balanced Scorecard constructions or implementations. As illustrated in Table 2, all interviewees have worked as consultants for more than five years. It is expected that, this way, the selection criteria suggested by Rubin & Rubin (1995) have been answered, inasmuch as the selected subjects a) are acquainted with the cultural arena or the situation; b) they wish to express themselves; and, c) have different perspectives.

Table 2: Interviewees' Profiles

| Consultant | Qualifications  |
|------------|---|
| A          | Has always worked in Consultant Business offices. Since 2003 the interviewee works as consultant in building and implementing Balanced Scorecards projects.   |
| B          | Has worked at private organizations before becoming consultant. For the five last years has been working in a Consultant firm, in projects involving management models configuration, one of them being Balanced Scorecard.                                       |
| C          | Has been working as Project consultant for the last ten years. In the last years he was involved in managerial systems Projects, especially Balanced Scorecards.  |
| D          | International experience in strategic managerial systems. He has been working for more than five years at an important consulting firm, managing implementation and construction of Balanced Scorecards.  |
| E          | Has been working for about fifteen years in projects related to diagnosis, processes buildings, implementation and development of managerial information systems. After having worked at three large consulting firms, he presently is a consulting firm partner. |

Considering both, the objectives of this study and the various forms of data collection, the researchers decided for the qualitative treatment of the data. Vergara (2000) suggests that in such cases, care should be taken both with respect to data codification as to the structured presentation. Furthermore, Rubin and Rubin (1995) suggest that the qualitative treatment of data aims at discovering what the interviewee wants to say, what he or she feels and thinks regarding the questions asked, that is, regarding his or her universe. The qualitative research, according to Rubin and Rubin (1995), allows for an understanding of the individuals' experiences and for a reconstruction of the same despite the fact that the researcher does not have an active role in it. The process of data collection aimed at capturing the perception of those consultants who participated in Balance Scorecard construction and implementation projects. It also attempted to capture the vision and the reflections carried by each with regards to this process. Based on previous explanations concerning the methodology, it is possible to say that all research strategy has both strong points and weak ones. As mentioned before, the decision in this case was to analyze the data qualitatively. In this respect Yin (2000) calls our attention to bias risks. This is a valid warning, inasmuch as, if a researcher in a similar position goes to the field with a previously formed opinion, the conclusions arrived at through his or her analyses may be partial, and, consequently, the results will be affected. Furthermore, it is important to keep in mind that the interviews were guided following the information contained in the literature review, that is, they were based on the following: the demands faced by the organization for the accomplishment of their verbally expressed strategy; the way in which the knowledge transfer takes place; and, some lacking elements identified by the framework authors. Considering all that was explained above, it is reasonable to suppose that there might be other critical issues which have not been considered by this study.

## FINDINGS

The consultants interviewed seemed to be aware of being the agents of organizational changes. This assertive can be justified through the following statement: *“Actually, I would say that, in a consultant job, I learn that we are agents who promote changes [...]”* (Interviewee C). Besides being an agent of change, the consultants are seen as impartial and are able to go around all the areas that their projects impact. Furthermore, when consultants are assigned to new client(s), they have to deal with new situations and play different roles, therefore they have to leave behind what they have been successfully using with their former clients and design new strategies that will be effective for this new entrepreneurship. According to Interviewee A this is one of the most important challenges in his work.

“It's not because I'm a consultant, that I believe that, an outside perspective would be very useful: can serve as a support to these people (the client team) and help them to think collectively and express what they think. Therefore, I myself, who am not part of that context, will be a spokesperson for a variety of things. I will create a synergy between the persons individually and the team, something I don't think would happen if the idea of creating a BSC came from someone within the organization [...] the consultant plays three roles: that of an architect, of an actor and of a psychologist. Consultants can say what they think (be the interlocutor) without exposing anyone at the meetings for validation.”

Taking into account the following testimonial, it is possible to reaffirm, the relevant consultant role in spreading the changes, as well, the benefits that they generate for the organization which contracts them, at least in the first phase of the project, that is, on Balanced Scorecard construction phase.

“The architect, the great visionary of things is, as a general rule, the consultant himself in the role of the Director who will, for the most part, clarify things for the client, in other words, telling him things such as: these are the aims of the project, these will be the products, [...], these are the challenges. But, in the long run, these things will have to happen through the training of someone in the client's development team.

Concerning to the architect role, three of the interviewees believe that consultants play such a role in an organization at the first moment. Later, it should be played by someone from the client's team. However, Interviewee A considered that it is possible to have two different persons in the construction and implementation of the processes. Furthermore, she highlights that *“people who works with strategy must have business vision”*. Interviewee C corroborates this point of view when he states that:

“[...] the architect responsible for implementing the project has to be selected very carefully at the beginning of it because, in my opinion, he is the manager of the project and, if this same project manager is not carefully selected, that becomes a problem because, in my opinion, the project manager becomes the Strategic Management Officer. It is very important for this manager to be appropriately selected. He must be someone who bought the business but who also has the necessary abilities to manage it afterward. Such necessary abilities are: to understand this method very well, to understand the work it will require, to be very capable of carrying out a dialogue with the other areas, to be able to demand from the other areas what has to be demanded, but to do so without making enemies. And then, the right choice of this manager is fundamental” (Interviewee C).

The previous statements are aligned in a certain way, to Kaplan and Norton's (1997) beliefs, since these authors assert that both, external consultant and organization internal members, if properly qualified, constitute critical factor to a successful Balanced Scorecard project. Contradicting Kaplan and Norton's (1997) opinion about the fact that the organizations need to find someone capable of conducting the construction process, Interviewee E, considers that the architect would be the responsible person for the client team, as it can be seen in the statement below:

“[...] who makes the strategy is not the consultant. Who makes the strategy happen is the team itself and it cannot be a team of only one person. In fact, you can have one or two persons who will concentrate and prepare the data, arrange the strategic follow-up meeting, or check the projects. [...] So, I would say that it

should not be one architect. I would say that it should be a team really concerned about the process construction” (Interviewee E).

Faced to what have been exposed, the consultant can be considered as a coach and this fact corroborates to one of consultants facets showed by Hirschle and Siqueira (2006). This role is reinforced by Interviewee E statement: “[...] *the consultant helps bringing his or her experience of questioning, criticizing, and pointing out. This attitude drives the group to notice that it is important to think about some point [...]*” Interviewee D, in turns, also highlights the consultant instructor role because he or she has to capacitate the client team in order to conduct the organization management based on Balanced Scorecard framework, as it can be seen:

“[...] in the beginning, as I have told, few people know the framework, the methodology. So, it is essential to have a consultant senior team [...] above all to conquer the client trust. As any framework, any method, if you do not conquer the client trust, everything will be much more difficult. First to conquer trust and then capacitate the team.”

Considering all projects experiences, four consultants interviewed emphasized the importance of understanding organizational maturity and the context in which the client is in insert. In this way, these evidences strengthen Fiol and Lyles’s (1985) concept concerning the factors related to organizational context and its influence in the learning capacity. According to the interviewees’ statements, the comprehension of the manner that enterprises work is important to Balanced Scorecard construction and implementation, as it can be validate by the following assertions:

“I learned to respect the manner in which enterprises work. Adapt the methodology to the enterprise day-by-day routine. For example, it does not work to use data show, if people used to prepare presentations using transparencies. So, one should understand how the enterprise communicates, if it is by phone, by e-mail, in meetings and how BSC follow up will be carried on (Interviewee A).

“It is impossible for me to break the methodology integrity in order to fit to the management style of a particular business. However, I can see that I, myself, and the enterprise as a whole, are becoming more flexible. We are attempting to make all possible adaptations in order to meet the needs of the business. And we try also to follow the rhythm of each business. Since the levels of maturity of each outfit with respect to management are quite different, it is impossible to impose the same rhythm. Thus, perhaps the lesson to be derived is to understand well your client’s context, in other words, to be familiar with the reality of the organization at a particular moment” (Interviewee C).

These assertions are compatible with the understanding of how much the organizational maturity level facilitates innovation process and the how direct relation between organization and competitive environment make an organization able to learn, relearn and unlearn based on its past behavior (FIEL; LYLES, 1985). The following statement illustrates this point of view.

“Should you forget the cultural aspect, it won't work. That's because it's a perennial process if you take into account that culture is an endless process. We're dealing with continuous transformation, as well as a constant process of cultural mobilization geared to producing results, but also geared to transparency. That's why you should be working internally in your business with a specific focus on the cultural issue. Also, it must be clear to all, that the tool is there to provide a support and not to get in the way of people's lives. [...]” (Interviewee D).

(the consultant) [should] identifies these power relations as a strategy capable of preventing their destructive effect on the results during the final stages of the project (Interviewee E).

[...] the following points can serve as a positive effect for the organization using an outsider: Number 1, precisely the experience acquired; Number 2, an issue involving reflection over a political aspect or a possible aspect of power on the team's end and, lastly, the introduction of a perspective external to the organization which would observe the activities of the others, that is, what new elements have appeared, what is taking place in other operational segments which might be interfering. Once again, we're dealing with the building of a strategy. And, so, the external element might and should contribute [...]” (Interviewee E).

So it can be observed a kind of alignment to Fiol and Lyles’s (1985) discoveries, concerning that organizational learning is not only the sum of individual learning, but also learning systems organized and maintained by the organization that will influence the organizations members and will be transmitted to future generations by rules and norms. In this way, an external element can act as mediator and introducer of new ways of working, thus

helping the learning process by expanding the organization mental models (SENGE, 2000), impacting the manner of reflection of new knowledge and ideas (GARVIN, 2000). Interviewee B points out that the consultant service aggregates value to the client. As it is clarified by his testimonial:

So, I think that what really concerns me is to see waste of money. Then I think that from a short-term period point of view, this situation is not bad for the consultant, but in the long term is not sustainable. When you speak about a consultant service that aggregates value, develops strategy, and costs a lot of money, we are not talking about waste of money but about a service that aggregates high value to the organization in long term.

## FINAL CONSIDERATIONS

Concerning what has been presented above it is possible to identify knowledge transference and the significance of organizational learning as critical success factors in Balanced Scorecard implementation. From an academic viewpoint, the contribution of this paper can be said to refer to understanding the relevance of the following factors appearing in the Balanced Scorecard implementation process:

1 – Continuous learning: success in the implementation process, according to the interviews, is also dependent on the knowledge level of the organizational members with respect to their business. As viewed from this perspective, learning does not mean knowing how to build a strategy map. The learning process involves reflections and productive discussions which take place when the Balanced Scorecard is still in the project construction phase. Once completed, this stage gives rise to management implementation which is based on this tool. After that, actions inherent to this process go on continuously. The cycle suggested for a successful management includes, among others, the following stages: results, observation, analyses, reflections and hypothesis formulations.

2 – Mediation by a consultant: research clarifies the role of this professional according to his/her own perspective. It further reveals what this person can mean for the success of the implementation framework, if we consider that he/she acts as coach, facilitator and spokesperson. The consultant's significance is unquestionable as of the map strategy building stage, in other words, starting with the first phase of the Balanced Scorecard since in this phase it is already clear that training of client members is a practically non-negotiable item.

3 – Perception of value: measurement of indicators, performance analysis, internal process restructuring with a view to making possible the achievement of organizational goals, demand time and, therefore, people responsible for generating these figures must follow strategic projects, see the benefits which will be generated for the organization by such efforts and, beyond that, they must have their job recognized or else, organizational members will not understand framework benefits and will only be aware of the extra work generated.

Considering that this paper signalizes learning and transfer of knowledge relevance as key elements for the Balanced Scorecard project to become a management process viable, loyal to these framework principles and a guide to enterprise-related actions, it is possible to assert that from the management's viewpoint it can serve as guidance to organizations and managers desiring to implement this management framework in those aspects that concern pre-requirements, efforts demanded from everyone regarding the learning issue and the predisposition of the members of the organization. As based on the categories emerging from the field research, organizations intending to adopt this framework can prepare a draft of the present situation including in it the qualifications or changes which will need to be carried out in order to facilitate the dissemination of the Balanced Scorecards.

Due to the restrictions tied to this paper, as well as to some issues observed during the field research, some gaps have emerged. One suggestion for future studies would be related to field researches undertaken from the viewpoint of organizations employing the Balanced Scorecard as a management framework. In other words, the researcher might consider the viewpoint of managers or of their team when attempting to identify the critical success factors involved in the Balanced Scorecard implementation. Another possibility would be to carry out a detailed search for the existence of possible relations between the organizational culture and critical success factors involved in the implementation of this framework. A further suggestion would be to explore the performance of people after implementing the Balanced Scorecard and its corollaries. Since this aspect has not yet appeared in an explicit way, a more detailed investigation would be an appropriate consideration for future studies.

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# ORGANIZATIONAL COMMUNICATION, INTERNATIONALIZATION PROCESS, AND CONSTRUCTION OF ORGANIZATIONAL IDENTITY

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## ABSTRACT

*This paper aims at describing organizational communication of a transnational company with headquarters in Brazil and at examining its contribution to build a new organizational identity. Theory is founded on culture, knowledge management, and organizational communication. Internal communication issues involving native workers and Brazilian expatriates, and subsidiary-headquarters communication are examined through a case study in the Colombian subsidiary. Using a qualitative approach, evidences have been collected through interviews, analysis of drawings and documents. Conclusions stress the importance of organizational communication to organizational identity, via knowledge sharing and diversity management, although results also point to necessary changes in cross-cultural and organizational communication.*

## INTRODUCTION

Communication is relevant for the construction of organizational identity of a transnational company due to the assumption that motivated, informed, competent people could be aligned to the organization's strategic vision and, thus, they are one of the most important factors to its sustainable competitive advantage. Moreover, an organization with communication processes that take into account local peculiarities could create more knowledge transfer power and it also could multiply the positive effects of that competitive advantage.

In transnational organizations, when local cultural traits are taken in consideration and integrate its cultural identity, organizational communication dysfunctions are minimized, fostering chances of attaining organizational goals.

As far as organizational communication is concerned, this goes beyond a traditional view supported by the 'conduit metaphor' and allow us to see organizations as texts, that is, as ritualized patterns of interaction that transcend immediate conversations, and where action and meaning intermingle in organizational discourse (Putnam, Phillips, & Chapman, 2004).

Furthermore, the internationalization process brings about examining varied forms of resistance, not only overt ones, frequently associated with a critical perspective on globalization, but also subtler hidden manifestations. A switching movement allows us to think 'cultures' – including national and organizational ones – as processes that, almost at the same time, could divide (Brazilian headquarters / 'mainland' vs. Hispano-American subsidiary / 'colony') and could try to unite everything and everybody in the organizational identity of a transnational company.

This fragmentation points to the importance of a new metaphor regarding organizational communication – the metaphor of contradiction (Putnam & Boys, 2006). This metaphor stresses the interaction between opposite forces within a bipolar relationship and helps analyze resistances.

Taking as conducting wire an attempt to examining the link between organizational communication and the (re)construction of the organizational identity of a Brazilian company as a transnational, this paper is supported by a case-study field research in the main premises and the operational units of a subsidiary in Colombia.

# LITERATURE REVIEW

## Organizational Communication Nowadays

Aktouf (1996) states that although communication has, etymologically, the meaning of 'putting in common', organizational communication, such as it is generally carried out, aims preferably at controlling and dominating situations and workers than sharing information. Even if it appears more frequently as a fragmentation mode than as a construction of authentic sharing processes, the institutional discourse is shown to the different publics as one in search of an 'integrated communication'.

Nowadays, the survival and success of an organization depend upon advancing a favorable image among its stakeholders, including its employees. However, this could only be possible if these stakeholders have concrete reasons to be loyal to the firm, that is, if they have effectively experienced satisfactory relationships.

It is worth noting that, many times, resistance to the instauration of new processes of interaction resides in the organizational top echelons, those who design organizational strategies (Aktouf, 1996). Hence, it is up to top management to demonstrate how its willingness to change expresses itself in daily life, through its own assertions, prerogatives, and responsibilities.

According to Watzlawick, Beavin, & Jackson (1981), communication is one basic condition for human life and social order. The human being, since its birth, has been engaged in this complex process of acquiring communication rules, but he barely has a slight awareness of what constitutes this body of rules.

It is worth noting that the study of human communication has been divided into three distinct domains: syntax, semantics, and pragmatics. The first one addresses problems of information transmission and has as its goals the study of codes, transmission channels and their capacity, noise, redundancies, and other language properties; but there is not any concern about the meaning of the symbols that constitute the message.

Meaning is main aim of semantics. Even when it is possible to transmit a sequence of symbols with perfect syntactic accuracy, those symbols are void and meaningless if sender and receptor are not in previous agreement about their meaning. Thus, sharing of information presupposes a semantic convention.

Lastly, communication affects behavior, thence its pragmatic aspect. It is not possible to make a clear theoretical split of these three domains, because they are intermingled. As far as pragmatic is concerned, every behavior, not only discourse, is communication; and every communication, even signs which affect communication in an impersonal context, affects behavior.

Even nowadays, Aktouf (1996) posits that most companies have not yet abandoned the industrial model of managing. To supersede it, the 'modern' company has to be reinvented, founded on four pillars: capital, production, organization, and management. After two hundred years of industrialism, the paradigm of the productive company has been replaced by the paradigm of the competitive company. Those previous pillars remain founding the structure of every company, but nobody buys a product or a service, or prefers a brand, motivated by any of them. The new paradigm of competitiveness – innovation and its values – helps bring about other parameters: identity, culture, communication, and image. Those are the bases that make companies different in the new context, the one determined by the culture of service.

Nevertheless, if organizational communication of nowadays let us view the organization as a social process of interpretation (Saludadez & Taylor, 2006), at the same time, the organization is ceaselessly recreated within and by daily actions of sensemaking by its members, when facing a complex, ambiguous and partially unforeseeable environment (Weick, 2001).

## Organizational Culture

According to Freitas (1997), organizations are social formats inserted in a wider society and they set up a relationship of reciprocal influence with the environment where they act. Values bred within organizations find support and legitimation in the cultural values of this wider society; hence, they cannot be seen as unique productions of organizations, as if they act in a void.

Organizational culture is the way by which an organizational project is disseminated to its members, in search of their willingness and adhesion. Thus, it also expresses a view about the organization and the world, either present or future. It is the organizational culture that communicates what are the behaviors, priorities and actions compatible with the building of this project; it also states which are the values that fit this project and



which are the beliefs that its members have to be attached to; it determines which models have to be followed, applauded, and esteemed; it defines the cleavage between ‘us’ and ‘others’.

## **Organizational Identity and Cultural Diversity**

Latin America has been attracting foreign direct investment in recent years. In the past, it has been mistakenly seen as a monolithic set of countries with many features in common, but it indeed displays a myriad of cultures and behaviors. It is not possible to disseminate the same policies to several countries, mainly when national cultures are very different. In this case, for building the image of an organization in the international market it is necessary to know its concepts and to adapt them to the diverse local tastes.

Transnational organizations that have recently started their internationalization process need to accept and understand diversity for being able to build their corporate identity (Nkomo & Cox, 2006). There are several perspectives that affect the understanding of different identities in organizations, mirroring the theoretical dilemma of lack of precision of that concept. On the other hand, Alderfer & Smith (1982) posit two types of groups within organizations: identity groups and organizational groups. An identity group is a group whose members share some biological characteristic, partake similar life experiences, are presently subjected to similar social forces, and, in that case, have congruent worldviews. An organizational group is a group whose members share organizational tasks, partake equivalent work experiences, and, in that case, they also have congruent worldviews.

Affiliation to an identity group precedes affiliation to the organizational group. Thus, the identity of individuals in organizations is a function of affiliation to the identity group and of affiliation to the organizational group. This theory acknowledges that individuals do not abandon their ethnic, racial or sexual identities when they join an organization. That is why categorizing the identity group will always be relevant in the organizational context.

The fact of individuals having multiple identities – and not a sole identity – contributes to the complexity of the issue of identity in organizations. How identities interact is important to an organizational context. Hence, examining organizational identity implies, necessarily, paying attention to its interaction with other identities (Nkomo & Cox, 2006).

## **Organizational Culture and National Culture**

National culture can help explain differences in work-related attitudes and values. Workers can be situated along five basic dimensions of national cultures: individualism vs. collectivism; power distance; uncertainty avoidance; masculinity vs. femininity; long-term orientation vs. short-term orientation (Hofstede, 1997).

The first dimension characterizes the nature of the links individuals establish with one another in a society. Individualism is an orientation towards oneself, whereas collectivism is chiefly oriented towards common goals. Power distance measures the degree of how less powerful members of organizations accept an uneven distribution of power. Avoiding uncertainty addresses the ways by which an uncertain situation is avoided, putting in practice more formalized rules, giving up alternative ideas and behaviors, accepting the feasibility of absolute truths. The dimension ‘masculinity vs. femininity’ points out that the stronger the distinction between ‘male’ and ‘female’ ascribed roles, more ‘male’ is a society, displaying dominant values of aggressiveness, competition, and materialism; on the other hand, the weaker the distinction between the roles, more ‘female’ is a society, where values of collaboration, care, and sustainability are prevalent. At last, long-term orientation shows how much a society adopts a pragmatic long-term perspective, looking up to the future; short-term orientation, however, indicates attachment to the past and history.

Comparing Brazilian and Colombian scores under these national cultural dimensions, it is found that both countries display scores that point out to large power distance, strong uncertainty avoidance and a tendency towards collectivism. Besides that, Colombia could be seen as a masculine society, whereas Brazilian society tends towards a slight prevalence of the feminine pole.

Tanure (2005) updated Hofstede’s data, originally collected more than thirty years ago, finding small score variation in power distance. As far as uncertainty avoidance is concerned, there has been sheer reduction of scores in both countries, what could be interpreted as fruit of economic modernization and a new social mentality. In the ‘individualism vs. collectivism’ dimension, there has also been a significant change in

Colombian scores, allowing us to label its values as individualist, reflecting the present social and political environment of the country and popular rejection of guerrilla movement, of collectivist roots.

Another point worth mentioning is a common trait of many Latin-American cultures: lack of assertiveness. Although profuse in praising, most Latin-Americans feel uncomfortable about manifesting clearly their criticism to other people's work, fearing that it could be felt as 'personal', not as factual (Srouf, 1998). This affects organizational communication, namely superior-subordinate relationships, bringing about some special hurdles for exercising authority. Instead of giving permanent feedback, in order to avoid increasing problems and equivoques, non-assertive bosses keep mum and, if under stress, criticize their subordinates in emotional outbursts.

## **Internationalization and Integration through Communication**

An interesting aspect concerning organizational communication is signaled by Adler (1997) under the label of 'projection of similarity', that is, people believe others are more alike than they really are. Projecting similarities reflects a natural common process, which involves assuming, imagining and perceiving similarities when there are differences. So, this is noxious to people involved in cross-cultural communication situations, which effectiveness depends on managers who deal with transnational affairs not to view this special kind of communication in the same way as other managers do. Therefore, those managers who deal with cross-cultural communication must assume things are different till similarities can be proved, instead of accepting similarities beforehand till difference can be demonstrated.

The process of building a globalized synergic identity must be careful. Before individuals in the organization can understand the need of changing communication patterns under the cross-cultural perspective, they must develop cultural self-awareness as well as some knowledge about other cultures, national and/or organizational. Without knowing some features of these dynamics, many proposals for change and interaction can be seen as nonsense. Thus, we can understand why diversity can cause communication problems. It can slow communication when organization members do not speak the same language. In diverse linguistic groups within organizations, some members have to communicate in a foreign language or to use interpreters. In both cases, speed and quality of communication are reduced and chance of mistakes increases if compared with teams of same language speakers.

According to Bastos (2001), one of the research lines in cognitive studies presents itself by incorporating the socio-cultural dimension in its model of mind, a dimension many times obfuscated by the information processing paradigm. This takes into consideration not only syntactic aspects, but also semantic ones, recovering the role of meaning, what is in line with the importance of language and the emphasis on culture in building human mind.

## **Communication and Organizational Knowledge**

Enabling organizational knowledge creation implies facilitating relationships and conversations, as well as cross-leveling local knowledge throughout the organization or even beyond geographical and cultural frontiers (Von Krogh, Ichijo, & Nonaka, 2000). This process depends upon a new meaning for knowledge and care within organizations, with emphasis on how people treat one another and how to foster creativity.

This network linking organizational communication, identity, and knowledge is brought about when Spender (1996) views organization as a universe of practical discourse; and Daft & Weick (1984) consider it as a system of interpretation.

The success in knowledge creation depends on how managers and other employees have related to one another along different phases of this process. Notwithstanding, few companies have converted relationships into a priority. Although company mission statements could refer to a commitment to a participative, careful work environment, most of them do not walk their own talk, perhaps because this language of solicitude and relationships seems to them alien to the business environment.

Von Krogh et al. (2000) state that the organization must pay attention to some factors, such as:

a) take into account the local knowledge in the sites where it is present, for people justify the truthfulness of their beliefs based on their observations of the world around them; these observations depend upon a sole viewpoint, personal sensitivity and individual experience. Therefore, knowledge is a reality construction;

b) although some knowledge forms could be explicated, other forms – the tacit ones – are linked to the senses, to body expression, to individual perception, to physical experiences, to rules of thumb, and to intuition. Generally, it is very difficult to describe tacit knowledge to other people. Admitting the value of this kind of knowledge or discovering how to use it is a true challenge to the knowledge-creating company, claiming for much conversation and good personal relationships;

c) the efficacy of knowledge creation depends on an enabling context, that is, a shared space which fosters new relationships. Such organizational context can be physical, virtual, mental, or even, the three types at the same time. This definition of context is linked to two previous points: i) knowledge is dynamic, relational, and based on human action, situation-related, and people-related, independent of absolute truths or tangible facts; ii) knowledge, unlike information or data, depends on context (Nonaka, Toyama, & Konno, 2000).

Briefly, it can be said that communication exerts a strategic role as enabler. However, in many organizations, communication plays a merely operational role, oriented towards disseminating one-way explicit knowledge, from the company to its employees, instead of being strategic in creating propitious environments and in the management of flows that induce development and knowledge conversion.

## METHODOLOGY

The methodological approach has been a descriptive, qualitative case-study. The purposeful sampling consists of 31 employees working for the Colombian subsidiary of a transnational company with Brazilian origin, and encompasses several hierarchical levels, including managers, communication officers, and line and staff employees. Evidences were collected in 2006, in the capital, Bogotá, as well as in several sites in Colombian hinterland.

Semi-structured interviews have been used, complemented by direct observation. Keeping the same questions in the semi-structured interview protocol has been important for assuring more accuracy in the collected evidences. To employees belonging to non-managerial ranks, besides interviews, it has been asked that they made a free-choice drawing. Using drawings in business research entices the display of emotional, psychological and political dimensions, less emphasized through other methods, more rational-oriented. Drawings represent imagination and dramatize the unconscious (Piccolo, 2005).

In order to overcome qualitative case-study methodological limitations, interviews, documents, observation, and analysis of drawings have been triangulated (Yin, 2003).

Analysis of evidences has followed the inductive deployment of categories through thematic analysis (Boyatzis, 1998), generating themes that, by pattern-matching, have brought about the understanding of the theoretical concepts and the exploration of their relationships.

## SOME RESULTS FROM STATEMENTS AND DRAWINGS

In this section, some statements and drawings collected in Colombia are commented, since the main theme and the literature review wait for a chance of using a narrative approach to mirror organizational complexity and its challenges to communication (Czarniawska, 2004).

### Statements

A Colombian communication officer identifies how a Brazilian expatriate gives rise to perceptions of a ‘conqueror’, very much alike to those pointed out by Brazilian employees when facing an expatriate supervisor:

“We feel communication with Brazilian expatriates is very difficult in several areas of the company. There is strong resistance to change and too much authoritarian mode in relationship”. (M.)

The same position is clearer in the next statement, stressing that the fact of the Human Resources Department are only staffed by Colombians, unlike other areas, does not assure fluidity and quality of organizational communication:

“There is a group of people who is here long since and who deals with other people in a very harsh, old, authoritarian way. It is odd because I have always thought that Brazilian culture is not like this way, but I see managers, here, treating their subordinates as slaves, rudely, in a thoroughly passionate, non-professional way. There is a gap dividing staff: in HR, only Colombians; in other areas, only Brazilians. But the two sides do not have equal status and equal voice”. (S.)

A Brazilian top executive in the Colombian subsidiary corroborates these previous statements, also - sketching a set of threshold competencies which seems useful for overcoming these obstacles:

“With a sense of personal loss, I am canceling the assignment of two Brazilian managers and sending them back to Brazil. I know that my attitude will kick up a fuss, but when I see people totally unprepared to face reality in another country – and when they are not such competent professionals...- it is nonsense to keep a manager who is toxic to his team; who acts in an autocratic way, disrespecting his subordinates, acting as a bailiff; who makes me feel willing to sink into the earth in an event, ironically commenting on the local culture; then, I cannot see any other solution. Our company needs to understand - and henceforth, the HR guys in the international area have to face it with seriousness, if the company intends to grow consistently beyond our borders – that being a good engineer is not enough for working abroad. This guy needs to be flexible; to have few prejudices; to know how to hear others; to face challenges and different contexts; to have willingness to speak the host country language well! My God, it is not up to them to learn Portuguese! Here is not Brazil, it is Colombia! If they came here to display a syndrome of cultural superiority, it would be better if they stay there and did not come here to blemish our country’s and our company’s image”. (D.)

Naturally, other aspects, not so striking, but no less important, about interpersonal communication flow and face to face interaction have also been stressed, as can be seen in this statement of a Colombian working in a production unit:

“We need to better organize what goes to Bogotá and what comes from there. And we need to have periodical meetings. I know both realities, but how many people from the Colombian headquarters, apart from the technical areas, have ever been here or in another production unit? And how many who works here have ever gone to Bogotá? Only a few. So, communication barriers can only be destroyed with more interchange”.

## Drawings

Symptomatically, in the Colombian workers’ drawings there is no sense of belonging to a Brazilian company operating in Colombia. Using two examples, the transnational company has been depicted, in one drawing, as ‘outer space company’, represented by a flying saucer and a planisphere. Two countries were put in relief in each hemisphere: the United States and Cuba, at the left side; and France and Lebanon, at the right side.

An analysis of this drawing shows ambivalence and paradox: the company is admired and unknown, but it is unattainable. What does it mean to come from the ‘outer space’? Is anything superior, special, and extraordinary? Or anything about which anyone has not any idea? Is anything real or a vision whose real existence could not be proved?

How to examine, in the same drawing, the paradox of two united hemispheres, with its image of integration, but represented by countries – the United States and Cuba; France and Lebanon – that have lived or do live a history of domination and conflict? Hence, opposite to the idealization of a ‘spacecraft’, it seems to reveal the interviewee’s hidden conflicts in relation to authority and to the management models imposed by the Brazilian headquarters and/or expatriate managers, probably identified as the oppressor poles: France and the United States.

In other drawing, two rectangular boxes are depicted, isolated, one near the upper left side of the paper, representing the Colombian subsidiary, with someone running at 100kph; other, near the lower right side, representing the Brazilian headquarters, with someone running at 60kph. It tries to show the unevenness between the Brazilian headquarters and the Colombian subsidiary, both boxes totally isolated from one another. It also leaks the irony of the subsidiary be seen more agile and the foreign headquarters be seen slower and more bureaucratic, not giving answers at the necessary speed. Colombian workers in production units only feel integrated in their own close micro contexts, but they ask for more effective presence of the Colombian headquarters in Bogotá, as well as from the Brazilian headquarters, which presence is barely noted.

## CONCLUSIONS

Throughout the field research, one could observe that the Colombian workers have a feeling of being far away from the decisions and from where more tightly knit relationships between them and Brazilian expatriates could evolve. This could signal a serious obstacle to (re)constructing the organizational identity of this company, once only Brazilian, now undergoing an internationalization process in order to be a transnational organization. Furthermore, it can be felt a common spirit of Latinity and some worries about colonialism which pervade these national societies, mainly when they liken transnational companies to the new conquerors of capital.

When asked if they consider themselves as being sufficiently informed about the company in Brazil, many Colombian workers clearly say 'no', pointing to hurdles to a free flow of communication within the organization.

The general context shows the need of linking together the elements of strategic communication, in order to create more links and commitment to the company. This is one of the main challenges of the communication process in this company. It can be understood that, depending upon the size of the business, each area could have a different vision of the whole company, but, for this diversity could be healthy and part of an harmonic whole, each partial vision has to be part of a holistic encompassing vision of the transnational company. Therefore, it is almost mandatory to perceive that each area and site have a different kind of demand, and such demand calls for a different approach and a specific way of enhancing the organizational communication. This is not happening in the organization under study, for communication appears as a formal, one-way process from the Brazilian headquarters to the Colombian operation, without any effort from managerial and administrative ranks in Bogotá to help close this gap.

Diversity is so widespread and differences are so important that we dare to say that, in fact, there is not a Colombian subsidiary, but a cluster of different 'companies', under the aegis of the same top managers, who are more or less accepted and understood. Any idea of unity is still embryonic and it demands effort for finding effective forms of integration.

Regarding superior-subordinate direct communication, it was found out that there was a long way ahead. Although most employees say direct communication is the most effective and the most pleasant, many do not identify their immediate superior as the sender of these messages.

In the interviews with managers and communication agents, two aspects can be unearthed. The first one tell us that the gap is not only found between the host country and the Brazilian headquarters, but also between the Colombian production units and the local headquarters in Bogotá. The other provisional conclusion is that the psychological distance and the hurdles of face-to-face communication are more present in Bogotá than in the production units. This is drawn from the statements that Bogotá views its communication with the production units as good, but these units have an opposite viewpoint, considering it 'bad'. This lack of balance points to the need of paying more attention to the communication process, in search of an omni-directional fluid communication.

The deficiencies of communication between managers and their subordinates in the Colombian subsidiary can lead to the conclusion that if the managers share more their experience with people in the production units, they'll be shortening emotional distances and, at the same time, they will be learning more how to deal with face-to-face communication.

At last, it is possible to conclude that the search for (re)constructing identity in a transnational company cannot be feasible without considering the weight and importance of the past origins of this Brazilian 'would-be' transnational company in forging its identity, but there is no question that it needs to put effort in balancing its original identity with local characteristics of the countries where it is set up, although this is a difficult task, mainly when considering the increasing speed of its internationalization.

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# **BASIC STAGES OF MARKETING DEVELOPMENT AT RUSSIAN ENTERPRISES**

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## **ABSTRACT**

*The current condition of marketing development at Russian enterprises is analyzed. Conclusions about the stage of formation and comprehension of the need in marketing are made. The author gives the results of the study of various aspects of the system of marketing. The formal criteria of an assessment of the degree of marketing development at an enterprise are defined.*

*The legal structures in terms of positioning marketing departments are characterized in general. The study of the marketing department at Russian enterprises shows the absence of common approach to marketing and the structure thereof. From what are drawn conclusions that change of subordination of service of marketing; its problems and functions, rights and subordination are have not been clearly defined so far.*

## **INTRODUCTION**

Complexity of the analysis of activities in the field of marketing is connected, first of all, to dual position and applicability thereof at an enterprise.

On the one hand, marketing sets up at the top management level as far as it is a determinant of managerial philosophy and a precondition and an integral component of the overall strategy of the enterprise. This is a strategic marketing.

On the other hand, marketing is linked to the organization and management of specific market activities of the enterprise and, like any other activity control (manufacture, procurement, finances, etc.), presents a middle management level. This is operative marketing.

Marketing research lies somewhat aside, because it frequently requires special knowledge and skills and may not always be conducted by the employees of the enterprise.

The analysis of marketing techniques exercised at Russian enterprises allows the author to assume that the majority of the enterprises tend to operative marketing, and individual strategic solutions (switching to new products as a reply to the changing market needs) do not prove the overall transition to the marketing-based management.

In our opinion, two factors serve as the main formal criteria of assessment of marketing development at the enterprise:

- A place and a role of the marketing department in the management structure;
- Degree of marketing integration into the existing management system at the enterprise.

Possible structures and subordination of a marketing department at the Russian enterprise have already been studied in many works and editions; we shall only note that the transition economy is characterized by diverse organizational structures in terms of positioning of the marketing department: the chief designer's office, the commercial department, the foreign trade department or the production division. At one enterprise, deputy general director controls both the financial and marketing departments. At some other enterprises, a position of the marketing director assistant was created. Still at other enterprises, the subordination of marketing department and the structure thereof changed many times during the period of national reforms. This proves that Russian enterprises still lack clear principles of marketing. Its goals and functions, rights and subordination are still ambiguous.



Irrespective of various ways of positioning the marketing department within the managerial structure of an enterprise, much depends on the overall relevance of the structure of the enterprise to the marketing principles. The objective of any such or other structural change is to ensure coordination of all divisions and departments of the enterprise in order to achieve the concrete goal: manufacture of competitive products meeting the customers' needs better, than those of the competitors. In this case, the enterprise is not a passive follower of the market environment, but an active conqueror exercising an elaborated balanced policy of developing new markets which provides for adaptation of the product range to the requirements of consumers, on the one hand, and active formation of the needs and demand and influence on consumers, on the other hand

The formal analysis of the place and role of the marketing department in the organizational structure of an enterprise should be supplemented with the analysis of the Regulations of Marketing Department, Rights and Duties of Experts. In early 1960's, the British Institute of Management analyzed marketing systems of English companies and made a conclusion that "there is hardly any position which would be misapprehended more, than the position of marketing manager. One should peep into the cabinet under the door plaque and see what this officer actually does, and what his rights and duties are."

Currently, this statement is quite topical for Russian enterprises.

Different enterprises have different views regarding the range of activities to be assigned to marketing or not. Almost everyone thinks that advertisement, promotion of products to the market, marketing research, handling consumers should be included into the scope of marketing. The concept of sales is much more controversial (scenarios of interaction between the sale and marketing have been considered above), it is less clear who should be responsible for the development new products, design of packing, organization of post-sale service and pricing. The main obstacles come from the fact that these activities, as a rule, require contribution from several departments, which entails the problem of coordination thereof. It is obvious, that the scope of rights and responsibilities of the marketing department depends on the functions delegated thereto.

The degree of interaction of the marketing department with other departments of the enterprise and its integration into the management system can be assessed on the basis of the data obtained from interviewing on links between the divisions of the enterprise.

Thus, the analysis of the organizational structure of the enterprise, the interviews on links between the divisions, lists duties of marketing staff allow us to determine the scope of this department and identify the place of marketing within the system of planning and governance of the enterprise.

The analysis of foreign and Russian experience allows us to outline several logical stages in the development of marketing at an enterprise (see Table 1.). The main attributes of each stage as indicated earlier, are the place and the role of marketing department in the organizational structure of the enterprise, and also the degree of its integration with other departments of the enterprise. Certainly, a real life is much more complicated than the simplified models, but the latter show principally possible position of marketing in the management system. An ideal competition-based enterprise finds all its customer-oriented departments working jointly to achieve the general goal. In real situations, this occurs quite seldom, as each division has experts who have their own opinions regarding the activities of the enterprise, therefore, the marketing department should continuously interact with all divisions, collecting and providing information about the market environment, wishes of clients, etc.

**Table 1: Basic stages of marketing development at Russian enterprises**

|   |   |
|---|---|
| Stage 1.<br>Marketing formation: realizing the need in marketing      | 1. Sales, advertising, market research<br>2. Accidental character of links between elements of the marketing system<br>3. The tactical information is scarce<br>4. A marketing department exists, but its goal, rights and responsibilities are unclear<br>5. Limited budget, staff and influence on managerial decisions. The production-sale approach to management                       |
| Stage 2.<br>Development of marketing on the basis of commodity policy | 1. Sales, advertising, pricing, market research, service of the target markets, commodity policy offers<br>2. Integrated use of different marketing elements (marketing mix)<br>3. Marketing databases are created<br>4. There is a position of deputy director for marketing; however, marketing is inferior to other managerial functions<br>5. Limited influence on managerial decisions |
| Stage 3.  | 1. Marketing is the basis of the company's development strategy   |

|                  |   |
|------------------|---|
| Marketing system | 2. Marketing is a real system (it is integrated into every department)<br>3. (MIS). Marketing information system<br>4. Deputy director for marketing has the same status as other departments (finances; production)<br>5. Marketing plan is the basis for activity of the company<br>Marketing-oriented management |
|------------------|---|

The analysis of marketing activities of a representative sampling of Russian enterprises specializing in various spheres, sizes and legal structures thereof, confirms the assumption about that objective conditions of marketing formation in Russia prevent marketing from reaching the third systemic stage of the development, and allows the author to draw to a conclusion that the majority of the enterprises is at the first stage of marketing development. Though some enterprises established a formal position of the deputy director for marketing, the scope of functions and objectives of the marketing department demonstrates just forming marketing which is to grow into the developing and further systemic one.

The major and central aspect of the Russian marketing development analysis is the integration of marketing into the management system of the enterprise, i.e. with other departments. This is due to the problems to be overcome in order to make the marketing results be properly recognized by the company's managers when analyzing and planning activities. The solution, in its turn, requires formal procedures aimed to coordinate all types of activities, a new managerial philosophy, corporate procedures, communications and personnel management as, for example, presented in the form of 7-C system.

Importance of this aspect may be illustrated by the negative example of *Omega* Association (city of Yaroslavl) which used to be a most recognizable brand among companies specializing in household radio-electronic appliances installation and repair in the Soviet market. It outstripped its main competitor - association "Radio Engineering" thanks to superior knowledge of market conditions and an aggressive advertising campaign. The association developed all marketing aspects except the price policy, which was the prerogative of the government. Marketing let the company get a top position in comparison with other manufacturers of radio appliances in mid 1990s, when the offer exceeded the demand. However, the enterprise failed to meet the competition with foreign manufacturers and their authorized service centers during the period of evolving market relations. Nowadays, it is about to stop offering services in the sphere of repair and installation of electronic appliances.

Meanwhile, *Omega* had a vast experience in marketing conducted by the advertising department created in mid 90s, which accumulated a significant experience in market research and promotion of products to the market. It would be enough to say, that the enterprise working with the consumer panel including 400 consumers from different CIS regions, and the trade panel of 200 commodity researchers and salesmen, the enterprise interviewed repair and service shops on a regular basis. The expert assessment of current demand was made on the basis of the results of the market research resulting in proposals for adjusting the product range. So, if the damping of demand was identified, the products were withdrawn from production upon the recommendation of the advertising department, which was a unique practice in the economy at that time.

The negative feature of marketing of *Omega* Association was that many of recommendations of marketing experts were ignored as the top managers believed that the department's main function was just to promote products to the market. Indeed, the association carried out a sound advertising policy, focusing on the advertisement of the trade mark. At the same time, marketing experts regularly offered to expand the product range. However, those timely offers were not taken into account. Their timeliness was confirmed by the "hard times" accompanied with the domestic market's saturation with imported electronic appliances and the decrease of effective demand, when one of the ways-out proposed was to launch the production of acoustic columns being on increasing demand in this country and abroad. However, the moment for such reorganization had passed.

The example given testifies to the restrictions of the marketing system coming from the management of the enterprise, the existing industrial and technological potential, financial and other resources.

Meanwhile, despite the years of reforms, the marketing has little changed; this is confirmed by the data, obtained by the author from interviewing and business assessment of a number of enterprises.

Many managers still narrowly consider marketing as a tool for getting information about the environment, studying consumers and influencing the market mainly through advertising.

The use of marketing as a basis of the enterprise's development strategy, improvement of existing products and launching the manufacture of new products is marked quite seldom.

In support of the above said, we refer to authoritative opinion of academician A.G. Aganbegyan who points out that "though everybody heard about the paramount value of marketing, unfortunately, it is still

underestimated in actual practice. There is a common view that, once made, a good product will find the buyer. The absence of realization of vital importance of knowledge of everything comprising marketing becomes obvious when analyzing applications of students of the Academy of national economy. The people do not apply for marketing programmes.”

Consequently, the current condition of marketing at Russian enterprises can be characterized as a stage of formation and comprehension of needs for marketing. Most of large and medium Russian businesses have established marketing departments; however the positioning of this department in the corporate system of management, the mechanism of interaction thereof with other departments of the company is still under development.

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# NETWORK UTILISATION IN THE COMMERCIALISATION OF RADICAL INNOVATIONS

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## ABSTRACT

*Commercialisation of radical innovations is known to be a very challenging task. The study analyses how network is utilised in the commercialisation of radical innovations and thus it contributes to both innovation management and network research. Data was collected through interviews in a comparative case study. Results indicate that the dissimilarity of network actors and the multidimensional structure of the network help in creating a market for a radical innovation. Furthermore the study shows that the actors in the R&D network and the relations of these actors can be very important also in the commercialisation stage*

## INTRODUCTION

Radical innovations are innovations that are new both to the firm and to the market. They provide the foundation on which future generations of products or services are created. Thus, they have been acknowledged to be critical to the long-term survival of many firms. (McDermott & O'Connor, 2002) Developing and marketing these innovations are known to be very demanding tasks. Challenges in development are related to technological uncertainty. Past research (e.g. Ritter & Gemünden, 2003) indicates that networking with other actors provides access to complementary technological knowledge and, hence, helps to manage uncertainties related to technology. However, overcoming the technological challenges is not enough to turn invention into innovation, i.e. to make it succeed commercially. Commercialising a radical invention also requires coping with considerable market uncertainty. (McDermott & O'Connor, 2002; Veryzer, 1998)

Market uncertainty stems from the novelty; customers, distributors, partners and other actors in the business environment may find it hard to accept a new product that significantly alters the prevailing market structure (Christensen, 1997). In these situations traditional marketing tools tend to be of limited use (cf. Dhanaraj & Parkhe, 2006). Past research (e.g., Beard & Easingwood, 1996; Easingwood & Koustelos, 2000) has emphasised the critical role of the commercialisation; Investment in the innovation may be considerable by this time, and the risk of rejection is still very high. This makes the manner in which the commercialisation is handled important. Although past studies on innovation development have tended to emphasise the role of networks at the development phase, it is presumed that, especially in the case of radical innovations, networks may also help to overcome the challenges inherent in the commercialisation stage. It is therefore worth analysing how a network may help a firm in the commercialisation efforts.

The role of relationships in marketing has been discussed in studies on collaborative marketing (e.g. Neves, 2007) and marketing alliances (e.g. Rich, 2003) but these studies tackle the issue on more general level without paying attention on the commercialisation of radical innovations. Previous research on innovation networks and strategic networks has mostly focused on R&D, production and distribution (e.g. Ritter & Gemünden, 2003), whereas commercialisation as a function of a network has been mentioned only very briefly (Möller, Rajala, & Svahn, 2005; Bullinger, Auernhammer, & Gomerlinger, 2004). Sawhney, Prandelli and Verona (2003) presented the concept 'Innomediator' to describe an actor that acts as bridge between the

innovating company and customers. They did not specifically concentrated on radical innovations but their argument that innomediators are needed especially in markets where an individual company usually does not have an existing network is very valid in case of radical innovations. They also argued that innomediators can create a shade of neutrality in the marketing message, otherwise easily interpreted as biased. However, the study by Sawhney et al. (2003) concentrated on actors acting over the Internet and their role in knowledge transfer. They did not discuss how the innomediators get on board in the first place, nor did they discuss about market creation for radical innovations.

This study aims to narrow this research gap and to contribute to both the network and innovation management research. The purpose of the study is *to analyse how network is utilised in the commercialisation of radical innovations*. The purpose is further divided into two sub-objectives: a) To understand how the commercialisation network is initiated; b) To describe how the different features inherent in radical innovations reflect on the tasks the network actors have in the commercialisation.

Theoretical background of the study bases mainly on the network and innovation management literature. Since there is no clear theoretical guidance for studying networks in the radical-innovation commercialisation and the theoretical background has to be built up from diverse streams, the study can be characterised exploratory. The empirical part concentrates on two cases describing how small firms that developed radical innovations are utilising networks in the market creation.

## **THEORETICAL BACKGROUND: NETWORK APPROACH TO THE COMMERCIALISATION OF RADICAL INNOVATIONS**

### **Initiation of the commercialisation network**

Network actors can be persons, business units, firms or other organisations and the interaction can be based on business or non-business exchange (Håkansson & Snehota, 1995; Ritter et al., 2004). Organisations are motivated to participate in networks because through them they may get access to resources of other actors (Håkansson & Snehota, 1995). Resources of actors in commercialisation net tend to be related to technical competence, customer knowledge, market knowledge and relations itself. The joining of complementary resources allows firms to focus on one's own resources and to utilise partners' resources in the marketing of innovations and to offer complete solutions instead of product only (Bullinger et al., 2004). SMEs, especially, are tempted to collaborate with larger organisations to achieve managerial, financial marketing and distribution resources (Alvarez & Barney, 2001). Additionally, network may be needed to provide legitimacy and reputation spillover effects for the radical innovation (cf. Teece, 1986). Furthermore, firms may also benefit from indirect ties; i.e. direct relation to another actor offers indirect relation to that actor's relations, which considerably increases the resources available (Håkansson & Snehota, 1995). This can facilitate the activities of the firm in various ways (Ritter, 2000).

The decision to enter into a commercialisation network can be based on multiple, multilayered short- and long-term economic criteria and goals. Even though the actors may have private goals there should also be a common goal to motivate the formation of a commercialisation net (cf. Gulati, Nohria, & Zaheer, 2000). The potential goals may be according to literature (Ritter & Gemünden, 2003; Ritter, Wilkinson, & Johnston, 2004; Gulati et al., 2000; Bullinger et al., 2004; Melo Brito, 1999) the following: growth and profit, access to new business relations access to information, knowledge and learning, access to new markets, ease of communication and organising activities, enhancement of reputation and image, need for support because of complexity of product, access to finance, aligning strategies and roadmaps, and gaining negotiation power.

Creating such a commercialisation network may differ depending on whether the process is conducted by a hub firm or equal actors. In high-central innovation networks, hub firm can impact on network membership (size and diversity), network structure, and network position by its strategic choice of partners (Dhanaraj & Parkhe, 2006). We assume, instead, that in low-central innovation networks, firms widely co-operate and monitor the competencies, ideas and activities among their potential partners, and the cooperation during formation should be perceived as activity of the group. Inter-organisational relationships usually do not start their own (Ritter & Gemünden, 2003), but one actor have to act as an initiator (Larson, 1992). In innovation networks, it is usually the hub firm who acts as an initiator, i.e. prime mover (Dhanaraj & Parkhe, 2006). Pre-existing social relations among individuals and reputational knowledge (personal reputations and firm

reputations) are often preconditions for forming new network relations since they create trust and mutual obligation (Larson, 1992, Jarillo, 1988). Trust is a critical component of both effectiveness and efficiency of the strategic network. Lack of trust may create free rider problems and lead to opportunistic behaviour. Trust can be generated by identifying partners' motivations and by choosing the partners with i.e. similar values and requiring some kind of reputation. (Jarillo, 1988; Dhanaraj & Parkhe, 2006) According to Gulati et al. (2000), both exogenous and endogenous forces shape how networks evolve over time. *Previous relations and already established network relations both enable and constrain further networking.* Consequently, actors can be locked in to cooperate with each other and locked out of cooperating with others (Gulati et al., 2000).

## **Tasks of the network actors in commercialisation of radical innovations**

The terminology regarding radical innovations is rather confusing (for a review of the concepts see Sandberg, 2008). Since the study concentrates on the commercialization stage, it is important to come up with a definition of radical innovation that particularly reflects the customer perspective. Radical innovation can thus be defined as a new product or service, which requires considerable change in customer behavior, is perceived as offering substantially enhanced benefits, and is also technologically new (cf. Veryzer, 1998). Features of the radical innovations can be contemplated through the categorisation by Rogers (1983), who divided them into complexity, trialability, relative advantage, observability, and compatibility. If the innovation is perceived as difficult to use and understand, i.e. complex, it is not usually adopted easily. On the other hand, the ability to test it enhances its adoption, since trialability reduces customer uncertainty; trials may reinforce an initially favourable attitude towards the innovation, or even turn negative attitudes positive (Robertson, 1971). In order to create revenue and succeed in the market place, the innovation needs to provide new benefits for customers. By pursuing radical innovations firms may replace prevalent methods of delivering value to customers (Kaplan, 1999) and provide them with a completely new level of functionality (O'Connor, 1998). However, the benefits perceived by customers seem to be more important than the objective benefits (cf. Veryzer, 1998). Customers usually evaluate these benefits by contemplating the degree to which the innovation appears to be better than the product it displaces. In other words, customers evaluate its relative advantage (Rogers, 1983). Since the benefits are not known, they need to be conveyed to the potential customers (Guiltinan, 1999). The more observable they are, the faster the innovation tends to be adopted. The benefits of an innovation tend to be more easily observable when they are compatible, i.e. consistent with existing values and beliefs, with previously introduced ideas, and with the needs of potential adopters. (Rogers, 1983)

We may assume that characteristics of the radical innovation influence on what kind of actors and resources the launching firm requires from the network (cf. Guiltinan, 1999). In case of radical innovations, it is important to build awareness, educate customers and give them opportunity to try the innovation before buying. Some radical innovations have to be bought in order for customers to perceive their advantages, but there are also those whose advantages cannot be detected before purchasing. This difference, together with how easy or difficult it is to use the innovation, can influence on what kind of actors are required; innovations that are easy to use seem to benefit from word-of-mouth communication and opportunity of lend and trial, and those that are difficult to use, seem to require hand-in-hand customer education and other support services and demonstrations where experts use the product skilfully. (cf. Beard and Easingwood, 1996; Easingwood and Koustelos, 2000; Guiltinan, 1999) Hence, *actors and resources related to education, distribution, expert knowledge and supporting services seem to be required in a commercialisation net.*

## **RESEARCH DESIGN**

The empirical part of the study concentrates on comparative case study, where two commercialisation networks are described and analysed. A case-study strategy was chosen because it allows holistic understanding of complex phenomena that cannot be easily separated from their organisational context (cf. Yin, 1989). A further justification for the case study approach was that the number of radical-innovation commercialisation processes to be studied is rather limited. In order to facilitate the comparison rather similar cases were selected: In both cases a firm tries to create market for the invention it has developed. The selected cases were found in the fitness market. They were the commercialisation of 'Nordic Walkers' (specially-designed poles for fitness walking) and the commercialisation of 'Bone Health Exercise Monitor' (a device for monitoring the level of bone exercise) (see Table 1). Both equipments were developed by Finnish firms and targeted to international

consumer markets. Nordic Walkers was launched in 1997 by Exel Ltd and Bone Health Exercise Monitor was launched in 2005 by Newtest Ltd.

**Table 1: Radicality in the selected innovations**

|   | <b>Nordic Walkers</b>   | <b>Bone Health Exercise Monitor</b>  |
|---|---|--|
| <b>Required change in customer behaviour</b>      | <ul style="list-style-type: none"> <li>Created a completely new sport (Nordic Walking) that is practiced so extensively, that it has even changed street scenes in countries in which it has gained popularity.</li> <li>Encouraged a whole new group of people to engage in fitness training.</li> </ul>   | <ul style="list-style-type: none"> <li>Created a new concept 'bone exercise' to describe the exercise that strengthens the bones.</li> <li>Got individuals to monitor regularly the intake of their bone exercise.</li> </ul>  |
| <b>Enhanced benefits offered to the customers</b> | <ul style="list-style-type: none"> <li>Provides a new kind of flexibility for training purposes, and unlike many sports, it can be practiced almost everywhere.</li> <li>Suits people in very different states of fitness and health.</li> <li>Studies also indicate that people do not feel that the exercise is as hard as it really is. Hence, Nordic walking produces more energy output for the same perceived level of exertion.</li> </ul> | <ul style="list-style-type: none"> <li>Shows whether the amount and quality of daily exercise are enough to develop a bone's density and prevent osteoporosis. Without the monitor it is impossible to monitor the g-forces influencing on bones.</li> <li>Allows an individual to practice own monitoring activities</li> </ul> |
| <b>New technology</b>                             | <ul style="list-style-type: none"> <li>New composite material: new kind of carbon fiber that does not vibrate when the pole strikes the ground.</li> <li>Special features: the forward-angled lock spike tips, Asphalt Paws and ergonomically designed grips and straps.</li> </ul>   | <ul style="list-style-type: none"> <li>New software that allows the combination of an accelerometer and a microprocessor.</li> </ul>   |

Semi-structured interviews were used as the key method of data collection. In Nordic Walkers case all the key persons in each main actor were interviewed. In Newtest case interviews were conducted both at Newtest and at other actors of the Bone Health Association. Interview data was further supplemented with numerous telephone discussions and email correspondence. Interviewees were selected to represent the key actors in the commercialisation network. Data triangulation was also utilised; information obtained from public sources was compared to the data gathered through the interviews. The analysis of the data was a continuous process that required repeated reading of the interview text files, the notes and the secondary data. It involved returning to the theoretical literature and to the interviewees with additional questions.

## RESULTS

In terms of radical-innovation characteristics the two cases were rather similar. In both cases the firm faced a need to create a new market for a completely new kind of equipment. Neither equipment was not very complex; hence they could be tried rather easily. However, the biggest obstacle was that in order to become adopted both innovations required new patterns of behaviour and attitudes among the prospective customers. Thus, their compatibility was rather low. Besides, health arguments are difficult to proof and thus it was hard to convince the prospective customers about the relative advantage of the new innovations and make observable the benefits of the equipment, the customers had never imagined to need.

As stated in theory, in order to overcome these obstacles both firms needed to employ a variety of market creation strategies, such as awareness creation, education and giving the customers opportunities to try the equipment before buying. These activities required a large variety of different actors with different resources. Thus, the firms needed several different organisations in their issue-based net (cf. Araujo & Easton, 1996; Melo Brito, 2001). Both profit and non-profit organisations played an important role in convincing the customers of the benefits of the innovations and, thus, enhancing first-mover advantages:

*"In a way, we're in a good situation if you consider other manufacturers that came after us. In practice, they've just copied our brochures, simply copy-pasted them. Then they've tried to copy the product as much as possible. [...] Whereas we have this whole network, all these people who are loyal to this brand."* (Senior Vice President, Exel)

Non-profit organisations were particularly important in creating credibility in the eyes of the customers. Hence, it seems that the dissimilarity of network actors and the multidimensional structure of the network improve the promotion of the radical innovation.

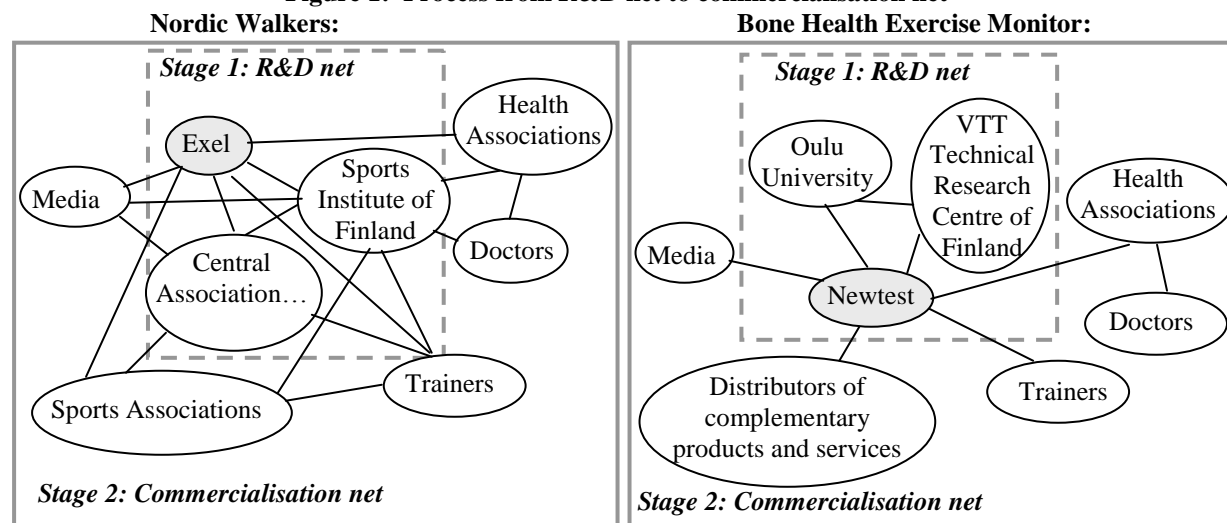
Since the creation of that kind of network, especially in international scale, requires significant amount of resources both firms strived to institutionalise the network into a formal association which would take over the

challenging and resource-intensive tasks of making prospective customers interested in and willing to adopt a completely new kind of behaviour. International Nordic Walking Association was created in 2000 and it has successfully taken over some of tasks from the launching company. Bone Health Association was formed in 2007 and therefore its benefits cannot be evaluated yet.

The initiation of commercialisation networks is illustrated in the Figure 1. The figure shows an important difference between the studied cases. In Nordic Walkers case Exel developed the innovation in close cooperation with The Sports Institute of Finland and The Central Association for Recreational Sports and Outdoor Activities (non-profit organisation). The commercialisation network was built on the groundings of R&D network and therefore it was built easily and fast; R&D and commercialisation nets were embedded, and the actors were already committed to the innovation and thus keen to share their relations and to deliver benefits of the radical innovation to customers by educating, creating media awareness and by providing trialability. As seen in the figure *the direct and indirect relations* of these actors seemed to have been very important in commercialisation stage. For instance, Exel alone would not have had relations to doctors. Furthermore, the innovation seemed more credible when its benefits were communicated to them by different R&D net actors:

*“In terms of marketing the sport, I think it’s been great. It gives you a... how should I put it... that the nonsense disappears from around it. People are trustful.” (head of physiological testing, The Sports Institute of Finland)*

**Figure 1: Process from R&D net to commercialisation net**



The actors involved had divergent resources and relations since they represented experts, medical-related actors (doctors), sport/fitness/wellness-related actors (trainers and health associations) and public media. Hence, they supported commercialisation through two modes: firstly, by confirming the benefits with their distinct resources and secondly, by utilising their divergent direct relations in order to reach the customers. These relations were indirect to Exel, but they still benefited it. Consequently, Exel was able to break through with Nordic Walkers extremely fast: The product was launched in Finland in 1997, and two years later nearly 10% of Finns had least tried the sport during the previous year, and 6% were practicing it regularly. Nordic walking started to increase strongly also in other countries, particularly in Scandinavia and in German-speaking parts of Europe.

Bone Health Exercise Monitor was developed by Newtest Ltd in cooperation with Oulu University and VTT Technical Research Centre of Finland. Although both co-operators provided valuable know how related to technology in R&D phase, they and their contacts were not of much help in market creation in commercialisation phase. Instead Newtest had to start creating a separate commercialisation net from scratch:

*“We know that we have got a brilliant product. We have scientific evidence supporting it. And there is a market out there! We know that the need is there. It is a challenge that the need is not recognized. We should create the demand for Bone Exercise and, after that, break through with the monitor. But we know that we don’t have money to do that. [...] We’d need to have an extensive network for succeed.” (CEO, Newtest)*



Consequently, it has had to take over the challenging commercialisation strategies on its own. It was not able to benefit from the indirect relations of its R&D partners and, since it has been the only promoter of the new innovation, convincing the prospective customers – or even recruiting and engaging potential partners to the commercialisation net – has been extremely difficult. The product was launched in 2005 and three years later, inspite of the widely recognised potential, it still has not broken through. The main challenge has been to get on board larger companies. It was seen very important to find synergistic actors – from various industries with synergistic products and services – who would supplement each others on markets. Since the device was targeted at international markets it was considered important to get also global firms to the net. Since Newtest did not have existent relations to the big international firms, it was forced to utilise its few sporadic indirect relations to get contacts with those. During this process it became clear that particularly incumbent companies were very cautious risk takers:

*“People lack vision. Firms do not dare to take risks. The bigger the firm the more it wants confirmation before it dares to get committed.” (CEO, Newtest)*

Organising meetings with the key persons of those organizations and convincing them proved to be extremely difficult. For those firms it was important to be able to trust the unknown small Finnish company and to know who the other actors in the net would be. Thus, getting the first international firm committed has been very challenging task. Currently, they have gotten one big international firm (a provider of products and services related to medical testing) in the commercialisation net, which may facilitate the network creation in the future.

Table 2 summarises how different actors contributed to the market creation. It rather clearly shows that in the Bone Health Exercise Monitor case the launching firm has not been able to utilise its network effectively in customer education and product trials. Both of these activities require more resources from network actors than awareness creation and thus seem to indicate also stronger commitment. To sum up, comparison of these two cases shows how much Exel has been able to benefit at the commercialisation stage from the relations it tied already during the development stage. Committed actors in the R&D net provided contacts to other actors and created shade of trust for the strange-looking radical innovation.

**Table 2: Roles of different actors in market creation**

|                            | <b>Nordic Walkers</b>   | <b>Bone Health Exercise Monitor</b>   |
|----------------------------|---|---|
| <b>Awareness creation</b>  | Exel, Sports Institute of Finland, Central Association, Health Associations, Doctors, Media | Newtest, Media, Health Associations, Doctors. Distributors of complementary products and services |
| <b>Education</b>           | Sports Institute of Finland, Central Association, Sports Associations                       | Trainers  |
| <b>Trial opportunities</b> | Sports Institute of Finland, Central Association, Sport Associations                        | Trainers  |

## IMPLICATIONS

This study contributed to both network and innovation-management studies. Innovation network and network research has previously focused only on R&D networks, but this study revealed how *network approach can be applied also to commercialisation phase*. Previous innovation management research has stated the challenges inherent in the market creation for radical innovations. Customers need to be prepared for the radical innovation, but awareness building, education and trials require resources, which tend to be scarce after the arduous development stage. This study indicates that the relations in the R&D network can considerably help in overcoming these challenges. Moreover, these relations may create something that may not be bought in any price and that may be particularly important for radical innovations: credibility and trustworthiness. Non-profit organisations, in particular, seem to be important in creating credibility in the eyes of the customers. Consequently, based on the results the following propositions may be derived:

*P1: The relations of the actors in the R&D network can be very important also in the commercialisation stage.*

*P2: The actors of a commercialisation network can take care of various tasks ranging from the awareness building to the customer education.*

*P3: The dissimilarity of network actors and the multidimensional structure of the network foster the promotion of the radical innovation, because different actors are better able to complement each other.*

The generalisability of these results is limited due to the context specificity and embeddedness of each particular network. Thus, there is a need for future research on different industries and different types of innovations. It is, however, suggested *that future research should not treat R&D network and commercialisation*

network separately, but rather consider the interconnectedness of these networks. This would help us to understand better both the commercialisation of radical innovations and the network involvement. Further research is needed to increase our knowledge on network actor selection criteria and process. Besides, currently our understanding on how to manage the diverse goals of network actors and how to motivate the actors to contribute in the commercialisation is rather limited.

Most important managerial implication of the focal research is that *already when forming the R&D net it would be beneficial to consider what kind of relations the R&D net actors would have to those actors that would be important in the commercialisation stage*. It would be useful to purposefully select diverse actors who either would directly be of use when creating market for the new innovation or who would have relations to other actors that are needed in the commercialisation. Hence, the most important actors of the commercialisation stage would be committed to the innovation already before the commercialisation begins.

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# FROM THE GLOBAL TO THE LOCAL: THE INTERIORIZATION OF THE SOCIAL TOURISM OF THE SESC IN THE HINTERLAND OF STATE OF PERNAMBUCO - BRAZIL. A CASE OF SOCIAL INCLUSION

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## ABSTRACT

*The Centers of Tourism and Leisure (CTL) in Brazil are the lodging hotel units of the **Commerce's Social Service (SESC)**. This research presents the importance and the implications of the interiorization of a CTL in the hinterland of the State of Pernambuco – Brazil. The research analyzes the new CTL located in the Town of Triunfo. Its performance as **a factor of social inclusion** comes propitiating the local development with **solid bases in the Global Net of the Social Tourism of the SESC**. The validation of its role in the community was originated from an exploratory and descriptive study. In this research, the authors look at the deep meaning of the social inclusion using an interview technique. The results were analyzed via quantitative and qualitative phases. The CTL activities and the story of the Town were contextualized and discussed through the concepts of the terms: Leisure, Tourism and Social Inclusion. The results indicate not only the implications of the CTL to the community but also, present suggestions to the social work of the SESC in a local, regional and national level.*

## INTRODUCTION

The Social Service of the Commerce - SESC, is a Brazilian organization with more than 61 years in the social rendering of services, appeared in the postwar period based on the philosophy of a document Letter of the Social Peace elaborated by a group of entrepreneurs, at the time, that defined the concept of social services defrayed by businessmen classis. **In the field of lodging on the social** tourism perspective, the focus of this study, Sesc withholds a net of many hotels in Brazil. With character exploratory and descriptive, this study was composed of a case, focusing and analyzing the Center of Tourism and Leisure (CTL) SESC Triunfo, which works as a hotel, and also as a Center that offers activities for the social local community. The study describes the strategy of the SESC with this new CTL, aiming not to dispute the hotel market in Triunfo, but to provide **greater social inclusion** and increase the flow of tourists. The social actors in the research were analyzed through different perceptions into four dimensions: hotel owners, people of the local community, guests and government people. The terms leisure, tourism and social inclusion were consulted in specific literature, composing the theoretical reference selected. And, at the final considerations, the results of the research were the start for suggestions and recommendations for new social actions as well as future investigations on the social tourism of the SESC at local and global network of information and exchanges of the organization.

## CONTEXTUALIZING THE STUDY

The study describes the relation between the global and local using a specific literature related with a social tourism and the CTL concept, object of this study. Among the literature revised, shows up the work of French philosopher and educator Edgar Morin, "The seven knowledges necessary to the education of the future", which

answers to the questioning of UNESCO in 1998: "What all men must learn to live well in the XXI century? For the case in focus, it was picked up Morin's proposal for the second knowledge, the apt knowledge, which has the object in a context that gives intelligibility. It is discovered that the relationship between the whole and the parts, and the author specified:

"In the sector of tourism, the apt knowledge is well exemplified when the relationship is between the global and the local. It is expected that the educator awakens to the context in which the object of knowledge is part, to give effect to this knowledge."

It was added to the proposition of **relevant knowledge**, which refers to the culture holographic, which expressed "everything is in every thing and every thing in everything." To relate these concepts to the focus of the study, the foundations of the social tourism, taken as ultimate goal by SESC, are evidenced as reality at the CTL. And, moreover, shows that the CTL is **committed to increasingly understand and act in the community context**, which is part, demonstrating the concern with the **local development and inclusion** of people of Triunfo able to enjoy the benefits of this infrastructure for the tourism. This argument reinforces the planning of holographic by Morgan (2006 p.105), meaning that all of the organization must know the environment with which they have to work.

## **The CTL SESC Triunfo: Proposal and socioeconomic characteristics of inclusion.**

As a hotel, the CTL sells service, but follows the SESC **idea wich the ultimate goal is the service and not the profit**, according to the concept of Social Tourism. As a differential factor, the CTL extrapolates that profile-unit hotel, the commitment to social responsibility.

The Town of Triunfo, with its wheather and the beauty of its ecological environment, in 2006 already had hotels, midsize and small hostels. The SESC trying not hurt the local economy aimed to **transform its CTL contribution to social inclusion, support and induction for the socioeconomic development of the region** by introducing a relationship in everyone which could benefit from the new venture, **the existing hotel segment, the local population, guests, and the SESC itself.**

The **main focus of research** also to find resonance in Martinelli and Almeida (1997, p. 167), to prove that "for win-win agreement, it is important to plan activities that provide opportunities for the development of positive relations, developing activities preferred by all , in order to promote the relationship, "might occur partnerships in the interest of all.

With this mission, the CTL SESC was inaugurated on February 10, 2006 resulting from the donation of 40,000 square meters of land, located at 1.174m altitude of the Municipality of Triunfo. The work has a 13.000m<sup>2</sup> area, built with an investment of thirteen million and five hundred thousand Reais at the time, approximately six million and seven hundred and fifty dollars being, the largest enterprise already done in the history of Triunfo. The unit has 60 rooms and condos. Restaurant, kitchen, laundry, Convention Center, gym, two modern heated swimming pools, a Fitness Center; hall of games; library for children and adults; Cyber Café, and handicrafts shop; one modern lift, the only one of the SESC throughout the Country. The CTL Triunfo counts with 78 employees. The CTL was delivered to society, and an important investment in physical resources, financial and human, but above all, of enormous social value, and promote the generation of new job opportunities and services.

## **The Social Programming of CTL SESC Triunfo**

To develop a management that could aggregate value and establish a relationship of exchanging satisfactory in the local market and for its guests, the SESC adopted the following strategies:

**a) during the construction period:** meetings with the local community, informing the beginning of the work and preferential hiring of labor-local and materials of the region, and then the professionals hired to work in local hotels; offering training courses in hospitality for the people of the community; local media and regional announcing the venture and the city of Triunfo as a tourist dentination;

**b) after soft opening:** **opening of the center** for visitors; **installation of a monthly forum** for discussions with the local community and representatives of local Mayor and neighboring counties; **achievement of a Fan-tour**, in order to develop a campaign for the promotion of the new CTL; **opening of activities / services** for people of the community; **promotion of courses** and workshops, culture and presentation of projects of national

redemption of the SESC and popular dances; **promotion of the project Christmas Triunfo**, in an integrated partnership with the Town hall; **involving the whole community**; **use of the cable lift** by the population; **support to local cultural expressions** for presentations in other units of the SESC in the State; **encourage the local crafts** for the opening of new businesses; **Prefecture to support** local groups to set tours.

There is, furthermore, the success in the social inclusion of customers of CTL, The local leaders met with the Group of this study, reported that the activities hotel took a big boost, making today, tourism, the predominant economic vocation of the city, after the deployment of CTL.

## History of the City of Triunfo

The centennial Town of Triunfo is known by its nice weather in the middle of a desert region. Its temperatures varies between 10 and 28 ° C. Located about 402 kilometers way from Recife, capital of the State of Pernambuco. Population of 15,135 inhabitants, with the economic activity potentialized for agribusiness development for food.

Triunfo is also known by its cultural heritage, town of Cianito Stone, the jelly made by orange; Liquor made by roses; Careta, a character in the local carnival culture. The community is proud of the production of the **Cachaça Triunfo**, a popular liquor made by sugar cane.

## PRESENTING THE OBJECTIVES

The objectives of the study aimed at guiding the search desired validate and report the elements of social inclusion offered by CTL Triunfo, being transcribed as follows:

**General purpose:** Reporting the strategies employed by SESC with the development of modern lodging infrastructure for the tourism in Triunfo, as a factor of social inclusion, demonstrating the benefits of social welfare, democratization of access to this service, enrichment of leisure, cultural and economic, with emphasis on education for action, and by tourism.

**Specific objectives:** **a)** To confirm the increase the hotel occupancy in the segment of the local market with the deployment of CTL SESC Triunfo **b)** identify the existence of greater opportunities for inclusion socioeconomic community after CTL SESC Triunfo **c)** Identify the perception of guests CTL SESC Triunfo as regarded as the actions of social tourism developed.

## DEFINING THE TERMS

### Leisure

The word pleasure, has its origin in the Latin verb "licere", which means to be lawful, legitimate, correct, itself, by extension, free, spontaneous. For Gutierrez (2001), is a leisure activity, not mandatory search of personal pleasure at leisure. According with Dumazedier apud Leite (1995,p16), "Leisure is a set of occupations for which the individual can deliver it gladly, either to rest, either to amuse themselves, is to develop its information or training disinterested, their social participation voluntary or their free creative ability, after have been released from their duties, family or social. "Leisure distinguishes itself as a social practice that originates from the organization of the historic free time, institution that sets through the tensions and contradictions triggered from the sixth century. XIX, when still in the embryonic capitalist mode of production.

Masi (2000) argues that living a crisis of transition, where there is a new model that is based on free time. The broader understanding of leisure should consider their relations with the world of work, in addition to their chances of qualitatively transform human society.

### The Leisure in the SESC

The SESC, throughout its history, has always able to implement actions in the field of leisure, identified as a set of recreational activities, and interactive cultural, essential to develop its action programme to:

"Enable the attendance of large contingent of their customers, recognizing its importance to liberate the individual from the fatigue resulting from their obligations, notably the labor (...)", (general directions of the SESC actions 2004).

In the 70's, signed on a major expansion of facilities for leisure of the SESC, intensifying its service. To the Sesc the Leisure is considered a priority field next to Nutrition, Health, Education and Culture, whereas the fullness of the human condition is closely linked to their state of well-being physical, mental and social.

## **Social Tourism**

The concept of Social Tourism emerged in France, encouraged by the creation of Tourism - Vacances pour tous (1937), entity managed by workers. It also called for sun and beach tourism. It is a tourist segment focusing on intermediate class of society and has as its main feature low cost.

According to the International Bureau of Social Tourism (BITS), this type of tourism is the "set of relationships and phenomena resulting from participation in tourism from less advantaged social classes, participation that becomes possible or facilitated by measures of social well-defined character, but involving dominance of the idea of service and not for profit."

For the Innovation Centre of Tourism, of the Getulio Vargas Foundation, is a "form of tourism that extends social inclusion, by the use of resources, goods and services of the arrangement productive tourism with sustainable use of natural and cultural resources, providing exercise of citizenship."

## **Social Tourism in Brazil**

Unlike the majority of countries in Europe and Latin America, in Brazil, the Social Tourism is not developed by the government. Restricts to some institutions devoted to social welfare, among them was the SESC.

According with DIAS (2004), in 2003, the government, establishing the Ministry of Tourism, which has, since the first quarter of its existence, the National Action Plan for Tourism (PNT) 2003-2007, with bold goals. Preparation of a public policy of Social Tourism, through studies of a Technical Group Theme (GTT), connected to the Board of targeting. Formed by representatives of institutions linked to the Social Tourism, as the SESC, the Association of Youth Hostels Association of Clubs and the Best Age.

## **The Practice Tourism in the Social SESC**

Tourism in the Social SESC not resume service to a single execution of interstate trips, but requires the integration, the system SESC, the entire equipment to use of leisure time. It is presented in three ways: emissive tourism, tourism receptive and hosting.

The SESC has provided new opportunities for recreation to a large number of commerce employees through, primarily, the reduction of costs on excursions (tickets, lodging and meals). It also promotes integration interpersonal and cultural enrichment with emphasis on informal education.

In Brazil, the SESC has: 41 means of lodging, 14,700 beds, 1,950 trips made, 191 thousand people, tourists in the sector of trade and relatives, had used its facilities, 90% of customers who attend these services are low income.

In this context, the social tourism has a very promising future, which integrates, distributes benefits, brings wealth, create businesses, which respond to the need for social welfare.

## **Social Inclusion**

Social inclusion, according Pochmann (2004), "is the development of strategies to ensure the emancipation social, political and economic whole segment of population and community living in old and new conditions of social exclusion."

Social inclusion needs to be a broad process of integration of various social actors in government institutions or not, that are involved in the apprehension and processing of reality. About the prospect of social inclusion through social tourism, Hawk (2006), "argues that it contributes in the fight against inequality and against exclusion, since promotes social cohesion, reinforced in the expression of values, such as: affordable fares ,

animation-cultural development, size solidarity and participatory, educational activities and the development of communities. "

This case study on the scene brings the experience, among others, a project outside CTL Triunfo, the Christmas of Triunfo, which allows action mobilization and involvement of the community.

## METHODOLOGY OF THE STUDY

This work was built from a **case study**, involving representatives of the community and guests CTL. Santos et alii (2000, p. 36), the study defines as:

"The case study is a thorough study on an individual, a fact or institution and aims to identify the variables and interfering related to the fact that may explain the phenomenon occurred. The subject target of the case study should be a typical representative of the problem in question, which makes us conclude that, in this case, does not demand a generalization of the results that is. "

Logs that the CTL had no data to validate their practice at the literature, necessitating the completion of an **exploratory study, combining up descriptive characteristics**, from participant observation and the analysis of reports, arising from the preparation of interviews, collections of testimony and other records capable of providing the proper understanding of the situation investigated Tripodi, Fellin and Meyer (1975, p.65-66).

The qualitative research reasons the research that for Minayo (1994, p.21), "works in the universe of meanings, motives, aspirations, beliefs, values and attitudes, which corresponds to a more profound relations, processes and (...)", phenomena of using the analysis of content that expresses, very well, the "testimony of representatives of a social group to raise the universe that group" (Gomes, 1994, p. 75).

The technique for collecting data used **non-structured interviews**, which, for Santos et alii (2000, p. 40), "can compose by questions in a predetermined script not necessarily need to be followed. It gives opportunities to the interviewer and the interviewee to develop, more free, the questions asked, extending them, raised them and even modifying them. "The interview is important component of qualitative research. "Through it, the researcher seeking to obtain reports contained in the speech of social actors."

To guide the answers to the objectives of the study were created four dimensions: hotel owners, people of the local community, guests and government people.

A group of Directors of the SESC representing the Northeast Region of Brazil: States of Piaui, Ceara, Rio Grande do Norte, Paraiba, Pernambuco, Alagoas, Sergipe and Bahia implemented the interviews. The methodology adopted employed the following: **a) invitation** by letter of the interviewees; **b) forum** of openness, clarifying the purpose of the meeting and interviews; **c) division** into teams by segments, targeting the application of interviews **d) discussion** group at the end of the work; **e) photograph** and filming and recording.

## ANALYZING THE PERCEPTIONS OF SEGMENTS SURVEYED ON THE CTL SESC TRIUNFO

The elements that make up the four dimensions of the study corresponding to: hotel owners, people of the local community, guests and government people. showed the following results:

**a) the perception of hotel owners segment** - The hotel segment with **60%** of representativeness focused on the positive performance of the SESC in the municipality, with the pronouncements: "the SESC came develop tourism, opening new opportunities for small and medium-sized hostels" and "a labour-intensive to build the SESC was all local helping in the training of people in the city. When you are working in the construction of my motel, feel the greatest pride in saying they learned in the construction of the SESC. "Before the SESC, the demand was only in the winter, and today is the end of every week, say the testimony: "SESC divisor of water", "helping to **consolidate the tourism as a vocation of the largest municipality.**"

**b) the perception of the people from the local community segment** - 15 representatives, on the sense of social inclusion and economic after the arrival of the CTL in Triunfo argued: "Socially, yes, because I speak on behalf of the schools city. These are, whenever possible, invited to participate in projects recreational / cultural. Even the special education classes. "

As for community participation in projects / actions of CTL Triunfo were observed: in **academic, weights:** 53.33% in a positive manner, ask 13.33% expansion of space and more disclosure and 33.34% did not respond, **in the library:** 60% in a positive way, regular 6.67%, 6.67% and 26.66 ask more disclosure% did not respond, **in groups / cultural courses:** 66.66%, a positive, reasonable 6.67%, 6.67 suggest expanding partnerships% and



20% did not respond, and **the artistic presentations** brought by the SESC: 80% of a positive, negative 6.67% and 13.33% did not answer .

The results show the clear opportunities for inclusion socioeconomic brought by the SESC.

**c) the perception of guests CTL SESC Triunfo** - For guests, the CTL is taken as a hotel for the weekends and holidays, considered the standard of 5 stars, the comfort and modernity of the premises, focusing on the quality of the courses gastronomic emerged from the hotel of Senac.

With a sample of 30 people hosted in CTL Triunfo, spontaneously interviewed, 63% of women and 37% of men, there was the degree of satisfaction of 100% with respect to the questions: contemplation with the actions of Tourism Social conducted by CLT ; appreciation of the score as a tourist; programming to provide rest and enjoyable stove, and programming contemplating whole family, leisure is the cause that leads the guests to the CTL.

**d) the perception of the government** - Representatives attended with various documents, such as: laws, offices, records and relevant points raised to intensify actions between the Municipality and CTL. This segment presented the Plan Director of the council, with tourism contemplating the proposal to 10 years. Including the creating of the environmental reserve in the vicinity of CTL Triunfo. Also, the SESC was considered the largest “formal” employers in Triunfo.

## FINAL CONSIDERATIONS AND RECOMMENDATIONS

This study analyzes four dimensions, corresponding to segments of the surveyed area hotel, the sample of the population, of guests and representatives of the Mayor Hall.

It was found that the three specific objectives of the study were treated in accordance with the general purpose, evidenced in the analysis of the content of primary data when comparing the words of the actors investigated, different segments, which expressed the same concept about the role of SESC.

Some final considerations, the way of conclusion, can still be highlighted in reference to CTL SESC / Triunfo: **a)** main outpost of **interiorization of tourism** in the state of Pernambuco, action policy of **decentralization of development and social equity**; **b)** inducing local development: trade in goods and services, in handicrafts and agro-industry selective, creation of new businesses in greater employability and generate income, the need for training of labor-in the rescue of the self-esteem of the population and the prospect of having better quality of life, becoming these factors basic **social inclusion**; **c)** **increased significantly, Triunfo in tourist flow in all the weekends**, the low and high season, was up to 35% **growth in occupancy of hotels and hostels existing**; **d)** **of the guests CTL were 62.47% and 32.53% beneficiaries of users in the period from fevereiro/2006 to October 2007**, complying with the guidelines of the five-year period of the SESC / DN, and play its role in social tourism receptive and hosting; **e)** is giving guests a direct contact with culture local and experience the diversity and richness of the environment, in addition to specific activities, lodging and food; **f)** is developing activities of community integration, providing the people of Triunfo attend certain sectors of the hotel for free; **g)** provided a forum for Citizenship to discuss the social function of the city, the sustainable development of the municipality and community participation in public management.

Recommendations for optimizing the positive effects, both in terms of satisfaction of tourists, as in the socioeconomic plan, and improve and / or preserve the quality of life of residents: **a)** **become inducer of the implementation of public policies to preserve the middle - environment** in the city of Triunfo and in the region, with the approval of the Plan of Development Director of Triunfo (Law No. 1.082/07); **b)** **assign to the tourism segments of Recife**, Joao Pessoa in Campina Grande, proximity, among others , to create roadmaps for integrating tourism until Triunfo, which is central in the roadmap of the Way of Cangaço and Lampião (already cited); **c)** **encourage a search of the current stage of the life cycle of tourism in Triunfo**; **d)** **expanding partnerships** to involve the largest possible number of institutions, entrepreneurs and the community in the search for accommodations social issues local; **e)** **intensify, with the local City Hall and the appropriate organizations**, the issue of improving access to the council, extending schedules and fleet of public transport.

In conclusion, this study records that the CTL Triunfo won a peculiarity importance, may be a focus of discussion of Social Tourism SESC for Brazil, as a new form of social responsibility. Now, this center gained an academic goal, which may be subject of study for future research, given the need to strategically plan its future.

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# SYSTEMS USABILITY EVALUATION METRICS REVIEW

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## ABSTRACT

*Systems usability is a concept that goes beyond the ease of use or learning; it is a broader concept comprising several criteria to measure it. Several relevant studies were developed, each with its set of metrics or criteria to evaluate systems usability. The objective of this research is to present these metrics and their meanings, on the basis of a review of scientific literature, and to propose on a model with the unification of these criteria in a correlation of the similarities and the differences between them. A list of six unified criteria, which is presented and suggested to be used in future studies.*

## INTRODUCTION

However, this definition alone renders the problem too simplified, which involves meeting user's expectations fully. Concerning systems usability, the details to be evaluated increase, since man x machine interaction aspects are involved besides rendering its use effective, efficient and pleasant for the user. Various systems usability researchers have already written on the matter and each proposed his evaluation model. Several systems usability evaluation techniques have been developed as well such as those based upon questionnaires, formal models, checklists, interaction essays or monitoring systems (CYBIS, 2006).

The ISO (International Standardization Organization), an international organization for the definition of technical standards in 148 countries worldwide, has some standards that address systems usability. One among them is the ISO 9126, which addresses systems quality and defines usability as a "set of attributes related to the effort required for its use and the individual judgment for a given number of users" (ABNT, 2003). Another standard, one of the most significant of all, is ISO 9241, which deals with user's view and its context as well as the product's ergonomic features and understands that usability can be understood as the ability a system offers its user in a given operations context for performing tasks more effective, efficient and pleasant way (ISO, 1998). This paper aims at revising the metrics and variables applied to the assessment of systems usability based upon relevant authors on the matter and on ISO standards, and proposing a model that includes all of these concepts. For that, a background of usability and how it has entered the systems interface context is presented as well as some concepts and evaluation models by several authors and international standards identified through a review of the Brazilian literature based upon scientific data to be analyzed and compared afterwards. Finally, a unified model is proposed that includes all of the concepts presented.

## USABILITY BACKGROUND

Usability is a characteristic for a given product to be easy to use, easy and fast to learn, not to cause errors or, should they appear, such errors should be easy to troubleshoot, to resolve the tasks it is intended for effectively and efficiently as well as to provide its users with a high level of satisfaction (JORDAN, 1998).

According to Shackel (1986), the definition of usability was introduced by Miller in 1971 through metrics related with 'the ease of use'. Miller identified several criteria to measure the ease of use such as: learning time, number of errors and tolerance to faults (MILLER, 1971).

In 1979, Bennett introduced the issue of usability in the Man-Computer Interaction (MCI), the field that studies the communication between people and systems, by stating that usability suggests user interaction and satisfaction (BENETT, 1979).

Eventually, Shackel (1986) broadened the concept of usability by including a view centered upon the user and the environment in which the system is being used; he also introduced four criteria to measure usability, namely: Effectiveness, Learning, Flexibility and Attitude.

Another studios on this matter is Jakob Nielsen (1993) who maintains that usability aims at providing the user with pleasant interfaces that allow for ease of interaction with effectiveness and efficiency.

After all of these works were published, ISO created, in 1998, Standard 9241, which addresses the quality of software packages and also deals with user's view and its context as well as the product's ergonomic features and maintains that usability can be understood as the ability an interactive system has to be operated, in an effective, efficient and pleasant way in a given operations context for performing the tasks of its users (ISO, 1998).

The majority of studies in the field of software usability evaluation is based upon a single technique or a set of metrics set up by a single author. The search for formal standards and the definitions of metrics for such end is required.

## EVALUATION OF USABILITY CRITERIA

This chapter introduces some models and their criteria, which were developed through several most influential academic studies on this issue.

What is intended is to analyze the similarity among the various works to achieve unification of such concepts.

The authors presented were selected following a review of literature through a survey of Brazilian scientific data base classified at the Qualis of CAPES (Higher Level Personnel Improvement Coordination).

Six scientific magazines were selected, namely: RAE – Revista de Administração de empresas (ISSN 0034-7593), RAE-Eletrônica (ISSN 1676- 5648), RAC – Revista de Administração Contemporânea (ISSN 1415-6555), RAUSP – Revista de Administração (ISSN 0080-2107), RESI – Revista Eletrônica de Sistemas de Informação (ISSN 1677-3071) and Revista Ciência da Informação (ISSN 0100-1965), in addition to the Yearbooks for two conferences: EnANPAD (Business Administration Post-Graduation Programs National Association) and the CATI (Information Technology Annual Congress).

The key word used in the search was simply “usability”; the period analyzed would vary according to the date of availability of the research for each magazine or conference. An amount of 17 articles were found and the result of such compilation is described in Table 1, below.

**Table 2: Result from the authors found in literature review**

| Source                                       | Period of Analysis | Number of Articles Found | Authors Mentioned (nr. of times)                          |
|--|--------------------|--------------------------|---|
| RAE - Revista de Administração de Empresas   | 1961 - 2006        | 0                        | -   |
| RAE - Eletrônica                             | 2002 - 2006        | 1                        | Bastien & Scapin (1)                                      |
| RAC - Revista de Administração Contemporânea | 1997 - 2006        | 1                        | Nielsen (1)   |
| RAUSP - Revista de Administração da USP      | 1997 - 2006        | 0                        | -   |
| RESI   | 2002 - 2006        | 2                        | Shackel (1) and Nielsen (1)                               |
| Ciência da Informação                        | 1999 - 2006        | 5                        | Nielsen (1), Shneiderman (2), ISO 9126 (1) and Jordan (1) |

|              |             |           |   |
|--------------|-------------|-----------|---|
| EnANPAD      | 1998 a 2005 | 6         | ISO 9126 (1), Nielsen (3),<br>Shneiderman (1) and<br>Bastien & Scapin (1) |
| CATI         | 2004 a 2006 | 2         | Nielsen (1) and<br>Quesenbery (1)   |
| <b>Total</b> |             | <b>17</b> |   |

After selecting the seven authors from the search, their original works were searched for and the criteria developed by each author to assess system usability were described.

## Evaluation Criteria according to ISO 9126

The ISO 9126 – Software Engineering – Product Quality Standard was developed in order to create a quality evaluation model for software product. The purpose is reaching a quality level to meet the actual needs of the user. The Quality in Use according to this Standard is “the ability of the software product to enable specified users to reach specified targets with effectiveness, productivity, safety and satisfaction in specified use contexts” (ABNT, 2003). The model proposed for assessing the quality of a software product is made up of six characteristics (functionality, reliability, usability, efficiency, maintenance and portability), each with its sub-characteristics. In that case, for the present work, the usability-related sub-characteristics are itemized as follows: Intelligibility: The ability of the software to enable the user to identify whether the software is suitable for performing a given task.

Apprehensibility: The ability of the software to enable the user to learn how to handle it.

Operability: The ability of the software to enable the user to operate and control it.

Attractiveness: The ability of the software to attract the user, to be pleasant.

Usability-Related Conformity: The ability of the software to be in accordance with usability-related standards and conventions.

## Evaluation Criteria according to Shackel

Shackel (1986) understands that usability is the means through which the user builds his perception towards the product. The author also introduces four components that are to be observed prior to evaluating usability: the user, the task, the system and the environment; and that a project that is well-focused on usability shall have a dynamic and harmonic interaction among these four components. For evaluating the tasks from the viewpoint of usability, the author uses four criteria (SHACKEL, 1986) as follows:

Effectiveness: Evaluates the performance of a task focused on a user or on a specific environment. For instance, based on the swiftness of execution and the amount of errors.

Learning: Evaluates the performance from product installation to the moment it is initially used, training time, and re-learning concerning the frequency of use.

Flexibility: Evaluates the performance of adaptation to the tasks other than those which are specified “from the manufacturer”, customization.

Attitude: Evaluates the performance in relation with the user’s comfort or satisfaction associated to the acceptable levels of wear, fatigue, discomfort, frustration and personal exertion.

## Evaluation Criteria according to Nielsen

Nielsen (1993), just like Shackel (1986), considers usability as one of the aspects that may influence acceptability of a product. Nielsen defines usability according to five attributes:

Ease of learning: The system must be easy to be learned so that a user may finalize a task quickly and with no difficulties. The interface must be clear and objective.

Usage efficiency: The system must be efficient in the task it is intended for. The user must reach a high level of output.

Memorization: The functionalities of the system should be easy to remember, even after a certain period of time has passed before the user can use it again with no need for new coaching.

Few errors: The system should produce a reduced amount of errors and if an error does occur, the user shall be able to solve it or ignore it in a quick and simple way.

Satisfaction: The perception of the user towards system interface. The interface should be pleasant and the user should feel satisfied and like to use the system. This measure is entirely subjective.

## **Evaluation Criteria according to Bastien & Scapin**

Bastien & Scapin (1993), French researchers of INRA (Institut National de Recherche en Informatique et en Automatique), developed a set of ergonomic criteria for building system interfaces. These authors proposed eight main criteria, some of which have sub-criteria that complement the concept. The eight main criteria are as follows:

Guidance: The software feature to guide the user through the interface and the use of the system through tips, simple information and responses to user's actions.

Work Load: The ability of the software to request a minimum of actions in order to perform a task. The fewer steps the user takes, the better, since it reduces memorization as well as the likelihood of making mistakes.

Explicit Control: It happens when the user is under the control of system action and it remains "compliant" to user's actions. System processing must be explicit to the user, who shall exercise greater control over the system.

Adaptability: The ability of the software to behave as per the user's needs and preferences. The software interface should react according to the context.

Error Management: The set of mechanisms that can prevent and reduce errors caused by the software, besides making its recuperation easy should they occur.

Consistency: The coherence in the way the interface aspects are maintained in similar contexts, and are different when applied to different contexts.

Code significance: How clear the codes and designation the user is presented with. There must be a strong semantic correlation between such codes and the items or actions they refer to.

Compatibility: The relationship between the users' characteristics (perception, age, expectations) and the tasks, and the system's outputs and inputs.

## **Evaluation Criteria according to Jordan**

Jordan (1998) introduces five "usability components" through his studies, namely:

Learning: the cost for the user to reach a certain level of competence in performing a certain task, leaving out the difficulties found to perform them the first time.

Performance of the Experienced User (PEU): the level of performance reached by a certain user upon performing certain tasks with a certain product many times.

System Potential: represents the maximum performance level that can be reached upon performing a certain task with a product. It is the maximum limit for the PEU.

Re-usability: indicates a possible reduction in the performance that may occur after the user ceases using the product or not execute a given task for a given period of time.

## **Evaluation Criteria according to Shneiderman**

Shneiderman (1998), gives us five "golden rules", which are measurable factors for evaluating the usability and quality of a system interface. These rules are very similar to those introduced by Nielsen (1993), but are presented in a more straightforward fashion:

Learning Time: The time required for a beginner user to learn how to run the commands in order to perform a certain task.

Performance swiftness: The time required for a user to finalize a key-task in the system.

User's Error Rate: Number and type of errors by the users.

Retention over Time: The way that the users make use of the system after a certain amount of time (hours, days or weeks) has passed. This measure is related with the learning time and the frequency of utilization.

Subjective Satisfaction: The level of user's satisfaction upon utilizing several system functionalities.

## **Evaluation Criteria according to Quesenbery**

Finally, Quesenbery (2001) introduces the five features of usability, known as the 5E's (effective, efficient, engaging, error tolerant, easy to learn). According to the author, the interfaces should be assessed by facing up these features in order to ensure the success and satisfaction of the end user:

**Efficiency:** Evaluates the time (number of clicks or pages browsed) spent to perform a given task.

**Effectiveness:** Evaluates how the tasks were finalized exactly and how often they produced errors.

**Attractiveness:** Evaluates user's comfort upon using the system. It measures user acceptance of the software.

**Error Tolerance:** Evaluates the rate of errors produced by the system. It can be assumed that the errors are clearly presented to the user and easily solved.

**Ease of Learning:** Evaluates the ease of usage for users from several levels of experience with the system. The user should finalize a task using assistants or help to the minimum possible.

## **UNIFICATION OF THE USABILITY EVALUATION CRITERIA**

All of the authors that were mentioned tried over time to find the ideal set of standards or metrics to measure the level of systems usability. Many of such standards are very similar among themselves, whereas others are different. With an aim at creating a set of criteria that would comprise of the works by the selected authors, a list of convergent (similar meaning) criteria was analyzed and prepared so that such criteria could be measured in the evaluation of systems usability. This list is created and made up of six criteria, namely: Ease of Learning, Ease of Remembering, Error Control, Efficiency, Effectiveness and Satisfaction, as per the table of Appendix A, to be explained as follows.

### **Ease of Learning**

The first criterion, which is unanimity amongst the papers presented, is the ease of learning. All authors, Nielsen (1993), Jordan (1998), Shackel (1986), Bastien & Scapin (1993), Shneiderman (1998) and Quesenbery (2001) as well as Standard ISO 9126, somehow presented a criterion addressing the idea that the system is easy to be learned, which is an underlying principle of usability. The system should be easy to be learned and handled, and the interface must be clear and objective. Moreover, Shackel (1986) also introduces a criterion called "Flexibility", which evaluates whether the system allows for customization in order to become easier to be used, so that it adheres to the tasks that the user performs. Following the same line, Bastien & Scapin (1993) introduce a criterion called "Adaptability", which assumes that the system should react according to the context of use. Bastien & Scapin (1993) also introduce to other criteria that help enrich the concept of ease of use, namely: "Consistency", which also foresees a level of interface adaptation according to the user's context of use; and "Code Significance", which is linked to the clarity in presenting codes and expressions in order to keep good guidance of the user by the system.

### **Ease of Remembering**

The second criterion, which is part of the studies by Nielsen (1993), Jordan (1998) and Shneiderman (1998), concerns the ease of recalling the actions performed by the system, even if such action is executed infrequently or after long intervals. Jordan (1998) also states through his "re-usability" criterion that reusing this action after some time has passed without using it should not reduce the performance or the time of performance of the action. If the action is easily recalled, this type of loss should not occur.

### **Error Control**

The third criterion, which is included in the ISO 9126 Standard and in the works by Nielsen (1993), Bastien & Scapin (1993), Shneiderman (1998) and Quesenbery (2001), deals with the control of errors by the system. The criteria analyzed do not limit to expecting from the system only the occurrence of few errors, but that the user be clearly informed of what caused the error and allow him to be able to solve it easily. The ISO 9126 Standard carries a concept called "Operability", which includes the concept that the user has the control of the system and understands that such control also comprises tolerance to errors.



## Efficiency

The “Efficiency” included in the ISO 9126 Standard and in the studies by Nielsen (1993), Bastien & Scapin (1993), Jordan (1998), Shneiderman (1998) and Quesenbery (2001) concerns the system doing the right thing and allowing the user to operate it in such a way as to reach a high level of output and performance in executing the tasks. Through their criterion of “Explicit Control”, Bastien & Scapin (1993) add that the user should have control over the system and the system must execute what is requested by the user. Jordan (1998) states that a high level of performance should be met as the user makes use of the system, that is, the number of times he performs the same task. Shneiderman (1998) adds that how fast the user finalizes a task is also a key-point for measuring system efficiency.

## Effectiveness

The “Effectiveness” criterion, identified in three studies, namely: Shackel (1986), Bastien & Scapin (1993) and Quesenbery (2001), refers to the point of the system doing the right thing in the best way possible. For Shackel (1986) and Quesenbery (2001) effectiveness is reached for instance, by measuring the swiftness of the operation and of the quantity of errors produced, in addition to the way in which the system executed the task. Bastien & Scapin (1993), enrich the Effectiveness criteria by introducing through their “Workload” criterion that the system should execute the task in the least number of steps, that is, to enable the interaction with the user in order to finalize a certain task, consequently reducing the occurrence of errors.

## Satisfaction

Finally, included in the ISO 9126 Standard and in four analyzed studies: Shackel (1986), Nielsen (1993), Shneiderman (1998) and Quesenbery (2001), the “Satisfaction” criterion was identified. It refers to the perception by the user of the use of the system. This criterion is totally subjective and is directly linked to user’s opinion on such characteristics as pleasantness and comfort of use. Shackel (1986) states that his criterion, “Attitude”, must be measured through “acceptable levels of wear, fatigue, discomfort, frustration and personal exertion”, meaning nothing more than the inversion of satisfaction, which can be measure through user’s pleasantness and comfort, as mentioned before. Some criteria analyzed were not considered as measurable criteria to be applied in the evaluation of system usability and thus were disregarded; one example is the criterion of “conformity related with usability of the ISO 9216 Standard, which refers to more to a rule that is to be followed in the development stage, that is, the developers are required to follow the resolutions of usability specified in the system design phase. Another criterion of the ISO 9216 Standard is that of “Intelligibility”, which states that the user should perceive whether the system is to meet his expectations; for this reason, it is understood that this is a stage preceding the purchase or request of development of the system itself, something that could not be measured by the evaluation of usability. Bastien & Scapin (1993) also introduce a criterion called “Compatibility”, which states that the contextualization of the users versus the expected result. The compatibility indicated by the author corresponds to a feature that should be taken into consideration upon planning the evaluation of a system’s usability.

## CONCLUSIONS

This paper aimed at presenting several most relevant studies on the evaluation of system usability and comparing the criteria they employed. The large amount of works about the issue impairs a consensus in conducting the evaluation of systems usability; however, by analyzing the works by various authors, it can be verified that, although the wording and the amount of criteria presented are different, there exists a correlation among them.

This paper also meant to provide a review of such criteria and act as a support for further research or evaluation on systems usability. By comparing all of the criteria, a set of six criteria was achieved, the concepts of which are an addition of the ideas of each of these works. These criteria are: Ease of Learning, Ease or Remembering, Error Control, Efficiency, Effectiveness and Satisfaction, and these are presented in Appendix A. As a suggestion for future works and in order to further enrich this set of criteria, a more comprehensive review of the

literature could be conducted which would comprise the international scientific data bases in order to verify the existence of any other criterion that has not been covered by this research.

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## APPENDIX A – TABLE OF USABILITY CRITERIA UNIFICATION

| Proposed Criteria   | ISO 9126         | Shackel                  | Nielsen          | Bastien & Scapin   | Jordan       | Shneiderman         | Quesenberry      |
|---------------------|------------------|--------------------------|------------------|--|--------------|---------------------|------------------|
| Ease of Learning    | Apprehensibility | Learning and Flexibility | Ease of Learning | Condition, Consistency, Code Significance and Adaptability | Learning     | Learning Time       | Ease of Learning |
| Ease of Remembering |                  |                          | Memorization     |  | Re-usability | Retention over Time |                  |
| Error Control       | Operability      |                          | Few Errors       | Error Management   |              | User's Error Rate   | Error Tolerance  |

|               |   |               |                    |                  |  |                         |               |
|---------------|---|---------------|--------------------|------------------|--|-------------------------|---------------|
| Efficiency    | Operability   |               | Efficiency and Use | Explicit Control | Performance of the Experienced User (PEU) and System Potential | Performance Swiftness   | Efficiency    |
| Effectiveness |   | Effectiveness |                    | Work Load        |  |                         | Effectiveness |
| Satisfaction  | Attractiveness  | Attitude      | Effectiveness      |                  |  | Subjective Satisfaction | Attraction    |
| Non-criteria  | Intelligibility and Conformity related with Usability |               |                    | Compatibility    |  |                         |               |

# **THE IMPLEMENTATION OF LEAN PRODUCTION PRINCIPLES IN SPANISH COMPANIES: AN EXPLORATORY RESEARCH IN THE AUTOMOTIVE INDUSTRY**

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## **ABSTRACT**

*The production management system based on the Lean Production approach has been recognized for the past decades as an efficient and competitive model for the automotive industry, thus creating the need for evaluating how and how much the companies have been adapting to this system. In this context, this article presents the main results and aspects related to a survey conducted with companies in the automotive sector in Spain, which had as main goal to determine the adjustment degree in these companies to the Lean Production System. Firstly, for so, the main concepts about aspects of the adjustment evaluation to the Lean Production are presented, describing, among them, the criteria defined by the Standard SAE J4000. Afterwards, the adopted methodological procedures for data gathering with the companies are described, as well as the main results obtained.*

## **INTRODUCTION**

There is a consensus which says that the worldwide automotive industry has undergone a profound restructuring in previous years, where the companies have developed smaller, lean productive systems which may respond quickly to the market demand changes (BENKO and FARLAN, 2003). This fact is partly justified when we analyze the worldwide automotive market data, where, having the year 2005 as reference, we may check that the worldwide productive installed capacity was 77 million cars per annum for a consumption of 60 million cars per annum, that is, an idle capacity of 22% (ZAPAROLLI, 2006).

Thus, the search for strategies which seek the improvement of competitiveness, as well as the need for supplying correctly the attributes and their clients' needs, has forced many companies to adapt their productive systems, focusing on the quality management and the continuous improvement of products and processes.

This adaptation to the new market strategies in the automotive industry has often happened through the Lean Production system, which started at the Toyota Production System, considered, throughout the automotive industry, as a model of efficiency and competitiveness. At assuming an approach which fights the waste sources, having as target the totality of the production flow, not only the operations in their individual way, the Lean Production system has, as one of its pillars, the improvement processes.

Trying to contribute in this discussion with the deployment of knowledge, this article presents the main aspects and results of a survey done with the objective of analyzing the adherence degree of Spanish automotive sector

industries to the Lean Production system. For contextualizing the analysis of results obtained in the making of this article, firstly the main theoretical fundamentals about the Lean Production System are presented, highlighting the improvement and program techniques and tools used for obtaining a lean system. The analysis on as company's adherence level to the Lean Production System was performed through the use of SAE J4000 standards, which are also described in this essay.

## **A BRIEF CONTEXTUALIZATION ON THE LEAN PRODUCTION SYSTEM**

The fundamentals developed by the Toyota Production System, which, later on, resulted in what is known nowadays as Lean Production, had as main philosophy the usage of identification and progressive minimization or elimination of waste sources, based on five paramount principles: the definition of *value* (i), from the client's point of view and needs, then determining the activities necessary for offering the product to the client with the lowest waste level through the definition of a *value chain* (ii). Then, the manufacturing of the product, using a *continuous flow* (iii) is sought, which is triggered only when the client places the order. That is, using a *drawn production* (iv). From these four principles and the usage of continuous improvements (*kaizen*) or radical ones (*kaikaku*), the fifth fundamental principle, *perfection* (v), is sought in the system (SATOLO et al, 2006).

When we analyze the implementation of the Lean Production system in companies, we notice that this may happen using several techniques and methods, which must happen in a coordinated and structured way (HUNTER, 2004). These methods and techniques must comply with the five fundamental principles of Lean Production system, mentioned in the previous paragraph. According to Feld (2000), these techniques may be grouped into five major categories, as described below:

- Production flow – it engulfs techniques related to physical changes, product development procedures and the definition of necessary standards. Some techniques and methods related to this category are: Value Stream Mapping (VSM); Process, products and/or services standardization; Takt Time definition; Cellular Layout, among others.
- Organizations and culture – grouped in this level are questions related to the individual, learning, communication and shared values. Some techniques and methods related to this category are: team work, empowerment, definition of mission and values of the organization, among others.
- Process Control – approaches techniques related to the monitoring, control, stabilization and improvement in the production process. Some techniques and methods related to this category are: SPC (Statistics Process Control), SMED (Single Minute Exchange of Die), 5S, TPM (Total Productive Maintenance), Mistake Proofing devices (Poka Yoke), among others.
- Metrics – engulfs techniques which measure output, improvement objectives and reward measures for working teams and collaborators. Some types of metrics performed are: cycle time, inventory turn, aggregated value per worker, among others.
- Logistics – mentions working rules, techniques and methods for planning and controlling internal and external material flows. Some techniques related to this category are: JIT (Just in time), Kanban, among others.

We must highlight that at the conception of the Lean Production System, no structure is considered as definite; the techniques and methods may be changed as technological and competitive needs arise.

## **THE SPANISH AUTOMOTIVE SECTOR**

The automotive industry is considered as one of the pillars in the Spanish economy, along with the civil construction companies and tourism. The sector is responsible for over 6% of the Spanish GDP and for almost a quarter of the country's total exports, employing over 11% of the active population, which generates more than 21 million Euros p.a. to the government (ANFAC, 2008).

This current positive conjuncture in the sector, according to Sevilla (2007), is the result of a group of favorable efforts and circumstances happened during the 80s, such as the European Union integration and the improvements in the worldwide economy.

At comparing the Spanish automotive industry with the Brazilian one, between 1991 and 2000, we see that the growth in the number of Spanish vehicles practically followed the growth in the number of Brazilian vehicles, having passed from 15 to 21 million, while in Brazil this number passed from 14 to 20 million. The vehicle production in Spain in 2006 was 2.07 million against 2.09 million in Brazil (ANFAC, 2008; ANFAVEA, 2008). One of the differential factors in this reality is the global competitive capacity of the Spanish automotive industry, which is able to put in the worldwide market a higher percentage than the Brazilian. Table 1 shows some comparative data between the Brazilian and Spanish automotive industries.

Table 1: Comparative data between the Brazilian and Spanish automotive industries for 2006

| Characteristic  | Spain      | Brazil     |
|---|------------|------------|
| Number of automakers  | 11         | 18         |
| Number of installed plants                                    | 18         | 39         |
| Number of light vehicles                                      | 20,908,725 | 19,212,000 |
| Production of light vehicles                                  | 2,078,639  | 2,092,003  |
| Exports of light vehicles                                     | 1,689,092  | 635,851    |
| % total exports over total production                         | 81.8       | 30.4       |
| Turnover (in US\$ million)                                    | 70,899     | 37,361     |
| Investment (in US\$ million)                                  | 1,615      | 1,451      |
| % of the sector over the GDP                                  | 4.9        | 1.6        |
| Direct jobs   | 72,786     | 93,243     |
| % over jobs (direct-indirect ones) over the active population | 9.3        | 0.30       |
| Productivity (light vehicle per worker)                       | 28.5       | 22.4       |
| Productivity (thousands of dollars per worker)                | 974        | 400        |
| Number of habitants per vehicle                               | 1.6        | 8.0        |

Source: ANFAVEA, 2008; ANFAC, 2008

## SERIES OF SAE J4000 STANDARDS

In August 1999, the SAE (Society for Automotive Engineers) approved the SAE J4000 Standard, called "Identification and measurement of best practice in implementation of lean operation". It was complemented in November 1999 by SAE J4001, being called then "Implementation of lean operation user manual", which provides instructions for evaluating the usage level of organizations to the standard SAE J4000 (LUCATO, MAESTRELLI & VIEIRA JR, 2006; SAE 1999a, 1999b).

The standard SAE J4000 is the first document and lists the criteria through which the lean manufacture may be reached, always focusing the elimination or minimization of waste. The main section of the standard is composed of 52 components divided into 6 elements (ethics and organization; people and human resources; information system; client/supplier relationship and organization; product and product management; product and process flow) that evaluate the implementation degree of principles related to lean operations in a company (DURAN & BATOCCHIO, 2001).

For evaluating the implementation degree in each of these elements, statements are made by the components, who try to characterize relevant aspects of the Lean Production system implementation principles. Though each of the elements has equal weight on the implementation, the relative importance that each of them has for the Lean Production System implementation success is reflected by the number of components related to each element (Lucato, Maestrelli & Vieira Jr., 2006; SAE 1999a, 1999b). The standard J4000 defines a specific number of components, as well as an importance weight for each element, as shown on Table 2.

Table 2: Representation of elements contained in the SAE J4000 Standard and its relative weights

| Element   | Main theme              | Number of components | Weight |
|-----------|-------------------------|----------------------|--------|
| Element 1 | Ethics and Organization | 12                   | 25%    |
| Element 2 | People and HR           | 13                   | 25%    |

|           |   |    |     |
|-----------|---|----|-----|
| Element 3 | Information System                        | 4  |     |
| Element 4 | Client/Supplier Relation and Organization | 4  | 25% |
| Element 5 | Product and Product Management            | 6  |     |
| Element 6 | Product and Process Flow                  | 13 | 25% |

Source: SAE (1999a)

To each of the components, a measurement scale on the implementation level is associated, which guides the component usage scope comparison due to better practices applied in the industry (VERGNA & MAESTRELLI, 2005), as shown on Table 3.

Table 3: Measurement scale on the satisfaction level in comparison with better practices

| Level   | Grade | Meaning   |
|---------|-------|---|
| Level 0 | 0     | The component is not implemented or there are fundamental inconsistencies in its implementation           |
| Level 1 | 1     | The component is implemented but there are still less significant inconsistencies in its implementation   |
| Level 2 | 2     | The component is satisfactorily implemented   |
| Level 3 | 3     | The component is satisfactorily implemented and has shown a continuous improvement for the last 12 months |

Source: SAE (1999a)

Nonetheless, the standards SAE J4000 and J4001 do not define a way to measure the implementation level of practices in the lean management for a specific element or for a company as a whole. Inside this gap presented by the standard, Lucato, Maestrelli and Vieira Jr. (2006) established a criterion, which allows them to evaluate the degree of adherence to the standard for both the element and the company, i.e., taking into consideration the six elements. These formulas are shown below.

- The implementation degree of a generic element “e” in the standard SAE J4000 (leaning degree for this element) may be obtained dividing the sum of grades obtained in the evaluation of this element’s components by the maximum possible grades for this evaluation, i.e.:

$$(1) \quad g_e = \frac{(\sum \text{of obtained grades in the evaluation of components from element "e"})}{(\sum \text{of max imum possible grades forthe components from element "e"})}$$

- The company’s leaning degree (g) is given by dividing the sum of the elements’ leaning degrees (g<sub>e</sub>) by the number of elements considered in the comparison (p).

$$(2) \quad g = \frac{(\sum g_e)}{p}$$

## THE SURVEY APPLICATION METHOD

The survey methodology used in the data gathering was the survey-type, which studies the sample of a population through gathering data in an individual way (not in a group), using these types of interviews as data-gathering: personal, by phone, by mail and by e-mail, classified as descriptive, exploratory or experimental (BACHMANN, ELFRINK & VAZZANA, 1999; FORZA, 2002; GRANELLO & WHEATON 2004).

In this survey, due to the fact that the questionnaire was based on an internationally recognized standard (SAE J4000) and to the fact that several other academic papers had already been successfully done and presented, this phase in the process of elaborating the questionnaire was considered as done. Nonetheless, a pre-test was initially conducted, in order to evaluate the survey questionnaire over a small sample before being definitely applied over the target public, so that possible failures and/or doubts could have been erased, trying, so, to improve the reply index.

In an initial phase, the data gathering leading happened by sending the questionnaire to 450 companies in the automotive sector located in the Iberian Peninsula, listed by the "*Autorrevista Guía 2003 - 2004*", which is an important source of reference and business in the automotive segment, mostly including Spanish companies and a few Portuguese ones. Out of this total, 32 companies replied the questionnaire sent, summing up 7.11% of the respondent rate.

In a second phase, it was proposed to these companies to participate in a new survey called "*Evaluación del grado de adecuación a la Producción Ajustada según las normas SAE J4000 y J4001*", which had as goal to evaluate the scope and deepening degree with which these companies had been adapting to the Lean Production system. This phase was started sending the questionnaires via web, but due to the low number of replies during the period established for return (one month), the strategy for data gathering was changed, and the printed questionnaires started being sent by regular mail, along with a self-addressed and stamped envelope, so that the companies could send them.

The reason for the low return rate via e-mail was not the object of a deeper study, but some evidences were checked, like socio-cultural customs and factors which could limit the e-mail understanding and the answer to a request, when it was not considered a formal relationship condition between the researcher and researchee (<http://epp.eurostat.ec.europa.eu>, 2006), thus damaging the return rate of electronically-sent questionnaires.

## ANALYSIS AND DISCUSSION OF RESULTS

The analysis of results will be divided into two sections: the conduction of the analysis on the adherence level to the Lean Production System and the description of a study on the correlation between the obtained data, in order to check the convergence and divergences among the elements.

### Evaluation of the adherence level to the *Lean Production System*

The calculation of the adherence level to the Lean Production System was done according the following steps:

- Step 1: Compilation of results, computing the data for each component evaluated by the company standard;
- Step 2: Association of grades obtained by each company, according to the weight attributed by Standard SAE J4000;
- Step 3: Calculation of percentage representative for each element evaluated, due to the weight attributed by Standard SAE J4000;
- Step 3: Calculation of the leaning degree for the companies

The Formulas 1 and 2, proposed by Lucato, Maestrelli and Vieira Jr (2006) were used in steps 3 and 4, respectively, and the calculation of the leaning degree for each element in the standard was done isolatedly for each company. In Figure 1, the adherence level to the Lean Production System in the respondent companies is presented, and it is possible to check that:

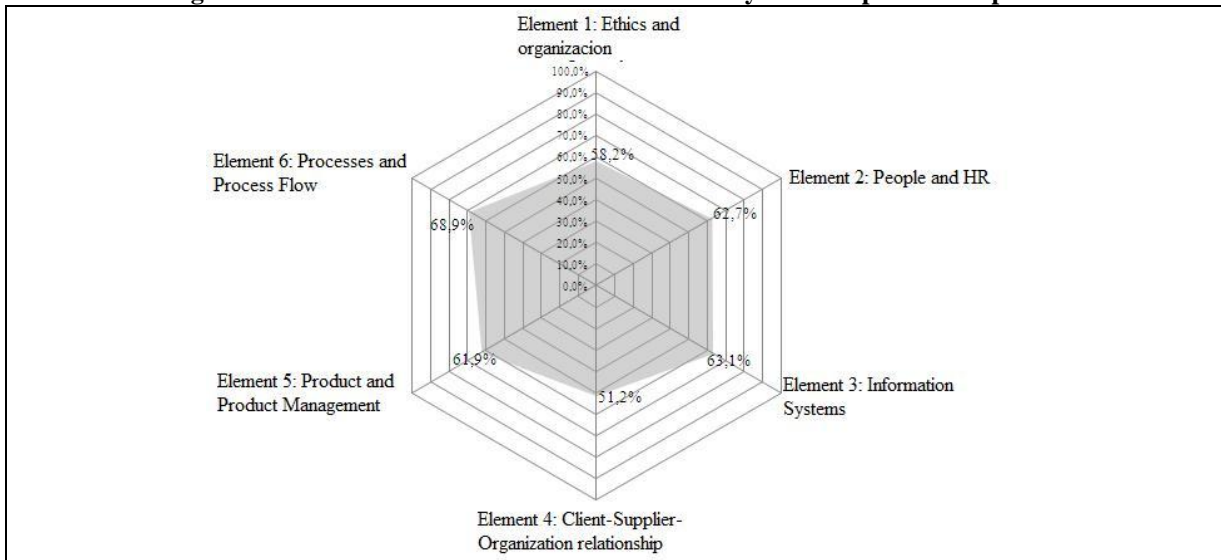
- Element 1 (ethics and organization) shows some improvement margins, mainly regarding the involvement of the board and top management. This involvement may be disseminated throughout the organization and implemented along with the organization strategic planning.
- Element 2 (people and human resources) highlights the level of participation of all collaborators in the organization. The concept obtained shows that the surveyed Spanish companies have democratized the decision-making, with a higher autonomy degree given by the formation of interdisciplinary teams.
- Element 3 (information system) highlights that the surveyed Spanish companies allow the safe and structured access to the information necessary for taking initiatives towards obtaining a Lean Manufacture, allowing the accompanying on the performance of actions taken by teams.
- Element 4 (client/supplier relationship and organization) is the one presenting higher levels of improvements to be done, showing that the Spanish companies under survey prioritized partnership relations between supplier, organization and client, possibly for improving their involvement with the other areas (e.g. product development) or for establishing long-lasting partnerships.



- Element 5 (product and product management) presented the third lowest evaluation index, and this component takes into consideration the usage of tools linked to the management of the product lifespan and the usage of multidisciplinary teams with specific competences for developing new products. This way, it may be checked that the surveyed companies still face difficulties or have not reached the desired level, mainly regarding the reduction in the launching of new products to the market and the costs linked to this task.

Finally, Element 6 (product and process flow), which had the best performance among the elements evaluated by the standard, shows that the surveyed Spanish companies have been using management methods and techniques in order to guide the production flow and be in synchronicity with the clients' needs.

**Figure 1: Adherence level to the *Lean Production System* in Spanish companies**



## Analysis of the correlation coefficient in evaluated elements

An analysis of correlation based on the sampling concept was done, being used, in this work, the Karl Pearson model for calculating simple correlations (COHEN et al, 2003).

The attainment of the correlation coefficient does not make this a fully-trustworthy value, thus a hypothesis test must be done in order to be sure that the obtained value is not zero, i.e., related to a null association. This hypothesis test generates a *p-value* that is normally linked to the *r* value. This *p-value*, when significant, only shows that the value calculated for *r* is trustworthy, which could not be equal to zero (HOFFMAN, 2006).

Table 4 presents the correlation coefficient among the variables analyzed and their respective *p-values*, which were estimated with the help of the R statistic package.

The first analysis which should be done in relation to the data on Table 5 is that all the correlation coefficients resulted in positive values, meaning that the correlation between the element pairs, besides not being null, is direct, i.e., when an element increases (or decreases) its evaluation, the leaning degree also increases (or decreases), showing that all the element pairs have a direct proportionality relation.

For the Spanish surveyed companies, Element 3 (Information systems) is the one presenting the lowest correlation coefficients at being linked to Elements 1 (ethics and organization), 4 (client, supplier and organization relationship), 5 (product and product management) and 6 (processes and process flow). This aspect shows that decisions taken for Element 3 influenced, in a lower degree, the other associated elements.

Nonetheless, decision-takings which interfere directly on Element 1 had an intense way of influence over Elements 2 (people and HR) and 4 by presenting the highest correlation coefficient.

Table 4. Correlation coefficient and p-value of analyzed data

|             |        | ELEM 1 | ELEM 2 | ELEM 3 | ELEM 4 | ELEM 5 | ELEM 6 |
|-------------|--------|--------|--------|--------|--------|--------|--------|
| correlation | ELEM 1 |        | 0.9800 | 0.0513 | 0.9247 | 0.7932 | 0.8017 |
| p-value     |        |        | 0.0001 | 0.7517 | 0.0028 | 0.0332 | 0.0301 |
| correlation | ELEM 2 |        |        | 0.8058 | 0.8929 | 0.7336 | 0.7931 |
| p-value     |        |        |        | 0.0286 | 0.0067 | 0.0605 | 0.0333 |
| correlation | ELEM 3 |        |        |        | 0.5885 | 0.5459 | 0.4426 |
| p-value     |        |        |        |        | 0.1645 | 0.2049 | 0.3200 |
| correlation | ELEM 4 |        |        |        |        | 0.7320 | 0.7773 |
| p-value     |        |        |        |        |        | 0.6065 | 0.0396 |
| correlation | ELEM 5 |        |        |        |        |        | 0.8004 |
| p-value     |        |        |        |        |        |        | 0.0305 |
| correlation | ELEM 6 |        |        |        |        |        |        |
| p-value     |        |        |        |        |        |        |        |

## CONCLUSIONS

This article had as a goal to analyze the adherence degree of companies in the Spanish automotive sector to the Lean Production System. The conduction of the survey-type study allowed checking, in a preliminary way, these companies' organizational scenario, considering an important international reference, i.e., the series of standards SAE J4000.

The data analysis allows highlighting that the Spanish surveyed companies still have some margin of improvements to be done in their organizational environment, since the indexes found for the elements evaluated by the standard SAE J4000 are under an intermediate range between 55 and 70%.

The analysis on the correlation of collected data also allowed identifying some important points. In a general sense, most of the elements in the standard present a strong correlation among them ( $> 0.70$ ), except to element 3, which presented a low correlation level ( $< 0.70$ ).

These benefits presented a higher intensity for changes done in aspects related to Ethics and Organization (Element 1), which will have effects over elements 2 (people and human resources) and 4 (client/supplier and organization relationship) for having such a high correlation level ( $> 0.9$ ). This is important when we check that this element was one with the lowest leaning degrees (58.2%), which shows that the improvements done in this element not only will improve its own performance but also will bring benefits to the other elements and in such a positive way.

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# **“LOOKING-IN” ON GLOBAL CONSUMER-USERS: TO DEVELOP BETTER PRODUCT FEATURE SETS**

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## **ABSTRACT**

*This exploratory research examines the consumer-centric insights that can accrue to product development and marketing strategists who are actively “looking-in” on the “global-level interactions” that are taking place at global online discussion forums. These discussion forums are populated with consumer-users who are regularly discussing, critically evaluating, and offering suggestions and “wish lists” that offer invaluable insights on product design issues and consumer-created feature-sets. These strategic insights are available to corporate marketing strategists for the “price” of the time for “looking-in” and “reflecting.”*

## **INTRODUCTION**

This paper explores a research process that we call “looking-in.” In the case of the current study, our intention is to apply the “looking-in” method to capture what consumer-users are posting on a “brand-model” discussion forum or “brand community,” and to show that it has the potential to enable product designers or developers, as well as marketing strategists, to be more consumer-centric in their efforts to develop new models or entirely new products.

Still further, by selecting a company that markets its products worldwide (i.e., Canon), a product category with a worldwide appeal (digital cameras) and a Web site (i.e., [dpreview.com](http://dpreview.com)) which has a worldwide following, our study truly has a global perspective or context. More specifically, we will also illustrate how global discussion forums or brand communities can provide companies with strategic insights from global consumer participants, in a manner that would be difficult to duplicate at almost any cost. The biggest cost is the effort of systematically “looking in” and absorbing what the target consumers are talking about. They are talking about a company’s likely next best strategic moves.

## **BACKGROUND ON LOOKING-IN ON GLOBAL ONLINE CONSUMERS**

Historically, when it comes to consumer marketing, it is uncommon for marketers to seek to interact directly or face-to-face with their target consumers. Instead, most consumer goods marketers tend to contract for a variety of types of quantitative and qualitative research methodologies—e.g., quite frequently a mix of survey and focus group studies. Moreover, by outsourcing marketing research to established expert consulting firms, consumer-goods firms are better able to maintain their anonymity, and provide a greater degree of confidentiality with regard to formulating new model or new product feature-sets.

Given such a perspective, it seems that consumer marketers would be good candidates to add the “looking-in” research orientation to their research “tool-kits.” More specifically, “looking-in” research, as we envision it, offers an online research methodology to capture, in the form of threads and postings, a written chronological document containing consumers’ experiences, opinions, forecasts, and sometimes a “wish list” of

product features to be incorporated into the next generation model or product. The sum-total of these insights are frequently a “treasure chest” of consumer-centric marketing-relevant inputs. Moreover, since these are easily divided into discrete time periods or cycles, consumer marketers are receiving the benefit of ongoing or longitudinal streams of research insights that sometimes capture changes in terms of style and functionality of sought-after products and features.

In particular, our use of the “looking-in” orientation was inspired by our experience conducting a wide-range of commercial marketing research projects, as well by the following important exploratory and discovery academic methodologies or orientations: (1) ethnography (e.g., Paccagnella 1997), (2) netnography (e.g., Kozinets 1997, 2002), (3) webnography (Puri 2007), and (4) cyber-archaeology (e.g., Jones 1997). It was also stimulated by a trend in the new product development process to increasingly include customers in the procedure of refining current products and/or identifying entirely new product solutions or opportunities (e.g., Clark, Nancarrow, Higgins, 2007; Pitta and Fowler 2005; Hemetsberger and Godula 2007). Still further, our thinking has also been influenced by Urban and Mauser’s (2004) “listening in” research that has focused on capturing the online interaction between potential consumers and Web-based virtual advisers (i.e., Kelly Blue Book’s Auto Choice Advisor). The information secured from this “listening-in” to the interchange between “man-and-computer” has enabled Urban and Mauser (2004) to identify new product opportunities that are based on new feature-sets and design preferences.

In the methodology section that follows, we provide a brief step-by-step overview of the “looking-in” process.

## METHODOLOGY

The description of our methodology is organized into the following three sections: (1) the looking-in process, (2) dpreview.com—the source of our data, and (3) the selection criteria used to select threads and related postings.

### The Looking-in Process

The following is an overview of the step-by-step “looking-in” research process that we followed in carrying-out our research. In parentheses, after each step, is the actual context of the looking-in research process, for our current research:

1. Selection of the product or service to be studied—in our case, Canon G-series cameras and speculation about a future or follow-on G-series camera.
2. Statement of purpose and/or objective of the research—to examine consumer responses and suggestions with respect to design and feature-sets of current and future models of the Canon G-series.
3. Identification and selection of one or more possible Web sites—a process that arrived at dpreview.com as the Web site. Dpreview.com is recognized as the leading photographic site, with a worldwide participant-audience and a “Canon Talk” discussion forum that includes consideration of the G-series Canons.
4. Formulation of relevant time periods for the search, or alternatively identification of key words, phrases, or statements that would reflect potentially interesting threads and postings.
5. Search all postings of all identified threads, so as to pinpoint insightful information.

The next sub-section considers the rationale for our selection to secure our data from dpreview.com.

## **The Global Reach of DPreview.com Participants**

It was our intention to secure a data-set drawn from a “worldwide population of postings,” that was concerned with feature-sets of current and future feature-sets of the Canon G-series camera. This was important, in the case of our research, since all major manufacturers of digital cameras tend to market their products worldwide. A search of the participant profiles of dpreview.com’s website reveals that participants are drawn from all over the world, with two geographic groups—United States, followed by Great Britain—providing the largest number of participants (dpreview, 2008).

Still further, dpreview.com was a particularly attractive source of data because it is recognized as the leading digital photography-related site, with a visitor count (according to independent ranking and rating services) that indicates that dpreview.com has four times more visitors, during a fixed period, than any of its competitors (see: Alexa.com and Compete.com). Indeed, as a sign of their “audience power,” Amazon.com recently purchased this privately held Web site for the opportunity to get easy access to its huge audience of digital camera enthusiasts and hobbyists (although they continue to accept advertising from other digital camera retail outlets, camera manufacturers, and a wide range of photographic accessories).

The next sub-section examines why we selected to apply the “looking-in” research process to examine the Canon G-series digital cameras.

## **Selecting the Canon G-Series Digital Cameras**

After selecting dpreview.com as our data source (and having already selected the Canon G-series digital camera as our brand-model of interest), we went to the “Canon Talk” discussion forum that is dedicated to all Canon point and shoot digital cameras (there are several other Canon forums that are dedicated to different models of digital single lens reflex (DSLR) cameras). In the “mix” of Canon’s digital cameras, the Canon G-series is the most advanced model of point-and-shoot camera; thus, it is a bridge between digital point and shoot cameras from the DSLR cameras.

The next section considers our approach to selecting and analyzing the threads and postings that constituted our research data.

## **The Selection of Threads and Postings**

For the current research, we wished to examine postings from the discussion forum “Canon Talk.” More precisely, we were interested in those threads that dealt with aspects of the feature-set of the Canon G7, anticipated features of the next generation Canon G-series camera—the G9, before it was introduced, the G9 after it was announced and introduced; and finally, speculation about the next future Canon G-series camera.

To illustrate the process that we followed in identifying relevant threads and their postings, we concentrated on finding threads and postings that suggested a discussion of what was “good or bad” about a current or future Canon G-series model (i.e., the G7, G9, or a future G-series model); or alternatively, postings that dealt with “what I want in the next G-series model.”

Next, to collect the threads and postings, we reviewed the titles of all threads (i.e., the first posting in a series of postings), and if the subject matter dealt with the G-series camera *and* the title reflected a current or anticipated G-series model or features of a G-series camera, we examined the postings in greater detail. If the content of a thread proved to be on target, we copied all of the postings within the thread. We continued this process until we had “reviewed and captured” all relevant threads and their postings for our pre-established time periods. When we were finished with this process, we had a total of 222 pages of threads and their postings—consisting of 140 threads and 353 responding postings.

Finally, we read all threads and postings, and selected a sample of postings that best represented the strategic insights that we were finding about the features of both current and next generation Canon G-series cameras.

The next section is devoted to our presentation and discussion of the findings of our research. To make our findings more vivid, we have captured sample verbatims.

## THE FINDINGS

To set the stage for presenting the findings of our research, it is important to recall that the Canon G-series is a digital bridge model camera located just between Canon's digital point and shoot cameras and Canon's digital single lens reflex (DSLR) models. Therefore, for camera hobbyists and enthusiasts, the G-series is the "nearest-thing" to a DSLR camera in shooting quality. However, according to our research findings, we realized that not all digital camera enthusiasts wish to own or use a DSLR because they are bigger and heavier, and more obtrusive. These individuals tend to feel that advanced point and shoot cameras—like the Canon G-series—are all that they really need. In contrast, other users own and regularly use both a DSLR camera and a point-and-shoot camera (depending on the circumstances).

With this as background, we will present our findings in the form of a representative sample of consumer-user postings. This provides us with the means to illustrate just how rich the strategic insights can be in terms of assisting a firm (in this case Canon) in its task of including consumer comments and reactions in its planning of future models and products (in the case of our focus here, the current or next generation of Canon G-series digital cameras). Finally, our discussion of the findings of our research have been organized into the following five headings: (1) Canon G7 period, (2) Canon G9 period, (3) Canon Protects DSLR camera at expense of G-series cameras, (4) seeking a "true" Canon rangefinder camera, and (5) hoping that Canon is "looking-in."

### The Canon G7 Period

We will first consider the time-frame that we have labeled the "Canon G7 Period." It corresponds to postings to the "Canon Talk" discussion forum starting just prior to Canon's September 6, 2006 announcement of a new Canon G-series model—the G7, and ending one-day prior to the announcement of the next G-series camera—the G9, on August 19, 2007 (i.e., a period of 11-plus months). During this first time-frame, postings tended to focus on a critical assessment of the features of the new G7 as compared to earlier G-series cameras. These postings also incorporated consumer-users expectations and preferences for the next Canon G-series camera.

### Sample Postings During the Canon G7 Period

Taken together, the following are four sample postings that we selected to illustrate how members of the "Canon Talk" discussion forum (at dpreview.com) provide strategic insights to Canon (if they are listening), as to what Canon needs to "keep," "delete" and "add" to the G7:

*"Many features that made the G series stand out have been removed; fast lens, raw mode, variable-angle screen, IR remote, big long-life battery, LCD status panel."*

*"...the G7 would be more appealing if it had the rotating LCD, f2.0-3.0 lens, however, this does not seem to be as important to most, a top backlit LCD, and RAW. If they just added the first 2 of those features and the last one even if they asked for \$650 the camera would be decent."*

*"...with the swivel LCD you don't have to have your arms outstretched. You have other vantage points for stability and composition other than eye level...all without bending-over or being contorted. The shots of people also seem more candid and relaxed when they don't think you're shooting them."*

*"Many things are nice on the G7. But they missed the chance of giving us a world class digicam. RAW and 28mm, with the G7 features they added, and we'd have a camera that would be treasured by an exponential increase in interest, including many more pros."*

To reflect on the “Canon G7 Period”; all of the responses tended to suggest that Canon G-series enthusiasts were disappointed with the features of the Canon G7. In particular, postings revealed disappointment because selected features were eliminated. More precisely, owners of earlier Canon G-series cameras reported being very disappointed with the removal of several “sacred” (to them) features, including: the ability to shoot RAW (i.e., with no data compression when the file is saved and no loss of detail), a swivel LCD screen and a faster lens. Others were hoping for features that were not added. A key anticipated and undelivered feature was a zoom lens that started with a wide-angle setting of 28mm or wider. This would have represented a very important and much wanted addition. In asking for this feature, posters indicate that they were willing to give-up or trade-off the high end of the zoom lens in favor of more on the wide end.

On the plus-side, there was a strongly positive reaction to the appearance of the camera. It can be described as a black retro-looking camera, similar in appearance to many rangefinder (film) cameras.

In terms of our strategic reflections on all of the posting during this “Canon G7 Period,” it is likely that Canon’s management underestimated the importance that consumer-users, especially those who had owned one or more of the earlier G-series cameras, placed on some of the established G-series characteristics or features. Further, if they were “looking-in,” they might have also decided to add a number of “consumer-requested” features. For instance, postings suggested that Canon might be shortsighted if it really believed that it could drive customers to purchase their DSLR cameras, rather than producing a substantially “richer” bridge point-and-shoot camera. (We will consider the form-factor of a rangefinder camera in a later sub-section.)

## **The Canon G9 Period**

The second time-frame includes postings made on the same discussion forum, starting on August 20, 2007, the day that Canon’s announced the Canon G9 (the replacement for the G7 camera) and ends on February 15, 2008 (the date that we set to complete our data collection).

It would appear that Canon did secure feedback that consumer-users were disappointed with the G7, because it added back in valued features from earlier G-series cameras (especially the Canon G6). We take it, that since Canon announced the G9 update, less than one year after the G7 (which is on the short side of a model’s “life cycle”), that Canon was acting in part to correct a “wrong.” In particular, Canon added a number of positive, but minor features (e.g., bigger LCD screen and slightly larger body). However, they did add-back one really important feature—RAW shooting.

For our research, the second time-frame includes postings about the features of the new Canon G9, postings contrasting the G7 and the G9, and speculations about future G-series cameras (to come after the G9). It also continued with three other important issues covered with their own subsection titles.

### **Sample Postings During the Canon G9 Period**

Immediately, after the announcement of the Canon G9, a series of postings started to appear and have never stopped (as of the middle of February 2008, when we stopped collecting postings). The following two postings provide a highly representative sample of how members of the “Canon Talk” discussion forum continued to provide strategic insights and feedback to Canon (again, if they are listening) as to what they want to “keep,” “delete” and “add” to make a better next generation G-series camera:

*“The G9 brings back the flash exposure setting and the dark/skin tone in my colors...on the other hand they increased 10mp to 12.1 mp the sensor. Any comments would be appreciated.”*

*“You get IS on the G7 but slower lens f2.8 compared to f2.0 on G1, G2, G3, G5, G6! Why can’t Canon meet “all” it’s customers’ feature-set needs, and stop the “give and take” strategy? The enlightened consumer that buys the G-series understands and would be willing to pay. Just keep making the next model better than the prior model.”*

Again, the discussion and verbatims that appear in the three subheadings are really a continuation of the current Canon G9 Period, but they reflect important themes that are worthy of their own focused attention.



## Canon Is Protecting Its DSLR Cameras at the Expense of G-series Cameras

There is an ongoing undercurrent that Canon is “holding back” on the feature-set for G-series; and therefore the G-series is never as good as it can or should be. The overriding motivation attributed to Canon is that it seeking to protect its cash cows—the DSLR, which provide more profit, especially with the purchase of additional lenses. True or not, this is a rather common belief. The following is an example of a verbatim expressing this viewpoint:

*“Canon guys think that if they do not provide this segment of customers with what they want and need, they will be forced into the Canon DSLR world in large enough numbers, thus bringing even more money to Canon. Well, I for one will most probably get a prosumer camera from some other manufacturer and even if and when I decide to go for a DSLR in the end I will make sure it is not a Canon DSLR just because of this arrogant attitude.”*

## Seeking a “True” Canon Rangefinder Camera

There is a strong emerging interest among G-series posters for a dramatic replacement or update of the G-series cameras that goes way beyond a steady improving G-series camera. What is being asked for is a digital rangefinder camera, which has a larger sensor, like a DSLR camera, but is considerably smaller and lighter in weight, and has prime or short zoom lenses.

For Canon, this would mean a new class of digital camera (note: Canon, as well other major camera brands, did manufacture such cameras for many years during the era of the film camera). The following are some of the many postings requesting that Canon upgrade the G-series cameras to the status of a digital rangefinder camera:

*“It is plausible that the market of bridge cameras is changing. For instance, the Canon G-series might be shifting from a bridge point-and-shoot camera to a rangefinder-like alternative to a DSLR. Canon and other camera manufacturers need be open to the possibility of an emerging new camera category of relatively small and lightweight digital rangefinder cameras. (To date, there is only the Leica M8—over \$5,000 for just the camera body).”*

*“I keep saying Canon will come out with a Digital Rangefinder Camera with a new line of lenses.” With regard to a Canon digital rangefinder-type camera, the biggest question in the development of such a system is sensor size, to get a suitable compromise between DOF, noise, and cost.”*

The large number of G7 postings on this topic tends to highlight the size of the group who are interested in such a small and light digital rangefinder camera; that is, a camera with a form-factor quite similar to that of the Canon G7-G9 cameras.

## Hoping that Canon is “Looking In”

Finally, in expressing their thoughts and making their recommendations, it was quite common for posters to say, “I hope Canon is listening.” The following are verbatim examples of two representative postings:

*“I'm hoping that Canon is listening to the response to the G7 and that they will incorporate what's missing in the G9 into the PRO 2. I wouldn't mind spending \$1,000 on a small jewel that performs competitively with a DSLR camera.”*

*“The best thing about G9 for me is that Canon listened. I had almost lost hope that Canon is actually caring what people want from their cameras. Now I actually have faith that Canon could introduce a new quality wide angle camera next year, let's call it S100 with "big" CMOS sensor. It would be a huge thing if Canon stopped using Sony sensors and started using their own. They have the tools.”*

## CONCLUSIONS AND RECOMMENDATIONS

The results of our research are very promising. They indicate that product discussion forums or “brand communities” contain a significant amount of “consumer-centric” insights that could help guide marketers’ product development efforts in the right direction; and at the same time assist them to avoid mistakes associated with deciding on a product-model feature-set that is underwhelming or fails to sufficiently satisfy consumers.

Furthermore, our research indicates that when it comes to deciding on a feature-set for a new model or product, in our case, a new model of the Canon G-series digital camera, it is quite common to find that enthusiasts provide some really good insights as to “must have features” and a variety of other features that are important to the overall target market for a particular product or model. It is up to experienced professional product designers and marketers to determine what weight to give to the consumer-users’ “feature proposals.” They need to be able to distinguish the “must have” features from the less important ones. By following an ongoing regiment of “looking-in,” these strategists can make more informed decisions, because it reflects the thinking of demanding, yet frequently quite loyal consumers.

It is our sense that companies, in our study Canon, would be rewarded for “looking-in” on consumers’ postings and making adjustments that reflect important features (especially if they are taken away). In the case of our research, Canon has put back in the G9 what consumers most missed in the G7—RAW shooting. The shorter than usual replacement cycle, between the G7 and G9, suggests that Canon might have obtained feedback from its worldwide consumer base that a sufficient number of enthusiasts really missed the RAW feature. However, if Canon was listening to the dpreview.com “Canon Talk” discussion forum, they could have avoided the issue, because there were ample postings that indicated the importance of the RAW feature.

It is our conclusion that the “looking-in” research approach is particularly well suited for online discussion forum research; and it would appear to be a highly effective research process, especially for marketers with a global target market. Most important, the “looking-in” research approach allows product designers and marketing strategists to carry-out, on an ongoing basis, what amounts to longitudinal access to consumer responses to both current and future product feature-sets.

Finally, in the future, researchers should apply the “looking-in” orientation to a variety of other consumer products and services categories. It is also likely that the “looking-in” method would work well with smaller entrepreneurial businesses. It is quite common for small business owners to visit special interest discussion forums that host discussions on topics that are designed to assist them in the tasks of managing their businesses. Many of these sites are likely to contain an extensive amount of word-of-mouth activity about specific products and services, and comparisons between brand alternatives. Access to such a constant stream of insights can prove invaluable to companies that are currently targeting or are seeking to target small business owners.

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# **AS A MISCONDUCT INDICATOR: CORRUPTION AND ITS EFFECTS ON TURKISH ECONOMY**

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## **ABSTRACT**

*Recently, the quality of institutions and the difference between weak and good institutions have been started to get investigated. According to researchers, it is believed that weak institutions trigger illegal and unethical practices and cause a worldwide problem: high level of corruption. Turkey, as a developing country, suffers from this phenomenon. Corruption level is relatively high in public sector, society's reliance on government institutions has been started to decrease and some kinds of corrupted behaviors have been started to get considered as legitimate. The purpose of this study is to define the causes of corruption in order to determine what kinds of reforms should be done, to analyze the effects of European Union Accession on corruption level, to identify the channels through which corruption affects Turkish Economy and to measure the magnitude of these effects.*

## **INTRODUCTION**

It is believed that weak institutions encourage unethical, illegal and corrupted practices and lead to a high level of corruption. Although, corruption is not a new phenomenon nowadays, it has begun to take more attention than in the past. Major international organizations and economists have started to deal with it.

The World Bank defines corruption as 'the abuse of public office for private gain' (Tanzi, 1998,p.564). Generally, in literature, corruption and bribery are used as synonymous terms. 'Wei (1999), focusing on the public sector, simply defines corruption as "government officials abusing their power to extract bribes from the private sector for personal benefit."'(Wei, 1999, cited in Berg, 2001, p.4) However, bribe is only a kind of corruption. All unethical and corrupted behaviors should not result with cash payments. There are other forms of corruption like nepotism, fraud and embezzlement. Corruption definition does not mean that it can not exist in private sector. All these types of behaviors are also extensively observed in private sector's activities.

Generally, international organizations believe that corruption badly influences the economy. However, economists do not come to an agreement about the effects of corruption on it. Some of them argue that corruption might promote economic development. For example, 'Leff (1964), points out that corruption may allow economically beneficial actions that erroneous policy or rigid bureaucracy would otherwise prevent.' (Leff, 1964 cited in Berg, 2001, p.6) Generally, these economists believe that corrupted behaviors decrease bureaucratic delays by relaxing inefficient and rigid bureaucratic regulations.

Recently, the positive effect of corruption on a country's economy has begun to be refuted by economists. They believe that firms that are willing to pay bribes for decreasing bureaucratic delays can not be economically competitive, instead of engaging in productive activities they can engage in rent-seeking activities. Additionally, it is argued that public officials can deliberately lower bureaucratic procedures and can exert rigidities to extract bribes. Thereby, corruption can lead to market failures and can diminish market efficiency.

Some empirical findings are made to exhibit negative effects of corruption on a country's economy. For example, Mauro (1995) investigates the effects of corruption on economic growth. He finds that corruption lowers private investment and thereby reduces economic growth. Lambsdorff (2003a; 2003b) finds that a rise in

corruption reduces property right's security and increase risk of making investment, thereby diminish investment to GDP ratio. (Lambsdorff, 2003a-2003b cited in Lambsdorff, 2005)

## CAUSES OF CORRUPTION

The question of 'Why some countries have relatively high level of corruption?' intrigues and motivates researchers to examine the causes of corruption and the following sources are found.

Government policies and government involvements in markets are seen as major sources of corruption. Especially, in developing countries, the state intervention in markets is widespread and having licenses, permits and other kinds of authorizations are essential requisite of engaging in economic activities. So, agents should contact with public officials to obtain these. If civil servants have an excessive degree of discretion over authorizations and regulations, they obtain a monopoly power and start to exploit their position's strength by distributing lucrative permits, delaying authorizations in exchange of bribes.

Some reasons are found behind the abuse of position in public sector. One is the level of public sector wages. It is argued that this level is important in specifying the extent of corruption. Rijckeghem and Weder (2001) find a negative and statistically significant relationship between corruption and wage level however, the direction of causality is not certain, a corrupt country can also intentionally diminish officials' salaries with the opinion that they can supplement extra income improperly. (Rijckeghem, Weder, 2001 cited in Lambsdorff, 2005) Second reason of position misuse is the weakness of penalty system. Theoretically, it is believed that a strong penalty system discourages civil servants to engage in corrupted acts. In fact, punishing a corrupted servant is not easy since legal, administrative and political obstacles make penalty systems inconvenient.

The low level of institutional control and the non-transparency of rules and laws reduce the probability of catching a corrupted behavior; thereby create a potential environment for corruption. Generally, controls inside of the institutions are more effective. With the help of clear and transparent rules and laws, supervisors and auditors can control officials' actions more effectively and can limit their corrupted behaviors. However, if rules are conceptually opaque, it provides ground for different interpretations and can decrease the probability of getting caught and punished.

The lack of effective media and press freedom can also be a potential source of corruption. It decreases the probability of getting caught and being disgraced to the society. Adsera, Boix and Payne (2000) find a negative relationship between corruption and newspapers per person and conclude that a free press can act as a powerful obstacle for corrupted elites. (Adsera, Boix, Payne, 2001 cited in Lambsdorff, 2005)

Low level of competition among private firms can be considered as a potential cause of corruption. The restriction of economic freedom by government diminishes competition and thereby increases supplier's prices and profits." Politicians can grasp the opportunity to assign these profits in exchange for a share. On the contrary, high level of competition reduces the opportunity of having a high level of profits and public servants and politicians have less to sell in exchange for bribes; reducing their motivation to start with a corrupt career." (Lambsdorff, 2005, p.5)

In empirical studies, openness to trade, the number of years that a country has opened to trade is used as an indicator of competition. Ades and Di Tella (1995), as cited by Lambsdorff (2005), use other two alternative indicators of competition; market dominance and anti-trust laws. They find that the level of competition determines the extent of corruption and a more competitive market is associated with a low level of corruption.

Cultural factors are regarded as potential causes of corruption. For example, La Porta (1997), as cited by Lambsdorff (2005), finds a negative and statistically significant effect of trust on corruption. In societies where the level of trust among citizens is high, the extent of corruption is low. He concludes that trust can be an important tool in combating corruption because it provides ground for a better cooperation between bureaucrats and private citizens. However, besides positive effect of confidence on corruption, some kind of it can play an expeditor role in corrupted transactions. Lambsdorff and Cornelius (2000), as cited by Lambsdorff (2005), examine a kind of strategic trust and suggest that if there is reliance between bribers that their presents will be reciprocated, the level of corruption will augment.

Finally, a country's natural resource endowment is an important determinant of the extent of corruption since they can be traded at a price more than their cost of extraction. Sachs and Warner (1995) indicate that countries which have rich natural resources are relatively more likely to engage in rent seeking behaviors. (Sachs, Warner, 1995 cited in Lambsdorff, 2005)

Turkey, as a developing country, experiences a high level of corruption. According to studies, in public sector, corruption level is relatively high, society's reliance on government institutions has been started to decrease (TESEV, The Turkish Economic and Social Studies Foundation, 2001) and corrupted behaviors have been started to get considered as legitimate.

As we already mentioned, corruption is not a new phenomenon, its roots are hidden in historical heritage. For this reason, to understand sources of corruption in Turkey, we should primarily examine Ottoman Empire. It is believed that corruption has been started in the early period of the empire and spread day by day in all areas. For example, during Orhan Sultan, corruption is examined in the establishment of military service, when it comes to the Bayezid 1<sup>st</sup> period, corruption is spread in judicial system and at the end of the Kanuni Sultan Süleyman period, corruption is extended in every mechanism of government. From XVII. Century, taking bribe becomes the principal of being appointed to the public officials. (Dascioglu, 2005) Unfortunately, corrupted and illegal behaviors are widely experienced in our historical background and inevitably, this situation affects our today's attitudes toward corruption. Our social values start to act as an incentive for corrupted behaviors. Public interest is not developed as citizenship consciousness. Individual benefit precedes than public benefit. In this sense, democracy culture is not sufficiently developed and public do not fulfill their citizenship and voter responsibilities. A common belief of seeing democracy as a tool of corruption is emerged between citizens. To sum up, our historical background provides ground for today's corrupted acts. (Kongar, 2005)

Besides historical and cultural background, our political structure creates a potential environment for corruption. Until 1950s, there is one party political system, after this date, a transition to the multiple parties is experienced in Turkey. Political power of a single party or a group and lack of effective oppositional creates an opportunity for politicians to collude with public officials.

During the establishment of Turkish Republic, Western model of development and Western political and administrative institutions that are emerged during a long period of time, are taken as a role model. The bureaucracy, formed in Western societies, is highly dependent on political system, it has a strong technical aspect and it effectively applies political decisions. However, the formation of Turkey's political and administrative institutions takes only a few years. Thereby, during this short period of time, political institutions are not internalized by public. And especially, after the transition of multiple party system, these institutions are started to corrupt. Additionally, in the first period of Turkish Republic, capital accumulation required for Western model of development is not adequate. This lack is tried to be eliminated by government involvement in markets. The government starts to make direct investments and protects local entrepreneurs against foreigners. Public officials contribute to the direct economic activities and gain a chance of having a share from these activities, thereby corrupted behaviors are started to be observed in public sector. (Ozsemerci, 2003)

Turkey's bureaucratic structure has an important effect on the spread of corruption since it has not sound base. There is uncertainty about positional responsibilities and authorities and this situation decreases the probability of getting caught. Instead of merit based recruitment, political parties willing to collude with public officials, prefer to recruit their relative, familiar and fellow and cronyism becomes dominant. So, bureaucracy is started to be politicized. Every party coming to the power tries to create its bureaucratic staff. Of course, besides, politicians and their aims, there are other reasons which trigger bureaucratic corruption such as inefficiency of constitutional state, low level of civil servants' salaries compared to private sector, complex and time consuming procedures.

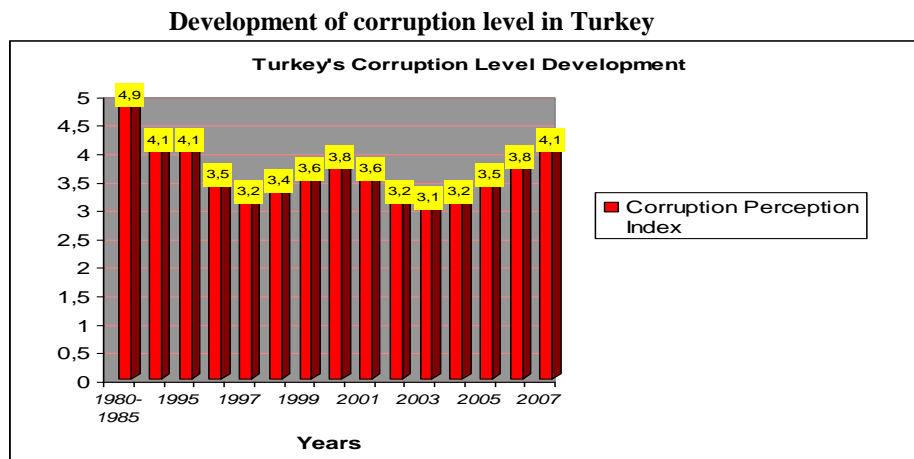
In Turkey, public administration is shaped according to centralized administration's principle. Various functions are planned and approved by central. Local administration's operations are largely diminished and this cause to an efficiency decrease. They are lots of ministries which have uncertain functions and lack of proper division of labor. Generally, they are set up at random and there is not sufficient cooperation and coordination between them. So, lack of organization, inefficient and ineffective use of resources provides an organization environment inclined to corruption. (Ozsemerci, 2003)

In Turkey, rapid population rise and irregular urbanization are seen as major causes of corruption. Both of them lead to increased demands towards public services and these make resources inadequate. Rapid population increase brings about multiple disadvantages since adequate employment opportunities for increased population can not be created. Despite government composition of artificial and unneeded employment in public sector, unemployment still stays as a big problem. This situation leads to a corruption of public sector because politicians create these artificial positions for their relatives and disregard merit based recruitment based on experiences and abilities. Because of increased population, public services fail to meet demands of citizens and officials start to favor people who are willing to give bribes to benefit from public services.

Irregular urbanization is the result of increased population and migration inside the country. In Turkey, from 1950s until now, rapid urbanization gains speed and this brings about some socioeconomic problems. For example, city's infrastructures, ability's of accommodation and other services become insufficient. In this instance, people who wish to realize their needs and wants start to engage in corrupted and illegal behaviors. A major example of rapid and irregular urbanization is the spread of squatter's houses in big cities. Immigrants start to build houses in the state territories without permission. However, this situation is not excessively taken account since they are seen potential voters and so, rising amount of squatter's houses suit politicians' purposes.

## CORRUPTION IN TURKEY

Every year, Transparency International, a global organization which fights against corruption, measures corruption perceptions index of countries and puts them in order from the least corrupt countries to the most corrupt. This index is between 0 and 10 where 10 means least corruption and 0 means highest corruption. In 2007, Turkey places in the 64<sup>th</sup> order between 179 countries. To observe general behavior of Turkey's corruption index, we can examine the following chart.



Source: Transparency International, Corruption Perception Index

Before observing the chart, it is useful to keep in mind that corruption perception index declared for a certain year is the result of past three year's survey values. Based on this, we can examine that the lowest values of indices reflect us economic crises years. 1994 is an economic crisis year and we can observe the reflection of this in 1997 with a low corruption index and the reflection of 2001 economic crisis can be observed in 2002, 2003 and 2004. From the chart, we can observe that after 1994 economic crisis, level of corruption is started to increase and the index is started to decrease. Between 1999 and 2001, an improvement is observed however, this does not endure too long since a big economic crisis is experienced in Turkey in 2001 and this immediately affects the index. After 2001, the index again shows a decrease. In 2003, highest corruption level is observed. But after 2005, the index is started to rise. Based on the index values, we can say that Turkey experiences a high level of corruption and undeniably, this situation has economic implications. To measure, the effects of high level of corruption on Turkish economy, I will use three proxies; underground economy, 2001 economic crisis and 1999 earthquakes.

In Turkey, one of the most important economic implications of high level of corruption is underground economy. According to Schneider (1986), “underground economy is all economic activities that contribute to value added and should be included in national income in terms of national accounting conventions but are presently not registered by national measurement agencies”.(Schneider, 1986 cited in Ogunc, Yilmaz, 2000, p.2)

Extensive corrupted acts observed in public and political institutions weaken citizens' confidence towards government. According to a research made by TESEV (The Turkish Economic and Social Studies Foundation) in 2001, citizens' trust against public institutions and their satisfaction from these institutions' services are highly low. A low level of confidence is started to make people worry about the use of their taxes' incomes by government. They start to think that these taxes payments, instead of turning them as public services, only serve to increase politicians' and public officials' welfare. This idea becomes a common view and thereby, society pressure' on citizens who do not pay their taxes diminish and society's moral values start to be negatively affected from the high level of corruption between politicians and public officials. The most apparent consequence of this situation is the tax evasion. When citizens encounter with heavy tax burden on employment, an increase in produced goods' tax rate and in fiscal responsibilities, they start to engage in unregistered economic activities. (Ozturk, Ulgen, 2007)

It is difficult to measure the amount of unregistered economy but it is expected to be around 30% of GDP. Turkish Statistic Institute finds that approximately 50% of working citizens are not registered to the social security system. 3% of these workers are in agricultural sector and they do not need to register in social security system but the other 7% of workers should register to the system and pay their taxes. In recent years, Turkey collects taxes in the rate of 25% of GDP. By accepting the ratio of unregistered economy's to GDP as 30%, Turkey's loss of tax revenues are expected to realize approximately 25,4 billion \$ in 2007. If we add lost premiums amount due to the underground economy, this loss increases to 40,07 billion \$. (Ankara Chamber of Commerce, 2007)

According to Ankara Chamber of Commerce, if any program to decrease underground economy is initiated by government and unregistered economy's ratio to GDP can be lower 1,5 % or 2% points every year, Turkey will catch the level of developed countries in ten years. Within research, if Turkey's economy yearly grows at 5%, and if annual reduction of unregistered economy's ratio to GDP is approximately 2% and 2006 tax revenues' ratio to GDP (24.5%) stays same, the country's additional total tax revenues will be 144 billion \$ additionally, if unregistered employment level is annually lowered 2 points, the government will obtain extra 39,8 billion \$ insurance premium in ten years. (Ankara Chamber of Commerce, 2007)

Bank embezzlement is a kind of corrupted and illegal acts observed in Turkey. It can be defined as the illegal transfer of bank deposits to the politicians, bureaucrats and privileged groups in exchange of a certain benefit. This corruption type is highly widespread during 1990s in banking sector and it is believed that embezzlement of public banks indirectly trigger one of the biggest crises of Turkey: '2001 financial crisis'. Politicians consider farmers and small tradesman as a potential vote resource. Due to the vote anxiety, they instruct public banks to provide them low credits. However, politicians do not want to reflect these spending to the budget. Thereby, the loss of public banks are started to stay hidden in their balance sheets. Growing losses of banks start to increase cash need of public banks and put them into a heavy fiscal burden. In the case of an increasing pressure, this situation can be turned into a crisis and lead to a rise in public debt stock. Additionally, public banks' managers provide credits to firms which normally do not merit. Managers know that these credits will not be repaid but in exchange of a certain benefit, they give the deposits of citizens as credits and let them to embezzle banks. All of these provide a ground for 2001 crisis and deteriorate Turkey's economy. For example, because of private banks, debt stock of treasury increased by 12 billion \$ in 2001. The cost of embezzlement was 11 billion \$ and the cost of sunk banks reached to 20 billion \$. (Yilmaz, Emil, 2004, p.52) Thereby, Real GDP growth which was 7.4% in 2000 realized -7,5% in 2001.(OECD Factbook, 2007)

In 1999, Turkey experienced one of the biggest disasters of its history; a very strong two earthquakes (17 August and 12 November) attack northwest of the country where %23 of overall population lives. “This affected area is country's industrial heartland, the immediate and adjacent provinces (including Istanbul) accounting for around one third of Turkey's overall output.”(Bibbee et al, 2000, p.5) Especially, three cities (Izmit, Sakarya, Yalova), which have 6.3% share in total GDP and 13.1% share in industry added value, are heavily affected by earthquake. (DPT, State Planning Organization, 1999, p.1)



Riba (2005) states that seventy-five percent of all earthquake deaths can be attributed to corruption in his "Earthquake destruction: corruption on the fault line?" article. Turkey is a good example for this assertion since high corruption level makes the effects of earthquake more violent. Especially, corruption in construction sector and the local municipalities' insufficient control of contractors are seen two major reasons of earthquakes' collapses. Contractors receive the permits of construction in seismic zone through nepotism. They give bribes to inspector in return of low control and obtain a chance of using low quality and cheap materials in buildings. Thereby, cause to a catastrophe.

According to EM-DAT (The International Emergency Disasters Database), 17 August 1999 earthquake is the 7<sup>th</sup> earthquake which has the biggest economic costs. Total economic damage costs of the two earthquakes were 23 billion \$. To give an example, the loss of national income was 4.5 billion \$. The infrastructure damage was 1.7 billion \$ and the reconstruction and improvement of building cost 4 billion \$. (<http://www.tumgazeteler.com/?a=1644427>)

In addition to economic cost, unfortunately, these earthquakes also have high social costs. EM-DAT (The International Emergency Disasters Database), identifies that 17 August 1999 earthquake is the 9<sup>th</sup> earthquake which causes the death of most people. (<http://www.tumgazeteler.com/?a=1644427>) Over 18 000 people were death and approximately 50 000 were injured. Around 109 000 housing units and business premises were completely destroyed. Numerous schools, roads, phone lines, bridges are damaged and up to 600 000 people were forced to leave their homes. (Bibbee et al, 2000)

By experiencing the negative effects of corruption on the society and economy, Turkey is gradually started to fight against corruption. During this period, undeniably, international organizations have an important role both in state and civil society level since they encourage their members to take precautions against corruption, to create their own anticorruption strategy and to give advices about effective struggle methods. In this sense, Turkey as a member of Organization for Economic Co-Operation and Development (OECD) and United Nations (UN), signed the OECD Convention on Combating Bribery of Foreign Public Officials in 2005 (Commission of The European Communities, 2005) and was entered the UN Convention against corruption into force in 2006. (Commission of The European Communities, 2006)

Turkey is in the European Union Accession process and naturally, this duration has some requirements about starting an anticorruption program and having a transparent fiscal system. In this sense, some actions are started to be taken. In 2002, the government approved an action plan in order to increase transparency in public sector and 'Parliament adopted a new law on Public Procurement with the aim of enhancing transparency and curbing corruption.' (Commission of The European Communities, 2002, p.23) The Law on Public Financial Management and Control was accepted in 2003. (Commission of The European Communities, 2006, p.58), The Ethical Board for Public Servants was established in 2004. (Commission of The European Communities, 2006, p.58), "The law on Access to Information was amended in 2006 to enable citizens to dispute all decisions of state agencies regarding denials of requests for information." (Commission of The European Communities, 2006, p.11) However, some of the actions taken are not accomplished their aims. For example, The Ethical Board for Public Servants does not work efficiently due to the lack of fiscal and human resources. The Law on Public Financial Management and Control is not implied properly especially in point of internal audit and performance precautions. Thereby, up to the present, only a limited progress is realized in the corruption struggle. The European Union continues to give us some advices to overcome this problem. Insistently, it recommends us decreasing the immunity of parliament' members, eliminating weaknesses in the legal framework such as election campaign financing, strengthening institutional structure and having an extensive anticorruption strategy and forming effective institutions. (Commission of The European Communities, 2007) It is believed that if all these advices are taken in account, there will be a significant fall in the level of corruption.

Based on the causes of corruption in Turkey, it can be suggested that an effective penalty system should be created by purifying judicial system from political obstacles. With clear rules and regulations and a disciplined control mechanism, the probability of getting caught and getting punished can be increased. To eliminate corruption in bureaucratic structure, instead of cronyism, a merit based recruitment and appointment system should be constructed. The confidence of citizens towards politicians and parliament's members should be

immediately regained by cleaning corrupted acts in political structure; this will help to change citizens' common belief of evaluating corruption as legitimate.

## CONCLUSION

In recent years, corruption has started to be one of the most important phenomenons of the world. The question of 'Why corruption is frequently perceived in some countries than in others?' is started to preoccupy economists and major international organizations. This paper has analyzed the causes of corruption in the world and in Turkey. It is found that cultural and historical background, bureaucratic and political structure and rapid population rise and irregular urbanization are major causes of Turkey's high level of corruption.

International organizations consider corruption as an obstacle in the development of countries. However, economists do not come to an agreement about the effects of corruption on the countries' economy. In this paper, I have identified three proxies to show the impacts of corruption on Turkey's economy. The proxies are underground economy, 2001 financial crisis and 1999 earthquakes and it is found that corruption negatively influences Turkish Economy. Additionally, this paper has analyzed the effects of European Union Accession on the fight of corruption and has concluded that Turkey is in the beginning of the corruption war and still has to take lot of step.

It is essential to specify that this study has its limitations since only three proxies are used to measure the impacts of corruption on Turkish Economy. The number and variety of proxies can be changed. An empirical study can be done to show the influences of corruption and to identify the channels through which it affects Turkey's Economy.

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# **CLOSING THE PERFORMANCE EVALUATION GAP IN SMEs IN THAILAND: WHAT MATTERS?**

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## **ABSTRACT**

*During the last two decades, SMEs sector in Thailand has been focused more as catalysts and drivers for economic growth. Many government programs have been set up and promoted to support the SMEs operations. However, at the firm level, there are still various aspects that need improvement. Management capability is one such issue. How firms manage their human resources and build up their competence can be reflected on the perception of employees on how they have been evaluated on the job which results in their motivation to perform and hence their organization effectiveness.*

*Based on a survey of SMEs in Thailand conducted in 2005, this study investigates factors influencing the perception gap on performance appraisal between the managers and subordinates in the SMEs. Various factors such as management styles, organizational citizenship, equity perception, organizational citizenship behavior, employee involvement, teamwork, and quality of work life are hypothesized to have relationship with the perception gap performance appraisal. The regression analysis results reveal that management styles, organizational citizenship behaviors, quality of working life and length of service are found to be significantly related to the performance evaluation gap.*

## **INTRODUCTION**

During the last two decades, SMEs in Thailand have been highlighted as catalysts and drivers for economic growth. Many government programs have been set up and promoted to support the SMEs operations. However, at the firm level, there are still various aspects that need improvement. Management capability is one such issue. How firms manage their human resources and build up their competence can be reflected in the perception of employees on how they have been evaluated on the job which results in their motivation to perform and hence their firm's organizational effectiveness.

In this paper, we investigate on what influences the performance evaluation gap. It is our assertion various factors such as management styles, organizational citizenship, equity perception, organizational citizenship behavior, employee involvement, teamwork, and quality of work life influence performance evaluation gap in organizations. We first discuss factors that influence the perception on organizational justice such as distributive, procedural justice and interactional justice and then describe the research methodology, the operational definitions of each factor and the questionnaire survey. Results of data analysis are discussed and finally conclusion is given.

## **WHAT INFLUENCES THE PERCEPTION ON PERFORMANCE EVALUATION?**

Performance evaluation is always one of the dimensionS of human resource management that can lead to job satisfaction or dissatisfaction and eventually employee organizational commitment and involvement which determines organizational effectiveness. The employee perception on performance evaluation generally traces down to the desire for organizational justice which reflects a sense of human worth and how one is valued by one's organization (Ambrose, 2002).

According to general definition, 'justice is about how rewards and punishments are distributed by and within social collectives and it is also about how people govern relations with one another'. Justice perceptions are related to attitudes such as organizational commitment (Folger & Konovsky, 1989; Konovsky & Cropanzano, 1991; and Erdogan, 2002:556), trust in management and turnover intentions (Konovsky & Cropanzano, 1991), and behaviors such as performance (Konovsky & Cropanzano, 1991) and organizational citizenship behaviors (Moorman, 1991). Because performance appraisal is an important human resource management practice that has implications for individual reward allocations, thus, justice perceptions in this context are especially salient. In this paper, we focus on employee perception on organizational justice that is about rewards distributed by organization. It is well-accepted that employee motivation to perform is very much reinforced by the way they are evaluated and rewarded and developed by the organization. The procedures involved, namely, performance appraisal, are basically embedded practices of HRM. This HRM process can either increase or decrease employee equity perception as well as perception on procedural fairness. For example, when one goes through performance appraisal processes within an organization. How the system has been designed, implemented and practised to increase the transparency and fairness would be of concern to employees. Here an important part in designing reward systems is that they are not only 'fair' but are 'seen to be fair'. Yet, people's ideas of fairness may vary. It is very likely that many employees will perceive some type of unfairness when going through the performance evaluation, whether with respect to the equity perception (how rewards are distributed) or procedural or interactional justice.

In many studies, management styles, particularly participative style as opposed to autocratic style have been found to exert strong influence on job satisfaction and work behavior (Tyler; Cremer, 2005). Thus, we hypothesize that the more participative management style is, the less performance evaluation gap

Previous empirical studies have suggested that perception of organizational justice will be related to the level of organizational citizenship behavior (OCB) of the employees (Moorman, 1991). When OCB is defined as the behavior that is based on altruistic nature of individual employee, we expect that the more employees demonstrate the organizational citizenship behavior, the gap in performance evaluation will be reduced..

Another factor that may reduce the performance evaluation gap is educational level. We expect that when employees have higher level of education, they will tend to be more achievement-oriented. Thus, they will tend to practice self-evaluation more often than those at the lower level where pay equity in particular is the most significant factor for job satisfaction. We therefore hypothesize that the more education one has, the less performance evaluation gap will be.

However, when one works for an organization for a longer period of time and become more attached and identifies oneself with his/her organization, it is expected that the length of service will tend to reduce the perception performance evaluation gap. Thus, we hypothesize that the longer the length of service, the less the performance evaluation gap will be. Moreover, the longer one expects to work with the current organization, the less the perception on performance gap will be. This maybe because one may come to term with the performance appraisal practices or being contented with other dimensions of work life.

When one is in a higher level of job position such as management position, it is expected that the job nature and description may allow more rigorous measurement in term of their performance and the accountability maybe clearer to the organizational effectiveness. Thus, it is expected that the higher the job position, the less performance evaluation gap.

Men and women may also have different reaction on performance evaluation. Men may demonstrate more of the competitive nature at work and have higher need for self-esteem, hence performance evaluation may have more effect on their sense of achievement in general. Thus, we expect that being male employee will lead to higher performance evaluation gap.

From the discussion above, we then specify our model as follows:

$$PG = f ( \text{MGTSTYLE, EP, OCB, EMPINVOLVE, LOS, TEAM, QWL, JOBPOS, LOEXPS, AGE, EDU, SEX} )$$

In brief, from the discussion above, we hypothesize the following:

Hypothesis 1: The more participative management style (MGTSTYLE) is the less performance evaluation gap (PG) will be.

Hypothesis 2: The higher satisfaction with pay one receives (EP), the less performance evaluation gap (PG) will be.

Hypothesis 3: The higher the level of organizational citizenship behavior (OCB), the less performance evaluation gap (PG) will be.

Hypothesis 4: The higher the level of employee involvement (EMPINVOLVE), the less performance evaluation gap (PG) will be.

Hypothesis 5: The higher the level of teamwork (TEAM), the less performance evaluation gap (PG) will be.

Hypothesis 6: The higher the quality of working life (QWL), the less performance evaluation gap (PG) will be.

Hypothesis 7: The longer the length of service (LOS) the less performance evaluation gap (PG) will be.

Hypothesis 8: The longer the expected length of service (LOEXPS) with the organization, the less performance evaluation gap (PG) will be.

Hypothesis 9: The older the age (AGE), the less performance evaluation gap (PG) will be.

Hypothesis 10: The higher the educational level, the less performance evaluation gap (PG) will be.

Hypothesis 11: Being male (SEX) will be positively related to performance evaluation gap (PG).

## **RESEARCH METHODOLOGY**

We conducted a questionnaire survey on domestic SMEs in Thailand during early 2005. The well-established U.S. 7-likert scale questionnaire was used to test the applicability and relevance which was designed to measure the perceptions of both manager as supervisor and employees as subordinates on procedural justice as well as the perception of individual respondents on other aspects including organizational citizenship, employee involvement, teamwork, quality of working life, and management styles. In the survey, the sampling frame was developed from the directory of small and medium scale industry directory acquired from the Ministry of Industry. The questionnaires were distributed in a set of 1:3 questionnaires of which one copy is for a manager and three copies for the subordinates under the same manager.

In our survey form on justice measures. In the survey, we have items which are measuring the consistency of the procedure, we ask about fairness perceptions during procedure of appraisal regardless of whether it is a written (whether performance appraisal is the same across all groups in organization), accuracy (whether it is based on accurate information on behavior of an employee), voice (whether the employee is allowed to express his/her opinion during appraisal) etc. In the survey, we measure interactional justice in performance appraisal so when manager is appraising his/her subordinate we want to find out how polite he/she was, how respectful he/she was, whether he/she explained well his/her opinions to the subordinate, etc.

About 300 questionnaires were distributed. We followed up in the process and eventually a total of 50 sets of questionnaires were obtained for this study. The profiles of respondents are given in Table 1. We followed up in the process and eventually a total of 50 sets of questionnaires were obtained for this study.

## FINDINGS AND DISCUSSION OF RESULTS

We analyzed the data obtained from the survey using SPSS software program. Cross-tabulation and regression analysis were performed to assess the impact of independent factors on the dependent factor, that is, the performance evaluation gap. The performance evaluation gap value is calculated from the perception on procedural justice of the managers' less that of the subordinates. All independent factors are found to have high cronbach alpha's reliability values ranging from .5561 to .9556 (see Table 2).

From the analysis, the results are as follows:

$$\begin{aligned} PG = f & (-0.583MGTSTYLE***, 0.085EP, 0.543OCB** \\ & , -0.356QWL**, -0.166EMPINVOLVE, \\ & 0.760LOS1**, -0.731LOS2*, -0.686LOS3**, \\ & 0.091LOEXPS1, 0.147LOEXPS2, .157LOEXPS3, \\ & 0.306JOBPOS1, 0.010JOBPOS2, 0.245JOBPOS3, \\ & -0.105TEAM, -0.195AGE1, -0.044AGE3, \\ & 0.253EDU1, -0.244EDU2, -0.143EDU3 \\ & 0.127SEX) \end{aligned}$$

Where: \*\*\* = significant at .001 level

\*\* = significant at .05 level

\* = significant at .10 level

The results of this study suggest that the proposed model can explain about 50.63 per cent of the total variation in the performance evaluation gap that exists in the workplace. Based on the SMEs sample size in Thailand variables such as management styles, quality of working life, and length of service are found to be negatively and significantly related to the degree of performance evaluation gap except organizational citizenship behavior [1] which is found to be positive and still significant. Educational level is found to have an inverse relationship as expected with the dependent variable (performance evaluation gap) but not statistically significant. Although the regression results suggest that the higher the level of job position, the lower the performance evaluation gap, the result is not significant either. Thus, we cannot be confident that those who are in the managerial positions as included in this study will have generally lower performance evaluation gap when compared with the non-managerial group sample respondents. Finally, how long one expects to remain with the current organization does not have any significant influence on the performance evaluation gap.

Another observation is that in most Thai organizations, supervisors usually do not spend time to have the performance review on a one-to-one basis with their subordinates. Usually, they would do that only with the special case or when some of their subordinates inquire about the outcome they receive. On an informal basis, they may try to hint to the employees in an indirect way before the outcome is finalized and formally disclosed to their employees. Thus, the implication is that there is still a big room for improvement in term of management practices to increase job satisfaction and organizational effectiveness.

## CONCLUSION

In the process of economic development, SMEs play a significant catalyst role to generate employment and growth for the country. However, it is observed that there is usually high turnover rate in these firms of small and medium size which to some extent prohibit stable growth and knowledge creation within organizations. HRM also plays a very important role in enabling the stable growth of the company. One of its practices that could lend the effectiveness is to develop the system that will develop effective leadership and increase job satisfaction, quality of working life and stable of employment for the organizations.

As expected, we found in this study that the independent factors such as management styles, organizational citizenship, quality of working life and length of service are found to be significantly related to the performance evaluation gap. The regression results suggest that the more participative management style, the lower the performance evaluation gap. In addition, if employees are provided with good quality of work life and they have been working with the company for some length, these factors tend to close the performance evaluation gap. Both suggest that employees are satisfied with their job and become more attached to the organization and aware of their own strengths and weaknesses in term of capacity.

## ENDNOTE

[1] This could be that it is because the variable is highly correlated to the two variables: teamwork and employee involvement which are found to be negatively related but not significant.

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**TABLE 1 PROFILE OF RESPONDENTS**

| Employee Type | Number     | Percentage  |
|---------------|------------|-------------|
| Manager       | 50         | 35.97%      |
| Employee      | 89         | 64.03%      |
| <b>Total</b>  | <b>139</b> | <b>100%</b> |



| Gender       | Number     | Percentage  |
|--------------|------------|-------------|
| Male         | 55         | 39.57%      |
| Female       | 73         | 52.52%      |
| Missing      | 11         | 7.91%       |
| <b>Total</b> | <b>139</b> | <b>100%</b> |

| Nationality  | Number     | Percentage  |
|--------------|------------|-------------|
| Thai         | 131        | 94.24%      |
| Indian       | 1          | 0.72%       |
| Missing      | 7          | 5.04%       |
| <b>Total</b> | <b>139</b> | <b>100%</b> |

**TABLE 2 CRONBACH ALPHA'S RELIABILITY**

| Factor                 | Cronbach's Alpha |
|------------------------|------------------|
| Equity Perception (EP) | 0.8879           |
| Performance Evaluation | 0.9556           |
| OCB                    | 0.8520           |
| Employee Involvement   | 0.6726           |
| Teamwork               | 0.8180           |
| Mgt. Style             | 0.5561           |
| Quality of Work Life   | 0.9173           |

**TABLE 3: DETERMINANTS OF PERFORMANCE EVALUATION GAP**

| Model Summary |        |          |                   |                            |
|---------------|--------|----------|-------------------|----------------------------|
| Model         | R      | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1             | 0.8749 | 0.7655   | 0.5063            | 0.8130                     |

a. Predictors: (Constant), AGE3, MGTSTYLE, EDU3, LOExpS3, EP, EDU1, SEX, EDU2, AGE1, QWL, JobPos1, LOS3, EMPINVOLVE, LOS1, LOExpS1, JobPos3, JobPos2, OCB, LOExpS2, TEAM, LOS2

**TABLE 4 COEFFICIENTS**

| Coefficients |                   |                             |            |                           |         |               |
|--------------|-------------------|-----------------------------|------------|---------------------------|---------|---------------|
| Model        |                   | Unstandardized Coefficients |            | Standardized Coefficients | t       | Sig.          |
|              |                   | B                           | Std. Error | Beta                      |         |               |
| 1            | (Constant)        | 4.0539                      | 2.6760     |                           | 1.5149  | 0.1463        |
|              | equity_perception | 0.0810                      | 0.1374     | 0.0850                    | 0.5895  | 0.5625        |
|              | <b>mgt_style</b>  | -0.8394                     | 0.2330     | -0.5826                   | -3.6024 | <b>0.0019</b> |
|              | emp_involve       | -0.4183                     | 0.4693     | -0.1664                   | -0.8913 | 0.3839        |
|              | teamwork          | -0.1758                     | 0.4048     | -0.1045                   | -0.4343 | 0.6690        |

|  |                       |         |        |         |         |               |
|--|-----------------------|---------|--------|---------|---------|---------------|
|  | <b>OCB</b>            | 0.9608  | 0.4205 | 0.5427  | 2.2849  | <b>0.0340</b> |
|  | <b>q_of_work_life</b> | -0.6108 | 0.2726 | -0.3559 | -2.2408 | <b>0.0372</b> |
|  | d_sex                 | 0.3129  | 0.4763 | 0.1274  | 0.6569  | 0.5192        |
|  | <b>LOS1</b>           | -2.1914 | 0.9968 | -0.7598 | -2.1985 | <b>0.0405</b> |
|  | <b>LOS2</b>           | -1.7337 | 0.9118 | -0.7307 | -1.9015 | <b>0.0725</b> |
|  | <b>LOS3</b>           | -2.3970 | 0.8874 | -0.6863 | -2.7012 | <b>0.0142</b> |
|  | LOExpS1               | 0.3177  | 0.6694 | 0.0909  | 0.4746  | 0.6405        |
|  | LOExpS2               | 0.3540  | 0.5477 | 0.1469  | 0.6464  | 0.5258        |
|  | LOExpS3               | 0.3645  | 0.5106 | 0.1571  | 0.7139  | 0.4840        |
|  | JobPos1               | -1.6231 | 0.9904 | -0.3059 | -1.6388 | 0.1177        |
|  | JobPos2               | 0.0275  | 0.5675 | 0.0095  | 0.0485  | 0.9618        |
|  | JobPos3               | -0.5614 | 0.4388 | -0.2449 | -1.2795 | 0.2161        |
|  | edu1                  | 1.1121  | 0.8449 | 0.2534  | 1.3161  | 0.2038        |
|  | edu2                  | -0.8645 | 0.5979 | -0.2244 | -1.4460 | 0.1645        |
|  | edu3                  | -0.3574 | 0.3834 | -0.1423 | -0.9323 | 0.3629        |
|  | age1                  | -0.5907 | 0.4354 | -0.1945 | -1.3565 | 0.1908        |
|  | age3                  | -0.1125 | 0.5218 | -0.0436 | -0.2155 | 0.8317        |

a. Dependent Variable: gap

# **SOME BRIEF CONSIDERATIONS ABOUT TRANSPARENCY IN THE FINANCIAL MARKETS**

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## **ABSTRACT**

*Nowadays the issue of financial markets is extremely important for many reasons, as the fact that in a daily basis everyone needs to work with financial instruments.*

*Transparency is one of the most important key words of a global and an effective financial system.*

*An effective action of the regulatory authorities and of the judicial system are extremely important to obtain transparency and increase the public confidence, as well as the accurate study of these matters (for instance, by academics and by everyone that works in these subjects).*

## **INTRODUCTION**

This paper intends to demonstrate the importance of transparency in the financial markets and to offer the point of view of the author regarding the importance of an effective action of the regulatory authorities and the judicial system to obtain transparency and increase the public confidence.

Another main goal of this paper is to give a general view of the role of the regulatory authorities in an ethical and effective financial system, as well as the role of the Judicial system, that should have all the resources needed to allow timely and effective enforcement of the law.

## **FINANCIAL MARKETS AND THE IDEA OF TRANSPARENCY**

At the present, the subject of financial market is extremely important, especially considering that we are living in a global world, being discussed, not only by academics, but as well by the general public that is more conscious of their rights.

In fact there is a major discussion regarding financial markets, by all the media means (as television, newspaper and others).

For instance, many media means reported the financial scandals that have happened in several countries (e.g. the case of Société Générale, in France), being the meeting that the leaders of some countries of the European Union had, been published in several newspapers, on January, 2008.

One of the main goals of that meeting was to discuss the importance of transparency “(...) in the functioning of markets, institutions and financial instruments (...)” (<http://www.premier-ministre.gouv.fr>, 2008)

At the same time, the French Prime Minister, François Fillon, “(...) declared that Europeans felt the need for a far-reaching reform of our financial system to be put before all developed countries for a safer, more regulated market.” (<http://www.premier-ministre.gouv.fr>, 2008).

The increase visibility of the issue of financial markets is not only due to the existence of a global economy, but, as well, due to the easy access to more information, through internet, for instance, by the general public, all over the world.

Another reason is that everyone, in a daily basis, needs to work with financial instruments. As an example, to buy a house, most of the time, it will be necessary to ask a loan to the bank as well as the need to make an insurance (for the house and due to the bank's loan).

In the case described above, it is possible that the buyer will not be certain regarding when is working with the bank (due to the loan) or with the insurance company (by making an insurance). This needs to be very well discerned and explained to the person involved, as well as to the general public, not only to protect the consumer, but also because of the idea of transparency.

And in fact it is possible that the buyer can work with different companies (the bank and the insurance company).

Early this year (2008) was published, in Portugal, a law (Decreto-Lei n.º 57/2008, de 26 de Março) that establish the legal regime applicable to unfair action of the companies regarding their relationship with the consumers.

With this law, the legislator intends to promote the consumers trust in the market, guarantee competition and promote the international commercial transactions.

The idea of transparency is one of the most important key words of a global and effective financial system.

Transparency is not easy to define. For instance, the International Monetary Fund explains transparency as "Openness, honesty, and accountability in public and private transactions. The term "transparency" is frequently used to mean openness in the working of institutions. It is linked to a variety of demands for broader public access to information. The IMF has developed codes of good practices on fiscal transparency, and transparency in monetary and financial policies." (<http://www.internationalmonetaryfund.org>, 2007).

The Código de Boas Práticas para a Transparência nas Políticas Monetária e Financeira (1999) and his complementary document (2000) refers that transparency is, for example, the accessible communication to the general public of the information relating to the monetary and financial policies.

And Gai and Shin (2003) wrote that "The notion of transparency is broad-ranging. It encompasses notions of accountability and political legitimacy of decision makers, as well as the legal and accounting infrastructure in which economic decisions are made."

However, there are different opinions about the level of transparency wanted, in different countries.

The connection between financial markets and transparency is crucial. In fact only when there is transparency markets can work with efficacy, where the role of regulatory authorities and the establishment of standards are extremely important.

That is why all countries must have these matters as a major goal of their policies. Not only because of financial, economic and competitive reasons, but also because of legal and ethic reasons.

Neves (2007) wrote that "Business Ethics' great academic success deeply influences both markets and manager's decisions. The approach is mostly pragmatic, concentrating on results and consequences through the use of rules, procedures and governance structures. Moral improvement of management is undeniable, but neglect of personal purposes and aims had public opinion doubting the sincerity of the ethical stance of firms. Transparency as an instrument for ethical decisions is a result of this general paradigm. (...)"

And Swanson (2004) wrote that "The 1990s and early 2000s witnessed an unprecedented increase in central bank transparency, with New Zealand, Canada, the U.K., Sweden, Finland, Israel, Australia, Spain, the European

Central Bank, Norway, and several developing countries all adopting an inflation targeting framework for monetary policy, and many other central banks dramatically increasing the amount of information regularly released to the public.”

Another key word of a global financial system and one of the purposes of Government is an effective financial system. In fact an effective financial system is the essential key to promote and assure the public confidence and promote economic and financial results.

In this sense, we can write about the interview given by IMF's European department division chief Jörg Decressin, where he “outlines his views on improving transparency and supervision of financial markets, as well as the challenges ahead for retail financial services.” (<http://www.euractiv.com>, 2007).

And also the meeting that the “Leaders of the four biggest economies of the European Union and the president of the European Commission called (...) for greater transparency in financial markets and the creation of an “early warning system” for the global economy to reinstate market confidence and help prevent future financial crises.” (International Herald Tribune Business with Reuters, 2008).

The major importance of these matters justifies, in my opinion, that they should be discussed, not only during university studies, but also by everyone that already work in these subjects, as, for instance, lawyers, judges, promoters, accountants.

In fact, the learning of financial matters is an important subject to European Union. In 30, April 2008, the European Commission (2008/365/CE) decided to create a group of experts in financial education.

This group has several goals, as to promote the best ways to financial instruction, identify juridical and administrative obstacles to promote financial education, as well to propose mechanisms to avoid those obstacles.

Only the effort of studying these matters (that also change through the years and in accordance with the evolution of the world) can make possible the (good) work of the people that deal with these subjects (e. g. experts of the regulatory authorities, lawyers, judges, promoters).

And an effective action of the regulatory authorities and the judicial system is very important to obtain transparency and increase the public confidence.

## **REGULATORY AUTHORITIES AND JUDICIAL SYSTEM**

Regulatory authorities have a special role in an ethical and effective financial system. So, regulatory authorities should have as one of their main goals the protection of the consumer (for instance, potential risks and rewards of the investment) and the financial markets.

For that purpose, regulatory authorities should “think” as being the consumer. In that way it would be easier to know what are the main purposes of the consumer and how to protect the consumer.

For instance, in Portugal, to know if the Capital Markets Authority acts (or not), in time, to protect the interest of small investors in the process of raising capital by a bank, a Parliament resolution (Resolução da Assembleia da República n.º 6/2008, de 12 de Março) was published, in the 12<sup>th</sup> of May, 2008, creating a Parliament Commission to determine and discern several issues, including this issue.

One of the main purposes of this Parliament Commission is to find and bring legal initiatives to improve the results and the effectiveness of all regulatory authorities.

To obtain their goals regulatory authorities should have the human and financial resources to investigate and detect illegal and unethical conducts in business. And these human resources should have access to education and training programs, as, for instance, by attending workshops, doing some e-learning courses, having an integrate and interdisciplinary courses.

The regulatory authorities also need a legal framework, and to be able to, when and if necessary, apply effective administrative sanctions.

But, in my opinion, it is extremely important to remind the idea that regulatory authorities can only perform properly their work if in the presence of a global policy in these matter. That is why European countries should have a global policy, by taking the same type of measures at the same time frame.

As a rule, all regulatory authorities should work more closely between themselves. Not only in a national plan, but also in a global scale, as we are living in a global world.

In that way, it would be easier to obtain better information regarding the market before taking any decision about the existence (or not) of any kind of violation of the law.

The regulatory authorities should work in a constant way to try to be aware and act, if necessary, in the major number of events as possible. As the every day life is more complex than the legislator imagination some authors thinks that is important that the law gives some “open space” to the regulatory authority work when a situation happens that is not predict in the law.

In fact, when a regulatory authority has knowledge regarding a specific situation, has to develop all the mechanisms to determine if there is any kind of violation of the law.

In that way, the regulatory authority in charge of that specific situation, should ask for information not only to the company itself, but also to others entities, as for example others regulatory authorities.

And in case, the regulatory authority thinks there is a violation of the law, it should act in accordance with the law. With an effective action of the regulatory authorities is possible to obtain transparency and increase the public confidence.

Dodge (2002) wrote that “(...) everyone needs to have trust in the financial markets—to know that the right rules are in place and that those rules are being enforced.”

But sometimes to decide if a violation of the law exists, the regulatory authority needs the information and the knowledge that a different authority has. In that case, it is necessary to have cooperation between the regulatory authorities.

With this kind of cooperation it would also be easier to have an efficient financial market.

However, it is necessary to have some concerns regarding the actions taken by a national regulatory authority, which can produce effects in another or in different countries, as we have an integrated financial market.

The problem, nowadays, seems to take the decision how that cooperation will work. And, regarding this matter, the opinions differ in the academic world and in the political world.

But the national regulatory authority should not only work with regulatory authorities from others countries, but also with others institutions, as, for instance, the International Monetary Fund.

That is why the leaders of some European Countries “(...) also asked for the International Monetary Fund to play a larger role in overseeing financial stability, for authorities to improve cooperation and for companies and rating agencies to help increase investors' understanding of potential market risks.” (International Herald Tribune Business with Reuters, 2008).

The regulatory authorities should also have in account that the increase integration of financial markets worldwide brings new challenges, problems and responses.

In fact, events that happened in one country can “travel” very fast to others countries. And this is also a challenge to the governments and to the regulatory authorities. That is why that all authorities need to work together and exchange more information to deal with those problems.

This same idea also works in the Judicial system. In fact, in my opinion, the Judicial system should have all the resources needed to allow timely and effective enforcement of the law. With a timely and effective enforcement of the law is possible to obtain transparency and increase the public confidence.

Nowadays, the quality and the productivity of the Judicial system is a very important question in several countries (Observatório Permanente da Justiça Portuguesa, 2005).

The timely and the effective enforcement of the law may be achieved by some main actions, as, for instance: an easy access to educational and training programs regarding these issues, by all the judicial system officers. For example, everyone that works in the Judicial system should have access to several kind of courses, as e-learning courses, and also to workshops.

These workshops should be done with a heterogenic group (e.g. academics, lawyers, judges, promoters, accountants). In that way it would be possible to discuss several ideas and opinions about the daily routine of the judicial system. In that way it would be possible to the Judicial system to act in a more efficient way and decide in a shorter period of time. These workshops could also promote the increase of “quality” of the law.

There should also exist an enforcement process of several kinds of sanctions. For that, Courts should have mechanisms to decide in a short time and to oblige the part that needs sanction to do what the Court determinate, for instance the custody, in a very short period of time, of the investments that the part has.

## CONCLUSION

Nowadays, the subject of financial markets is extremely important, especially considering that we are living in a global world.

The connection between financial markets and transparency is vital. In fact, the idea of transparency is one of the most important key words of a global and effective financial system.

Only when there is transparency markets can work with efficacy, where the role of the regulatory authorities and of the Judicial system are extremely important.

With an effective action of the regulatory authorities and with a timely and effective enforcement of the law is possible to obtain transparency and increase the public confidence.

The major importance of these matters justifies, in my opinion, that they should be discussed, not only during university studies, but also by everyone that already work in these subjects, as, for instance, lawyers, judges, promoters, accountants.

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# DUOPOLY OF LINUX AND MICROSOFT AS COMPETING SERVER OPERATING SYSTEMS

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## ABSTRACT

*The paper is motivated by Microsoft Windows and Linux competition at the server operating systems market. Microsoft/Linux mixed duopoly dynamics is analyzed using optimal control mathematical model where Microsoft is considered as a profit-maximizing competitor while Linux as an open source software project is assumed non-for-profit.*

*Previous studies of mixed duopolies were static except the paper by Cassadeus-Masanell and Ghemawat (2006) where a dynamic mixed duopoly was presented and applied to Windows/Linux competition investigation.*

*This paper presents some extensions and modifications of Cassadeus-Masanell and Ghemawat's model. Cassadeus-Masanell and Ghemawat assumed that at the demand side of the model in each period of time a new cohort of potential users enters the market, and the size of this cohort does not depend on time. We here assume that the cohort size is increasing exponentially. It is important that the demand side is learning and it affects the cost side. Another addition to the Cassadeus-Masanell and Ghemawat's model is that the cost investments in learning are endogenous.*

*The conditions when Linux And Windows coexist at the market and when Linux is pushed out by Windows and vice versa are obtained and discussed. The special attention in the model presented is given to a piracy of Windows and strategic contribution to Linux issues which for the first time were discussed also by Cassadeus-Masanell and Ghemawat (2006).*

## INTRODUCTION

At the moment all the software users are choosing between the three options:

- to buy licenses and use the commercial software (e. g. Microsoft Windows as an operating system, Microsoft Office as an office suite, Microsoft SQL Server as a database server, Microsoft Internet Information Server as a web server, etc.);
  - to use free or open source software (e. g. Linux as an operating system, OpenOffice as an office suite, MySQL as a database server, Apache as a web server, etc.);
  - to pirate (i. e. to use the commercial software without buying licenses.
- These options correspond to three types of software market players:
- profit-maximizers (for example, Microsoft);
  - non-for-profit players (for example, Linux team);
  - pirates.

In this paper we do not differentiate free and open source software, we refer to these two types of software as non-commercial software.

At the software market the product cost is the sum of fixed cost, vendor profit (margin), and maintenance cost. Fixed costs of commercial and non-commercial software tend to zero, maintenance costs of these two types of software are approximately equal, and the profit of commercial software vendor is positive while one of non-for-profit player is equal to zero. Non-for-profit players indeed earn their money but (opposed to profit-makers) not on sales but on maintenance.

The pirating at the software market is legally prohibited (this prohibition is hardly stimulated by for-profit players, especially by Microsoft). We discuss the software pirating in Soloviev (2008), here we concentrate mostly on the duopoly of commercial and non-commercial software.

It may appear that the buyer's choice is very simple: to use non-commercial software due to significantly lower cost of ownership (and some other advantages in case of open software where the user can directly affect the product quality). But the situation is much more complex because at the start point of competition between commercial and non-commercial software (in early 1990's) almost 100% of the market were occupied by for-profit players and it was very difficult for non-commercial players to distribute their products widely due to high authority of famous commercial products, and almost absolutely no awareness of free software reliability, security, etc. It is known that in 1994 Linux has 0% of server operating systems market, and now Linux has something about 40% of this market (and approximately the same share of market is occupied by Microsoft Windows).

The paper is motivated by Microsoft Windows and Linux competition at the server operating systems market. Microsoft/Linux mixed duopoly dynamics is analyzed using optimal control mathematical model where Microsoft is considered as a profit-maximizing competitor while Linux as an open source software project is assumed non-for-profit.

The history of duopoly studies begins with the works of Cournot (1838), Stackelberg (1934), et al who have studied the symmetric duopolies, while the duopoly of commercial and non-commercial software is asymmetric. In addition, the solutions of Cournot, Stackelberg, Arrow, Nash, et al are static but the main interest at the moment is on the dynamics of software market competition.

The software market players compete in the presence of learning-by-doing (which means that the authority of non-commercial products is growing while the users are learning using these products). The learning-by-doing competition theory initiated by Spence (1981) is focused on the impact of cumulated output on cost reduce.

The prior research of commercial and non-commercial software competition was focused mainly on the customer choice as make-or-buy decision [see, e.g., Kuan (2001)].

Lee and Mendelson (2008) assume that the software market consists of two customer segments with different preferences and is characterized by positive network effects. The commercial player makes product and pricing decisions to maximize its profit. The non-commercial player make product decisions to maximize the weighted sum of the segments' consumer surplus, in addition to their intrinsic motivation.

One of the recent steps in the duopoly theory was to combine the classic market duopoly theory with the demand-side learning and to extend this approach to a dynamic situation where the objectives of players are mixed rather than symmetric. This step was done by Cassadeus-Masanell and Ghemawat (2006) who have presented a dynamic mixed duopoly model and applied this model to Windows/Linux competition dynamics investigation.

This paper presents some extensions and modifications of Cassadeus-Masanell and Ghemawat's model. Cassadeus-Masanell and Ghemawat assumed that at the demand side of the model in each period of time a new cohort of potential users enters the market, and the size of this cohort does not depend on time. We here assume that the cohort size is increasing exponentially. It is important that the demand side is learning and it affects the cost side. Another addition to the Cassadeus-Masanell and Ghemawat's model is that the cost investments in learning are endogenous.

Using the optimal control theory we obtain the conditions when Linux and Windows coexist at the market and when Linux is pushed out by Windows and vice versa are obtained and discussed. The special attention in the model presented is given to a piracy of Windows and strategic contribution to Linux issues which for the first time were discussed also by Cassadeus-Masanell and Ghemawat (2006).

## THE MODEL

The model presented in this paper is modification of Cassadeus-Masanell and Ghemawat's model (2006).

We assume that the operating systems market grow at rate  $v$ . Let  $q(t)$  be the portion of new users entering the market at the moment  $t$ , who buy Windows,  $p(t)$  — the portion of new users who pirate Windows,  $\varepsilon(t)$  — the portion of new users who are strategically committed to Linux; each user can either buy Windows, or

pirate Windows, or download Linux,  $y_W(t)$  and  $y_L(t)$  — the cumulative number of Windows and Linux users respectively,  $w$ . Then

$$(1) \quad \frac{dy_W(t)}{dt} = vq(t),$$

$$(2) \quad \frac{dy_L(t)}{dt} = v(1 - q(t)).$$

Let the demand functions of Windows and Linux be linear:

$$(3) \quad p = \alpha_W (y_W(t) - sy_L(t))(1 - q(t))$$

and

$$(4) \quad p = \alpha_L (y_W(t) - sy_L(t))(1 - q(t)),$$

here  $p$  is the OS's value to a user,  $s > 0$  is the strength of Linux (which means that the increase of  $s$  corresponds to strengthening of Linux due to network externalities),  $\alpha_W (y_W(t) - sy_L(t))$  and  $\alpha_L (y_W(t) - sy_L(t))$  are S-shaped technological curves [see Foster (1988)] of Windows and Linux.

When Linux is free and Windows is available at the moment  $t$  at price

$$(5) \quad p(t) \geq 0,$$

the portion of customers, precisely indifferent between two operating systems, is given by the next formula:

$$(6) \quad \alpha_W (y_W(t) - sy_L(t))(1 - q(t) - \rho(t) - \varepsilon(t)) - p(t) = \alpha_L (y_W(t) - sy_L(t))(1 - q(t) - \rho(t) - \varepsilon(t)).$$

Hence

$$(7) \quad p(t) = \alpha_W (y_W(t) - sy_L(t))(1 - q(t) - \rho(t) - \varepsilon(t)) - \alpha_L (y_W(t) - sy_L(t))(1 - q(t) - \rho(t) - \varepsilon(t)).$$

At the initial moment ( $t = 0$ ) we assume that

$$(8) \quad \alpha_W (y_W(0) - sy_L(0)) > \alpha_L (y_W(0) - sy_L(0)).$$

Microsoft is willing to maximize its integral discounted (at the rate  $\delta$ ) profit:

$$(9) \quad J(p(t)) = \int_0^{+\infty} vq(t)p(t)e^{-\delta t} dt \rightarrow \max$$

subject to (1), (2), (5), (7), (8).

## RESULTS AND DISCUSSION

The main result of the paper is formulated as the following theorem.

**Theorem.** Linux and Windows coexist at the market if and only if  $s$  is greater than 1 and Linux has no strategic commitments with the groups of customers and there is no piracy of Windows. Linux is pushed out by Windows if and only if  $s$  is less or equal to 1. Windows is pushed out by Linux if and only if  $s$  is greater than 1 and Linux has a strategic commitments with the groups of customers or there is a piracy of Windows.

The main difference between the model presented in this paper and Cassadeus-Masanell and Ghemawat's model (2006) is following. Cassadeus-Masanell and Ghemawat assuming that the users' growth rate is zero presented an example where the piracy of Windows could be beneficial to Microsoft. If we assume that the number of users is growing then we have proven that the piracy of Windows will never bring any benefits to Microsoft.

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# COMPARATIVE ANALYSIS OF RESULTS OF INTEGRATING AN ACTIVITY AS A SUBJECT OF ENTERPRISE CONTROL

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## ABSTRACT

*Enterprise control requires a subject of control to be singled out. In dealing with activities, functions or processes, one should choose the level of integration of activities. Presented in the article are some results of research into practical integration of activities as a subject of control, in Russia. An overview of integration results of business enterprises control is given at operational, functional, interfunctional and interenterprise levels. Typical results of integration were identified as applied to individual control functions and professional spheres of activity. A comparative characteristics of various levels of integrating an activity as a subject of control is given.*

## LITERATURE REVIEW

The term of integration is widely used in modern science and applied management. As shown by the analysis, management integration is one of the most popular topics. In Russia the absolute majority of dedicated scientific periodicals addressed this topic at least once over the past five-year period.

Integrated management is a result of conscious need to achieve parity between economical interests of an enterprise, on the one hand, and economical, social and environmental demands of the society, on the other hand. Integrated management, integral manager, integrated concept of logistics, integrated information and communication systems constitute an incomplete list of set phrases, currently used to describe the processes of enterprise control at different levels.

Quite often integration in management is synonymic with combination (of efforts, actions, opportunities) (Chase (2000); Chen (2005); Craighead (2007); Forrester (2006); Handfield R. (2007); Johnson (1999); Jonker (2004); Klevlin (2003); Radding (1998), et al.), which complies with general perception of this term. Integration can be treated as inclusion, involvement (Chase (2000); Delen (2005); Handfield R. (2007); Stevenson (2006), et al.). Integration is viewed as a means of economic growth and development of enterprises and as a means of modernization of the economy (Christy (2001); Marquardt (2004); Wang (2006), et al.).

In Russia, a number of studies has been devoted to research of integration, in the most general meaning of this word, as applied to economy and management (Belyaev (2000); Korotkov (1999); Pudich (2003); Sterligova (2005), et al.). Different understanding of integration results in availability of different types of integration in the economy and management. The main types of integration are as follows: economic, horizontal and vertical (backward) integration, combined integration, progressive (forward) integration, forward and backward integration, convention integration, circular integration, end-to-end integration, short-term and long-term integration, conglomerate integration, etc. (Christopher M. (2005); Chudnovskaya (1999), and many other authors). Moreover, there is a pronounced hierarchy of types of integration. A geographical profile is available (a global (world) level, economic integration in the framework of separate states, interregional integration). In addition, an interenterprise level is distinguished (horizontal, vertical, combined integrations, forward and backward integrations, convention integration, circular integration, currency integration, conglomerate integration). The end-to-end integration indicates that integration follows a process which can cover functional and interfunctional levels of an individual enterprise, besides the interenterprise level.

An activity (individual operations, functions, processes or interfunctional and interenterprise interactions) is, first of all, a subject of integration. Choosing a subject, concrete definition of the level of subject of control, technology, style and other elements of control represent a nontrivial task within the framework of implementation of advantages of the modern activity integration concept (Pudich (2003)). The performed analysis allows us to define integration as a process ensuring integrated implementation of operations, functions and managerial measures taken by individual performers, functional subdivisions or enterprises in order to obtain the maximum possible result of their joint activity.

Despite the fact that the topic of integration in management is popular, the actual mechanism of activity integration remains unexplored. This article presents the results of research into practical integration of activities at different levels, performed in Russia, and its results.

## WORKING HYPOTHESIS OF RESEARCH

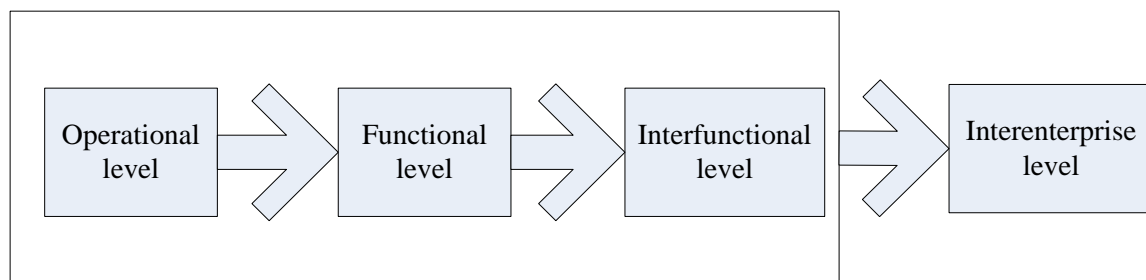
By analyzing the contents of research performed in this field, one can show that the activity integration can be considered at four levels: operational, functional, interfunctional and interenterprise. In controlling enterprises, it is possible to use one, several or all of the above-mentioned levels of integration of activity as a subject of control. An operational level of activity integration is typical of and quite justified for individual performers and low-hierarchy managers (both in the case of functional and process approaches to management). The higher the level of management, displayed by higher-hierarchy managers, the broader the freedom enjoyed by mid-hierarchy managers in choosing the level of integration of activities. Without support rendered by higher-hierarchy managers, initiatives generated by mid-hierarchy managers at interfunctional and interenterprise levels might fail to yield long-term positive results, often give rise to conflicts situations developing into conflicts, deteriorate personal relations, decrease internal motivation.

The research hypothesis consists in the idea that the use of different levels of activity integration to control an enterprise yields typical results.

## LEVELS OF INTEGRATION OF ACTIVITY AS A SUBJECT OF CONTROL

Ignoring the geographical aspect of integration and generalizing the results of research performed by other authors, it should be concluded that activity integration displays four levels. The first three levels (operational, functional and interfunctional) can be defined as internal integration of activity within the framework of a separate enterprise. The last interenterprise level represents external integration (refer to Figure 1).

**Figure 1. Interaction of levels of activity integration.**



Successful interfunctional interaction within the framework of individual enterprises lays the basis for successful interenterprise integration. Effectiveness of interfunctional interactions has to do with maturity of functional operation. Efficient control of individual functional areas is based on a clearly spelled-out operational level of activity integration (Johnson (1999); Craighead (2007)). Depending on the considered level of activity, one can speak about control of operations, functional areas, interfunctional and interenterprise interactions. Process approach to control allows functional network of business-processes of an enterprise to be ensured without distinguishing between the functional and interfunctional levels of activity. The conducted research was

based on availability of the above-mentioned activity integration levels in the control experience of each enterprise.

## DESCRIPTION OF PROCEDURE FOR POLLING AND DISTRIBUTION OF RESPONDENTS

To implement the research and to reveal typical results of activity integration at different levels, managers of different levels of control and staff members of Russian commercial enterprises, as well as those of foreign capital-based commercial enterprises, operating on the territory of the RF, were polled in the time period from 2002 till 2007. About 500 people took part in the polling. During the polling, 56% of managers and performers occupied positions of higher-hierarchy managers, 14%, those of mid-hierarchy managers, while 6% of them had positions of low-hierarchy managers and 24% were performers.

The list of polled managers and performer includes staff members of more than 150 enterprisers, operating on the territory of the RF and representing various fields of business. The majority of enterprises is located or has a management company located in Moscow or Moscow region. Affiliations or representative offices of the majority of enterprises are situated on the territory of the European part of RF, the Urals, Siberia and the Russian Far East. The majority of enterprises (about 60%), the managers or experts of which participated in the poll, belong to limited liability companies. From the viewpoint of their business legal structure, about 20% of enterprises are closed joint stock companies, about 10% of them are open joint stock companies. About 10% of enterprises have other business legal structures (state unitary enterprises, group of companies, etc.).

The polling was performed in the form of a free interview with a group of respondents, consisting of 3 to 7 persons. Two sets of questions were discussed: What (1) advantages/(2) drawbacks can you single out at the operational (OL) (functional (FL), interfunctional (IFL), interenterprise (IEL)) level of activity integration? A sufficiently representative, relevant and competent audience participated in the poll, whose opinion can be treated as typical.

Answers were qualitative in their character. Subsequently, the language used for defining advantages/drawbacks of employed different levels of activity integration was edited. As a result of analyzing the obtained data, positive and negative results of integration of activity as a subject of control at the operational, functional, interfunctional and interenterprise levels were recorded and described. A list consisting of 45 advantages/34 drawbacks was compiled for the operational level, that of 30 advantages/34 drawbacks, for the functional level, while 37 advantages/35 drawbacks were listed for the interfunctional one, and 53 advantages/23 drawbacks, for the interenterprise level. Table 1 presents positive and negative results of activity integration, which were mentioned most often.

**Table 1. Examples of Main Advantages/Drawbacks of Levels of Activity Integration**

| Operational Level of Integration  |   |
|---|---|
| Advantages  | Drawbacks   |
| Transparency of processes<br>Managers and performers know the contents of processes in detail<br>Decisions are made on a real-time basis                      | No general vision of business<br>Absence of strategic perspective of enterprise development<br>Important part played by the manager, responsible for the processes integration task |
| Functional Level of Integration   |   |
| Advantages  | Drawbacks   |
| Clear distribution of duties and responsibilities between functional subdivisions<br>Highly qualified specialized personnel<br>Speedy decision-making process | Conflict situations between subdivisions<br>Conflicts between staff members of different functional subdivisions<br>No flexibility in the control system                            |
| Interfunctional Level of Integration  |   |
| Advantages  | Drawbacks   |
| Common goal available<br>Interfunctional conflict situations can be resolved  | Insufficient attention paid to activity and problems of separate functional subdivisions  |

|   |  |
|---|--|
| Available optimization of using resources   | Interests of counteragents are not taken into account<br>Risk of conflicts on the ground of joint use of resources, interconnection of tasks, difference of goals and perception of values, undeveloped communication  |
| <b>Interenterprise Level of Integration</b>   |  |
| <b>Advantages</b>   | <b>Drawbacks</b>   |
| Integration with suppliers and customers is ensured<br>Savings on expenditures and costs<br>Strategically-aimed control | Requires detailed elaboration of operational, functional and interfunctional interaction<br>Significant influence of quality of operational level of control integration<br>Requires high level of corporative culture |

## TECHNIQUES FOR PROCESSING OBTAINED DATA

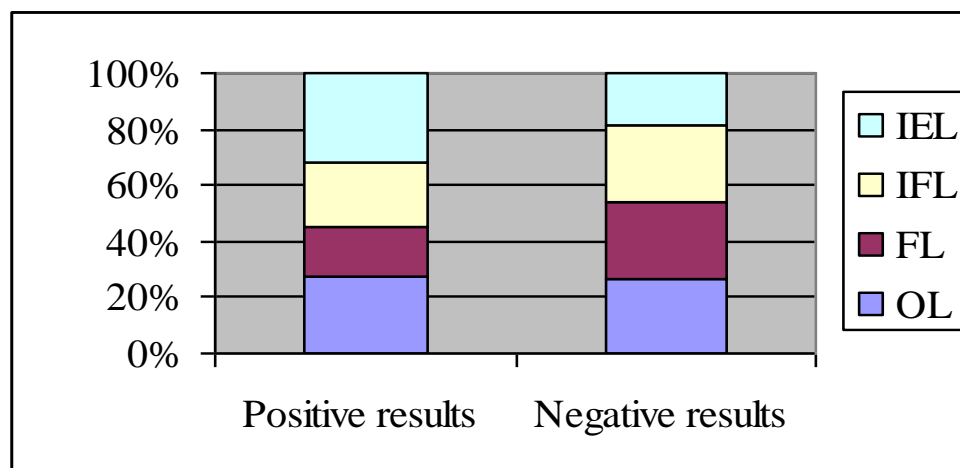
To perform detailed analysis of the obtained characteristics of activity integration levels, they were classified over a number of criteria: control functions, professional spheres of activities, etc.

Forecasting and planning; organization; control and analysis; regulation; motivation and work incentives were included into the list of control functions, as the classification criterion. Information technologies (IT), management, processes, quality control, human resources management (HRM), economy and finances were identified in the professional spheres of activity.

## BASIC RESULTS OF RESEARCH

As a result of studying the characteristics of activity integration at various levels with respect to the above-mentioned criteria, it was discovered that the number of positive and negative results rises with increasing integration level. Moreover, the share of negative results of activity integration is decreased with increasing its level. In modern business, the increase of the activity integration level plays a pronounced positive role. As estimated by the polled managers and performers, the interenterprise integration is characterized, as a minimum, almost two times as positive as the other activity integration levels (refer to Figure 2).

**Figure 2: Ratio of positive and negative results with respect to activity integration levels.**



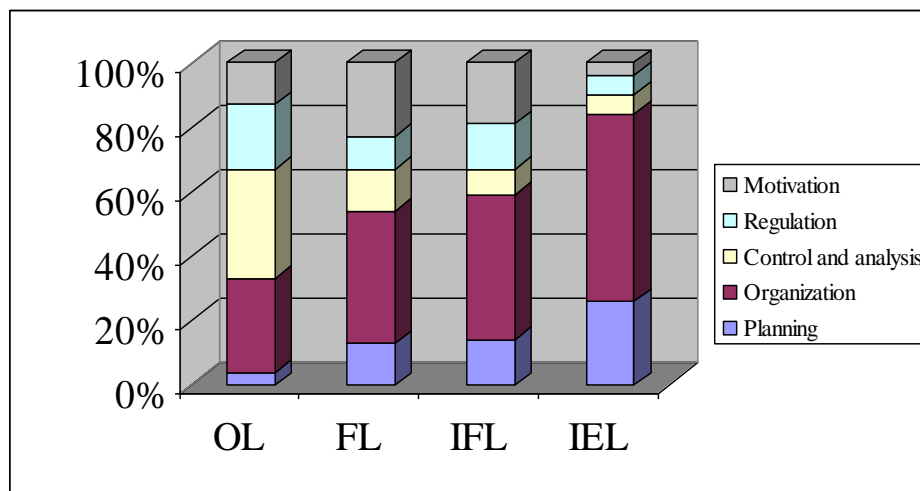
Evidently, the relative parity of the number of positive and negative results in operational, functional and interfunctional integration of activities is a consequence of lessons learned and represents a generally inconsistent nature of these integration levels from the viewpoint of modern business. Since the interenterprise integration of activity is much less widespread than practical operational, functional and interfunctional integration, the more pronounced positive estimate of this level can be attributed to positive expectations and



hopes, while the estimate of, first of all, operational and functional integration levels, was performed on the basis of long-term experience of their implementation, which always involves an increase of negative attitude.

As seen from Figure 3, the increase of the activity integration level exercises still more positive effect on the “Forecasting and Planning” and “Organization” functions of control. At the same time, the positive effect of the increase of the activity integration level on implementation of the “Control and Analysis” and “Regulation” control functions is decreased. These control functions require additional attention and support given by the management in transition to the interenterprise integration. The interfunctional integration is more capable of acting positively on implementation of the “Regulation” function, as compared with the functional integration. The “Motivation and Work Incentives” function becomes positive within the obtained results in case of functional integration and requires significant attention, means and capacities in the operational integration of activities.

**Figure 3: Comparison of positive results of activity integration levels with respect to control functions.**



The interenterprise integration induces positive results of implementation of the “Forecasting and Planning” control function, as well as of the “Organization” function. The operational integration exercises the maximum positive effect on the “Control and Analysis” and “Regulation” functions. The functional integration acts positively on the fulfillment of the “Motivation and Work Incentives” function. At the same time, as shown in Figure 4, the “Organization” function displays areas of concern at all the levels of activity integrations. The “Control and Analysis” function is subjected to minimal negative influence at all the levels of integration.

**Figure 4: Comparison of negative results of integration levels with respect to control functions.**

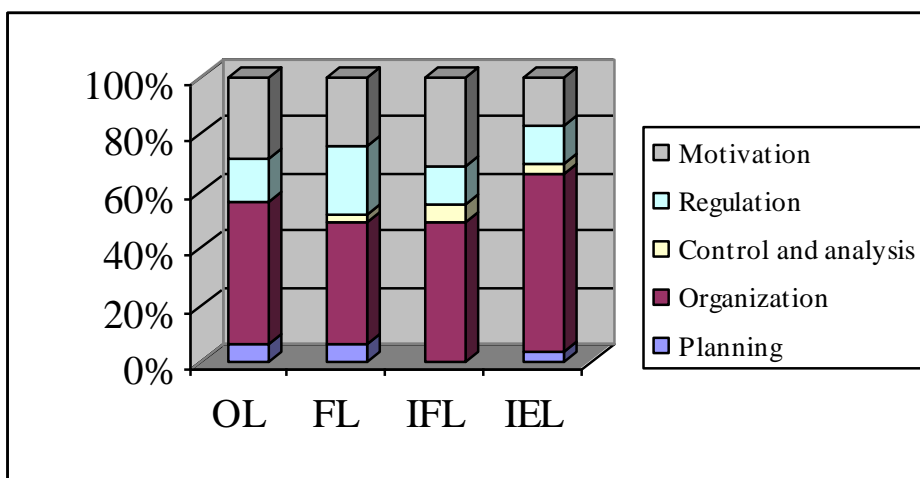
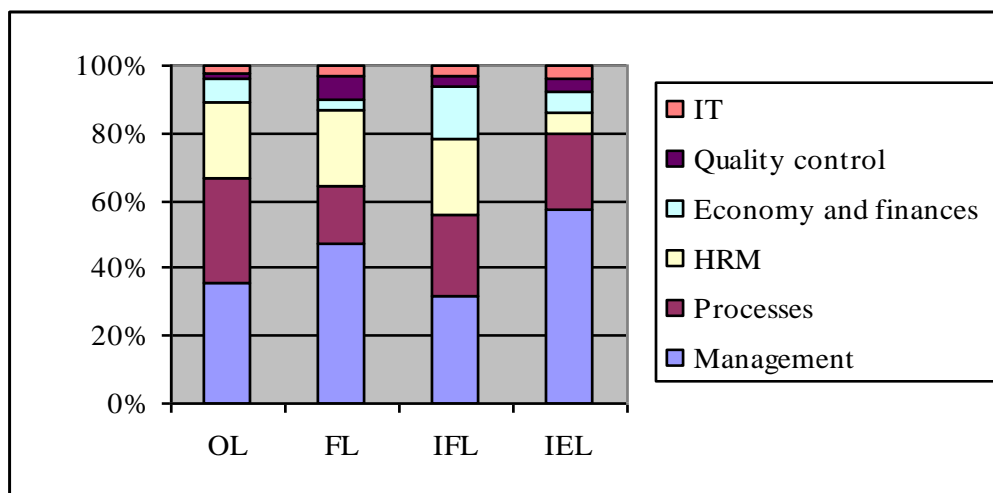


Figure 5 shows that, in analyzing the positive effect of integration level on the professional spheres of activities, an increased attention paid to the IT sphere with raising the activity integration level was revealed. At the interenterprise level of integration, the HRM plays an insignificant part due to development of the corporative culture and corporative identification. While at the operational, functional and interfunctional levels of integration, the HRM develops equally positively. The operational activity is almost equally affected by a positive influence of all the levels of activity integration. The sphere of management displays the maximum positive result at all the integration levels, which has to do with the professional interest of the polled managers and performers. It is precisely this professional interest that is, evidently, manifested in insufficient attention paid to the IT and quality control spheres, being secondary spheres for the management.

**Figure 5: Comparison of positive results of activity integration levels with respect to professional spheres.**



## BASIC CONCLUSIONS OF RESEARCH

The present research allowed comparative analysis of operational, functional, interfunctional and interenterprise levels of activity integration to be performed on the basis of the identified and described results of their use. The following conclusions summarize this research.

1. There typical positive and negative results of activity at each level of activity integration.
2. The increase of activity integration level is favorable in achieving the goals set by the enterprise.
3. On the whole, the interenterprise integration of activities was estimated positively, the operational and functional integration was estimated negatively, while the interfunctional one was rated neutral.
4. Positive results of the functional and interfunctional activity integration resolve more than 70% of negative results of the operational and functional activity integration, correspondingly.
5. As compared with the operational and functional activity integration, the functional and interfunctional ones represent a next step and a higher quality of control of an enterprise.
6. To implement the interenterprise activity integration, it is required to perform dedicated preparatory work, since an enterprise controlled at the interfunctional level cannot naturally evolve to the interenterprise level.

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# THE PREDICTIVE VALIDITY OF THE DISCUS FOR ACADEMIC SUCCESS OF STUDENTS

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## ABSTRACT

*In a changing South Africa, with its increasing emphasis on individual rights, fair and equitable selection is a priority. The target population for this investigation was students studying Human Resources Management and Industrial engineering at a Tertiary institution. The aim of the study has been achieved by the proof that specific factors of the Discus do have prediction validity. These findings can be used with fruit in search of refining a selection model for students.*

## INTRODUCTION

Tertiary institutions are confronted daily with issues relating to the formulation of admission requirements for prospective students, in order to ensure academic success. If a valid measure were to be found to predict academic success, this would not only prevent personal failure, but also bring about financial savings for both the student and the tertiary institution. (Herman, 1995:264; van der Merwe & de Beer, 2006:547; Visser & Hanslo, 2005:1160)

## MEASURING INSTRUMENT - DISCUS

### Background

The Discus or also referred to as DISC is based on the work of Carl Gustav Jung who defined personalities as belonging to one of four different types: sensing, intuitive, feeling and thinking (Möller, 1993:77). It was Jung's opinion that people instinctively understand the personality in terms of a set of four elements (Bergh & Theron, 1999:514). These groups of four (technically called tetralogies) underlie a very large number of personality assessment techniques, and DISC is no exception. The Discus profile is based on the research of William Moulton Marston Ph.D. (1893-1947). Marston, who was influenced by Carl Jung sought to find a theory to explain the behavior of "normal" "healthy" people within a specific situation or environment (Martinussen *et al.*, 2001:411).

### Description

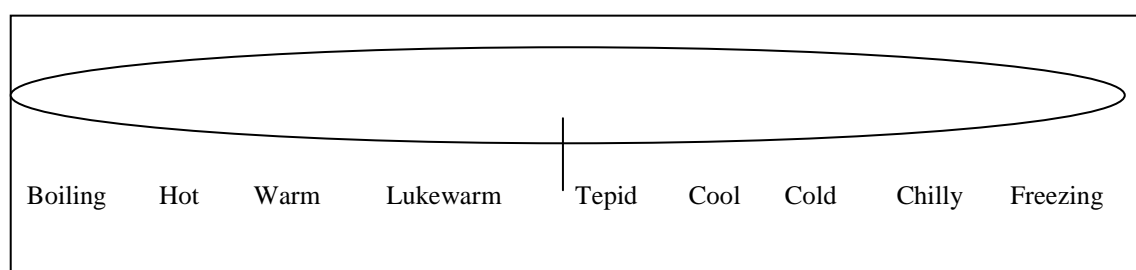
Discus is a completely computerised assessment tool, designed to produce a detailed profile of a personality. Reid and Reid (2003:94) describe the four personality factors of the DISC through which the analysis results of individual personality profiles are arrived as follows:

- Dominance: Persons who score high on this, are active in dealing with problems and challenges, demanding, forceful, egocentric, strong willed, ambitious, aggressive, and pioneering, while those low on dominance want to do more research before committing to a decision, and are considered conservative, cooperative, calculating, undemanding, cautious, agreeable, modest and peaceful.

- **Influence:** Persons who score high on this, are able to influence others through talking and activity and tend to be emotional, magnetic, charismatic, enthusiastic, persuasive, warm, trusting and optimistic, while those low on influence want to use facts and data rather than feelings and emotions, and are reflective, calculating, logical, suspicious, matter of fact, pessimistic and critical.
- **Steadiness:** People who score high on this, want a steady pace, security rather than sudden change, and they are calm, patient, possessive, predictable, consistent, unemotional and poker faced, while those low on steadiness want change and variety, are restless, impatient, eager, and impulsive.
- **Conscientiousness:** Persons who score high on this, adhere to rules, regulations and structures, prefer quality work and getting it right the first time, they are careful, cautious, neat, systematic, diplomatic, accurate and tactful, while those low on conscientiousness challenge the rules, want independence, are described as self-willed, stubborn, unsystematic and careless with detail.

The Discus defines personality in terms of their profiling system and at the core of this definition lie the ideas of stimulus and response. Sets of circumstances or individual events (stimuli) cause people to act or react (respond) to them. Different people, however, have different responses to particular stimuli. In any given situation, we expect that different people will react in different ways. DISC defines a 'personality' as the sum of all a person's varying response styles to varying stimuli, (Brookhouse, 1994).

Figure 1: An illustration of the Discus continuum



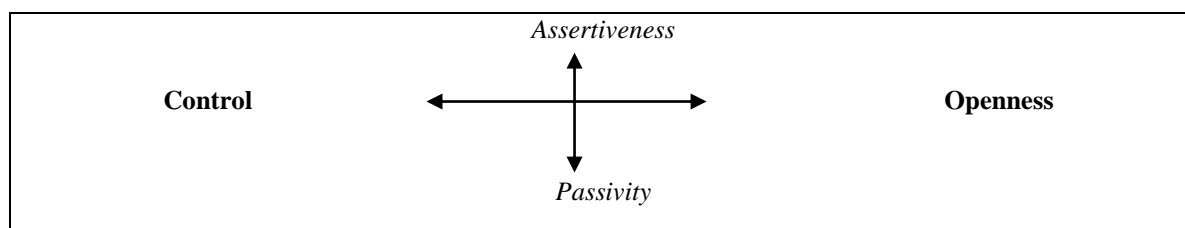
(Source: Brookhouse, 1994:62)

At the extremes of the axis are very hot and very cold temperatures. Moving along the axis from one extreme to the other, a variety of different temperatures exist, each blending into the next. A personality axis is very much like this. There are as many possible personality axes as there are potential opposites in the personality, but most assessment systems use only a select few. The DISC personality axes lies between the opposites of assertiveness and passivity, and the axis between openness and control , (Brookhouse, 1994).

## The biaxial model of DISC

The two axes of Assertiveness/Passivity and Openness/Control lie at the heart of the DISC profiling system. It might not, at first sight, be obvious how these two axes are related to the DISC profile, which contains four factors illustrated in figure 2.

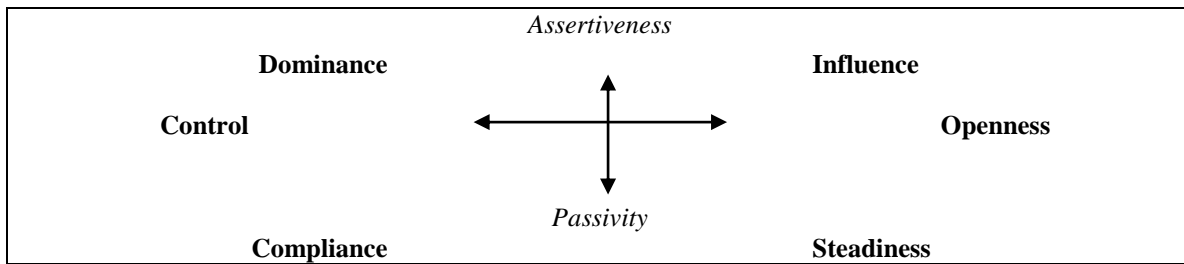
Figure 2: The biaxial model of the Discus



(Source: Brookhouse, 1994:65)

The link between the axes and DISC is the so-called *Biaxial Model* (i.e. a model with two axes). This is formed by the two fundamental axes when placed at right angles to one another (see figure 2). The result is a cross shape with four empty spaces between its arms. These spaces correspond to the four DISC factors, as depicted in figure 3.

Figure.3: Discus factors



(Source: Brookhouse, 1994:65)

Each of the four factors is defined as a meeting point between two of the axes. Dominance can be defined as Assertiveness and Control. The four factors shown on this diagram are the same four factors that are shown on a DISC graph, (Reid & Reid, 2003:96).

The DISC test does not measure the underlying axes of the personality, and then extrapolates the DISC factors but rather measures Dominance, Influence, Steadiness and Compliance directly. In these cases, the Biaxial Model provides a theoretical underpinning of the system, (Beamish, 2005:140).

The Discus further indicates stress levels that candidates currently are experiencing. This is a generalised measure of the amount of stress present in the personality. Certain more resilient personalities have a 'Stress Threshold'. Below this level, stress can actually have a positive effect, helping to motivate and challenge the person concerned, (Brookhouse, 1994).

## CRITERION OF SUCCESS

Plug *et al.*, (1997:196) defines a criterion as a variable, which provides an acceptable indication of what a psychological test should measure, and it can be used to investigate the empirical validity of a test.

*"Adequate and accurate criterion measurement is a fundamental problem in personnel psychology. Although criteria are sometimes used for predictive purposes and sometimes for evaluative purposes, in both cases they represent that which is important or desirable. Criteria are operational statements of goals or desired outcomes"* according to Cascio (1991:50).

Every time an evaluation takes place criteria are used, thus standards to measure against are set. When students decide whether a lecturer is a 'good lecturer' student A may be of opinion that a 'good lecturer' prepares well and provide clear instructions, while student B feels that a 'good lecturer' is someone who is enthusiastic, inspires students and possesses excellent communication skills. These two students use different criteria to define a 'good lecturer'. (Muchinsky *et al.*, 1998:46)

## Criteria for tertiary selection

Academic performance according to Fourie (1992:1) is not easily defined and cannot be expressed by a single mark or symbol. There are no valid norms to evaluate academic achievement. Rademeyer and Schepers (1998:36); Fourie (1992:1) as well as Combrink (1970:3) refer to academic performance in a number of related definitions:

- success in a subject;
- failure in a subject;
- over or under-achievement; or
- poor or no progress at academic level.

Academic achievement is influenced by the:

- ability of a specific person although ability is not necessarily an indication of achievement;
- aptitude of a person, which correlates with situations, opportunities, challenges etc;
- interpretation of achievement by the achieving person. The value that is attached to the achievement, what amount of input led to achievement and the levels of self actualisation experienced; and
- norm or measuring instrument according to which achievement is measured. This norm is usually determined externally (by another person) and influences the level of recognition and value attached to a specific achievement.

Academic achievement is a complex and multi-faceted phenomenon, which encompasses numerous aspects. Knowledge of the factors influencing academic achievement sheds little light on accurately describing academic achievement. Tertiary achievement in contrast to school achievement is more complex. School achievement is defined as the achievement at school in the results of a final examination. At school level a student either passes a grade year or fails it. At tertiary level a student accumulates credits for individual subjects, although the student may not necessarily be promoted to the next academic year, (Monteith, 1988:23).

As a result of this more complex promotion system, at tertiary institutions, academic achievement is not easily measured. Add to that the problem of:

- diverse study fields;
- differences in requirements and standards in diverse study fields; as well as
- differences existing in different faculties.

Generally tertiary academic achievement is defined as the ability of a student to obtain her degree or diploma within the prescribed period as indicated by the institution according to Fourie (1992:3) and confirmed by Stoker *et al.*, (1985:26).

If the method that a student uses in his/her studies could be based on a criterion scale, tertiary achievement could be tuned in more detail. This will result in canvassing the limitations of the pass versus fail dichotomy and a better usable norm will be established. Diverse study fields, differences in evaluation measurements and promotion systems and especially different perceptions of tertiary achievement contribute to the difficulty to lay down a generally accepted norm according to which a student's tertiary achievement can be expressed in a qualitative manner. Different perceptions of what should be used as a point of reference when a norm for tertiary achievement is determined, inevitably result in different norm scales. Examination results obtained in different subjects are the traditional criterion according to which academic achievement is evaluated according to Fourie (1992:4) and Louw *et al.*, (1998:150).

Although examination results do not offer a complete representation of academic progress and adaptation, it is regarded as the most significant aspect of these processes. Examination papers in different subjects cover the work of a semester or year. These are meticulously compiled, administered and marked therefore it is fair to accept that examination results provide a valid and reliable indication of academic achievement.

The assumptions used in this research are the following:

- The percentage of a student's final mark in an examination, and specifically the major subjects, is an objective measurement of tertiary achievement;
- A mark obtained in a specific subject is equal to the same mark obtained in another subject, provided the subject level is equal. Factors such as evaluation standards or differences in complexity between different subjects are not taken into account but condoned, because the pass mark is 50% for every subject.;
- The degree of difficulty of different subjects on the same level is the same therefore Human Resources Management 1 is not more difficult than Industrial Engineering 1; and
- The prescribed syllabi in one faculty are weighted equally to that of another faculty consequently a first-year course in Environmental Sciences earning 12 credits is equal to a first-year course in Economic Sciences consisting of 14 credits;

Smith (1979:42) confirms the above assumptions as a point of departure in formulating criteria for tertiary selection.

## METHODOLOGY

All first-year, second-year and third-year students studying Human Resources Management (n=286) and Industrial Engineering (n=57) were included in the sample. Students completed the Discus instrument and the examination results of the two major subjects namely Human Resources Management and Industrial Engineering were gathered. The SPSS for windows was used for statistical analysis.

## RESULTS

### Descriptive statistics

Table 1 indicates that the distribution of the Discus is skewed with the skewness coefficients either greater than zero or less than zero. The kurtosis values show that the distribution is not in the form of a bell curve, but either leptokurtic  $\geq 0.263$  or platykurtic  $\leq 0.263$ .

**Table 1: Descriptive statistics of the Discus (n=343)**

|            | Mini-<br>mum | Maximum | Mean    | Standard<br>error of the<br>Mean | Standard<br>Deviation | Variance | Skewness | Kurtosis |
|------------|--------------|---------|---------|----------------------------------|-----------------------|----------|----------|----------|
| Internal D | 11.00        | 95.00   | 49.7168 | .8110                            | 13.7146               | 188.091  | .644     | 1.093    |
| Internal I | 6.00         | 95.00   | 44.0105 | 1.0512                           | 17.7771               | 316.024  | .412     | -.018    |
| Internal C | 24.00        | 95.00   | 68.0000 | .8785                            | 14.8567               | 220.723  | -.258    | -.742    |
| Internal S | 23.00        | 95.00   | 61.1853 | 1.0558                           | 17.8549               | 318.797  | .084     | -.806    |
| External D | 5.00         | 83.00   | 39.9021 | .8619                            | 14.5765               | 212.475  | .364     | .223     |
| External I | 10.00        | 90.00   | 41.5979 | 1.0942                           | 18.5047               | 342.424  | .408     | -.596    |
| External S | 18.00        | 90.00   | 51.2308 | .8117                            | 13.7270               | 188.431  | .045     | -.062    |
| External C | 5.00         | 91.00   | 58.9650 | 1.0721                           | 18.1303               | 328.708  | -.283    | -.766    |
| Stress     | 1.00         | 4.00    | 1.9720  | 3.602E-02                        | .6092                 | .371     | .576     | 1.693    |

**Table 2: Comparative descriptive statistics of Industrial Engineering and Human Resources Management students**

|         |                | N   | Mean    | Standard<br>Deviation | Standard error of the<br>mean |
|---------|----------------|-----|---------|-----------------------|-------------------------------|
| Inter D | Industrial Eng | 61  | 50.7541 | 15.0849               | 1.9314                        |
|         | Personnel Man  | 225 | 49.4356 | 13.3412               | .8894                         |
| Inter I | Industrial Eng | 61  | 35.1803 | 14.1191               | 1.8078                        |
|         | Personnel Man  | 225 | 46.4044 | 17.9359               | 1.1957                        |
| Inter S | Industrial Eng | 61  | 63.4262 | 17.6441               | 2.2591                        |
|         | Personnel Man  | 225 | 60.5778 | 17.9021               | 1.1935                        |
| Inter C | Industrial Eng | 61  | 72.6230 | 14.9456               | 1.9136                        |
|         | Personnel Man  | 225 | 66.7467 | 14.6151               | .9743                         |
| Ext D   | Industrial Eng | 61  | 41.8361 | 15.8978               | 2.0355                        |
|         | Personnel Man  | 225 | 39.3778 | 14.1895               | .9460                         |
| Ext I   | Industrial Eng | 61  | 40.5574 | 17.9662               | 2.3003                        |
|         | Personnel Man  | 225 | 41.8800 | 18.6772               | 1.2451                        |
| Ext S   | Industrial Eng | 61  | 47.7049 | 13.3658               | 1.7113                        |
|         | Personnel Man  | 225 | 52.1867 | 13.6963               | .9131                         |
| Ext C   | Industrial Eng | 61  | 62.9016 | 17.0799               | 2.1869                        |



|        |                | N   | Mean    | Standard Deviation | Standard error of the mean |
|--------|----------------|-----|---------|--------------------|----------------------------|
|        | Personnel Man  | 225 | 57.8978 | 18.2953            | 1.2197                     |
| Stress | Industrial Eng | 61  | 1.9180  | .6402              | 8.197E-02                  |
|        | Personnel Man  | 225 | 1.9867  | .6012              | 4.008E-02                  |

## Multiple Regression Analysis

### Human Resources Management as a dependent variable

Regression analysis was conducted on the various measuring instruments in order to predict the Human Resources Management mark. The following results regarding the measuring instruments were found:

| Model | R    | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|------|----------|-------------------|----------------------------|
| 1     | .379 | .144     | .069              | 12.11                      |

| Model |            | Sum of Squares | Df  | Mean Square | F     | Sig. |
|-------|------------|----------------|-----|-------------|-------|------|
| 1     | Regression | 5078.305       | 18  | 282.128     | 1.923 | .016 |
|       | Residual   | 30218.417      | 206 | 146.691     |       |      |
|       | Total      | 35296.722      | 224 |             |       |      |

| Case Number | Std Residual | AVG PM | Predicted Value | Residual |
|-------------|--------------|--------|-----------------|----------|
| 72          | -3.123       | 30     | 67.82           | -37.82   |

The following variables of the Discus are included as possible predictors of the average Human Resources Management mark:

- External dimensions - dominance, influence, compliance, steadiness;
- Internal dimensions – dominance, influence, steadiness, compliance; and
- Stress dimension.

The possible predictors together explain 14,4% of the variance in the subject Human Resources Management and is significant as indicated by the F value.

It is evident from Table 3 that the dimension external compliance contributes significantly to the model.

**Table 3: Coefficients of the model tested (N=286)**

|            | Unstandardised Coefficients |           | Standardised Coefficients | T      | Sig  |
|------------|-----------------------------|-----------|---------------------------|--------|------|
|            | B                           | Std Error | Beta                      |        |      |
| (Constant) | 29.055                      | 59.821    |                           | .486   | .628 |
| Inter D    | -6.496E-02                  | .089      | -.069                     | -.728  | .467 |
| Inter I    | -4.953E-02                  | .062      | -.071                     | -.798  | .426 |
| Inter S    | -2.919E-03                  | .064      | -.004                     | -.045  | .964 |
| Inter C    | -9.455E-02                  | .072      | -.110                     | -1.308 | .192 |
| Ext D      | .104                        | .088      | .118                      | 1.187  | .237 |
| Ext I      | -2.707E-02                  | .060      | -.040                     | -.448  | .655 |

|        | Unstandardised Coefficients |           | Standardised Coefficients | T     | Sig  |
|--------|-----------------------------|-----------|---------------------------|-------|------|
|        | B                           | Std Error | Beta                      |       |      |
| Ext S  | 2.085E-02                   | .083      | .023                      | .252  | .802 |
| Ext C  | .116                        | .060      | .169                      | 1.916 | .057 |
| Stress | .116                        | 1.493     | .047                      | .653  | .515 |

## Industrial Engineering as a dependent variable

Regression analysis was conducted on the various measuring instruments in order to predict the Industrial Engineering mark. The following results regarding the measuring instruments were found:

| Model | R    | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|------|----------|-------------------|----------------------------|
| 1     | .514 | .265     | -.004             | 13.50                      |

| Model |            | Sum of Squares | Df | Mean Square | F    | Sig. |
|-------|------------|----------------|----|-------------|------|------|
| 1     | Regression | 2687.829       | 15 | 179.189     | .984 | .489 |
|       | Residual   | 7468.680       | 41 | 182.163     |      |      |
|       | Total      | 10156.509      | 56 |             |      |      |

The following variables of the Discus are included as possible predictors of the average Industrial Engineering mark:

- External dominance, influence, steadiness, compliance;
- Internal dominance, influence, steadiness, compliance; and
- Stress dimension.

The possible predictors together explain 26.5% of the variance in the subject of Industrial Engineering and are significant as indicated by the F value.

**Table 4: Coefficients of the model tested (N=57)**

|            | Unstandardised Coefficients |           | Standardised Coefficients | T     | Sig  |
|------------|-----------------------------|-----------|---------------------------|-------|------|
|            | B                           | Std Error | Beta                      |       |      |
| (Constant) | 148.873                     | 331.221   | .298                      | .449  | .655 |
| Inter D    | .260                        | .265      | .119                      | .981  | .332 |
| Inter I    | .110                        | .205      | .053                      | .537  | .594 |
| Inter S    | 4.125E-02                   | .160      | .012                      | .258  | .798 |
| Inter C    | 1.097E-02                   | .220      | .029                      | .050  | .960 |
| Ext D      | 2.421E-02                   | .201      | .115                      | .120  | .905 |
| Ext I      | 8.489E-02                   | .166      | -.139                     | .512  | .611 |
| Ext S      | -.143                       | .196      | .129                      | -.730 | .469 |
| Ext C      | 9.999E-02                   | .147      | .029                      | .678  | .501 |
| Stress     | .614                        | 3.590     | .029                      | .171  | .865 |

**Table 5: T-test of measuring instruments (n=353)**

|         |                             | LEVENE'S TEST FOR EQUALITY OF VARIANCES |      | T-TEST FOR EQUALITY OF MEANS |         |                |                 | T-TEST FOR EQUALITY OF MEANS |   |         |
|---------|-----------------------------|---|------|------------------------------|---------|----------------|-----------------|------------------------------|---|---------|
|         |                             | F                                       | SIG  | T                            | DF      | SIG (2-TAILED) | MEAN DIFFERENCE | STD ERROR DIFFERENCE         | 95% CONFIDENCE INTERVAL OF THE DIFFERENCE |         |
|         |                             |   |      |                              |         |                |                 |                              | Lower                                     | Upper   |
| Inter D | Equal variances assumed     | 1.149                                   | .285 | .665                         | 284     | .506           | 1.3185          | 1.9817                       | -2.5821                                   | 5.2192  |
|         | Equal variances not assumed |   |      | .620                         | 87.096  | .537           | 1.3185          | 2.1264                       | -2.9078                                   | 5.5449  |
| Inter I | Equal variances assumed     | 3.448                                   | .064 | -4.521                       | 284     | .000           | -11.2241        | 2.4829                       | -16.1114                                  | -6.3369 |
|         | Equal variances not assumed |   |      | -5.179                       | 117.938 | .000           | -11.2241        | 2.1674                       | -15.5163                                  | -6.9320 |
| Inter S | Equal variances assumed     | .049                                    | .826 | 1.106                        | 284     | .270           | 2.8485          | 2.5764                       | -2.2228                                   | 7.9197  |
|         | Equal variances not assumed |   |      | 1.115                        | 96.159  | .268           | 2.8485          | 2.5550                       | -2.2230                                   | 7.9199  |
| Inter C | Equal variances assumed     | .605                                    | .437 | 2.772                        | 284     | .006           | 5.8763          | 2.1199                       | 1.7036                                    | 10.0490 |
|         | Equal variances not assumed |   |      | 2.737                        | 93.460  | .007           | 5.8763          | 2.1474                       | 1.6123                                    | 10.1402 |
| Ext D   | Equal variances assumed     | 2.684                                   | .102 | 1.169                        | 284     | .243           | 2.4583          | 2.1028                       | -1.6808                                   | 6.5974  |
|         | Equal variances not assumed |   |      | 1.095                        | 87.621  | .276           | 2.4583          | 2.2446                       | -2.0026                                   | 6.9192  |
| Ext I   | Equal variances assumed     | .399                                    | .528 | -.494                        | 284     | .621           | -1.3226         | 2.6748                       | -6.5875                                   | 3.9423  |
|         | Equal variances not assumed |   |      | -.506                        | 98.055  | .614           | -1.3226         | 2.6157                       | -6.5134                                   | 3.8681  |
| Ext S   | Equal variances assumed     | .057                                    | .811 | -2.278                       | 284     | .023           | -4.4817         | 1.9671                       | -8.3538                                   | -.6097  |
|         | Equal variances not assumed |   |      | -2.311                       | 96.921  | .023           | -4.4817         | 1.9397                       | -8.3315                                   | -.6320  |
| Ext C   | Equal variances assumed     | 3.461                                   | .064 | 1.921                        | 284     | .056           | 5.0039          | 2.6049                       | -.1235                                    | 10.1312 |
|         | Equal variances not assumed |   |      | 1.998                        | 100.528 | .048           | 5.0039          | 2.5040                       | 3.633E-02                                 | 9.9714  |
| Stress  | Equal variances assumed     | 3.554                                   | .060 | -.780                        | 284     | .436           | -6.8634E-02     | 8.800E-02                    | -.2419                                    | .1046   |
|         | Equal variances not assumed |   |      | -.752                        | 90.731  | .454           | -6.8634E-02     | 9.124E-02                    | -.2499                                    | .1126   |
|         | Equal variances not assumed |   |      | 2.266                        | 118.380 | .025           | 1.5851          | .6996                        | .1999                                     | 2.9704  |

( $p \leq 0.05$ )

The shaded values in Table 5 indicate significant relations between academic success in average major subject and the dimensions of:

- Discuss internal influence, steadiness; and
- Discuss external steadiness, compliance.

## CONCLUSION

Specifically the Discuss external dimension compliance predicts success in Human Resources Management. The following variables of the Discuss are included as possible predictors of the average Human Resource Management mark:

- External dimensions - dominance, influence, compliance, steadiness;
- Internal dimensions – dominance, influence, steadiness, compliance; and
- Stress dimension.

The following variables of the Discuss were found to predict the average Industrial Engineering mark:

- External dominance, influence, steadiness, compliance;
- Internal dominance, influence, steadiness, compliance; and
- Stress dimension.

Significant relations were found between academic success in the average major subjects and the following dimensions of the Discuss:

- internal influence
- steadiness;
- external steadiness; and
- compliance.

One of the limitations of this study is that the number of Industrial Engineering students included in the sample was only 57. The validity and reliability of the measuring instruments in this study can contribute significantly to the journey of fine-tuning a selection model for tertiary education.

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# **ECONOMIC IMPACT OF CROSS-CULTURAL MARRIAGE ON THE NORTHEAST OF THAILAND**

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## **ABSTRACT**

*The study's objective was to determine the pattern, causes, and economic impacts of cross-cultural marriages by using the Input-Output model. After marrying with western men, Northeastern women tend to have greater incomes. These economic incentives have played important roles in these marriages. Based on the research findings, the total impact of the married couples spending was 10,510 million baht and an increase of 578,609 jobs. Their spending mostly affects the growth of the wholesale and retail trade sector; repair of motor vehicles, motorcycles and personal and household goods. Therefore, the economic growth in this Northeast region of Thailand is pronounced.*

## **INTRODUCTION**

The cross-cultural marriage between Thais and the foreigners began for a long ago when Thailand engaged in an international trade called the "Bowring Treaty". This trade continued through World War II. During the war, Thailand became home to serve western military bases which led to many foreign soldiers entering the country. The military bases became like small towns. Foreign soldiers married with Thai women and many had children. This was the beginning of cross-cultural marriage trend in Thailand.

Cross-cultural marriage between Thai women and foreign men was increased even more when Thai people began immigration going to work in foreign countries under the National Economic and Social Plan since 1982. This plan brought diversity among people. Therefore, the cross-cultural marriages grew to a large number and it would later contribute to economic and socio cultural change.

According to the survey conducted by the National Economic and Social Development Board in 2003, 19,594 women from the Northeast chose to marry westerners. Most of them are from Nakon Ratchasima (21%), Khon Kaen (12%), and Udon Thani (11%). This statistic is projected to be higher in the future due to the rapid globalization of Thailand.

In the past, the Northeast of Thai community always lived as multi-generational families. Their lifestyle was simple and did not depend on any expensive luxuries. This region is the poorest area and its population accounts for one third of the entire country. Although farming is the primary occupation, its' productivity is low when compared with other countries. The income per capita in this area is the lowest in the country causing many people to migrate to find more jobs in big cities such as Bangkok, Changmai and Phuket.

Nowadays, many Northeastern people continue to make low wages or move to big cities, which keeps them in poverty and away from having modern lifestyle. Nevertheless, in this poorest region, the increasing amount of money spending can be observed. What happen in this region could be linked to the increasing number of cross-cultural marriage? This research would find out an answer.

## **RESEARCH METHODOLOGY**

This study used data from a survey conducted by the National Economic and Social Development Board (NESBD) in 2003. The Input-Output model was used to analyze the economic impact of the region. A survey of 219 women who married western men were conducted. The questionnaire composes of 4 sections. The first section contained general information of the sample such as name, age, address, education and occupation. The second part was about conditions before and after their marriage. The questions were, for example, the nationality of their husbands, how they met and the women's status before married. These questions would provide information of their marriage. The third part was about the expenditures that the sample would spend in Northeast. The final part was about their lifestyle in both Thailand and other countries.

After gaining data from the survey, the Input-Output model was used as a tool to explain the effect of their spending on the region economy. The model shows interactions among industries when demand for a goods increase, these increasing would made more demand in other goods and services. The more money the cross-cultural married women spend, the more impact the economy has. To analyze an effect of the expenses data was adjusted to be a suitable transaction table (I-O table).

To measure the economic impact of the married couples' spending on the Northeast region of Thailand, national Input-Output Model was modified using the technique suggested by Somboonpanya (1980). First the matrix was aggregated into 16 x 16 one to represent business of 16 sectors. Then, regional Input – Output model is created using Schaffer, W.A. (1972)'s method.

## RESEARCH RESULTS

Normally, Northeast communities had simple lifestyles and multi-generational families. However, cross-cultural marriage, has spreaded the concept of a nuclear family. In the past, Thai society had a negative attitude toward cross-cultural marriages especially toward low class women. At the present, however, this attitude has gradually changed, as the marriage had financially supported. Many people involving married person. Cross-cultural married women and their families were getting wealthier. Furthermore, they would introduce their husbands' relative in order to increase possibility for others to have the same opportunity as theirs.

The survey of NESBD (2003) revealed that there were many ways to originate the marriage. There are 54% of the sample unintentionally meet foreign men in their workplaces. About 26% knew their foreign husband while they traveled and 20% through internet or match-making agencies. The last choice has become more popular (Ngamkham, Wassayos 2006) as many websites serve this purpose. These websites are, for example, Thaisweetheart, Bangkokmate.com, Sweetsingle.com, Thaidarling.com and Simamatch.com.

Before marriage, 53% of the sample was widow or divorce and the rest was single (NESBD, 2003). There are many reasons that Thai women marry with the foreign men. Some women had a good impression on foreign men about their attitude of women's background and their good support to women's families (Chumnankul, 2005). Several women had witnessed the well-being after marriage of others and many studies i.g., Limanonda, Bhassorn (2007) found that this is the main reason for cross-cultural marriage. As such, after marriage, daughters are responsible for the economic well-being of the family while sons pay their debt of gratitude by being ordained as a monk. NESDB survey (2003) shows that the sample sent back \$2.878 million a month and this amount financially supported their families and paid for debts and household expenses.

From Limanonda's study (2007), Northeastern women earn about \$150 a month for working as a laborer in service or industrial restaurant, entraining sectors and \$100 a month for working in the agricultural field. However, who has cross-cultural marriage women earn about \$1,500 a month and their status changed to be a wife, an entrepreneur or international-firm staff. These women would spend their money on expensive luxuries. These expenditures would produce consumptions and be a part of business cycle. Moreover, these married women would send the remittance back home to support their families. The overall remittance flow to Thailand is on average about \$5.878 million a month (NESDB, 2003). As a result, their families could boost Thai economy by spend money on commodities and luxuries. In summary, expenses occurred by cross-cultural marriages would affect local economic performance, leading to changes in their lifestyle.

Table 1 shows that expenses for food, clothes, luxury appliances, domestic and international traveling would cause the final demands on other business sectors. Although these are only five industries directly affected by the spending, according to the Input-Output model, this amount would stimulate other business sectors as shown in table 2.

**Table 1: Final demand from cross-cultural marriage on Northeast of Thailand for a year**

| <b>Business Sector</b>   | <b>Final demand from cross-culture (Baht) on 2003</b> |
|--|---|
| Manufacturing  | 124,645,966   |
| Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods | 4,567,023,841   |
| Hotels and restaurants   | 335,264,724   |
| Transport, storage and communications  | 523,682,767   |
| Other community, social and personal services activities   | 74,970,508  |
| <b>Total</b>   | <b>5,625,587,806</b>                                  |

**Table 2: Total economic impact from cross- cultural marriage on Northeast of Thailand, 2003**

|                   | <b>Direct</b>  | <b>Indirect</b> | <b>Induced</b> | <b>Total</b>    |
|-------------------|----------------|-----------------|----------------|-----------------|
| <b>Employment</b> | 239,891        | 168,889         | 169,829        | 578,609         |
| <b>Income</b>     | ฿3,446,491,976 | ฿355,210,839    | ฿2,377,925,014 | ฿6,179,627,829  |
| <b>Output</b>     | ฿5,625,587,805 | ฿982,726,454    | ฿3,901,964,851 | ฿10,510,279,109 |

Table 2 showed on the economic impact of cross-cultural marriage on Northeast of Thailand as a result of the final demand of 5,625 million baht. 239,891 workers were directly employed and the additional 168,889 workers were indirectly employed. Furthermore, the induced effect created around 169,829 workers. Similarly, as a result from cross-cultural marriage, local business owners and their employees would earn an additional 3,446 million baht which in turn generated income other about 6,179 million baht. Finally total output, from this impact was 10,510 million baht.

## CONCLUSION

This study reveals that cross-cultural marriages could have an economic impact on the Northeast of Thailand. The marriage would ease economic hardship of Thai women's families, as the women earn income from their foreign husband. This income partly boosted the overall economic performance, evidence through the total of output 10,510 million baht and the increasing of employment.

Although the aim of the paper was to analyze the economic impact of the cross cultural marriage, it should be noted that income inequality might result in this trend. Some people couples may marry with the emotional reason. The others who rely on their economic judgement may reflect the failure of the income distribution policy of the Thai government.

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# FINANCIAL CRISES AND EARLY WARNING SYSTEMS: AN APPLICATION FOR TURKISH ECONOMY

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## ABSTRACT

*Financial crises, in general, may be attributed to the need for sudden and sharp changes in prices and/or quantities in financial markets for bonds, equities and foreign exchanges. The delay in the adjustment process increases the sharpness of the change, and hence, the degree of the crisis. In the last decade of the 20<sup>th</sup> century, several crises in financial and foreign exchange markets in Europe (1992-93), Latin America (Mexico, 1994-95) and Southeast Asia (1997-98) led economists to focus on the causes and timing of these crises.*

*This paper aims to make a general summary of financial crises. Furthermore, it focuses on the early warning systems of financial crises. In the consequent section, a general definition of financial crisis is made. Consequently, the possibilities of early warning systems in case of financial crises are explained. Finally, an application for the Turkish economy has been carried out in order to reflect the important indicators of Turkish currency crisis of 2001 and prediction results of the corresponding models and a general evaluation of results and some future recommendations are given.*

## INTRODUCTION

Financial crises, in general, may be attributed to the need for sudden and sharp changes in prices and/or quantities in financial markets for bonds, equities and foreign exchanges. The delay in the adjustment process increases the sharpness of the change, and hence, the degree of the crisis.

In the last decade of the 20<sup>th</sup> century, several crises in financial and foreign exchange markets in Europe (1992-93), Latin America (Mexico, 1994-95) and Southeast Asia (1997-98) led economists to focus on the causes and timing of these crises. They tried to explain different experiences of countries with different economic structures and historical backgrounds by using different models, since there is no unique reason of crises.

This paper aims to make a general summary of financial crises. Furthermore, it focuses on the early warning systems of financial crises. In the consequent section, a general definition of financial crisis is made. Consequently, the possibilities of early warning systems in case of financial crises are explained. Finally, an application for the Turkish economy has been carried out in order to reflect the important indicators of Turkish currency crisis of 2001 and prediction results of the corresponding models and a general evaluation of results and some future recommendations are given.

The study underlines the importance of the liquidity for an emerging market economy. Therefore, it aimed to investigate the relationship between financial ratios and financial crises which affected many firms in the past two decades in Turkey.

## FINANCIAL CRISIS

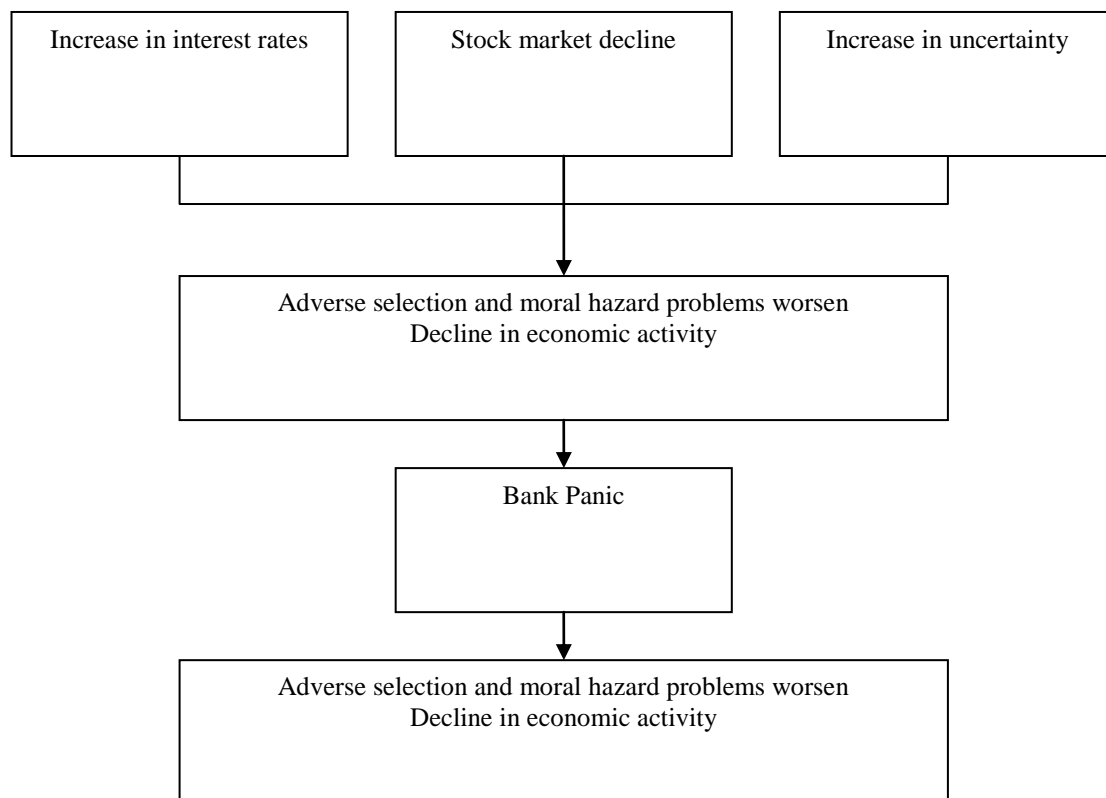
A financial system can be defined as the complete mechanism which turns the savings into investment and production (Oruç, 2002). Furthermore, to define a financial crisis, the sector that is initially affected by the crisis needs to be identified. A 'financial system' includes domestic banks and other financial entities that perform bank-like operations (intermediation of resources between lenders and borrowers) such as insurance companies,

stock exchange institutions, savings and loans, etc., as well as a central bank that is committed to act as lender of last resort (Martinez, 2006). Therefore, different definitions of crises can be named regarding different sectors and economic conditions. For instance, the reason behind the crises before 1990 was either the balance of payments or external debts. Furthermore, between 1970 and 1985 there were few banking crises. After the mid 1980's the number of banking crises increased and since the beginning of 1990's crises have gained a twin structure with which is going to be dealt later on (Yay et al., 2001).

Among borrowers and lenders in the financial system, asymmetric information problem usually exist which leads markets to collapse or people in these markets to make flawed and wrong decisions. Asymmetric information in the financial system leads to two main problems, namely *adverse selection* and *moral hazard* which happens before and after the financial transaction or process respectively. Adverse selection refers to a market process in which bad results occur due to information asymmetries between buyers and sellers: the "bad" products or customers are more likely to be selected. Furthermore, moral hazard refers to the possibility that the redistribution of risk (such as insurance which transfers risk from the insured to the insurer) changes people's behavior. According to these definitions, a financial crisis is defined best as the situation where adverse selection and moral hazard exist at worst and the financial system is unable to turn the savings into investment and production. In other words, in a financial crisis markets don't work efficiently and therefore economic activities decrease (Mishkin, 2000).

Mishkin (1992) describes the usual timeline that a financial crisis follows; rather than starting with bank panics, most of financial crises begin with a rise in interest rates, a stock market crash and the widening of the domestic-foreign interest rate spread. The sequence of events in a financial crisis can be seen below:

#### The sequence of events in a financial crisis



### Financial Crises in Turkey during 1990's

After serious crises at the end of 1970's, several reforms have been carried out including, liberalization of capital account and financial reforms by the governments. Financial reforms in 1980's changed the Turkish financial system significantly. Government securities and interbank market have deepened, interest rates are determined

freely, and reflect market sentiments, and new indirect instruments of monetary controls are developed. Following the financial account liberalization, the rate of economic growth substantially depended on volatile and reversible short-term capital inflows. On the other hand, ‘instability’ became the distinctive feature of the Turkish political environment. As a consequence, Turkey experienced severe financial crises in 1994 and 2000-01. In the following two sections, fundamental properties, financial reasons and results of these crises are given.

## Turkish Currency Crisis of 1994

After the import substitution period, Turkey opened its market totally and experienced a financial liberalization which led to its first severe financial crisis in 1994. The crisis in 1994 was different from those in European countries, Mexico and Southeast Asian countries due to the fact that the exchange rate was governed by a managed float, rather than being fixed (Özer, 1999). Increasing and high public sector deficits, inadequate private savings to finance these deficits and as a result of these two deficits growing external deficit made the imbalances in the macro economic variables in the first half of the 1990’s. This disequilibrium and the efforts to sustain it by inappropriate policies had some reflections to the relative prices. Some developments precipitating the crisis were observed in the foreign exchange markets.

After the financial liberalization in 1989, Turkey had attracted capital inflows due to high real interest rates which led to an overvaluation of the Turkish Lira (TL). The appreciation of the currency and also the tariff reductions in 1989 caused current account deficits. The pressures on the exchange rate and the interest rates, and the open position of the banking system, which was around 5 billion dollars, increased the demand for dollars.

There was a run from the TL. The banks rushed to foreign exchange market to close their foreign exchange position. The Central Bank intervened the foreign exchange market in order to defend the exchange rate. As a result the Central Bank lost half of its reserves and overnight interest rates reached a record level. The open position of commercial banks declined to 1.1 billion dollars in June 1994. Finally, these developments had an impact on the parity. It was about 15000 TL/US\$ in January 1994, but jumped to 38000 TL/US\$ by the first days of April 1994 (Celasun, 1998). In Table 1, the balance of payments and some key economic indicators of Turkey between 1990 and 1995 can be seen (Özatay, 1996):

**Table 1: The balance of payments and some key economic indicators of Turkey between 1990 and 1995**

| <b>Current Account (US\$ million)</b> | <b>1990</b> | <b>1991</b> | <b>1992</b> | <b>1993</b> | <b>1994</b> | <b>1995</b> |
|---------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Exports</b>                        | 13.0        | 13.7        | 14.9        | 15.6        | 18.4        | 21.9        |
| <b>Imports</b>                        | 22.6        | 21.0        | 23.1        | 29.8        | 22.6        | 35.2        |
| <b>Trade Balance</b>                  | -9.6        | -7.3        | -8.2        | -14.2       | -4.2        | -13.2       |
| <b>Current Account Balance</b>        | -2.6        | 0.3         | -0.9        | -6.4        | 2.6         | -2.3        |
| <b>Capital Account Balance</b>        | 3.9         | -1.3        | 2.4         | 6.6         | -2.4        | 8.9         |
| <b>Portfolio and Direct Inv.</b>      | 1.2         | 1.4         | 3.2         | 4.5         | 1.7         | 1.5         |
| <b>Short-Term</b>                     | -0.2        | -0.8        | -0.9        | 1.4         | -0.8        | -0.2        |
| <b>Long Term</b>                      | 2.9         | -1.9        | 0.2         | 0.8         | -3.4        | 7.6         |
| <b>Change in Reserves</b>             | 1.3         | -1.0        | 1.5         | 0.3         | 0.2         | 8.8         |
| <b>GDP growth 1990 prices</b>         | 9.4         | 0.3         | 6.4         | 8.1         | -6.1        | 8.1         |
| <b>Inflation (WPI, year end,%)</b>    | 48.6        | 59.2        | 61.4        | 60.26       | 149.56      | 64.9        |
| <b>PSBR, (%GNP)</b>                   | 7.4         | 10.2        | 10.6        | 11.7        | 8.1         | 6.5         |

|  |      |      |      |      |       |   |
|--|------|------|------|------|-------|---|
| <b>Domestic Non Monetary Debt Stock/M2Y</b>      | 26.3 | 25.6 | 37.7 | 53.7 | 45.5  | - |
| <b>Average T-Bill Rate</b>                       | 55.7 | 87.5 | 93.0 | 86.1 | 158.2 | - |
| <b>Average Maturity of Domestic Debt (Years)</b> | 2    | 1.5  | 1    | 1    | 0.7   | - |

According to this table, it's obvious that the annual inflation rate jumped to three digit levels which was an important result of the crisis. At the end of 1993, public sector debt stock and deficits as a percentage of GDP reached record high levels and the burden of interest payments increased. Several Treasury bill auctions were cancelled and the Treasury started to rely on short-term advances from the Central Bank. Therefore, there was a substantial real increase in Central Bank's domestic credits starting from the beginning of September 1993. The real return on Treasury bills turned to negative at the end of 1993. The cancellation of auctions increased the uncertainty in the financial markets and shook the confidence of investors. Finally the Treasury lost its ability to borrow (Kibritçioğlu et al., 1999).

Consequently, it can be said that the financial crisis in 1994 was not unexpected because many economic indicators were giving warning signals before the crisis period. There was a great loss of reserves, the fiscal indicators worsened and the demand for foreign currency was increased which implies that this crisis can be explained by the first-generation models. However, the government's objective function also makes it possible to fit this crisis in the second-generation models (Kibritçioğlu et al., 1999).

## Turkish Currency Crisis of 2000-01

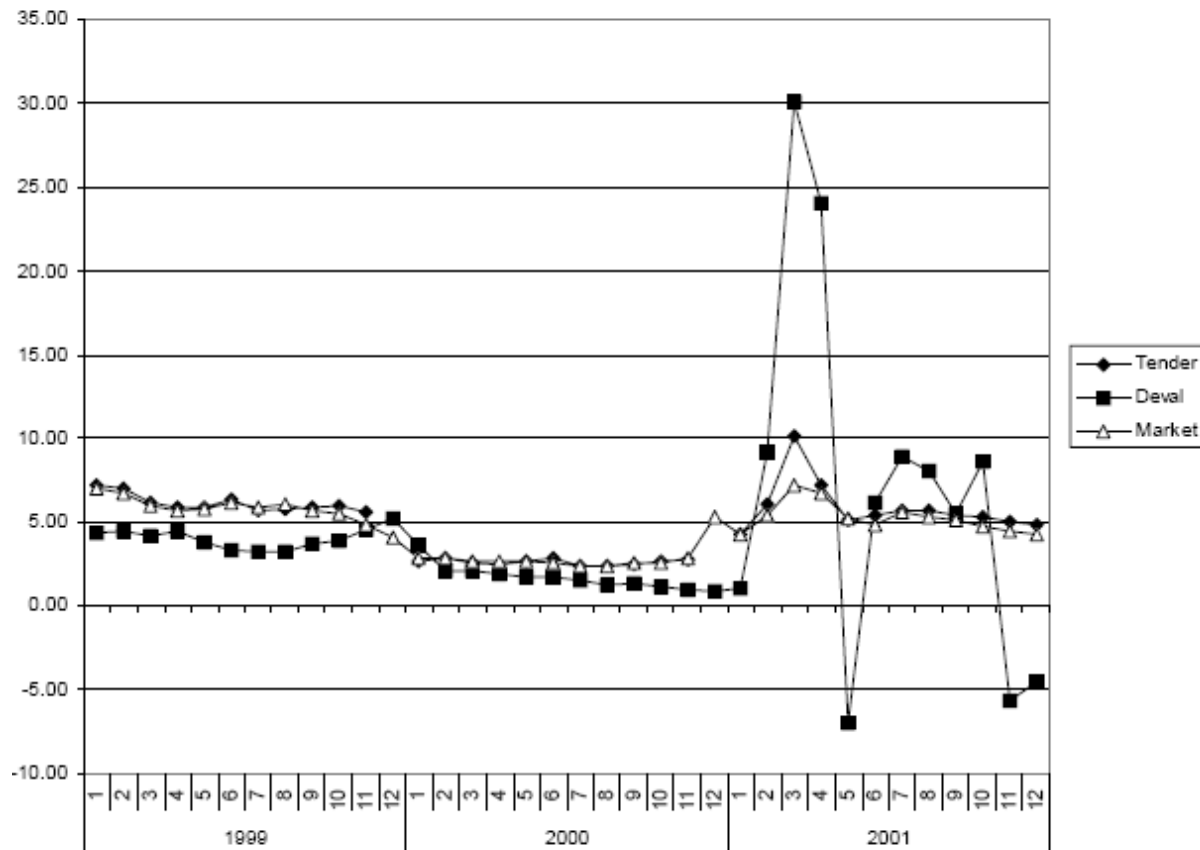
At the end of 1999, Turkey embarked on an exchange rate based disinflation program backed by a three-year stand-by agreement with the IMF which aimed to reduce the inflation from the range of 65-90%. Central to the stabilization program were: a strong exchange rate commitment; tight monetary control; a large fiscal adjustment to eliminate inflationary pressures; and a range of structural measures designed to liberalize the economy (Özkan, 2005).

The financial crisis preceded by a financial turmoil that burst in the second half of November 2000 just at the midst of that stabilization program. The following figure shows the change in interest rates and the rate of devaluation between 1999 and 2001 in Turkey (Ekinci & Ertürk, 2004).

The pressure in the market calmed down soon after a new letter of intent was presented to International Monetary Fund (IMF). However, as of the end of December, the average interest rates, both the overnight rate and secondary market bond rate, were almost four times higher than their levels at the beginning of November and more than five times higher than the preannounce year-end depreciation rate of the lira. This unsustainable situation ended on the February 19, 2001, when the prime minister announced that there was a severe political crisis that ignited a crisis in the highly alerted markets due to what had happened at the end of the preceding year. On that day the overnight rates jumped to unprecedented levels of 6200 percent in uncompounded terms. Three days later, the exchange rate system collapsed and Turkey declared that it was going to implement a floating exchange rate system from that time onwards (Alper, 2001).

The effects of the 2000–2001 crisis were more severe than that of the one of 1994. As a result of this crisis, international finance capital benefited from the crisis by increasing its total assets in the economy as well as the income flows it receives from it, while large domestic financial capitalists also increased their profits in the aftermath of the crisis. Industrial capital benefited via a repression of real wages and a decline in the strength of the labor movement (Orhangazi & Dufour, 2006). The structural changes imposed on the economy in the aftermath of the crisis, in order to 'remedy' to the situation, furthered the interests of capital in general by promoting increased privatization and changes in public finances, including most notably an increase in regressive taxation. Furthermore, policies associated with neoliberalism, such as central bank independence, labor flexibility, the liberalization of agriculture, and so on, have been extended and deepened in the economy (Yay et al., 2001).

### Change in interest rates and the rate of devaluation between 1999 and 2001 in Turkey



## EARLY WARNING SYSTEMS: AN APPLICATION FOR THE TURKISH ECONOMY

As it has already been mentioned, financial crises cause many bankruptcies which underline the importance of crisis and failure prediction. Therefore, a prediction model which helps shareholders, the government, creditors, vendors, investors and the management itself to foresee financial crises is very beneficial in our uncertain financial world.

A prediction model can also take the shape of a failure prediction where decision makers are interested in the prediction of direction of variables over time. At the beginning of researches on failure prediction, there were no advanced statistical methods available for researchers. The most common research method was to compare the financial ratios of distressed and non-distressed firms with each other. Later on, multivariate analysis expanded the range of the research. Until 1980's discriminant analysis was the dominant method in failure and default prediction. During 1980's the discriminant analysis was replaced by logistic analysis which until recent years has been the most used statistical method for failure prediction.

As it has already been mentioned, the effects of the 2000–2001 crisis were more severe than that of the one of 1994. The latter one affected most of the sectors in Turkish economy. In that period, many firms went bankrupt or were financially distressed.

The following section focuses on the selection of predictors for failure prediction purposes. Furthermore, it too investigates the essential differences between discriminant and logistic analysis whether they affect the empirical selection of independent variables to the models and lead significant differences in failure prediction accuracy or not.

## Data

To achieve the purpose of this term project, empirical studies are conducted on companies all of which are listed on Istanbul Stock Exchange. Data set consist of distressed and non-distressed firms of different sectors after the Turkish Currency Crisis of 2001. Financially distressed firms are determined according to the Bankruptcy Law article 179, in accordance with Turkish Trade Law articles 324 and 434. Non-distressed firms are selected as the industry averages. Thus, there are 34 distressed firms, and 16 non-distressed firms that are sector means. Table 2 provides the financially distressed firms and their appropriate industry.

**Table 2: Financially distressed firms and their appropriate industry**

| Name of the Firm       | Industry / Sector       |
|------------------------|-------------------------|
| Nergis Holding         | Holding and Investment  |
| Turkish Airlines       | Transportation          |
| Gorbon Işıl            | Ceramics                |
| Tüpraş                 | Petroleum Products      |
| Gima                   | Retailing and Marketing |
| Sabah Marketing        | Retailing and Marketing |
| Sezginler Food         | Retailing and Marketing |
| Tansaş                 | Retailing and Marketing |
| Arat Textile           | Cotton and Wool         |
| Bisaş Textile          | Cotton and Wool         |
| Lüks Kadife Textile    | Cotton and Wool         |
| Polylen Synthetic      | Cotton and Wool         |
| Sifaş Synthetic        | Cotton and Wool         |
| Parsan Machinery Parts | Automotive Parts        |
| Makina Takım           | Metal Processing        |
| Bayraklı Dye           | Chemicals and Plastics  |
| ÇBS Dye                | Chemicals and Plastics  |
| Meges Dye              | Chemicals and Plastics  |
| Duran Offset and Press | Paper and Packing       |
| Işıklar Packing        | Paper and Packing       |
| Viking Paper           | Paper and Packing       |
| Koniteks Textile       | Apparel                 |
| Kerevitaş Food         | Food                    |

|                        |                |
|------------------------|----------------|
| Dardanel Onentaş Food  | Food           |
| Mudurnu Chicken        | Food           |
| Gümüşsuyu Carpet       | Home Textile   |
| Tümteks Textile        | Home Textile   |
| Aktaş Electricity      | Energy         |
| Abana Electro mechanic | Electronic     |
| Emek Electric          | Electronic     |
| Raks Electronic        | Electronic     |
| Turkcell               | Electronic     |
| Kardemir Karabük       | Iron and Steel |
| Metaş İzmir Metallurgy | Iron and Steel |

As it has already been mentioned, 16 industry/sector averages have been chosen and taken into account as non-distressed firms.

For the discriminant and logistic analysis, financial statements of distressed firms are gathered from [www.analiz.com](http://www.analiz.com) according to 4 periods on 3 months basis prior to the 2001 crisis and financial statements of industry/sector averages are downloaded from [www.tcmb.gov.tr](http://www.tcmb.gov.tr). 10 important financial ratios, which are used as quantitative variables in the analysis, are calculated from balance sheets and income statements and classified according to their ratio category. Table 3 represents these calculated ratios and their category.

**Table 3: Calculated ratios and their category**

| Variable No | Category of the Ratio | Financial Ratio                     |
|-------------|-----------------------|-------------------------------------|
| V1          | Liquidity             | Current Assets/ Current Liabilities |
| V2          | Liquidity             | Current Assets/ Total Assets        |
| V3          | Solvency              | Equity/ Fixed Assets                |
| V4          | Profitability         | Equity/ Net Sales                   |
| V5          | Activity              | Inventory/ Net Sales                |
| V6          | Activity              | Net Income/ Total Assets            |
| V7          | Activity              | Net Sales/ Total Assets             |
| V8          | Liquidity             | Quick Assets/ Current Liabilities   |
| V9          | Leverage              | Total Debt/ Total Assets            |
| V10         | Profitability         | Return on Equity                    |

## Methodology

The statistical approach consists of two steps. Firstly, discriminant analysis and logistic analysis are carried out and the results evaluated. Secondly, the prediction abilities of both analyses are compared with each other. SPSS 13 is used in order to obtain the results.

In the analysis the set of variables that are subject to be used in discriminant function was chosen by using stepwise selection. Using the significance level of F-test variables were chosen whether they enter or leave the model where selected variables act as covariates because of being under consideration of dependent variable (1-



2: 1 stands for distressed firms and 2 stands for non-distressed firms). The significance level for adding and extracting variables into the model was 0.05. All of 10 financial ratios for every distressed firm and industry/sector averages were put into discriminant analysis. For every 3 month period variables were selected separately. For the logistic analysis same variables and method were used. Binary logistics in SPSS 13 was used with stepwise selection. Again the significance level was 0.05.

Consequently, prediction abilities of discriminant and logistic analysis were compared with each other. In order to obtain the cross-validated prediction accuracy results again SPSS 13 was used.

## Findings and Evaluation

Variables selected for discriminant and logistic analysis can be seen in detail in Appendices. But, for convenience they are summarized in the Table 4:

**Table 4: Variables selected for discriminant and logistic analysis**

| Date  | 2000/03     | 2000/06     | 2000/09     | 2000/12    |
|---|-------------|-------------|-------------|------------|
| <b>Variables Selected for Discriminant Analysis</b> | V10, V2, V4 | V2, V8, V6  | V8, V9, V1  | V8, V1, V9 |
| <b>Variables Selected for Logistic Analysis</b>     | V4, V10, V8 | V10, V8, V9 | V10, V9, V6 | V9, V1, V8 |

According to Table 4, variables 3, 5 and 7 are included neither in discriminant analysis nor logistic analysis. Furthermore, logistic analysis does not select variable 2, however discriminant analysis does. Number of variables selected in discriminant and logistic analysis is the same. Totally, 12 variables were selected in both models. It can be asserted that liquidity is the main factor in both models for each time period. On the contrary, solvency factor is not critically important for both models. The least important factor which was selected as a variable is the activity factor.

For further analysis cross-validated prediction results for discriminant and logistic analysis was performed. In the variable selection it can be seen that the relationship between independent variables didn't affect the model selection in a prominent way. Therefore, in order to examine further consequences of model selection the relevant statistical method was implemented to test the predictive ability of discriminant and logistic analysis. Table 5 shows the cross-validated prediction results for discriminant and logistic analysis.

**Table 5: Cross-validated prediction results for discriminant and logistic analysis**

| Date           | TYPE I ERROR |             | TYPE II ERROR |             | TOTAL ERROR  |              |
|----------------|--------------|-------------|---------------|-------------|--------------|--------------|
|                | Discriminant | Logistic    | Discriminant  | Logistic    | Discriminant | Logistic     |
| <b>2000/03</b> | 13,47        | <b>6,12</b> | <b>17,45</b>  | 21,73       | 15,47        | <b>11,39</b> |
| <b>2000/06</b> | 9,26         | <b>2,75</b> | <b>5,59</b>   | <b>5,59</b> | 7,51         | <b>3,98</b>  |
| <b>2000/09</b> | 12,76        | <b>4,49</b> | <b>6,48</b>   | 7,12        | 11,23        | <b>5,93</b>  |
| <b>2000/12</b> | 12,53        | <b>2,89</b> | 14,36         | <b>3,45</b> | 14,65        | <b>8,76</b>  |

From the cross-validated prediction results it's obvious that logistic analysis yielded better results for all time periods in type I error and total error. However, discriminant analysis yielded better results in type II error for date 2000/03 and 2000/09 and both models have the same type II error for date 2000/06.

From the results it can be derived that discriminant and logistic analysis both lead to different failure prediction models and that different methods lead to the selection of different financial ratios. According to the variable selection liquidity seems to be the most important factor for the Turkish economy and failure prediction. This indicates that the liquidity failure is more general failure type in Turkey. Besides, variables in the sample were mostly factors describing liquidity and activity. However, activity ratios were not selected in both models.

## FINAL REMARKS AND CONCLUSION

Failure prediction in financial crises suffered due to the lack of a precise theory since 1930's. Alternative models predicted the future of a firm, sector or economy in 80% of all cases. However, the problem is that the prediction accuracy depends on the best possible selection of variables which can be found in the prediction models. Until 1980's the prominent method in failure prediction was discriminant analysis. During 1980's logistic analysis replaced the discriminant analysis. Today models such as neural networks, fuzzy logic challenge the logistic analysis in which they lead to high prediction accuracy beside discriminant and logistic analysis.

In this paper first a general definition of financial crisis was made. Consequently, the possibilities of early warning systems in case of financial crises were explained and an application for the Turkish economy was carried out in order to reflect the important indicators and prediction results. According to the results liquidity is the most important indicator for the Turkish economy prior to a financial crisis. Furthermore, information content of the models varies because of the variables that are used to measure the different economic dimensions of a firm. Finally, it can be stated that alternative failure prediction methods also affect the prediction accuracy where this term project showed that logistic analysis leads to better prediction results than discriminant analysis. For further research it can be useful to examine the different models such as factor analysis, fuzzy logic or neural networks and compare the prediction capabilities of these models with each other.

Nowadays, the international economy is in a lull between financial crises. Turkey seems to have been stabilized. However, in the very near future, as real interest rates rise there will be another emerging market crisis. On the other hand, the U.S. economic and financial system is undergoing a very challenging period of adjustment, and we are likely to be living with a high degree of uncertainty for some period of time about the ultimate magnitude and duration of the slowdown underway. The improvements in monetary policy credibility and in financial strength developed over the past few decades mean that policy around the world has more room to adjust to deal with the challenge in the present environment. Nevertheless, the speed and agility with which public policy makers and private financial institutions respond to the continuing pressures in a rapidly evolving environment will determine how quickly and how smoothly market conditions return to normal—and how rapidly the risks to the economic outlook are mitigated.

## APPENDIX A

**Table A.1: Variables in the Discriminant Analysis for the Date 2000/03**

**Variables in the Discriminant Analysis (2000/03)**

| Step    | Tolerance | F to Remove | Min. F | Between Groups |
|---------|-----------|-------------|--------|----------------|
| 1 V10-1 | 1,000     | 97,748      |        |                |
| 2 V10-1 | ,906      | 80,125      | 45,718 | Yes and No     |
| V2-1    | ,906      | 34,698      | 97,748 | Yes and No     |
| 3 V10-1 | ,671      | 119,808     | 37,302 | Yes and No     |
| V2-1    | ,642      | 66,535      | 66,066 | Yes and No     |
| V4-1    | ,632      | 35,576      | 99,834 | Yes and No     |

**Table A.2: Variables in the Discriminant Analysis for the Date 2000/06**

**Variables in the Discriminant Analysis (2000/06)**

| Step |      | Tolerance | F to Remove | Min. F | Between Groups |
|------|------|-----------|-------------|--------|----------------|
| 1    | V2-2 | 1,000     | 95,847      |        |                |
| 2    | V2-2 | ,908      | 83,637      | 54,862 | Yes and No     |
|      | V8-2 | ,903      | 42,948      | 93,399 | Yes and No     |
| 3    | V2-2 | ,786      | 102,630     | 39,399 | Yes and No     |
|      | V8-2 | ,843      | 57,846      | 62,489 | Yes and No     |
|      | V6-2 | ,654      | 43,543      | 98,498 | Yes and No     |

**Table A.3: Variables in the Discriminant Analysis for the Date 2000/09**

**Variables in the Discriminant Analysis (2000/09)**

| Step |      | Tolerance | F to Remove | Min. F | Between Groups |
|------|------|-----------|-------------|--------|----------------|
| 1    | V8-3 | 1,000     | 97,276      |        |                |
| 2    | V8-3 | ,895      | 87,895      | 62,826 | Yes and No     |
|      | V9-3 | ,957      | 47,298      | 95,892 | Yes and No     |
| 3    | V8-3 | ,853      | 106,894     | 43,850 | Yes and No     |
|      | V9-3 | ,737      | 59,883      | 59,850 | Yes and No     |
|      | V1-3 | ,699      | 47,098      | 95,845 | Yes and No     |

**Table A.4: Variables in the Discriminant Analysis for the Date 2000/12**

**Variables in the Discriminant Analysis (2000/12)**

| Step |      | Tolerance | F to Remove | Min. F | Between Groups |
|------|------|-----------|-------------|--------|----------------|
| 1    | V8-4 | 1,000     | 93,468      |        |                |
| 2    | V8-4 | ,923      | 89,462      | 73,547 | Yes and No     |
|      | V1-4 | ,976      | 57,093      | 92,469 | Yes and No     |
| 3    | V8-4 | ,799      | 103,985     | 47,893 | Yes and No     |
|      | V1-4 | ,835      | 62,949      | 64,892 | Yes and No     |
|      | V9-4 | ,654      | 53,291      | 91,490 | Yes and No     |

## APPENDIX B

**Table B.1: Variables in the Logistic Analysis for the Date 2000/03**

**Model in the Logistic Analysis if Term Removed (2000/3)**

| Variable     | Model Log Likelihood | Change in -2 Log Likelihood | df | Sig. of the Change |
|--------------|----------------------|-----------------------------|----|--------------------|
| Step 1 V10-1 | -34,069              | 50,789                      | 1  | ,000               |
| Step 2 V10-1 | -33,833              | 67,667                      | 1  | ,000               |
| V8-1         | -11,061              | 22,123                      | 1  | ,000               |
| Step 3 V4-1  | -221,484             | 442,968                     | 1  | ,000               |
| V10-1        | -82,632              | 165,263                     | 1  | ,000               |
| V8-1         | -25,293              | 50,586                      | 1  | ,000               |

a. Based on conditional parameter estimates

**Table B.2: Variables in the Logistic Analysis for the Date 2000/06**

**Model in the Logistic Analysis if Term Removed (2000/06)**

| Variable     | Model Log Likelihood | Change in -2 Log Likelihood | df | Sig. of the Change |
|--------------|----------------------|-----------------------------|----|--------------------|
| Step 1 V8-2  | -37,347              | 47,491                      | 1  | ,000               |
| Step 2 V8-2  | -39,487              | 73,099                      | 1  | ,000               |
| V9-2         | -17,490              | 32,096                      | 1  | ,000               |
| Step 3 V10-2 | -212,689             | 453,310                     | 1  | ,000               |
| V8-2         | -89,341              | 176,350                     | 1  | ,000               |
| V9-2         | -32,095              | 54,349                      | 1  | ,000               |

a. Based on conditional parameter estimates

**Table B.3. Variables in the Logistic Analysis for the Date 2000/09**

**Model in the Logistic Analysis if Term Removed (2000/09)**

| Variable     | Model Log Likelihood | Change in -2 Log Likelihood | df | Sig. of the Change |
|--------------|----------------------|-----------------------------|----|--------------------|
| Step 1 V9-3  | -45,892              | 52,463                      | 1  | ,000               |
| Step 2 V9-3  | -42,843              | 69,786                      | 1  | ,000               |
| V6-3         | -24,350              | 35,736                      | 1  | ,000               |
| Step 3 V10-3 | -256,698             | 388,574                     | 1  | ,000               |
| V9-3         | -92,348              | 189,574                     | 1  | ,000               |
| V6-3         | -38,461              | 59,358                      | 1  | ,000               |

a. Based on conditional parameter estimates

**Table B.4. Variables in the Logistic Analysis for the Date 2000/12****Model in the Logistic Analysis if Term Removed (2000/12)**

| Variable    | Model Log Likelihood | Change in -2 Log Likelihood | df | Sig. of the Change |
|-------------|----------------------|-----------------------------|----|--------------------|
| Step 1 V1-4 | -36,564              | 58,490                      | 1  | ,000               |
| Step 2 V1-4 | -47,574              | 65,491                      | 1  | ,000               |
| V8-4        | -32,426              | 43,050                      | 1  | ,000               |
| Step 3 V9-4 | -203,865             | 362,069                     | 1  | ,000               |
| V1-4        | -98,529              | 176,895                     | 1  | ,000               |
| V8-4        | -45,360              | 62,847                      | 1  | ,000               |

a. Based on conditional parameter estimates

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# **USING ARTIFICIAL NEURAL NETWORKS AND ADAPTIVE NEURO-FUZZY INFERENCE SYSTEMS IN FAULTS PREDICTING MODELS**

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## **ABSTRACT**

*The objective of this paper is the application of two models for predicting faults in industrial equipment systems by using Artificial Neural networks (ANN) and Adaptive Neuro-Fuzzy Inference Systems (ANFIS) as well as the interpretation of joint network outputs. Currently, an extended and effective operation of production systems is a vital demand. Soon the necessity to get to know and control any possible faults that might compromise the production mission is a must. The target becomes the extension of the system activity at full load and in a continuous manner, at the required timing, without it being affected by defects of its integral parts.*

## **INTRODUCTION**

Predictive maintenance has the advantage of predicting the status of components by informing when they will have a defect within a good certainty margin. For this, it is necessary to carry out what is called “diagnosis”. This will evince the status of given components, when they will have a flaw and how to schedule their replacement before the occurrence of the critical situation leading to breakage and subsequent equipment stoppage. In this paper, a time series is formed on the basis of a 5-year survey on maintenance stoppage interventions to an industrial production system at the finishing plant of Petroflex Ind. e Com. S/A, the largest synthetic rubber producer in Latin America and one of the largest in the world. This way, the objective is to introduce ANN- and ANFIS-based models with an aim at verifying their system stoppage prediction capability so that in the future it is possible to intervene in an optimum time before the systems fail, so that operation time is extended and, consequently, their availability is improved. Neural network-based models have been successfully used for predicting temporal series in which there is a strong non-linearity component. This fact can be explained by the capability of a neural network to act as a “universal approximator” of continuous functions (Cybenko, 1989). This approach has been frequently used in financial temporal series (Klimasauskas, 1992), (Draisma, kaashoek & Dijk, 1993), (Cheng, 1996), (Refenes, 1994), as well as in the forecast of electric load consumption (Park, 1991), (Lin, 1996), in which other statistical techniques have showed less effective.

In the past few years, hybrid neuro-fuzzy systems have developed greatly, since they can combine the advantages of the fuzzy logic and those of the artificial neural networks, being able to incorporate in a single system the explicit knowledge of experts and the implicit knowledge inherent to a set of data. A significant number of references on these systems can be found in (Jang 1997), (Kasabov 1995), (Hayashi 1994), (Posey 1992), (Braga 1995).

## **ARTIFICIAL NEURAL NETWORKS (ANN)**

### **Definition**

The Artificial Neural Networks (ANN) are technological information processes inspired in studies of the brain and the nervous system (Trippi; Turban, 1993). Haykin (1994) defines the ANN as follows: “The ANNs are processors, massively parallel and distributed, which are naturally prone to store the knowledge from experience and make it useful. Thus, resembling the human brain in two aspects:

- 1- Knowledge is acquired by the network through a learning process, and
- 2- The intensities of the connections among neurons, known as synaptic weights, are used to store knowledge”.

Driven by the wish to understand and simulate how the brain works, the neural network models have been developing throughout the years by means of generalizations of mathematical models. Due to their capability to learn from examples and to generalize the information learned, the ANNs have proposed interesting solutions in several fields such as business administration, economics, medicine, agronomy, engineering etc. The mathematical model of an artificial neuron was first idealized by researchers W. S. McCulloch and W. H. Pitts (Zurada, 1992) in 1943. The main limitation of the neuron of McCulloch and Pitts is that it was proposed with fixed weights, non-adjustable, thus only getting to implement linearly separable functions. In the state-of-the-art of neural computing, we do not need to be limited to our understanding of biological neural networks. Despite the extensive research prompted by neurobiology and psychology, important questions remain on how brain and mind work. This is the main reason for the neural computing models not to be quite limited to the biological systems of today (Turban; Trippi, 1993).

## Learning

Learning is the process through which the parameters of a neural network re adapted by means of a continuous stimulus from the environment where the network is operating, being the specific type of learning carried out defined by the particular way of how the adjustments performed in the parameters occur (Haykin, 1994). Undoubtedly, the greatest appeal of neural networks lies in the learning capability, by which the network extracts relevant information on the patterns presented and generates its own representation of the problem. The learning process can be simplified as follows (Trippi; Turban, 1993): “Artificial Neural Networks learn from their errors. Normally, the learning process (or training) involves three phases: 1- Compute the output; 2- Compare the output with the desired responses; 3- Adjust the weights and repeat the process. Usually, the learning process starts from the randomized weights. The difference between the current output ( $Y$  or  $Y_t$ ) and the desired output ( $Z$ ) is called  $e$ . The aim is to minimize the  $e$  (or better, reduce it to zero). The reduction of the  $e$  is performed through the incremental change of the weights”.

## The “Backpropagation” Algorithm

The MLP-type networks have been successfully used to solve several problems involving high degrees of non-linearity. Its training is of the supervised type and it uses a very popular algorithm called error backpropagation. This algorithm is based upon a learning rule that “corrects” the error during the training (Haykin, 1994). The “backpropagation” algorithm was created by Rumelhard, Hinton and Williams in 1986 (Zurada, 1992), (Haykin, 1994) stemming from the generalization of “Widrow-Hoff’s” learning rule, which had been introduced in 1960-1962 for “feedforward perceptron”-type networks. The “Widrow-Hoff’s” learning rule, also known as “Delta Rule” – LMS (minimization of the mean square error) – which adjusts the weights by the connections of the neurons in the network according to the error, that is, this rule aims at finding a set of weights and polarizations that minimize the error function,

$$(1) \quad E = \frac{1}{2} \sum_{p,i} (y_{p,i} - y'_{p,i})^2$$

where,

$R$  = number of patterns or input vectors;

$S$  = number of output neurons – output vector dimension;

$y_{p,i}$  = desired output in the  $i$ -th neuron, when the  $p$ -th pattern is presented;

$y'_{p,i}$  = output obtained by the network in the  $i$ -th neuron, when the  $p$ -th pattern is presented.

The change of weights  $W_{i,j}$  of the “Widrow-Hoff” rule is calculated as follows:

$$(2) \quad \Delta W_{i,j} = - \eta \frac{\partial E}{\partial W_{i,j}}$$

where,  $\eta$  = learning rate and  $\frac{\partial E}{\partial W_{i,j}}$  is the partial derivative of the error in relation to the weight of the respective connection – gradient. The main restriction in the minimization of the error towards the decreasing gradient is that the neuron transfer function has to be monotonic and distinguishable at any point. The “Backpropagation” (BP) algorithm refers to a learning rule consisting in adjusting the network’s weights and



polarizations through the backpropagation of the error found in the output. Minimization is achieved by continuously performing – at every interaction – the update of the network's weights and polarizations, as opposed to the function gradient at current point, that is, proportionally to the negative of the derivative to the square error in relation to the current weights. Therefore, it is about one supervised training, deterministic, local computing, algorithm that implements the decreasing gradient method in the additions of error squares. The topology of the network architecture that uses this learning rule is generally made up of one or more hidden layers (intermediate) of non-linear neurons (with a sigmoidal propagation function) and a linear neuron output layer. Due to the great diffusion of the network architecture this learning rule is applied to, it is common to refer to it as the learning rule's own name, namely, BP network. BP networks having polarizations of, at least, one intermediate layer are theoretically capable of promoting the approximation of any mathematical function, still being widely used in the association and classification of standards.

## ADAPTATIVE NEURO-FUZZY INFERENCE SYSTEMS

### Definition

The Adaptive Neuro-Fuzzy Inference System (ANFIS) is a neural network proposed by Jang (Jang 1993), (Jang et al. 1997). Given an input-output set, the ANFIS builds up an equivalent neuro-fuzzy inference system. The parameters associated to the pertinence functions are adjusted by a learning algorithm. Adjustment for such parameters is carried out by using the backpropagation algorithm or a combination of it with a minimum square-type algorithm. The fuzzy logic is based upon the theory of fuzzy sets and fuzzy rules (IF-THEN type), proposed by Zadeh and Mandani, and is closely related to linguistic and the cognition science. Fuzzy is suitable for creating models from an explicit knowledge (rational and linguistically treatable), originating in human experts, whilst the artificial neural networks are appropriate for creating models from implicit knowledge (and not obvious) embedded in a set of data. As a consequence, many researchers have attempted to integrate these two modeling techniques in order to generate a hybrid model that can associate the advantages of each approach and minimize their deficiencies. From this, the hybrid neurofuzzy systems, or simply neurofuzzy systems (SNF), were born. Amongst the researchers of this new era, we can distinguish Jang (one of the pioneers), Nauck and Vuorimaa, who created, respectively the ANFIS, NEFCLASS and FSOM models. All these models are adaptive systems like the neural networks and are interpretable through the fuzzy rule. Jang (1997) proposed a type of fuzzy modeling that utilizes an adaptive neural network structure jointly with estimates of minimum squares for the implementation of fuzzy systems. The utilization of this structure with such an objective is due to the inexistence of standardized methods to transform human knowledge into a base of rules to a fuzzy inference system, and to the need of efficient methods to adjust the pertinence functions and consequent minimization of the output error. This way, the Adaptive Neuro-Fuzzy Inference System (ANFIS) can be a powerful tool for building up a set of IF-THEN fuzzy rules with pertinence functions suitable for being applied in the case study under focus.

### The ANFIS Architecture

In order to simplify, let us consider that the fuzzy inference system considered below has two inputs,  $x$  and  $y$ , and one output,  $z$ . According Sugeno's to the first-order fuzzy model, one set of ordinary rules containing two IF-THEN fuzzy rules is described as follows:

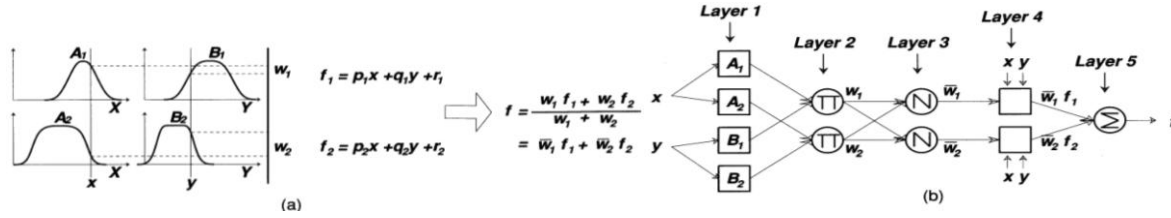
Rule 1: IF  $x$  is  $A_1$  and  $y$  is  $B_1$  THEN  $f_1 = p_1.x + q_1.y + r_1$

Rule 2: IF  $x$  is  $A_2$  and  $y$  is  $B_2$  THEN  $f_2 = p_2.x + q_2.y + r_2$

Figure 1 shows the reasoning mechanism for the Sugeno model; the equivalent ANFIS architecture which corresponds to this Sugeno model is shown in figure 1 (b), where the knots of the same layer have similar functions. Here, we indicate the output of knot  $i$ th in layer  $l$  as  $O_{l,i}$ .

**Figure 1 - (a) The ANFIS Inference Mechanism**

**(b) The ANFIS Structure**



**Layer 1:** Every knot  $i$  in this layer is an adaptive knot with a nodal function:

$$O_{1,i} = \mu_{A_i}(x), \quad \text{for } i = 1, 2, \text{ or} \\ O_{1,i} = \mu_{B_{i-2}}(y), \quad \text{for } i = 3, 4$$

Where  $x$  (or  $y$ ) is the input for knot  $i$  and  $A_i$  (or  $B_{i-2}$ ) is a linguist classification (such as “small” or “large”) associated to this knot. In other words,  $O_{1,i}$  is the level of pertinence of a fuzzy set  $A$  ( $= A_1, A_2, B_1$  or  $B_2$ ) and it specifies the degree to which the input of  $x$  (or  $y$ ) satisfies quantifier  $A$ . The pertinence function for  $A$  can be any pertinence function configured such as a sine-type general function:

$$\mu_A(x) = \frac{1}{1 + \left| \frac{x - c_i}{a_i} \right|^{2b}},$$

Where  $\{a_i, b_i, c_i\}$  is the set of parameters. Since the values of these parameters change, the sine function varies and shows several forms of pertinence functions for the fuzzy set  $A$ . According to Jang (1997 p. 337): “the parameters in this layer are referenced to as antecedent parameters”.

**Layer 2:** Every knot in this layer is a fixed knot classified as  $\Pi$ , the output of which is a product of all the entering signs:

$$O_{2,i} = \omega_i = \mu_{A_i}(x) \cdot \mu_{B_i}(y), \quad i = 1, 2$$

Jang (1997. p.337) states that “each nodal output represents the triggering force of a rule”. In a general sense, another Norm-T operator executing rule AND can be used as a nodal function in this layer.

**Layer 3:** Every knot in this layer is a fixed knot classified as  $N$ . Knot  $i_{th}$  calculates the relationship between the triggering force of the rule in knot  $i_{th}$  and the sum of all triggering forces of all knots:

$$O_{3,i} = \bar{w}_i = \frac{w_i}{w_1 + w_2}, \quad i = 1, 2.$$

Jang (1997) characterized, by convenience, to name the outputs of this layer as normalized triggering force.

**Layer 4:** Every knot  $i$  in this layer is an adaptive knot with a nodal function:

$$O_{4,i} = \bar{w}_i f_i = \bar{w}_i (p_i x + q_i y + r_i),$$

Where  $w_i$  is a normalized triggering force from layer 3 and  $\{p_i, q_i, r_i\}$  is the set of parameters of this knot. Jang (1997) named the parameters of this as consequent parameters.

**Layer 5:** The simple knot in this layer is a fixed knot classified as  $\Sigma$ , which computes the general output as a sum of all input signals:

$$O_{5,1} = \sum_i \bar{w}_i f_i = \frac{\sum_i w_i f_i}{\sum_i w_i}$$

Thus, an adaptive network is built which is functionally equivalent to the fuzzy model of Sugeno. Note that the structure of this network is not unique; layers 3 and 4 can be combined in order to obtain an equivalent network with 4 layers only. Likewise, one can perform the normalization of weights upon the last layer.

## Hybrid Learning Algorithm

From the architecture shown in figure 1 (b), it is observed that when the values of the antecedent parameters are fixated, the general output can be presented as a linear combination of the consequent parameters. Output  $f$  in figure 1 (b) can be rewritten as:

$$\begin{aligned}
f &= \frac{w_1}{w_1+w_2} f_1 + \frac{w_2}{w_1+w_2} f_2 \\
&= \bar{w}_1(p_1x + q_1y + r_1) + \bar{w}_2(p_2x + q_2y + r_2) \\
&= (\bar{w}_1x)p_1 + (\bar{w}_1y)q_1 + (\bar{w}_1)r_1 + (\bar{w}_2x)p_2 + (\bar{w}_2y)q_2 + (\bar{w}_2)r_2,
\end{aligned}$$

which is linear regarding the consequent parameters  $p_1, q_1, r_1, p_2, q_2, r_2$ .

Upon passing the hybrid learning algorithm forward, the nodal outputs go straight to layer 4 and the consequent parameters are identified through the minimum square method. In the return passage, the error signals propagate in an opposite direction to the layers and the antecedent parameters are updated by the decreasing gradient. When the approximation is hybrid, it converges much faster, since it reduces the space dimensions in the research on the original backpropagation method. Thus, one should always observe the possibility of breaking down the set of parameters in the first place. The decreasing gradient and the minimum square method can be combined in several ways. One of such methods can be chosen according to the computing resources available and the level of performance required, Jang, Sun & Mizutani (1997, p. 340). As noted in Jang's (1993) original ANFIS article, the learning mechanism should not be applied to determine pertinence functions in Sugeno's ANFIS, as in this case, the linguistic and subjective possibility of bad concepts is carried. This is a situation that must be observed case-by-case and decision must be defined by the user. In principle, if the size of the set of input/output data is large, then a fine tuning of the pertinence functions is recommended (or always required), since the pertinence functions determined by the user are rarely favorable in terms of reproduction of the desired outputs. However, if the set of data is too small, then it probably does not have enough information on the target system. In this condition, the pertinence functions determined by the user represent important information that may not be reflected in the set of data; soon, the pertinence functions must be kept fixed throughout the learning process. Following the guidance of Klassen and Pao (1988) and Pao (1989), if the pertinence functions are fixated and only the consequent part is adjusted, Sugeno's ANFIS model can be seen as a functional connections network, where the "stressed representations" of the input variables are obtained through the pertinence functions. According to Pao (1989), these stressed representations determined by the experts clearly provide more penetration into the target systems than the functional expansions. By updating the pertinence functions, this stressed representation is indeed tuned into a better performance.

The data used are related with the days on which stoppages (failure) occurred and with the amount of stopped hours in a system of industrial equipment accountable for the addition of sulfur acid. It is a vital production system. The data were organized by the daily sum throughout 5 (five) years, that is, a series of 1,826 days in a row with their respective stopped hours. The graph for the reason of the stoppage, which is studied in this paper, prepared in the Matlab software and showing the day when the failures occurred and how many hours the equipment remained inoperative, is shown as normalized in section 5, "results".

## BUILDING THE NETWORKS

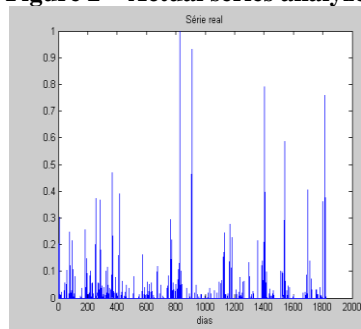
With an aim at accelerating the training phase, the data were normalized (Haykin, 2001), also providing input data between 0 and 1. Particularly for the ANN, the data concerning each code were divided in 3 (three) blocks for different purposes: training, validation and testing. Having in mind the objective of the paper under focus and the amount of input data for each round, 1,826, an option was made to divide them into three equal groups, thus ensuring a consistent mass of data for testing. It is worth stressing that the testing data were the same as those used for the two networks, intending for a better analysis and graphic comparison. This way, the values for the temporal series were distributed as follows: 01 to 608 – Training; 609 to 1216 – Validation; 1217 to 1824 – Testing. The software used was Matlab through the Neural Network Toolbox. This software uses for the feedforward networks the backpropagation algorithm by using a decreasing gradient called "trainlm". The computer used was an AMD Athlon 2400, 1.99Ghz. The selected activation function was the Sigmoidal Logistics, achieving outputs between 0 and 1 as well, thus rendering the accuracy measures easy. In the training and validation phase, the process is only interrupted by two pre-determined mechanisms. The first one regards a minimum standard of error at output and determined in the case under focus, in the backpropagation phase, by the mean square error; and the second interruption mechanism is due to the maximum number of allowed iterations (epochs). It was pre-defined that for all tested networks two values would be set for the mean error, 0.01 and 0.005 and a limit of 30,000 iterations. (Limit initially defined, having as a basis some tests run with the data and for being values of acceptable accuracy in the relevant case). For the learning rate and the momentum, two important parameters that help in expediting the training, the default of Matlab, the "traingd", that is, the

program automatically alters and adapts the learning rate and the momentum values as the mean square error decreases. Regarding the network architecture, only one hidden layer was used having in mind that this simpler topology is enough to enable the approximation of continuous and non-linear functions of inputs. Thus, with an aim at finding the best architecture, or groups of networks that acquire the best learning capabilities, the study started from 1 (one) hidden layer neuron, increasing this number without pre-determined initial limits and verified the behavior of the networks both in the training and validation phase following the error parameter, and in the result phase for the tests performed. In relation with the error parameter, we used the relationship between the output values of the network and of test as a technique to measure the accuracy of the prediction model. For this, the network output and the test set were plotted in superposed graphs in different colors in order to obtain an early visual analysis, and the differences, the values of the errors found, were shown graphically. The lowest error values found determined the best networks. On the basis of this assessment parameter, simulations were made to separate a first set of networks that demonstrated generically the most feasible topologies (number of neurons in the hidden layer). This way, six architectures, containing 02, 03, 04, 05, 10 and 20 neurons, were separated for a second training phase. In this phase, as well as in the previous ones, each architecture corresponds to two networks, that is, one for the mean square error of 0.01 and another of 0.005, and both with a maximum of 30,000 interactions, initially. As the need of more interactions was verified, new simulations would be performed. For each configuration each architecture was repeated at least 10 (ten) times. No concern existed with the timing of trainings. Regarding the ANFIS, data for training and testing were also used, a rule generating system was established and the initial pertinence functions were plotted. With an aim at finding the best network, the same procedure for the ANNs was used regarding the error and the iterations (epochs), initially separating the best network set until that with the lowest error in relation with the test set was found. For the training optimization method, the hybrid learning algorithm was used. As mentioned above, it is about a combination of backpropagation of the errors with the minimum squares. Also shown are the final pertinence functions and the errors found in relation with the test set. The procedure to find the best network is the same as that used for the ANNs. Finally, we compared in the same graph the errors found in the two best networks (ANFIS and ANN), thus enabling for the visualization of the coincident points as well as the performance of each network in the same scale.

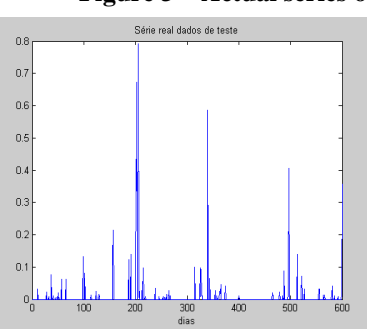
## RESULTS

Preliminarily, throughout the simulations carried out, the need to carry out several simulations for the same architecture was verified, with an aim at finding the beat group of results and trying to reach them in future simulations.

**Figure 2 – Actual series analyzed**



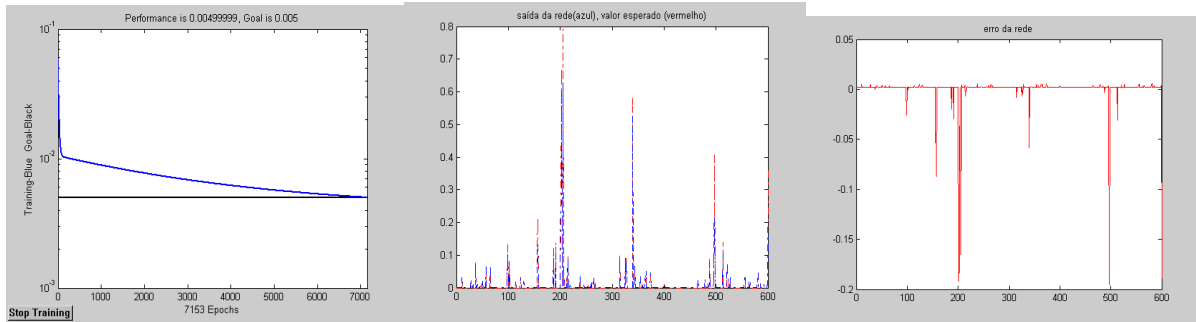
**Figure 3 – Actual series of test data**



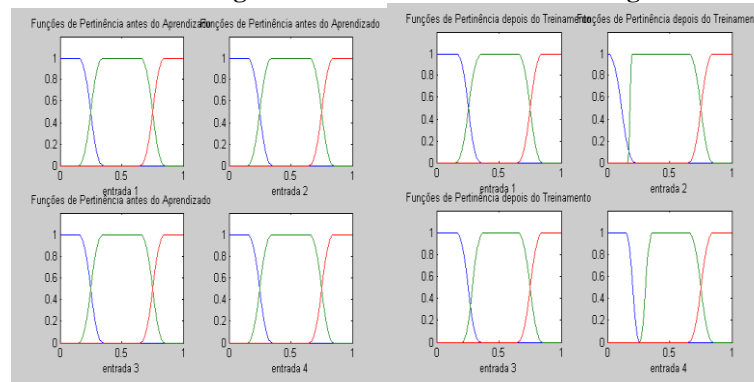
**Figure 4 – ANN performance**

**Figure 5 – (a) ANN output vs. expected value**

**(b) ANN error**



**Figure 6 – Pertinence function of ANFIS before learning** **Figure 7 – Pertinence functions of ANFIS after learning**



**Figure 8 – ANFIS error**

**Figure 9 – ANN error vs. ANFIS error**

## CONCLUSIONS

The results achieved in this paper demonstrate, initially, the applicability of the Artificial Neural networks (ANN) and the Adaptive Neuro-Fuzzy Inference System (ANFIS) for predicting maintenance stoppages, evincing the best ANN performance. It is still confirmed the ability of such models to predict in a data set with strong non-linearity component, in which other statistical techniques have shown less effective. From the analysis of the association of the graphs for the error found in the output of the networks in relation with the test set, we can verify that on the days when the stoppages were extended (outliers), the biggest errors occurred; however, both models predicted system stoppages, thus allowing for a programming interventions on a date close to that and with a higher hit margin. Finding neural models for predicting temporal failure series in the systems has more and more made room in the field of research, especially due to market demand and undoubtedly this is a technique still to evolve greatly in the field of industrial maintenance, aiming at subsidizing relevant management decision-making. It still relies on the possibility to be inserted in the computing systems that currently provide baseline information collected in its everyday operations, as is the case of this paper. Also,

it has a substantially lower cost in relation with other predictive maintenance techniques. Predictive techniques, such as the ones presented hereby, acting jointly with the maintenance planning, can provide in the medium term, as long as they are carefully implemented and followed up, a substantial increase in the amount of operating hours available. A recommendation for further papers would be a particularized model for a given data set that would find, as long as it is daily fed, the best neural networks that adapt to these data and provide the prediction of date for possible system stoppages, as well as the amount of hours such set is to remain inoperative.

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# USING OF PROJECT MANAGEMENT THEORY FOR IMPROVING BUDGETING SYSTEM IN COMPANIES

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## ABSTRACT

*This article is about improving budgeting system in companies by means of a new method based on the concept of managed impacts which use project management tools. This concept divides planning into two stages: making general forecast and making set of managed impacts. Each managed impact is determined by some changes of budget's parameters and a percentage change of a target parameter to its forecast level. All the managed impacts form project of managed impacts. And this project should take the place of master budget. This method can solve such budgeting's problems as: flexible adaptation of the master budget to new conditions, difficulties to see the strategy and aims of company in budgets etc.*

## INTRODUCTION

Budgeting is one of the most important management technologies in companies. In general it consists of two parts: short-term planning and controlling. Typically, companies make a lot of different plans such as: sales plan, manufactory plan, costs plan, working capital plan, profit plan, cash plan, investments plan etc. They are called budgets and all budgets together are called master budget. One year is the most typical period for budgets and typically all budgets' parameters are planed in each month within budgeting period.

Historically established that the master budget of the company is focused on financial parameters such as sales, costs, profit, cash etc. But nowadays, many non financial parameters are involved in budgeting process. For example, activity based budgeting theory defines a process as a object for budgets, so including all process' performance indicators in planning becomes very important (Antos, Brimson, 1998).

Modern financial planning systems should be modernized because of some problems connected with market globalization, shortening of the product life-cycle, increasing uncertainty etc. These problems are:

1. Very long procedure of the master budget accommodation (especially in big companies)
2. Flexible adaptation of the master budget to a new conditions
3. There are some difficulties to see goals and the strategy of the company in the master budget
4. Increasing complexity of the models which lies in the basis of any budget (because of increasing budgeting parameters)

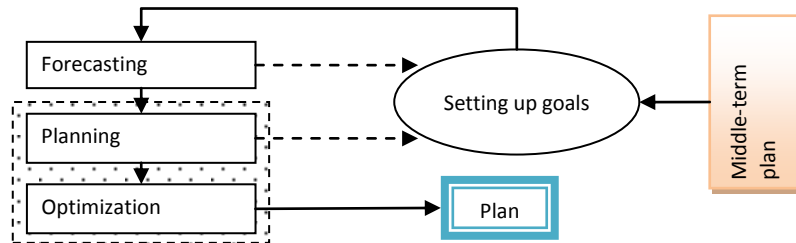
Some of the authors (Hope, Fraser, 2003) considered budgeting as a main factor of an inefficient resource allocation. However they don't contest necessity of planning. I think that nowadays planning becomes more and more important. So those companies which could solve previously mentioned problems will get an additional competitive advantage.

My base hypothesis is that project management theory could be applied to the budgeting process and solves the vast majority of budgeting problems.

# PROJECT OF MANAGED IMPACTS

The budgeting includes making investments plan. This plan consists of set investment projects, which could be aggregated in programs or portfolios. The sum of timed investment budgets is investments budget. So project management approach is used in making investments plan. Let's extend this approach of making budget from investment activity to others.

Let's consider short-term planning process in details. It consists of four phases: setting up goals, forecasting, reducing gaps (planning) and optimization (pic. 1).



**Picture 1. The planning process**

The first phase is setting up goals. These goals can be defined by middle-term plan and some short-term aims. In this case corresponding budget's target parameters are key performance indicators (KPI).

The second phase is making forecast of budgetary parameters. I propose do not take into account middle-term projects and any short-term decisions in this process to understand what happens with business without any additional actions. It is the basic level which we'll call *budget's forecast*.

The third phase is planning (pic. 1). If there are any gaps between forecast and target level of target parameters we should design some actions which could reduce these gaps. Let's call these actions as *managed impacts* (MI). So we can say that planning is the process of defining goals, making forecast and finding set of managed impacts which can help in achieving company's goals.

And the fourth phase is optimization. On this stage company should choose the optimal set of managed impacts.

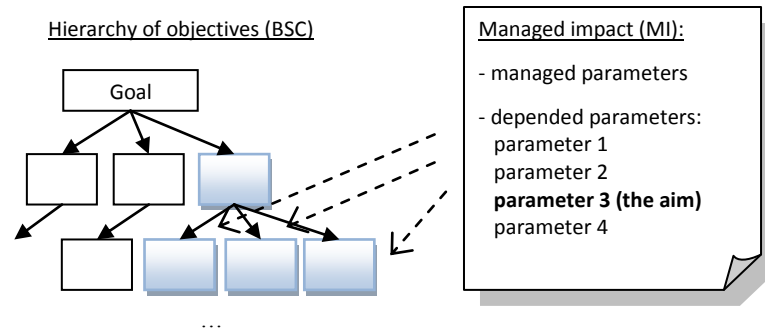
I propose to consider each approved managed impact as a work of managed impacts' project (MIP). The aim of this project is to achieve company's goals. The life period of MIP is budget period. MIP is unique project because of unique combinations of conditions and company's goals. Let's consider this project in details.

## Work Breakdown Structure (WBS)

Each work of the MIP is managed impact (MI) which consists of managed, target and others direct depended parameters. Some of MI can be grouped according to their aims. For example, the first MI is increasing promotion expenses which has the aim of increasing sales and the second MI is cutting of production costs. These MI can be grouped because of multiplying synergy which obviously has a place.

From the other hand, some goals can be very complex (e.g. demand balance) so they could be divided into several goals. Company can arrange MI according to hierarchy of objectives. Top level of this hierarchy can correspond to balanced scorecard (Kaplan, Norton, 1996, 2001). So, we have a transparent connection of MIP with BSC.



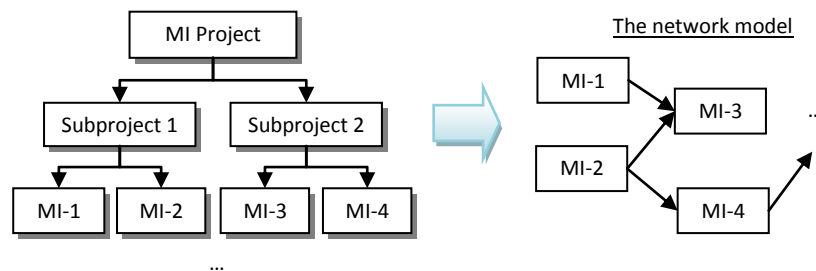


**Picture 2. Work breakdown structure of the MIP**

The advantage of such grouping is the possibility to concentrate on the main critical works (MI).

## Project Network Model

A lot of works of the MIP have a different links between each others. For example, the MI “starting middle-term project” can be started only after the MI “issue a loan” finished. Such kind of links forms the network model of the MIP. From the other hand, MI sequence can be connected with balanced scorecards.



**Picture 3. Project network model**

There are some methods in the project management theory to work with such networks (e.g. CPM, PERT, GERT). Company can also optimize the network using these methods. Project scheduling makes master budget more flexible. The network describes the strategy because MI sequence defines how company will achieve their goals. So the concept of managed impacts makes budgets to target on realization of the strategy.

## Organizational Breakdown Structure (OBS)

In accordance to the project approach each work in WBS should be connected with the responsible manager. This can organize and order realization of managed impacts and control its realization. The control could be executed on the basis of suggested budgeting model. The first levels of work decomposition are connected with heads of divisions (responsibility centers) such as marketing, manufacture, sales etc. These responsibilities form the team of the budgeting project and are included in the budget committee.

## CLASSIFICATION OF MANAGED IMPACTS

I propose some classification attributes of managed impacts: duration, independency, number of factors, policy, object, planning level and entity. These attributes can help and arrange making master budget. Let's consider the most important attributes.

## Classification by an Object

The object of impacts can concern with any managed budget's parameter. So managed impacts divided into managed operation, investment, innovation and finance impacts. In turn operation impacts divided into sale, cost, manufacturing, purchase and working capital impacts. Let's consider managed sale and cost impacts.

**Sale impacts.** The main sales budget parameter is proceeds. There are some factors which influence on proceeds: price, advertising, competitors, inflation, seasonality, market changing, quality of products etc. The budget's forecast (see above) takes into account exogenous parameters such as inflation, market, competitors etc. and some active projects and policies like price-formation policy. In this case increasing or decreasing sales price from the budget's forecast will be managed impact which can have different aims: increasing proceeds, increasing market share, advertising etc. Company should fix the aim. Next step is defining the influence on proceeds. It is possible if the elasticity coefficient is known. But there are some problems: 1) the elasticity coefficient is always changing because of changing exogenous factors; 2) the elasticity coefficient depends on sales volume and increase of price. From the other hand, when company makes variant budget it does to forecast proceeds changing so it can define elasticity coefficient.

**Fixed cost impacts.** All costs tend to unfounded growth. So the main function of fixed costs budgeting is controlling. Activity based budgeting and zero-based budgeting allows partially solving this problem. The concept of managed impacts solves this problem in the following way. Fixed costs are connected with some activity. Fixed costs shouldn't be changed if there are no any changes in such activity with the exceptions of objective factors like inflation, price growth etc. But the concept of managed impacts implies these objective changes are included in the budget's forecast. So if someone needs to change fixed cost he must make a managed impact which has an aim, period etc. It's easy to realize such method with automation system which should keep all the managed impacts with each costs' item.

The efficiency of such method consists in formalization. Each costs' item is divided into several managed impacts with different aims. So there is no reason to use zero-based budgeting.

## Classification by an Independency, a Number of Factors and Entity

Each managed impact has an aim. The aim is represented by a budget's parameter. There can be several managed impacts which act on this parameter. Let's consider two managed impacts connected with this parameter. If the sum of their combine impacts on this parameter is equal to impacts individually let's call them independent managed impacts. For example, two managed impacts: "increasing advertising" and "decreasing price" can be dependent and have a synergy in increasing market share if company is going to advertise decreasing price.

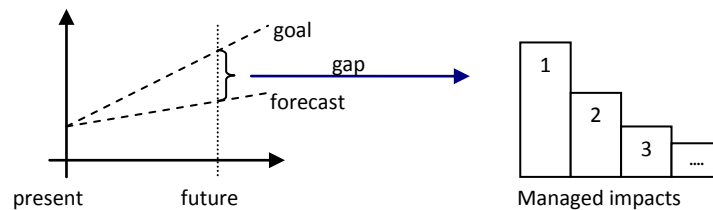
Company should include dependent managed impacts in subproject of the MIP to maximize synergy effect and save results of realization this subproject in the knowledge base so it can be used in the future.

The other way to take into account a synergy of two managed impacts is to make a multifactor managed impact which implies changes of two (or more) factors to achieve certain aim. In this way we can construct policy impact which implies changing of some factors and develop budget with appropriate policy.

One can consider changes of exogenous parameters as stochastic managed impacts which influence on the budget's key performance indicators. Let's call such impacts as external managed impacts. It can allow us to develop stochastic budget which consists of action alternatives. The MIP network model in this case can be described by stochastic network like GERT.

## PLANNING WITH MANAGED IMPACTS

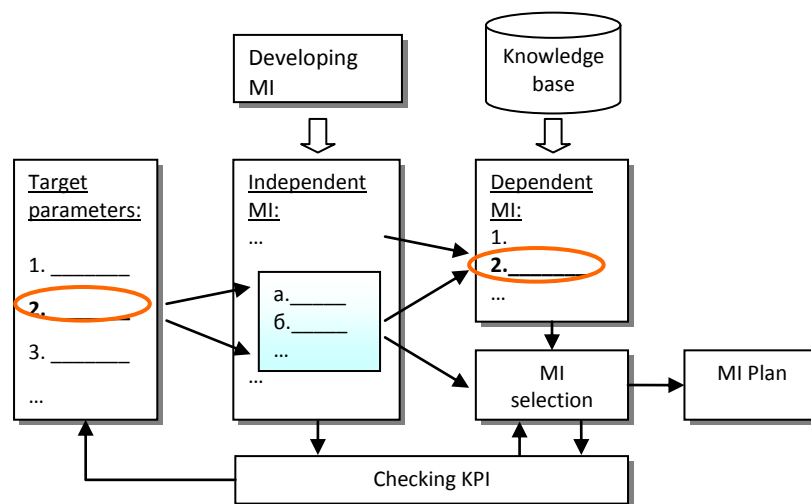
The whole planning process we considered above (pic. 1). Let's consider the third phase of this process in details. After making budget's forecast and defining goals it's necessary to detect all the managed impacts which could be influenced on these goals' parameters. It can be done by using financial model of budgeting.



**Picture 4. Gap-analysis**

Company's automation system can arrange all managed impacts which influence on an objective parameter by level of influence so the main impacts can be revealed (pic. 4). In this way the set of managed impacts can be reduced to the most important. In this process we should check key performance indicators to save them from unsuitable volumes.

The next step is to detect all independent and dependent managed impacts because it's important to take into account possible synergy of applying managed impacts. In this phase the main alternatives of actions are finally formed.



**Picture 5. Planning with managed impacts**

The final stage of this process is selection of appropriate managed impacts and making network model of the MIP. There is an instrument on the base of linear programming which can solve MI selection problem (Tsarkov, 2007). The classification of managed impacts which was considered above can also help to solve this problem. For example, policy classification could shorten the list of managed impacts to make selection easy because in ordinary situation company won't change it policy so many potential impacts won't apply.

When managed impacts are selected and MIP is formed company can use it as a plan of works which can be done in definite time but there are no traditional budgets. It's possible to make a master budget, using the MIP. Company should take a budget's forecast then for each managed impacts form the MIP change budget's parameters corresponding to managed impact parameters and then recount master budget using existing

budgeting automation system. So project based budgeting can be used as a superstructure over existing budgeting system.

## CONCLUSION

We considered the way of applying project approach to budgeting by means of managed impacts concept. This concept has following advantages:

1. The *managed impacts project* (MIP) is more flexible then any budget and allows to define a timed list of works which had to be done to achieve company's objectives.
2. The concept of managed impacts provides continuous planning which can help to adapt budget to possibly changes quickly.
3. The MIP is closely connected with a strategy by means of network model and with balanced scorecards by means of work breakdown structure. It helps to concentrate on the main problems in realizing budget.
4. The concept of managed impacts implies a quick centralized procedure of master budget accommodation which can provide presence voted budget to definite fixed date.
5. The concept of managed impacts can be realized as a superstructure of existing budgeting system.
6. The MIP can be used to make and manage stochastic budget which can allow preparing for possible changes.

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# SOME SPECIFIC BUT IMPORTANT NON-LINEAR MODELS, THEIR APPLICATIONS IN REGRESSION ANALYSIS AND HOW MINITAB CAN BE USED TO SOLVE SUCH PROBLEMS

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## ABSTRACT

*Non-linear regression is, in general, more difficult than linear regression. But there are some important non-linear models that have many important applications in Forecasting, such as the Exponential, Power, and Quadratic models.*

*In this paper we show how such models can be analyzed using linear regression results, how we select the model which fits a given data set "best," and how MINITAB estimates and analyzes these models. The "best" fitting model is retained and used for Forecasting purposes.*

## INTRODUCTION

Sometimes two variables are related but their relationship is not linear and trying to fit a linear equation to a data set which is inherently non-linear will result in a bad-fit. But, because non-linear regression is, in general, much more difficult than linear regression, we explore in this paper estimation methods that will allow us to fit non-linear equations to a data set by using the results of linear regression which is much easier to understand and analyze.

This becomes possible by first performing logarithmic transformations of the non-linear equations, which change the non-linear into linear equations, and then using the normal equations of the linear model to generate the normal equations of the "linearized" non-linear equations, from which the values of the unknown model parameters can be obtained. In this paper we show how the exponential model,  $\hat{y} = ke^{cx}$ , and the power model,  $\hat{y} = ax^b$  (for  $b \neq 1$ ) can be easily estimated by using logarithmic transformations to first derive the linearized version of the above non-linear equations, namely:

$$\ln \hat{y} = \ln k + cx \text{ and } \ln \hat{y} = \ln a + b \ln x,$$

and then comparing these to the original linear equation,  $\hat{y} = a + bx$ , and its normal equations.

Also discussed is the quadratic model,  $\hat{y} = a + bx + cx^2$  which, even though is a non-linear model, can be discussed directly using the linear methodology. But now we have to solve simultaneously a system of 3 equations in 3 unknowns, because the normal equations for the quadratic model become:

$$\begin{aligned} na + b \sum_{i=1}^n x_i + c \sum_{i=1}^n x_i^2 &= \sum_{i=1}^n y_i \\ a \sum_{i=1}^n x_i + b \sum_{i=1}^n x_i^2 + c \sum_{i=1}^n x_i^3 &= \sum_{i=1}^n x_i y_i \\ a \sum_{i=1}^n x_i^2 + b \sum_{i=1}^n x_i^3 + c \sum_{i=1}^n x_i^4 &= \sum_{i=1}^n x_i^2 y_i \end{aligned} \quad (1)$$

A procedure is also discussed which allows us to fit these four models (i.e. linear, exponential, power, quadratic), and possibly others, to the same data set, and then select the equation which fits the data set “best”. These four models are used extensively in forecasting and, because of this, it is important to understand how these models are constructed and how MINITAB can be used to estimate such models efficiently.

## THE LINEAR MODEL AND ITS NORMAL EQUATIONS

The linear model and the normal equations associated with it (the normal equations of the linear model are the two equations which must be solved simultaneously to obtain the least square estimates for a and b), are given by:

Linear Model

$$y = a + bx \quad (2)$$

Normal Equations

$$na + b \sum_{i=1}^n x_i = \sum_{i=1}^n y_i \quad (3)$$

$$a \sum_{i=1}^n x_i + b \sum_{i=1}^n x_i^2 = \sum_{i=1}^n x_i y_i \quad (4)$$

## THE EXPONENTIAL MODEL

The **exponential model** is defined by the equation:

$$y = ke^{cx} \quad (5)$$

Our objective is to use the given data to find the best possible values for k and c, just as our objective in equation (2) was to use the data to find the best (in the least-square sense) values for a and b.

Taking natural logarithms (i.e. logarithms to the base e) of both sides of equation (5) we obtain

$$\begin{aligned} \ln(y = ke^{cx}) \\ \text{or: } \ln y = \ln(ke^{cx}) \end{aligned} \quad (6)$$

## Logarithmic Laws

To simplify equation (6), we have to use some of the following laws of logarithms:

$$\text{i) } \log(A \cdot B) = \log A + \log B \quad (7)$$

$$\text{ii) } \log(A/B) = \log A - \log B \quad (8)$$

$$\text{iii) } \log(A^n) = n \log A \quad (9)$$

Then, using equation (7) we can re-write equation (6) as:

$$\ln y = \ln k + \ln e^{cx}, \quad (10)$$

and, by applying equation (9) to the second term of the right hand side of equation (10),

equation (10) can be written finally as:

$$\begin{aligned} \ln y &= \ln k + cx (\ln e) \\ \text{or: } \ln y &= \ln k + cx \\ &(\text{because } \ln e = \log_e e = 1) \end{aligned} \quad (11)$$

Even though equation (5) is non-linear, as can be verified by plotting  $y$  against  $x$ , equation (11) is linear (i.e. the logarithmic transformation changed equation (5) from non-linear to linear) as can be verified by plotting:  $\ln y$  against  $x$ .

But, if equation (11) is linear, it should be similar to equation (2), and must have a set of normal equations similar to the normal equations of the linear model.

Question: How are these normal equations going to be derived?

Answer: We will compare the “transformed linear model”, i.e. equation (11), to the actual linear model (equation (2)), note the differences between these two models, and then make the appropriate changes to the normal equations of the linear model to obtain the normal equations of the “transformed linear model”.

## Logarithmic Transformation of Exponential Model

To make the comparison easier, we list below the 2 models under consideration, namely:

$$\begin{array}{ll} \text{a) Original Linear Model:} & y = a + bx \\ \text{b) Transformed Linear Model:} & \ln y = \ln k + cx \end{array} \quad (2) \quad (11)$$

Comparing equations (2) and (11), we note the following three differences between the two models:

- i.  $y$  in equation (2) has been replaced by  $\ln y$  in equation (11)
- ii.  $a$  in equation (2) has been replaced by  $\ln k$  in equation (11)
- iii.  $b$  in equation (2) has been replaced by  $c$  in equation (11)

## Normal Equations of Exponential Model

When the three changes listed above are applied to the normal equations of the actual linear model (equations (3) and (4)), we will obtain the normal equations of the “transformed model”. The normal equations of the “transformed linear model” are:

$$n(\ln k) + c \sum_{i=1}^n x_i = \sum_{i=1}^n \ln y_i \quad (12)$$

$$(\ln k) \sum_{i=1}^n x_i + c \sum_{i=1}^n x_i^2 = \sum_{i=1}^n x_i (\ln y_i) \quad (13)$$

In equations (12) and (13) all the quantities are known numbers, derived from the given data as will be shown later, except for:  $\ln k$  and  $c$ , and equations (12) and (13) must be solved simultaneously for  $\ln k$  and  $c$ .

*Suppose that for a given data set, the solution to equations (12) and (13) produced the values:*

$$\ln k = 0.3 \quad \text{and} \quad c = 1.2 \quad (14)$$

If we examine the exponential model (equation (5)), we observe that the value of  $c = 1.2$  can be substituted directly into equation (5), but we do not yet have the value of  $k$ ; instead we have the value of  $\ln k = 0.3$ !

Question: If we know:  $\ln k = 0.3$ , how do we find the value of  $k$ ?

Answer: If  $\ln k = 0.3$ , then:  $k = e^{0.3} \approx (2.718281828)^{0.3} \approx 1.349859$

Therefore, now that we have both the  $k$  and  $c$  values, the non-linear model, given by equation (5), has been completely estimated.

## THE POWER MODEL

Another non-linear model which can be analyzed in a similar manner is the Power Model defined by the equation:

$$y = ax^b \quad (15)$$

which is non-linear if  $b \neq 1$  and, as before, we must obtain the best possible values for  $a$  and  $b$  (in the least-square sense) using the given data.

### Logarithmic Transformation of Power Model

A logarithmic transformation of equation (15) produces the “transformed linear model”

$$\ln y = \ln a + b \ln x \quad (16)$$

When equation (16) is compared to equation (2), we note the following 3 changes:

- i.  $y$  in equation (2) has been replaced by  $\ln y$  in equation (16)
  - ii.  $a$  in equation (2) has been replaced by  $\ln a$  in equation (16)
  - iii.  $x$  in equation (2) has been replaced by  $\ln x$  in equation (16)
- (17)

When the changes listed in (17) are substituted into equations (3) and (4), we obtain the normal equations for this “transformed linear model” which are given by equations (18) and (19) below:

### Normal Equations of Power Model

$$n(\ln a) + b \sum_{i=1}^n \ln x_i = \sum_{i=1}^n \ln y_i \quad (18)$$

$$(\ln a) \sum_{i=1}^n \ln x_i + b \sum_{i=1}^n (\ln x_i)^2 = \sum_{i=1}^n (\ln x_i)(\ln y_i) \quad (19)$$

Equations (18) and (19) must be solved simultaneously for  $(\ln a)$  and  $b$ . If  $\ln a = 0.4$ , then  $a = e^{0.4} \approx (2.718251828)^{0.4} \approx 1.491825$  and, since we have numerical values for both  $a$  and  $b$ , the non-linear model defined by equation (15) has been completely estimated.

## DERIVE THE NORMAL EQUATIONS FOR THE QUADRATIC MODEL, $y = a + bx + cx^2$

To derive the normal equations of the quadratic model, first form the function

$$Q(a,b,c) = \sum_{i=1}^n [y_i - a - bx_i - cx_i^2]^2 \quad (20)$$

Then take the partial derivatives:  $\frac{\partial Q}{\partial a}$ ,  $\frac{\partial Q}{\partial b}$ ,  $\frac{\partial Q}{\partial c}$ , and set each equal to 0, to obtain the 3 equations needed to solve for  $a$ ,  $b$ ,  $c$ .

We obtain:



$$\frac{\partial Q}{\partial a} = +2 \sum_{i=1}^n [y_i - a - bx_i - cx_i^2] (-1) = 0, \text{ or:}$$

$$\sum_{i=1}^n y_i - na - b \sum_{i=1}^n x_i - c \sum_{i=1}^n x_i^2 = 0, \text{ or:}$$

$$na + b \sum_{i=1}^n x_i + c \sum_{i=1}^n x_i^2 = \sum_{i=1}^n y_i \quad (21)$$

$$\frac{\partial Q}{\partial b} = +2 \sum_{i=1}^n [y_i - a - bx_i - cx_i^2] (-x_i) = 0, \text{ or:}$$

$$\sum_{i=1}^n [x_i y_i - ax_i - bx_i^2 - cx_i^3] = 0, \text{ or:}$$

$$\sum_{i=1}^n x_i y_i - a \sum_{i=1}^n x_i - b \sum_{i=1}^n x_i^2 - c \sum_{i=1}^n x_i^3 = 0, \text{ or:}$$

$$a \sum_{i=1}^n x_i + b \sum_{i=1}^n x_i^2 + c \sum_{i=1}^n x_i^3 = \sum_{i=1}^n x_i y_i \quad (22)$$

$$\frac{\partial Q}{\partial c} = +2 \sum_{i=1}^n [y_i - a - bx_i - cx_i^2] (-x_i^2) = 0, \text{ or:}$$

$$\sum_{i=1}^n [y_i x_i^2 - ax_i^2 - bx_i^3 - cx_i^4] = 0, \text{ or:}$$

$$\sum_{i=1}^n x_i^2 y_i - a \sum_{i=1}^n x_i^2 - b \sum_{i=1}^n x_i^3 - c \sum_{i=1}^n x_i^4 = 0, \text{ or:}$$

$$a \sum_{i=1}^n x_i^2 + b \sum_{i=1}^n x_i^3 + c \sum_{i=1}^n x_i^4 = \sum_{i=1}^n x_i^2 y_i \quad (23)$$

Equations (21), (22), and (23) are identical to equation (1).

## DATA UTILIZATION IN ESTIMATING THE 4 MODELS

To generate the quantities needed to estimate the 4 models:

- The Linear Model
- The Exponential Model
- The Power Model,
- The Quadratic Model

the given (x, y) bivariate data must be manipulated as shown in Tables: 1, 2, 3, and 4, respectively.

a) **Given Data**

| <b>x</b> | <b>y</b> | <b>xy</b> | <b>x<sup>2</sup></b> |
|----------|----------|-----------|----------------------|
| $x_1$    | $y_1$    | $x_1 y_1$ | $x_1^2$              |
| $x_2$    | $y_2$    | $x_2 y_3$ | $x_2^2$              |
| $x_3$    | $y_3$    | $x_3 y_4$ | $x_3^2$              |
| ...      | ...      | ...       | ...                  |
| $x_n$    | $y_n$    | $x_n y_n$ | $x_n^2$              |

|                    |                    |                        |                      |
|--------------------|--------------------|------------------------|----------------------|
| $\sum_{i=1}^n x_i$ | $\sum_{i=1}^n y_i$ | $\sum_{i=1}^n x_i y_i$ | $\sum_{i=1}^n x_i^2$ |
| $N_1$              | $N_2$              | $N_3$                  | $N_4$                |

**Table 1 Manipulation of Given Data to Evaluate the Linear Model**

To evaluate  $y = a + bx$  substitute:  $N_1, N_2, N_3, N_4$  into equations (3) and (4) and solve for  $a$  and  $b$  simultaneously.

b) **Given Data**

| $x$                | $y$                | $x^2$                | $\ln y$                | $x \ln y$                  |
|--------------------|--------------------|----------------------|------------------------|----------------------------|
| $x_1$              | $y_1$              | $x_1^2$              | $\ln y_1$              | $x_1 \cdot \ln y_1$        |
| $x_2$              | $y_2$              | $x_2^2$              | $\ln y_2$              | $x_2 \cdot \ln y_2$        |
| $x_3$              | $y_3$              | $x_3^2$              | $\ln y_3$              | $x_3 \cdot \ln y_3$        |
| ...                | ...                | ...                  | ...                    | ...                        |
| $x_n$              | $y_n$              | $x_n^2$              | $\ln y_n$              | $x_n \cdot \ln y_n$        |
| $\sum_{i=1}^n x_i$ | $\sum_{i=1}^n y_i$ | $\sum_{i=1}^n x_i^2$ | $\sum_{i=1}^n \ln y_i$ | $\sum_{i=1}^n x_i \ln y_i$ |
| $N_5$              | $N_6$              | $N_7$                | $N_8$                  | $N_9$                      |

**Table 2 Manipulation of Given Data to Evaluate the Exponential Model**

To evaluate  $y = ke^{cx}$ , substitute  $N_5, N_7, N_8, N_9$  into equations (12) and (13) and solve for  $\ln k$  and  $c$  simultaneously.

c) **Given Data**

| $x$                | $y$                | $\ln x$                | $(\ln x)^2$                | $(\ln x)(\ln y)$                  | $\ln y$                |
|--------------------|--------------------|------------------------|----------------------------|-----------------------------------|------------------------|
| $x_1$              | $y_1$              | $\ln x_1$              | $(\ln x_1)^2$              | $(\ln x_1)(\ln y_1)$              | $\ln y_1$              |
| $x_2$              | $y_2$              | $\ln x_2$              | $(\ln x_2)^2$              | $(\ln x_2)(\ln y_2)$              | $\ln y_2$              |
| $x_3$              | $y_3$              | $\ln x_3$              | $(\ln x_3)^2$              | $(\ln x_3)(\ln y_3)$              | $\ln y_3$              |
| ...                | ...                | ...                    | ...                        | ...                               | ...                    |
| $x_n$              | $y_n$              | $\ln x_n$              | $(\ln x_n)^2$              | $(\ln x_n)(\ln y_n)$              | $\ln y_n$              |
| $\sum_{i=1}^n x_i$ | $\sum_{i=1}^n y_i$ | $\sum_{i=1}^n \ln x_i$ | $\sum_{i=1}^n (\ln x_i)^2$ | $\sum_{i=1}^n (\ln x_i)(\ln y_i)$ | $\sum_{i=1}^n \ln y_i$ |
| $N_{10}$           | $N_{11}$           | $N_{12}$               | $N_{13}$                   | $N_{14}$                          | $N_{15}$               |

**Table 3 Manipulation of Given Data to Evaluate the Power Model**

To evaluate  $y = ax^b$ , substitute  $N_{12}, N_{13}, N_{14}, N_{15}$  into equations (18) and (19) and solve simultaneously for  $(\ln a)$  and  $b$ .

d) **Given Data**

| $x$   | $y$   | $x^2$   | $x^3$   | $xy$      | $x^4$   | $x^2 y$     |
|-------|-------|---------|---------|-----------|---------|-------------|
| $x_1$ | $y_1$ | $x_1^2$ | $x_1^3$ | $x_1 y_1$ | $x_1^4$ | $x_1^2 y_1$ |
| $x_2$ | $y_2$ | $x_2^2$ | $x_2^3$ | $x_2 y_2$ | $x_2^4$ | $x_2^2 y_2$ |
| $x_3$ | $y_3$ | $x_3^2$ | $x_3^3$ | $x_3 y_3$ | $x_3^4$ | $x_3^2 y_3$ |
| ...   | ...   | ...     | ...     | ...       | ...     | ...         |
| $x_n$ | $y_n$ | $x_n^2$ | $x_n^3$ | $x_n y_n$ | $x_n^4$ | $x_n^2 y_n$ |

|                    |                    |                      |                      |                        |                      |                          |
|--------------------|--------------------|----------------------|----------------------|------------------------|----------------------|--------------------------|
| $\sum_{i=1}^n x_i$ | $\sum_{i=1}^n y_i$ | $\sum_{i=1}^n x_i^2$ | $\sum_{i=1}^n x_i^3$ | $\sum_{i=1}^n x_i y_i$ | $\sum_{i=1}^n x_i^4$ | $\sum_{i=1}^n x_i^2 y_i$ |
| $N_{16}$           | $N_{17}$           | $N_{18}$             | $N_{19}$             | $N_{20}$               | $N_{21}$             | $N_{22}$                 |

**Table 4 Manipulation of Given Data to Evaluate the Quadratic Model**

To evaluate  $y = a + bx + cx^2$ , substitute  $N_{16}$ ,  $N_{17}$ ,  $N_{18}$ ,  $N_{19}$ ,  $N_{20}$ ,  $N_{21}$ ,  $N_{22}$  into equations (21), (22), and (23), and solve simultaneously for  $a$ ,  $b$ , and  $c$ .

## SELECTING THE BEST-FITTING MODEL

a) Given a data set  $(x_i, y_i)$ , we have shown how to fit to such a data set four different models, namely:

$$\text{i) Linear: } \hat{y}_i = a + bx_i \quad (24)$$

$$\text{ii) Exponential: } \hat{y}_i = ke^{cx_i} \quad (25)$$

$$\text{iii) Power: } \hat{y}_i = ax_i^b \quad (26)$$

$$\text{iv) Quadratic } \hat{y}_i = a + bx_i + cx_i^2 \quad (27)$$

We might decide to fit all four models to the same data set if, after examining the scatter diagram of the given data set, we are unable to decide which of the “4 models appears to fit the data “best”.

But, after we fit the 4 models, how can we tell which model fits the data best?

To answer this question, we calculate the “variance of the residual values” for each of the models, and then “select as the best model” the one with the smallest variance of the residual values.

b) Calculating the residual values of each model and their variance.

Use each  $x_i$  value, of the given data set  $(x_i, y_i)$ , to calculate the  $\hat{y}_i$  value, from the appropriate model, and then for each  $i$ , form the residual:

$$\text{Residual of observations} = (y_i - \hat{y}_i) \quad (28)$$

Then the variance of the residual values is defined by:

$$V(\text{Residual}) = \frac{1}{DOF} \sum_{i=1}^n (y_i - \hat{y}_i)^2, \quad (29)$$

where  $DOF = \text{Degrees of Freedom}$ .

**Note:** The  $DOF$  are  $DOF = n - 2$  for the first three models (Linear, Exponential, Power) due to the fact that each of these 3 models have 2 unknown quantities that need to be estimated ( $a$  and  $b$ ,  $k$  and  $c$ , and  $a$  and  $b$ , respectively) and, as a consequence, 2 degrees of freedom are lost. For the Quadratic model,  $DOF = n - 3$  because the model has 3 unknown quantities that need to be estimated and, as a consequence, 3 degrees of freedom are lost.

Using equation (29) to calculate the variance of the residuals for each of the 4 models, we obtain:

$$V(\text{Residual})_{\text{Linear}} = \frac{1}{n-2} \sum_{i=1}^n (y_i - a - bx_i)^2 \quad (30)$$

$$= \frac{1}{n-2} \sum_{i=1}^n [(y_1 - a - bx_1)^2 + (y_2 - a - bx_2)^2 + \cdots + (y_n - a - bx_n)^2] \quad (31)$$

$$V(\text{Residual})_{\text{Exponential}} = \frac{1}{n-2} \sum_{i=1}^n (y_i - ke^{cx_i})^2 \quad (32)$$

$$= \frac{1}{n-2} \sum_{i=1}^n [(y_1 - ke^{cx_1})^2 + (y_2 - ke^{cx_2})^2 + \cdots + (y_n - ke^{cx_n})^2] \quad (33)$$

$$V(\text{Residual})_{\text{Power}} = \frac{1}{n-2} \sum_{i=1}^n (y_i - ax_i^b)^2 \quad (34)$$

$$= \frac{1}{n-2} \sum_{i=1}^n [(y_1 - ax_1^b)^2 + (y_2 - ax_2^b)^2 + \cdots + (y_n - ax_n^b)^2] \quad (35)$$

$$V(\text{Residual})_{\text{Quadratic}} = \frac{1}{n-3} \sum_{i=1}^n (y_i - a - bx_i - cx_i^2)^2 \quad (36)$$

$$= \frac{1}{n-3} [(y_1 - a - bx_1 - cx_1^2)^2 + (y_2 - a - bx_2 - cx_2^2)^2 + \cdots + (y_n - a - bx_n - cx_n^2)^2] \quad (37)$$

After the calculation of the 4 variances from equations: (31), (33), (35), and (37), the model with the “smallest” variance is the model which fits the given data set “best”.

We will now illustrate, through an example, how the 4 models we discussed above can be fitted to a given bivariate data set, and then how the “best” model from among them is selected.

## AN EXAMPLE

A sample of 5 adult men for whom heights and weights are measured gives the following results:

| # | <i>X = Height</i> | <i>Y = Weight</i> |
|---|-------------------|-------------------|
| 1 | 64                | 130               |
| 2 | 65                | 145               |
| 3 | 66                | 150               |
| 4 | 67                | 165               |
| 5 | 68                | 170               |

Problem: Fit the linear, exponential, power, and quadratic models to this bivariate data set and then select as the “best” the model with the smallest variance of the residual values.

### Fitting the Linear Model $\hat{y} = a + bx$

To fit the linear model, we must extend the given bivariate data so that we can also calculate  $\sum_{i=1}^n x_i^2$

and  $\sum_{i=1}^n x_i y_i$ , as shown below:

| $x^2$                         | $x$                      | $y$                      | $xy$                            |
|-------------------------------|--------------------------|--------------------------|---------------------------------|
| 4096                          | 64                       | 130                      | 8320                            |
| 4225                          | 65                       | 145                      | 9425                            |
| 4356                          | 66                       | 150                      | 9900                            |
| 4489                          | 67                       | 165                      | 11055                           |
| 4624                          | 68                       | 170                      | 11560                           |
| $\sum_{i=1}^5 x_i^2 = 21,790$ | $\sum_{i=1}^5 x_i = 330$ | $\sum_{i=1}^5 y_i = 760$ | $\sum_{i=1}^5 x_i y_i = 50,260$ |

We then substitute the generated data into the normal equations for the linear model, namely equations (3) and (4):

$$na + b \sum_{i=1}^n x_i = \sum_{i=1}^n y_i$$

$$a \sum_{i=1}^n x_i + b \sum_{i=1}^n x_i^2 = \sum_{i=1}^n x_i y_i ,$$

and obtain the equations:

$$5a + 330b = 760$$

$$330a + 21,790b = 50,260$$

When these equations are solved simultaneously for a and b we obtain:

$$a = -508 \text{ and } b = 10$$

Therefore, the linear model is:

$$\hat{y} = a + bx = -508 + 10x$$

The variance of the residual values for the linear model is calculated as shown below:

| $x$ | $y$ | $\hat{y} = -508 + 10x$ | $y - \hat{y}$ | $(y - \hat{y})^2$                       |
|-----|-----|------------------------|---------------|---|
| 64  | 130 | $-508 + 10(64) = 132$  | -2            | $(-2)^2 = 4$                            |
| 65  | 145 | $-508 + 10(65) = 142$  | +3            | $(+3)^2 = 9$                            |
| 66  | 150 | $-508 + 10(66) = 152$  | -2            | $(-2)^2 = 4$                            |
| 67  | 165 | $-508 + 10(67) = 162$  | +3            | $(+3)^2 = 9$                            |
| 68  | 170 | $-508 + 10(68) = 172$  | -2            | $(-2)^2 = 4$                            |
|     |     |                        |               | $\sum_{i=1}^5 (y_i - \hat{y}_i)^2 = 30$ |

Therefore, the variance of the residual values, for the linear model is:

$$V(\text{Residual})_{\text{Linear}} = \frac{1}{n-2} \sum_{i=1}^n (y_i - \hat{y}_i)^2 = \frac{1}{5-2} (30) = 10$$

## Fitting the Exponential Model $\hat{y} = ke^{cx_i}$

To fit the exponential model we need to extend the given bivariate data so that we can calculate, in

addition to  $\sum_{i=1}^5 x_i = 330$  and  $\sum_{i=1}^5 x_i^2 = 21,790$ ,  $\sum_{i=1}^5 \ln y_i$  and  $\sum_{i=1}^5 (x_i \ln y_i)$  as shown below:

| $x^2$                         | $x$                      | $y$                      | $\ln y$                             | $x \cdot \ln y$                               |
|-------------------------------|--------------------------|--------------------------|-------------------------------------|---|
| 4096                          | 64                       | 130                      | 4.8675                              | 311.5200                                      |
| 4225                          | 65                       | 145                      | 4.9767                              | 323.4855                                      |
| 4356                          | 66                       | 150                      | 5.011                               | 330.726                                       |
| 4489                          | 67                       | 165                      | 5.1059                              | 342.0953                                      |
| 4624                          | 68                       | 170                      | 5.1358                              | 349.2344                                      |
| $\sum_{i=1}^5 x_i^2 = 21,790$ | $\sum_{i=1}^5 x_i = 330$ | $\sum_{i=1}^5 y_i = 760$ | $\sum_{i=1}^5 \ln y_i = 25.0966474$ | $\sum_{i=1}^5 x_i \cdot \ln y_i = 1657.04468$ |

We then substitute the generated data into the normal equations for the exponential model (i.e. equations (12) and (13)):

$$n(\ln k) + c \sum_{i=1}^n x_i = \sum_{i=1}^n \ln y_i$$

$$(\ln k) \sum_{i=1}^n x_i + c \sum_{i=1}^n x_i^2 = \sum_{i=1}^n x_i (\ln y_i),$$

and obtain the equations:

$$\begin{aligned} 5 \ln k + 330 c &= 25.0969 \\ 330 \ln k + 21,790 c &= 1657.0612 \end{aligned}$$

When these equations are solved simultaneously for  $\ln k$  and  $c$ , we obtain:  $c = 0.06658$  and  $\ln k = 0.6251$ , or:  $k = e^{0.6251} = 1.868432$

Therefore, the exponential model is:

$$\begin{aligned} \hat{y} &= ke^{cx} = 1.868432 e^{0.06658x} \\ (\text{or: } \ln y &= \ln k + cx \\ &= 0.6251 + 0.06658x) \end{aligned}$$

Then, the variance of the residual values, for the exponential model, is calculated as shown below:

| $x$ | $y$ | $\hat{y} = ke^{cx} = 1.868432 e^{0.06658x}$ | $y - \hat{y}$ | $(y - \hat{y})^2$                            |
|-----|-----|---|---------------|--|
| 64  | 130 | $1.868432 e^{0.06658(64)} = 132.4515$       | -2.4515       | 6.0099                                       |
| 65  | 145 | $1.868432 e^{0.06658(65)} = 141.5703$       | 3.4297        | 11.7628                                      |
| 66  | 150 | $1.868432 e^{0.06658(66)} = 151.3169$       | -1.3169       | 1.7324                                       |
| 67  | 165 | $1.868432 e^{0.06658(67)} = 161.7346$       | 3.2654        | 10.6630                                      |
| 68  | 170 | $1.868432 e^{0.06658(68)} = 172.8694$       | -2.8694       | 8.2336                                       |
|     |     |   |               | $\sum_{i=1}^5 (y_i - \hat{y}_i)^2 = 38.4035$ |

Therefore, the variance of the residual values, for the exponential model is:

$$\begin{aligned} V(\text{Residual})_{\text{Exponential}} &= \frac{1}{n-2} \sum_{i=1}^n (y_i - \hat{y}_i)^2 = \frac{1}{n-2} \sum_{i=1}^n (y_i - ke^{cx_i})^2 \\ &= \frac{1}{5-1} \sum_{i=1}^5 [y_i - 1.868432 e^{0.06658x_i}]^2 \end{aligned}$$

$$= \frac{38.4035}{3} = 12.8017$$

### Fitting the Power Model $\hat{y} = ax^b$

To fit the power model we need to extend the given bivariate data set to generate the quantities:

$\sum_{i=1}^n \ln x_i$ ,  $\sum_{i=1}^n (\ln x_i)^2$ ,  $\sum_{i=1}^n \ln y_i$  and  $\sum_{i=1}^n (\ln x_i)(\ln y_i)$ , and this is accomplished as shown below:

| $x$ | $y$ | $\ln x$                            | $(\ln x)^2$                            | $\ln y$                            | $(\ln x)(\ln y)$                               |
|-----|-----|------------------------------------|--|------------------------------------|--|
| 64  | 130 | 4.158883                           | 17.2963085                             | 4.867553                           | 20.2435  |
| 65  | 145 | 4.1738727                          | 17.42550908                            | 4.976734                           | 20.2435  |
| 66  | 150 | 4.189654742                        | 17.55320686                            | 5.010635                           | 20.9928  |
| 67  | 165 | 4.204692619                        | 17.67944002                            | 5.105945                           | 21.4689  |
| 68  | 170 | 4.219507705                        | 17.80424527                            | 5.135798                           | 21.6705  |
|     |     | $\sum_{i=1}^5 \ln x_i$<br>=20.9471 | $\sum_{i=1}^5 (\ln x_i)^2$<br>=87.7581 | $\sum_{i=1}^5 \ln y_i$<br>=25.0967 | $\sum_{i=1}^5 (\ln x_i)(\ln y_i)$<br>=105.1505 |

We then substitute the generated data into the normal equations of the power model, namely equations (18) and (19):

$$n(\ln a) + b \sum_{i=1}^n \ln x_i = \sum_{i=1}^n \ln y_i$$

$$(\ln a) \sum_{i=1}^n \ln x_i + b \sum_{i=1}^n (\ln x_i)^2 = \sum_{i=1}^n (\ln x_i)(\ln y_i)$$

to obtain the equations:

$$5 \ln a + 20.9471 b = 25.0967$$

$$20.9471 \ln a + 87.7587 b = 105.1505$$

When these equations are solved simultaneously for  $b$  and  $\ln a$  we obtain:  
 $b = 4.3766$  and  $\ln a = -13.316$ .

Therefore, the “linearized” power model becomes:

$$\ln \hat{y} = \ln a + b \ln x = -13.316 + 4.3766x$$

Then the variance of the residual values for the power model is obtained as shown below:

| $x$ | $y$ | $\ln x$  | $\ln \hat{y} = \ln a + b \ln x$<br>= -13.316 + 4.3766x | $\hat{y}$ | $y - \hat{y}$ | $(y - \hat{y})^2$ |
|-----|-----|----------|--|-----------|---------------|-------------------|
| 64  | 130 | 4.158883 | $\ln \hat{y}_1 = 4.885768$                             | 132.3920  | -2.3920       | 5.721664          |
| 65  | 145 | 4.173873 | $\ln \hat{y}_2 = 4.95623$                              | 141.6874  | 3.3126        | 10.973319         |
| 66  | 150 | 4.189655 | $\ln \hat{y}_3 = 5.020443$                             | 151.4784  | -1.47843      | 2.185667          |
| 67  | 165 | 4.204693 | $\ln \hat{y}_4 = 5.086258$                             | 161.7833  | 3.2167        | 10.347159         |
| 68  | 170 | 4.219508 | $\ln \hat{y}_5 = 5.151097$                             | 172.6208  | -2.6208       | 6.868592          |

|  |  |  |  |  |  |   |
|--|--|--|--|--|--|---|
|  |  |  |  |  |  | $\sum_{i=1}^5 (y_i - \hat{y}_i)^2$ $= 36.09640$ |
|--|--|--|--|--|--|---|

Therefore, the variance of the residuals values for the power model is:

$$\begin{aligned}
 V(\text{Residual})_{\text{Power}} &= \frac{1}{n-2} \sum_{i=1}^n (y_i - ax_i^b)^2 \\
 &= \frac{39.096401}{3} = 12.0321
 \end{aligned}$$

## Fitting the Quadratic Model $\hat{y} = a + bx + cx^2$

To fit the quadratic model, we need to use the given bivariate data set and extend it to generate the quantities:

$$\begin{aligned}
 \sum_{i=1}^n X_i &= 330; \sum_{i=1}^n X_i^2 = 21,790; \sum_{i=1}^n X_i^3 = 1,439,460; \sum_{i=1}^n X_i^4 = 95,135,074; \\
 \sum_{i=1}^n Y_i &= 760; \sum_{i=1}^n X_i Y_i = 50,260; \sum_{i=1}^n X_i^2 Y_i = 3,325,270
 \end{aligned}$$

We then substitute the generated data into the normal equations of the quadratic model (see equation (1)), and obtain:

$$\begin{aligned}
 5a + 330b + 21,790c &= 760 \\
 330a + 21,790b + 1,439,460c &= 50,260 \\
 21,790a + 1,439,460b + 95,135,074c &= 3,325,270
 \end{aligned}$$

Solving these 3 equations simultaneously, we obtain:

$$a = -\frac{25,236}{7}; b = \frac{730}{7}; c = -\frac{5}{7}$$

Therefore, the quadratic function  $\hat{y} = f(x)$  is given by:

$$\hat{y} = a + bx + cx^2 = \frac{1}{7} [-25,326 + 730x - 5x^2]$$

The variance of the residual values for the quadratic model is calculated as shown below:

| $x$ | $y$ | $\hat{y} = \frac{1}{7} [-25,326 + 730x - 5x^2]$ | $y_i - \hat{y}_i$ | $(y_i - \hat{y}_i)^2$ |
|-----|-----|---|-------------------|-----------------------|
| 64  | 130 | $\hat{y}_1 = 130.5714286$                       | -0.5714286        | 0.326530644           |
| 65  | 145 | $\hat{y}_2 = 142.7142857$                       | 2.2857143         | 5.224489861           |
| 66  | 150 | $\hat{y}_3 = 153.4285714$                       | -3.4285714        | 11.75510184           |
| 67  | 165 | $\hat{y}_4 = 162.7142857$                       | 2.2857143         | 5.224489861           |



|    |     |                           |            |   |
|----|-----|---------------------------|------------|---|
| 68 | 170 | $\hat{y}_5 = 170.5714286$ | -0.5714286 | 0.326530644   |
|    |     |                           |            | $\sum_{i=1}^5 (y_i - \hat{y}_i)^2$<br>= 22.85714286 |

Therefore, the variance of the residual values for the quadratic model is:

$$\begin{aligned}
 V(\text{Residual})_{\text{Quadratic}} &= \frac{1}{n-3} \sum_{i=1}^5 (y_i - \hat{y}_i)^2 \\
 &= \frac{22.85714286}{2} = 11.42857143 \approx 11.4286
 \end{aligned}$$

## Summary of Results and Selection of the “Best” Model

We have fitted the 4 models: linear, exponential, power, and quadratic models, calculated the respective residual variances, and have obtained the following results:

- a) The linear model is:  $\hat{y} = a + bx = -508 + 10x$ , with:  $V(\text{Residual})_{\text{Linear}} = 10$
- b) The quadratic model is:  $\hat{y} = a + bx + cx^2 = \frac{1}{7}[-25,326 + 730x - 5x^2]$ , with:  
 $V(\text{Residual})_{\text{Quadratic}} = 11.4286$
- c) The power model is:  $\ln \hat{y} = \ln a + b \ln x = -13.316 + 4.3766 \ln x$ , with:  
 $V(\text{Residual})_{\text{Power}} = 12.0321$
- d) The exponential model is:  $\hat{y} = ke^{cx} = 1.868432 e^{0.06658x}$ , with:  
 $V(\text{Residual})_{\text{Exponential}} = 12.8017$

Since the linear model has the smallest variance of the residual values of the 4 models fitted to the same bivariate data set, the linear model is the “best” model.

## MINITAB SOLUTIONS

To obtain the MINITAB solutions of the four models we discussed in this paper we do the following:

### a) To find the MINITAB solution for the linear model:

```

MTB > SET C1
DATA> 64 65 66 67 68
DATA> END
MTB > SET C2
DATA> 130 145 150 165 170
DATA> END
MTB > NAME C1 'X' C2 'Y'
MTB > REGRESS 'Y' 1 'X'

```

#### Regression Analysis: Y versus X

```

The regression equation is
Y = - 508 + 10.0 X

```

| Predictor | Coef    | SE Coef | T     | P     |
|-----------|---------|---------|-------|-------|
| Constant  | -508.00 | 66.02   | -7.70 | 0.005 |
| X         | 10.000  | 1.000   | 10.00 | 0.002 |

S = 3.16228    R-Sq = 97.1%    R-Sq(adj) = 96.1%

Analysis of Variance

| Source         | DF | SS     | MS     | F      | P     |
|----------------|----|--------|--------|--------|-------|
| Regression     | 1  | 1000.0 | 1000.0 | 100.00 | 0.002 |
| Residual Error | 3  | 30.0   | 10.0   |        |       |
| Total          | 4  | 1030.0 |        |        |       |

## b) To find the MINITAB solution for the exponential model:

```
MTB > SET C1
DATA> 64 65 66 67 68
DATA> END
MTB > SET C2
DATA> 4.8675 4.9767 5.011 5.1059 5.1358
DATA> END
MTB > NAME C1 'X' C2 'Y'
MTB > REGRESS 'Y' 1 'X'
```

### Regression Analysis: Y versus X

The regression equation is  
 $Y = 0.625 + 0.0666 X$

| Predictor | Coef     | SE Coef  | T    | P     |
|-----------|----------|----------|------|-------|
| Constant  | 0.6251   | 0.4925   | 1.27 | 0.294 |
| X         | 0.066580 | 0.007460 | 8.92 | 0.003 |

S = 0.0235917    R-Sq = 96.4%    R-Sq(adj) = 95.2%

Analysis of Variance

| Source         | DF | SS       | MS       | F     | P     |
|----------------|----|----------|----------|-------|-------|
| Regression     | 1  | 0.044329 | 0.044329 | 79.65 | 0.003 |
| Residual Error | 3  | 0.001670 | 0.000557 |       |       |
| Total          | 4  | 0.045999 |          |       |       |

## c) To find the MINITAB solution for the power model:

```
MTB > SET C1
DATA> 4.158883 4.1738727 4.189654742 4.204692619 4.2195077
DATA> END
MTB > SET C2
DATA> 4.867553 4.976734 5.010635 5.105945 5.135798
DATA> END
```

```
MTB > NAME C1 'X' C2 'Y'
MTB > REGRESS 'Y' 1 'X'
```

### Regression Analysis: Y versus X

The regression equation is  
 $Y = -13.3 + 4.38 X$

| Predictor | Coef    | SE Coef | T     | P     |
|-----------|---------|---------|-------|-------|
| Constant  | -13.316 | 2.069   | -6.44 | 0.008 |
| X         | 4.3766  | 0.4939  | 8.86  | 0.003 |

S = 0.0237507    R-Sq = 96.3%    R-Sq(adj) = 95.1%

### Analysis of Variance

| Source         | DF | SS       | MS       | F     | P     |
|----------------|----|----------|----------|-------|-------|
| Regression     | 1  | 0.044301 | 0.044301 | 78.53 | 0.003 |
| Residual Error | 3  | 0.001692 | 0.000564 |       |       |
| Total          | 4  | 0.045993 |          |       |       |

## d) To find the MINITAB solution for the quadratic model:

```
MTB > SET C1
DATA> 64 65 66 67 68
DATA> END
MTB > SET C2
DATA> 4096 4225 4356 4489 4624
DATA> END
MTB > SET C3
DATA> 130 145 150 165 170
DATA> END
MTB > NAME C1 'X1' C2 'X2' C3 'Y'
MTB > REGRESS 'Y' 2 'X1' 'X2'
```

### Regression Analysis: Y versus X1, X2

The regression equation is  
 $Y = -3618 + 104 X1 - 0.714 X2$

| Predictor | Coef    | SE Coef | T     | P     |
|-----------|---------|---------|-------|-------|
| Constant  | -3618   | 3935    | -0.92 | 0.455 |
| X1        | 104.3   | 119.3   | 0.87  | 0.474 |
| X2        | -0.7143 | 0.9035  | -0.79 | 0.512 |

S = 3.38062    R-Sq = 97.8%    R-Sq(adj) = 95.6%

### Analysis of Variance

| Source | DF | SS | MS | F | P |
|--------|----|----|----|---|---|
|--------|----|----|----|---|---|

|                |   |         |        |       |       |
|----------------|---|---------|--------|-------|-------|
| Regression     | 2 | 1007.14 | 503.57 | 44.06 | 0.022 |
| Residual Error | 2 | 22.86   | 11.43  |       |       |
| Total          | 4 | 1030.00 |        |       |       |

|        |    |         |
|--------|----|---------|
| Source | DF | Seq SS  |
| X1     | 1  | 1000.00 |
| X2     | 1  | 7.14    |

## CONCLUSIONS

- a) In general, non-linear regression is much more difficult to perform than linear regression.
- b) There are, however, some simple non-linear models which can be evaluated relatively easily by utilizing the results of linear regression.
- c) The non-linear models fitted in this paper are:
  - I) Exponential Model
  - II) Power Model
  - III) Quadratic Model
- d) A procedure is also discussed which allows us to fit to the same bivariate data set many models (such as: linear, exponential, power, quadratic) and select as the “best fitting” model the model with the “smallest variance of the residuals”.
- e) In a numerical example, in which all 4 of these models were fitted to the same bivariate data set, we found that the linear model was the “best fit”, with the quadratic and exponential very close “second best” while the power model was a “third best”.
- f) The evaluation of these models is facilitated considerably by using the statistical software package MINITAB which, in addition to estimating the unknown parameters of the corresponding models, also generates additional information (such as the p-value, standard deviations of the parameter estimators, and  $R^2$ ).
- g) This additional information allows us to perform hypothesis testing and construct confidence intervals on the parameters, and also to get a measure of the “goodness” of the equation, by using the value of  $R^2$ . A value of  $R^2$  close to 1 is an indication of a good fit.
- h) The MINITAB solution for the linear model shows that both a and b (of  $\hat{y} = a + bx = -508 + 10x$ ) are significant because the corresponding p-values are smaller than  $\alpha = 0.05$ , while the value of  $R^2 = 97.1\%$ , indicating that the regression equation explains 97.1% of the variation in the y-values and only 2.9% is due to other factors.
- i) The MINITAB solution for the quadratic model shows that a, b, and c (of  $\hat{y} = a + bx + cx^2 = -3,618 + 104.3x + 0.7143x^2$ ) are individually not significant (because of the corresponding high p-values, but b and c jointly are significant because of the corresponding p-value of  $p = 0.022 < \alpha = 0.05$ . The value of  $R^2$  is:  $R^2 = 97.8\%$ .
- j) The MINITAB solution for the power model shows that both a and b (of  $\hat{y} = ax^b$  or  $\ln y = \ln a + b \ln x = -13.3 + 4.3766 \ln x$ ) are significant because the corresponding p-values are smaller than  $\alpha = 0.05$ , while the value of  $R^2 = 96.3\%$ .

k) The MINITAB solution for the exponential model shows that the k (in  $\hat{y} = ke^{cx} = 1.868432e^{0.06658x}$  or  $\ln \hat{y} = \ln k + cx = 0.6251 + 0.06658x$ ) is not significant because of the corresponding high p-value, while the c is significant because of the corresponding p-value being smaller than  $\alpha = 0.05$ . The value of  $R^2 = 96.4\%$ .

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# **EFFECTS OF FAMILY STRUCTURE AND SOCIALIZATION ON MATERIALISM: A LIFE COURSE STUDY IN MALAYSIA**

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## **ABSTRACT**

*Consumer researchers have had a long-standing interest in understanding the development of materialistic attitudes and values in different cultural settings. The life course approach, which has developed recently as an interdisciplinary program for studying various aspects of behavior, is used as an overarching framework for studying the development of materialism in Malaysia. Specifically, the paper first presents the general conceptual life course paradigm that serves as a blue print for discussing theoretical perspectives, organizing, integrating, and reporting consumer research on materialism. Next, hypotheses derived from life course perspectives are formulated, and a survey of 101 young adults (ages 18 to 22) is used to test them. The findings suggest that the amount of television viewing and peer communication about consumption during adolescent years contribute to the development of materialistic values.*

## **INTRODUCTION**

Research on consumer behaviour have currently become deep seated in not only identifying and analyzing superficial dimensions but also the causative and intervening variables involved in the adoption process. In that regard, 'materialism', one of the variables involved in a consumer decision making process has become an important area of study. The need for understanding and interpreting the development of materialistic attitudes and values in different cultures and their impact on consumption activities, orientations and decisions is strongly felt by consumer researchers. Consumer researchers have suggested that much can be understood by studying the past events in a person's life and his perceptions of the future in understanding patterns of consumer behaviour. Researchers in several disciplines have presented compelling evidence for childhood-adulthood links and have also started elaborating and explaining the mechanisms responsible for them. In this context, the Life course paradigm, a recent addition to the knowledge base on consumer behaviour, operates as a relevant framework to study development of an important consumer orientation namely 'Materialism' in multi cultural environments and Malaysia, being a multi cultural society, has been taken as the area of study.

## **CONCEPTUAL FRAMEWORK**

The life course framework, which extends across substantive and theoretical boundaries of social and behavioral sciences (e.g., Abeles, Steel and Wise 1980; Elder, 1995; Mayer and Tuma 1990), can fill gaps in previous efforts to study consumer behavior. Unlike many other approaches to the study of behavior, the life course paradigm views behavior at any stage in life or given point in time to be the product of responses to earlier life conditions, including cultural settings, and the way the individual or other units have adapted to these circumstances (e.g., Mayer and Tuma 1990). Researchers in several disciplines of science have presented compelling evidence for childhood-adulthood links and have begun to elucidate the mechanisms responsible for them (McLeod and Almazan 2003); they have contributed to our understanding of how early experiences in a

person's life influence patterns of thought and action in later life. The elements of life course model (Figure) can be classified into three broad categories: events and circumstances that are experienced at a specific point in time ( $T_1$ ) in the person's life course, processes triggered by these events, and outcomes that occur at later points in time ( $T_2$ ) which are the consequence or outcome of these processes and earlier in-time-occurred events.

The life course paradigm provides a framework for integrating diverse theoretical perspectives into a multi-theoretical conceptual framework, which is consistent with recent efforts of life course researchers to develop models that include variables derived from diverse theories (e.g., Pearlin and Skaff 1996; Mortimer and Shanahan 2003).

The life course paradigm is a Multidimensional conceptual framework that brings out variables sourced from theories originating from different disciplines (e.g., Pearlin and Skaff 1996; Mortimer and Shanahan 2003; Abeles, Steel and Wise 1980; Elder, 1995; Mayer and Tuma 1990). The life course paradigm posits that consumption activities and orientations of individual consumers are effectively being influenced by antecedents, which may be early life events and processes that include socialization, stress and human capital development in childhood e.g., Mayer and Tuma 1990; McLeod and Almazan 2003. The elements of the Life course model can be classified into Events and circumstances that are experienced at a specific point in time ( $T_1$ ) in a person's childhood, processes triggered by these events and the outcomes that occur at later points in time ( $T_2$ ) because of the events and processes. Accordingly, the purpose of this study is to examine the effects of family structure (Events) and socialization (processes) during childhood in Malaysia on the development of materialism in Adult consumers (outcomes). Existing literature establishes a direct link between adverse evaluations of family disruptive events and the strength of materialistic values, which indirectly are taken as strategies to cope up with stress coming out of disruptive events (Rindfleisch et al. 1997). Hence, one of the important dimensions taken under Family structures in this study is the incidence of Family disruptive events in childhood.

Secondly, research also indicates that the Socio economic status enjoyed by a particular family determines whether its members would value Conformity with the society's expectation more than self-expression and more the conformity, more the possibility of its members striving for materialism Kasser et al. 1995; Moschis 1987; O'Guinn and Shrum 1997). Hence the second dimension considered under Family structure would be that of Socio economic status enjoyed by adult consumers during their childhood. Existing research evidence also supports the line of reasoning that a significantly positive relationship exists between three major mediating variables namely Peer communication, Television viewing (socialization agents) and socio-oriented family communication structure on materialism Moschis 1987; Moschis and Churchill 1978; Flouri 1999; Moschis 1987. Hence, in this study, these three variables have been considered as process variables to find their mediating effects on materialism (outcome).

## Research Objectives and Hypotheses

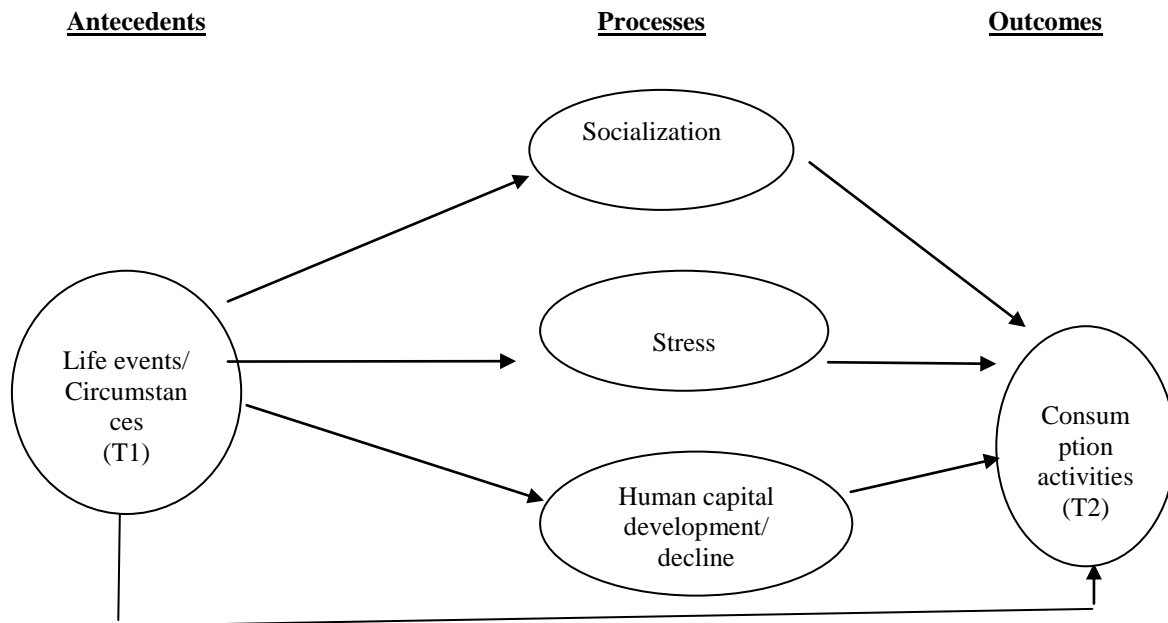
Evolving from the discussion above the major research objectives are to assess the impact of Family structure and socialization on materialism. The study has achieved these objectives out of six Hypotheses statements which attempt to test the relationship between family structure and socialization on 'materialism'. Out of the six hypotheses tested, four of them are intended to test the unilateral relationship between television viewing, Peer communication, Socio-oriented family communication, Socio economic status (independent variables) and Materialism(dependent variable). The remaining two hypotheses test the mediating effects of socio economic status, peer communication and Mass media use on 'materialism'.

## Methodology

A convenience sample of 101 undergraduate Malaysian students in Stamford college sdn Bhd., Petaling Jaya, Multimedia University, Cyberjaya and Sunway college, Petaling Jaya aged from 18 to 22 was used for a survey using a self administered structured study. The Data analysis tools employed were Product moment correlation, Regression analysis and Tests of hypothesis conducted on their coefficients. Materialism was measured using an inventory of nine items, while socio-oriented family communication, Television viewing and Family disruptive events were measured using six, one and six items respectively (Measures of the variables are available from the senior author upon request).

## FIGURE

### A GENERAL CONCEPTUAL LIFE COURSE MODEL OF CONSUMER BEHAVIOR



Note: Adapted from Moschis (2007).

## Results

The results of the study indicate a positive association between Television viewing and Materialism, Peer communication about consumption during adolescent years and Materialism. These findings are in line with studies made by earlier researchers, who have indicated that consumption norms are acquired through Mass media and peer communication. These findings reinforce the liking adolescents have on watching televisions. A considerable amount of Malaysian adolescents including Indians, Chinese and Malays have access to TV and a considerable number of Asian Brands are in the commercials talking about the different types of Brand positions maintained by them. However, the other hypotheses which study the unilateral relationship of Socio-oriented family communication, Socio economic status and Materialism were found to be insignificant. Additionally, the hypotheses intended to study the mediating effects of socio economic status, peer communication and Mass media use were not found to be significant.

These findings indicate that disruptive family events in Malaysia are not necessarily manifested and mediated through socialization agents such as TV viewing and peer communication and hence it may be interpreted that other possible maladaptation strategies may be employed by adolescents in mediating family disruptive events and materialism. Since 'TV viewing' and 'Peer communication' have not been found to be playing the role of mediators between Disruptive Family events and Materialism, we suggest the future researchers to study the role played by other possible mediators like cultural, social and religious values. The findings of the study, when reflected and transposed on the Life course paradigm (figure) brings out the role played by Family structure and socialization on Materialism in Malaysia.

## APPENDIX



## ITEMS USED IN MEASURES

### Materialism

1. Do you feel that you have all the things you really need to enjoy life?
2. How do you feel about having a lot of luxury in your life?
3. How do you feel about acquiring material possessions as an achievement in life?
4. Would your life be any better if you owned certain things that you don't have?
5. How do you feel about people who own expensive homes, cars, and clothes?
6. How much pleasure do you get from buying things?
7. How do you feel about things you own?
8. How do you feel about owning things that impress people?
9. How do you approach your life in terms of your life possessions (i.e., buying and owning things)?

### Socio-Oriented Family Communication

1. Say that their ideas were correct and you shouldn't question them.
2. Say that you should give in on arguments rather than making people angry.
3. Say you shouldn't depend on others if you can do something yourself.
4. Answer your arguments by saying something like "You'll know better when you grow up."
5. Say that the best ways to stay out of trouble is to keep away from it.
6. Say that you shouldn't argue with adults.

### Television Viewing

Approximate number of hours spend weekly viewing the following on television: News, soap operas, action and adventure shows, sport events, drama shows, movies, comedy shows, other (write in number of hours)

### Family Disruption Events

The respondent's experience of the following events before their 18<sup>th</sup> birthday:

1. Did not live in the same home as both of their biological parents
2. Frequent time periods in which one or both parents were absent
3. Loss (other than death) or separation from a family member or loved one
4. Arguments between parents or other family members
5. Move(s) to a new place of residence
6. Physical abuse by parents or close family members

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# LANGUAGES OF THE FUTURE

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## ABSTRACT

*At the present time, there is a semantic gap between what the programmer knows about his program and the way this knowledge has to be expressed for reasoning about this program. Systems are configured with new knowledge at different levels; compile-time, link-time, and run-time. The development of innovative and context-specific programming languages constitutes one of computer science's finest achievements. It is hard to predict what it will be like in a hundred years. Languages will form evolutionary trees with dead-ends branching off all over.*

## DEFINITIONS

*Concurrency* – Property of systems in which several computational processes are executing at the same time.

*Paradigms* - These models provide a perspective through which languages may be examined individually and evaluated through comparison with similar programming languages. They are patterns of thought for problem solving.

*Protocol* – The rules that govern the syntax, semantics, and synchronization of communication.

*Script* - A list of commands that can be executed without user intervention.

*Security* – Computer security is concerned with detection and prevention of unauthorized use of computational resources.

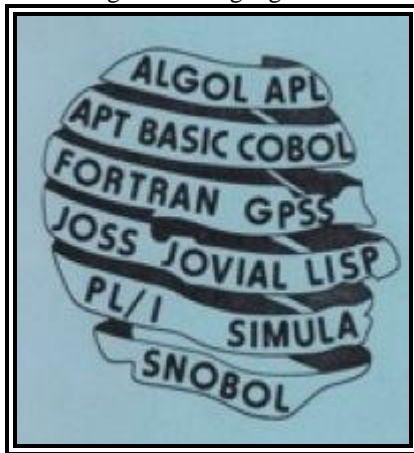
## INTRODUCTION

A linguist strives to identify and understand both the specific rules of specific languages and the more general laws that govern all languages. Their efforts aim to conceptualize the universals of syntax, semantics, and phonology. Unlike linguists who seek to identify patterns and features of natural languages, computer scientists hope for more. The study of programming languages leads us to a better understanding of existing languages, but also towards a superior design in the future. A comparative evaluation of programming languages supports both of these objectives. The evolution of languages differs from the evolution of species because branches can converge. The FORTRAN branch, for example seems to be merging with the descendants of Algol. Languages designers deliberately incorporate ideas from other languages. It is especially useful for languages designers to think about where the evolution of programming languages is likely to lead, because they can steer accordingly. The new generation of language designers has taken to naming its brainchildren after real people. The study of the nature of programming languages leads to a better understanding of existing languages, but more so towards a superior design in the future.

## BACKGROUND

In 1978, the first History of Programming Languages (HOPL I) was held June 1-3, 1979 in Los Angeles, California. Jean E. Sammet was the program chair. The HOPL was intended to consider the technical factors that influenced the development of certain programming languages. Richard L. Wexelblat was the proceedings chair. The languages should have been developed by 1967 and should have been in use till 1977. The languages considered were:

Figure 1: Languages



*Algol60* (Naur), *APL* (Iverson), *APT* (Ross), *BASIC* (Kurtz), *COBOL* (Sammet), *FORTRAN* (Backus), *GPSS* (Gordon), *JOSS* (Baker), *JOVIAL*(Schwartz), *LISP* (McCarthy), *PL/I* (Radin), *SIMULA* (Nygaard), and *SNOBOL* (Griswold).

HOPL II was held April 20– 23, 1993 in Cambridge, Massachusetts. Sammet was the program chair. The languages should have been developed by 1982 and should have been in use till 1985. The languages were: *Monitors & Concurrent* (Hansen), *Prolog* (Roussel), *Icon* (Griswold), *Smalltalk* (Kay) , *Algol 68* (Lindsey), *CLU* (Liscov), *Discrete Event Simulation languages* (Nance), *Forth* (Rather, Colburn, & Moore), *C* (Ritchie), *FORMAC* (Sammet), *Lisp* (Steele & Gabriel), *C++* (Stroustrup), *Ada* (Whitaker), and *Pascal* (Wirth)

HOPL-III was held in San Diego in conjunction with the Federated Computing research Conference (FCRC) from June 9 – 10, 2007. They were broadly categorized as paradigms: Object-Oriented (*Modula-2/Oberon* - Wirth, *C++*-Stroustrup), Self (Ungar & Smith), *Emerald* (Black, Hutchinson Jul, &

## Background and Purpose

The growing number of languages used in changing environments accommodates the new applications. From embedded applications to critical systems, there is an emergence of new applications, with web programming to extensible programming languages like HTML, XML. The existence of safety mechanisms to ensure that failure in systems is infrequent is receiving adequate attention. Just as automobiles have features to minimize damage in an accident, languages have their own safety mechanisms called exceptions to minimize the effect, when modules or subsystems fail. All languages provide basic constructs for sequence, alteration, and repetition. The changing demands and nuances of the computer market have generated designs to meet the new criteria with novel languages.

## PARADIGMS

### Aspect-Oriented Programming (AOP)

Aspect Oriented Programming is considered a promising new technology (Steimann, 2006). Gregor Kiczales and his team at Xerox Parc originated the concept of AOP. They also developed the most popular AOP language AspectJ. The programming paradigms of aspect-oriented programming and aspect-oriented software development (AOSD) attempts to help programmers in the separation of concerns, particularly cross cutting concerns before modularization as did Object Oriented Programming (OOP) before, it is beginning to permeate all areas of software engineering. All programming languages including procedural and object-oriented support separation and encapsulation of concerns into separate entities. Packages, procedures, classes, and methods help programmers to encapsulate concerns into single entities. Some concerns defy encapsulation and software engineers call them crosscutting concerns since they cut across multiple modules of a program. With its growing popularity, practitioners and academics alike are wondering whether they should look into it without losing out on an important development. Much of AOP's success seems to be based on the conception that it improves both modularity and the structure of code, while in fact, it works against the primary purposes of the two, namely, independent development and understandability of programs. The success of AOP seems to be paradoxical.

### Component Object Model (COM)

COM is a programming discipline known as interface-based programming. In interface-based programming, as many details as possible are hidden from the client code, making it easier to distribute software, and integrate it at run-time. The Microsoft Active Template Library (ATL) gets you to COM more quickly than using raw C++. By taking the boiler plate code to get COM working and packaging it behind templates, classes, and utility functions, ATL saves a lot of typing time.

## **Collaborative Programming**

Computer programming is generally a consolidated effort. Many programming projects are too large for one to handle that many developers get involved in a timely manner. The normal approach is to use collaborative tools with a control system for exchange of source code. An alternative approach is to use a language that itself supports the concept of multiple programmers collaborating on a project. Some of the collaborative languages are MOO, ColdC, and LPC. They were designed for multi-user text adventure game by hobbyists with little background in programming language design and theory. Though many programs are in existence using them, very little progress has been done in its research.

## **Dynamic Language**

They are high level languages that execute at run-time with common behaviors which other languages might perform at compile-time. These behaviors can be emulated in any language of sufficient complexity.

## **Functional Programming (FP)**

Languages like Lisp, Scheme, ML, OCaml, Haskell, and Erlang are functional languages having large user and developer communities with well engineered compilers and tools. There are many industrial programmers using functional languages for exploration, prototyping, modeling, specification and design, building compiler-like tools. The first International Conference on Functional Programming(ICFP) by the Association Computing Machinery (ACM) was co-located with the Special Interest Group for Programming Languages (SIGPLAN) on September 18<sup>th</sup>, 2004 in Snowbird, Utah, to make FP become a feasible technology for use in commercial, industrial, and government space, and to enable functional programming professionals to share their experience and ideas. Benefits of using FP in industry: powerful type systems, rapid prototyping, ability to code complex algorithms, continuations for backtracking, easy creation of domain-specific languages (DSLs), good memory management, high productivity and portability(Wadler, Moran). Haskell is close to its mathematical roots. Technical barriers; libraries not tuned for performance, lack of platform support (particularly tools for Windows), lack of industrial grade development and debugging tools. Non-technical issues suggest FP as a powerful suite of tools, rather than as a new or competing paradigm. Industry needs focus on application domains: E.g. *Cryptol*, for implementing crypto algorithms (cryptography), for hardware design use *BlueSpec*, a declarative hardware description language. Beckman Coulter's graphical language for describing experiments in industrial chemistry. For build-to-order manufacturing, Abstrax, domain-specific languages and optimizers with the formation of a consortium with other companies to develop tools and provide support were suggested at the conference (Wadler, 2004).

## **Generic Programming**

Generic Programming is yet another programming paradigm dealing with the construction of programs that can be applied to many different data types. It is supported by languages like Ada, C++, Haskell, and Java. It shares with Object-Oriented Programming (OOP) the reusability of code. While OOP emphasizes the data aspect of programming, generic programming emphasizes the algorithmic aspect.

## **Object-Oriented Programming (OOP)**

Object-oriented programming is the paradigm of choice for conquering the complexity of distributed applications. It provides a natural way of decomposing a large complex system into subsystems with entities called objects and procedures called operations. A class describes the behavior of a set of objects, and objects are instantiated from the class. Inheritance allows common behavior to be factored out. Polymorphism describes the multiple possible states for a single property, encryption is the most commonly used method of achieving it in code (Cyber Forensics).

## **Game Play Simulation**

Game developers have been early adopters of new technologies. The Context Semantics, as a language, analogous to geometry of interaction can be used as a language for Games and Flow Analysis (Mairson, 2003). With new hardware, programmers are able to rethink the software assumptions, and develop new products using new tools and ground-breaking environments not to mention newer programming languages. The level and range of game development has amplified over the past ten years, yet the underlying limitations of the mainstream programming languages like C++, Java, and C # remain mostly unaddressed. The kind of algorithms we employ on contemporary CPUs (Central Processing Unit), GPUs (Game Processing Unit), the challenges of writing complex software with the difficulties of concurrency and componentization taking into consideration real-time requirements remains the same. Future programming languages should help us write better code using abstraction facilities, information hiding, and modularity, with extensible frameworks. Game developing involves physics simulation, collision detection, numeric computation, rendering, pixel shading, artificial intelligence, and path finding. It involves scripting and compiler technology, graphical user interfaces (GUIs), visual content authoring tools, and distributed computing (multiplayer game simulation). Game-play simulation models the state of the game world as objects evolve over time. It is usually high-level object-oriented code written in low level high performing code in C++ with simple instruction multiple data (SIMD) intrinsics or a scripting language in imperative programming style. There is usually garbage collection. The programs usually involve 30-60 updates (frames) per second. There will approximately be a thousand classes, containing imperative states and member functions which are highly dynamic. Each time a game-play is updated, it typically touches 5-10 other objects. For numeric computations, algorithms will be for scene graph traversal, physics simulation, collision detection, path finding, and sound propagation. They are essentially functional transforming a small input data set to a small output data, making use of large constant data structures. Concurrency and reliability are features essential to the programming language for use in game programming. Operating system (OS) graphics application programming interfaces (APIs), sound input, and so on are needed.

## **Open Language**

Open languages are a class of formal languages that combine the grammar of an object-oriented programming language with the universality of a natural language. Open languages allow the creation of a monolingual communication environment where it can be used in a wide range of communication processes requiring explicit information – programming, documentation for software, hardware, specification of various standards, tasks setting, and presentation of various kinds of knowledge. Open classes provide a solution to the extensibility problem of object-oriented programming languages, allowing the modular addition of both new types and new operations to an existing type hierarchy. Open classes allow one to add to the set of methods that an existing class supports without creating distinct subclasses or editing existing code.

Open language is an artificial language with the formal grammar of a universal programming language. It is a natural language for information exchange between various communicators with the semantics transmitted by its code consisting of the conventional knowledge about object, action, properties, states, and so on.

Open code provides better in-lining and partial evaluation of object programs, but once constructed, expressions of this type cannot in general be executed (Nanevski, 2002). In contrast, closed code expressions can be invoked at run-time, but the computations over them are more rigid, and typically produce less efficient residual object programs.

## **Scripting Language**

It is a high level programming language with transparent syntax that is interpreted by another program at run-time.

Scripting languages are popular due to its usage in developing Web applications. Visual BASIC is a rapid application development (RAD) scripting programming language. It allows blind programmers to specify forms in a much simpler form. Separate website *blindProgramming.com* is available for the blind and visually impaired programmers. With the availability of Braille terminals, the visually impaired programmers are able to work as productively as the others in the mainframe environment. JavaScript, ASP, JSP, PHP, Perl, Tcl, Python are all scripting languages.

## **LANGUAGES**

### **C# (C sharp)**

Anders Heijlsberg, a distinguished computer engineer at Microsoft developed the language with him team as part of the .NET initiative as an object-oriented programming language and it was publicly accepted at the July 2000 Professional Developers Conference (PDC). It is intended to be simple, robust, with strong type checking and array bounds checking. Programmer portability is important for those who are familiar with C and C++. C# is intended for embedded systems ranging from the very large that use sophisticated operating systems (OS) to the very small packages with dedicated functions. C## is not meant to compete with assembly language with regard to size or performance. The main purpose for the new language is the development environment is changeable, application logic is simple, the intellectual property protection is not an issue, maintenance and deployment requirements are very strict, and the speed is expected to be faster than usual.

### **Component Object Model (COM)**

COM is a programming discipline known as interface-based programming. In interface-based programming, as many details as possible are hidden from the client code, making it easier to distribute the software, and integrate it at run-time. The Microsoft Active Template Library gets you to COM more quickly than using raw C++. By taking the boiler plate code necessary to get the COM working and packaging it behind templates, classes, and utility functions, the ATL saves unwanted typing.

### **Hyper Text Markup Language (HTML)**

It is the markup language with which World Wide Web hypertext documents are written. Hyper Text Transfer Protocol (HTTP) servers are designed specifically to distribute hyper text documents – knowing how it works one can take advantage of its powerful features. It is a client-server protocol. In the client-server model, a client program running on the user's machine sends a message requesting service to a server program running on another machine on the Internet. The server responds to the request by sending a message back to the client. In exchanging these messages, the client and server use a well understood protocol. Uniform Resource Locators (URLs) are a naming scheme for specifying how and where to find an internet server resource, such as those available from Gopher, File Transfer Protocol (FTP) or other servers.

### **Java Tools Language (JTL)**

JTL is a novel language for querying Java. It was designed to serve the development of source code software tools for Java, and as a small language to aid programming language extensions for Java. The applications include point-cuts for aspect-oriented programming, fixing type constraints for generic programming, and specification of encapsulation etc. Each of these is specific, concise, intuitive, and general (Cohrn, 2006).

### **MultiJava**

MultiJava is a conservative extension of the Java programming language. Among other benefits available with MultiJava provides a solution to the binary method problem. MultiJava permits modular type-checking and

modular compilation strategies. MultiJava extends Java, and the key ideas of the language design are applicable to other object-oriented languages such as C# and C++, and with some modifications to functional languages like ML. MultiJava, is a backward-compatible extension to Java supporting open classes and symmetric multiple dispatch.

## Python

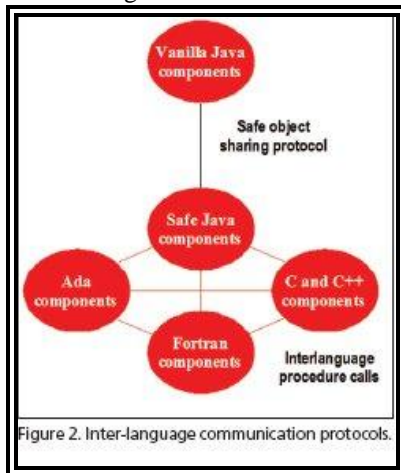
Python is a remarkable dynamic powerhouse that can handle practically any application domain. Python is compared to some of the newer languages like Tcl, Perl, Ruby, Scheme, and even Java. Some of its key notable features include: readable code, natural expression of procedural syntax, modularity, hierarchical packages which are supportive, error handling exceptions, dynamic data types of high level, wide-ranging third party modules and standard libraries. Standard libraries include asynchronous processing to zip files. It is a very powerful language – you can build your own web server with three lines of code. Advanced language features include duck typing (it's a style where the current set of methods and properties determine the valid semantics), meta-classes, and decorators (to extend the functionality of a class at run-time), and dynamic introspection capabilities with flexible data-driven code. The highly optimized byte compiler and support libraries makes Python run fast enough for many applications. It integrates well with .COM, .NET, and Common Object Request Broker Architecture (CORBA).

## The Language T

The non-executable language T belongs to the class of open languages. An open language is not confined to any particular representation domain, and may be applied to any tasks requiring explicit informing. T can be used for producing object-oriented specifications of various entities representing software, hardware, technical appliances, biology systems, knowledge representation systems, and so on. The language also permits explicit representation of semantics of programming languages and produces executable code compliant with the semantics it represents.

## World Wide Web (WWW)

Figure 2: Protocols



**Z<sub>0</sub>**

Z<sub>0</sub> is a tiny experimental class-based pure OOL. Key features are syntactic simplicity, strong static typing, pure object abstraction, dynamic mechanisms similar to those found in dynamic languages.

## SECURITY



Computer security problems range from detecting malevolent network transfer to password systems and other access control mechanisms designed to prevent installed code from corrupting an environment. There is an overlap between security and procedures for ensuring software correctness. For example, if a browser code contains a Trojan program, whose functionality is to allow unauthorized access, it is an incorrect browser implementation. The specification of a web browser does not permit remote access to the computer on which it is installed. An insecure browser could be considered an incorrect implementation.

Many security concerns can be addressed using computer methods for software assurance. A qualitative difference between security properties and correctness properties lies in the manner in which the system input is considered. Software is secure if arbitrary input does not have undesired consequences such as release of private information. Computer security has received significant attention in security analysis of network protocols. The Secure Sockets Layer (SSL) protocol is used in the huge number of Internet purchases every minute using credit card. The protocol provides a secret key, shared between client and server that can be used to send a credit card number or other confidential data under encryption. If the protocol is vulnerable to practical attack customers could have their data or credit card numbers stolen. Security protocols are simple distributed programs that run for three to seven communication steps and halt. There are many ways that procedures from programming language analysis can be used in security protocol analysis. They include model checking techniques to find flaws of protocols, use of concepts from logic of programs to develop specialized logics for proving protocol correctness.

For critical systems, the appeal will be off-the-shelf re-useable components meant. The language profile should have the ability to automate the analysis of a language's source code prior to execution to establish increased confidence the software will run dependably and consistently.

Ada is one of the languages designed for critical embedded systems. It was designed as the Department of Defense's super-toy to replace outmoded and obsolete languages like FORTRAN and COBOL.

The new generation of language designers has taken to naming its brainchildren after real people rather than the usual acronyms like BASIC, COBOL, FORTRAN, ALGOL, PL/1, and so on. Pascal was named after the first person to build a calculating machine, Ada after Ada Lovelace, the first lady computer programmer, and Babbage after Charles Babbage the first system designer.

## **FUTURE WORK**

There is so much going on in the field of programming in the programming world. For example, the Princeton ZebraNet is a collaboration of engineers and biologists to build wireless embedded systems for wildlife tracking. A number of communication, and data management algorithms specifically tailored for small memory, constrained energy, and sparse connectivity of long lifetime systems are being designed. Major generations of software, hardware, and communication packages are being developed. There have been two successful real-world deployments on Plains Zebras in Kenya.

## **CONCLUSION**

This study contributes an additional dimension to an ongoing evaluation of programming languages which demands fresh look for the needs of programmers and the capacities of programming languages change in radical ways. There is no simple framework to evaluate a programming language, due to its sophistication and context-specific nature. Evaluating methods could include statistical techniques like non-parametric, chi-square but they need be application-specific. Each significant real-world classification has its own peculiarities, requirements, and challenges in the context of a particular application. Enhanced application of existing techniques with refined algorithms is a pre-requisite to progress in programming language development. Newer application domains will produce new developments and ongoing research in the field.

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# ECONOMIC IMPACT OF HARD DISK DRIVE CLUSTER ON THE THAI ECONOMY

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## ABSTRACT

*This study provides estimates of the HDD industry's contribution to the Thai economy, using key economic indicators such as output, employment, and income effects. The estimates are based on actual industry expenditures for 2007. This analysis contains several measures of the relative importance of the HDD industry in Thailand. First, the industry's share of final demand is evaluated. Second, the business volume generated by the industry is compared to the total gross business volume for the country. Expenditures were obtained from a survey of firms involved in HDD related activities (assembly or components) in Thailand. Third, annual wages paid by HDD related industries will be compared to all industry wages in the country. The output, income, and employment effects are an additional \$7,025 million dollars, \$1,614 million dollars and \$2,485 new jobs, consecutively. The backward and forward linkages are 0.32 and 0.11, respectively.*

**Keywords:** *input-output model, Hard Disk Drive industry, impact, forward and backward linkages*

## INTRODUCTION

Thailand currently ranks as the world's largest producer of Hard Disk Drive (HDD). In 2007, total Hard Disk Drive (HDD) export value from Thailand was approximately \$3 billion dollars (or about 3 percent of the Thai GDP) with a volume of 15 million pieces. The HDD industry employs approximately two hundred thousand Thai workers. Due to new applications in consumer electronics such as video recorders, market growth of the industry is rising. Four out of five of the world's largest manufacturers of Hard Disk Drive, Seagate, Western Digital, Fujitsu, and IBM/Hitachi assemble their final products in Thailand. The significant growth for the HDD industry in Thailand is mainly because the comparative advantages of skilled labor together with the incentive packages from the Thai Board of Investment (BOI). The growth of the industry influences its direct supply chain such as wafer factories and sliders factories. Supporting industries such as logistic firms, financial institutions, and other business services benefit directly from this HDD industry growth. Industries supporting the HDD workers such as educational institution, restaurants and hotels etc., also are experiencing growth in direct relation to the HDD industry growth.

While the HDD industry has a solid footing in Thailand, several components are produced from other countries such as Singapore and Malaysia; (which have production bases for disk media and wafer fabrication). Due to the evolution of globalization, spatial network allows HDD to reap up benefit of being based on each region. Thus, Thailand is selected for regional hub of HDD production for manufacturers in the HDD industry. However, Thailand still imports approximately 60 percent of HDD overall value from suppliers located outside the country. Despite of the Thai government's effort to encourage Thai owned suppliers to participate in the industry, foreign firms still dominate HDD and parts production. Gourvervitch et al. (2000) stated "that supply of labor at various skill levels affects the location of different parts of the HDD value chain". Engineers who are needed for particular stages of HDD productions are plenty in one geographic location but scarce in others. HDD firms produce the labor intensive but simple job skills in the location that has an abundance of inexpensive low skilled labor, while producing high technology parts where there are plenty of highly skilled laborers. The HDD firms produce the intermediate activities which require a mix of labor skills in the countries with intermediate levels of wages, expertise, and skilled labor. The countries that host the HDD firms gain more jobs and thereby

raise purchasing power. As a guideline for policy makers, the impact of the HDD industry on the Thai economy should be investigated thoroughly. The objective of this study is to 1. Study the supply chain of the industry, 2. Calculate backward and forward linkages of the HDD industry and 3. Estimate the economic impacts of the HDD industry on the Thai economy.

## LITERATURE REVIEW

Input-output analysis was developed by Professor Wassily Leontief in the late 1930s. The inter-industry analysis is the fundamental framework of the model (Ebiefung, 2008). After the analysis was developed, the model has been modified and employed to evaluate economic impact on different aspects. For example, Tiebout (1967) demonstrated how a firm can utilize the model and the economic impact of a firm's revenue on the economy. Wolsky (1984) stated a general solution to construct a disaggregated input-output model from the aggregated one. Beard and Dess (1988) modified the model to demonstrate the interdependence between ecology and the economy. Recently, Ebiefung et al. (2008) demonstrated a dual linear programming model based on the original concept of input-output analysis. Llop (2008) applied the model to analyze the economic impact of alternative water policies implemented on the Spanish production system. Albino (2002) showed the application of the model to construct a network of production processes within and outside a given geographic area. Their framework incorporated the concept of supply chain management which reflect current business environment of the multinational cooperation.

As for the Hard Disk Drive, Goutevitch et al. (2000) studied the geographical location of HDD production, the welfare and competition among countries hosting the HDD related firms. They emphasized that the strategies of the HDD firms reflect the trend of globalization. The comparative advantages of the host countries cause the relocation of the HDD firms. For the HDD industry, availability of the right skill labor and labor cost are the key decision of the firms in choosing the location for their production facilities. NECTEC (2007) estimated the value added of the HDD output in Thailand. Other studies place more emphasis on the technological parts of the HDD components (e.g., Lee et al., 2004; Luo et al, 2006; Yap et al. 2006).

In this study, we are basing the analytical part on the input-output model concept, while constructing the linkage of the HDD chain based on methodology suggested by Albino et al. (2002).

## HARD DISK DRIVE VALUE CHAIN

The HDD is composed of four main components: platters (or media), read-write heads, spin motors, and printed circuit boards (PCBs) (Figure 1). The platter, which is used to hold data, is made of glass or ceramic and coated with special media material such as iron oxide and cobalt alloy to hold electromagnetic signals. The quality of the platter is critical for the overall quality of the HDD because of its usage as data storage. Platter is bound together on a spindle and spun by a spindle motor. Read-write heads are the devices that mount with arms that fly on the top and bottom surfaces of each platter. The heads convert bits to magnetic pulses and store them on the platters during the data writing process, while the process is reversed during reading activity. The head is usually the most expensive part of the hard disk (Sukhpisarn, 2002).

The value chain of HDD industry is divided into the HDD manufacturer, 1<sup>st</sup> tier supplier, 2<sup>nd</sup> tier supplier, and 3<sup>rd</sup> tier supplier. The HDD manufacturers located in Thailand are Seagate, Western Digital, Fujitsu, and IBM/Hitachi. The 1<sup>st</sup> tier suppliers include the firms specializing in head-gimbal assembly (HGA), head-stack assembly (HSA), motor, media, and flexible printed circuit (FPC). The 2<sup>nd</sup> tier suppliers include suspension, motor parts, printed circuit boards (PCBs) and Integrated circuits (ICs). The 3<sup>rd</sup> tier supplier includes Metal/other parts and indirect materials. The names of the tier suppliers located in and outside Thailand are indicated in Figure 2.

**Figure 1: Main components of HDD**

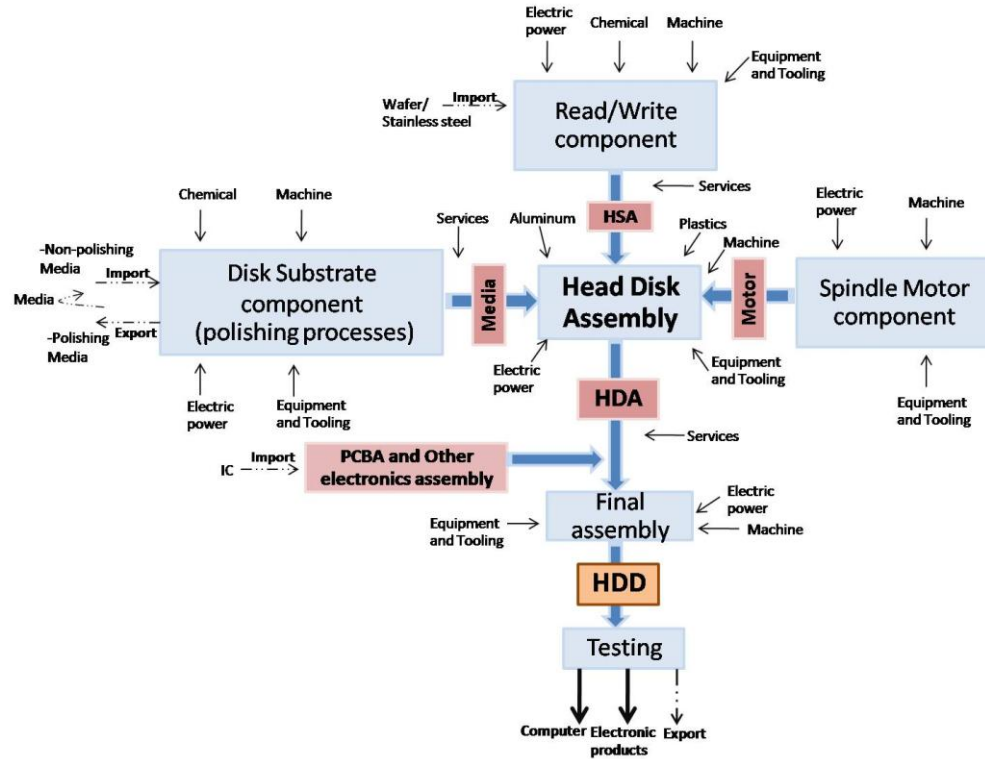
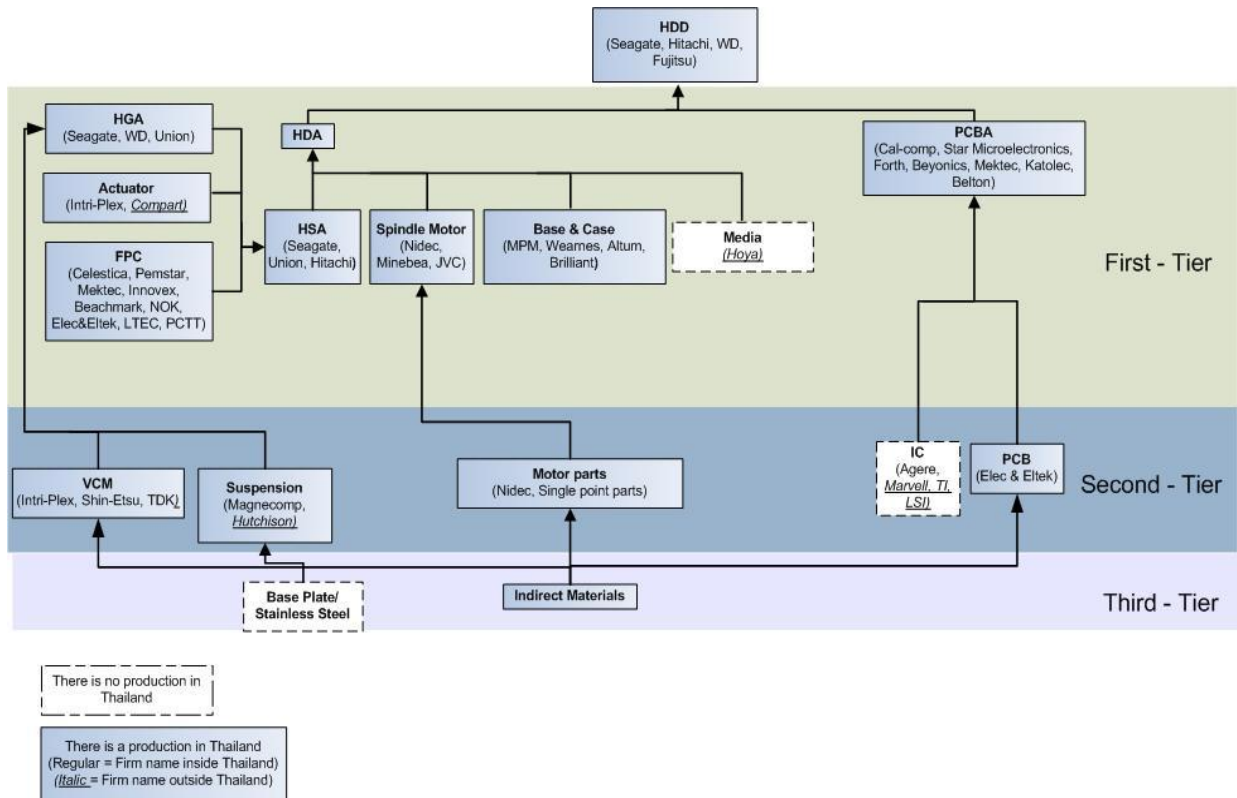


Figure 2: Supply Chain of the HDD industry



# INPUT-OUTPUT MODEL FOR ESTIMATING THE IMPACT OF THE HARD DISK DRIVE

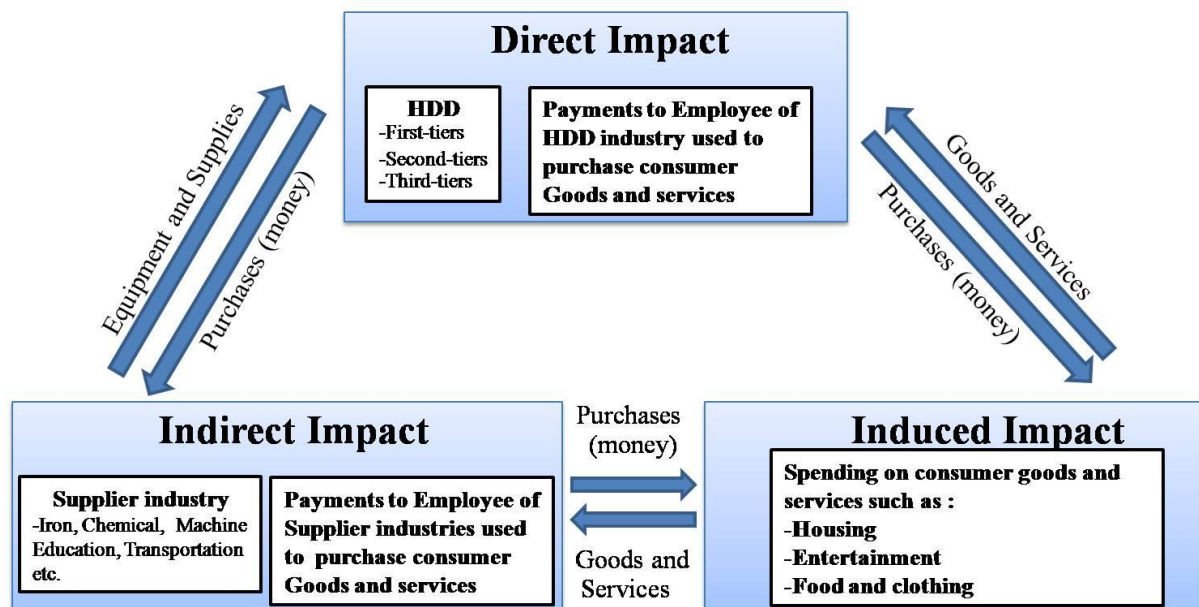
In this study the input-output model is employed to estimate impact of the HDD on the Thai economy. The model uses a matrix to represent a nation's economy. Its analysis considers inter-industry relations in an economy and can be quantified to estimate of economic impacts through multipliers. An increase in final demand that impacts on output, income, and employment is called 'Multiplier effects'. In other words, a unit increased in final demand due to a total increase in output, income, or employment in the economy equal to its multiplier. In this light, multipliers estimate the amount of direct, indirect, and induced effects on income or employment that result from each additional dollar of output, additional job, and additional dollar of employee compensation in a sector. When HDD output rises, the employment and payroll is directed in the HDD industry results in new jobs and income in the Thai economy. This effect is called 'direct impact'.

The HDD firm operating in Thailand interact with the Thai economy by purchasing labor from households and reimburse households with wages and by using other inputs that are purchased from local service firms and suppliers. In addition to the direct impact, there will be 'indirect impact' which creates the changes in local purchasing from service firms and suppliers. There will be also an 'induced impact' which is created when the employees of the HDD firms and HDD's suppliers spend their earnings on groceries, clothing, recreation, and other goods and services. The spending creates more jobs and income in the immediate geographic area. A change in HDD output will reverberate through the entire system of the community (Figure 3).

Mathematical techniques can be used to measure the relationships between basic industries, households, and services. A business impact model is used to estimate the economic impact of the HDD industry on the economy, as industry purchases goods and services to produce its products. We can calculate a backward linkage (a linkage between the HDD industry and its suppliers) and a forward linkage which is (a linkage between the HDD industry and its consumers).

The 2000 Input-Output matrix obtained from the office of the national economic and social development (NESDB) was used as a basis. The household sector was modified to represent in matrix. The modified data were gathered from the balance sheet of the HDD firms and the interview sessions with key persons in the industry.

**Figure 3: Relationship of impact types**



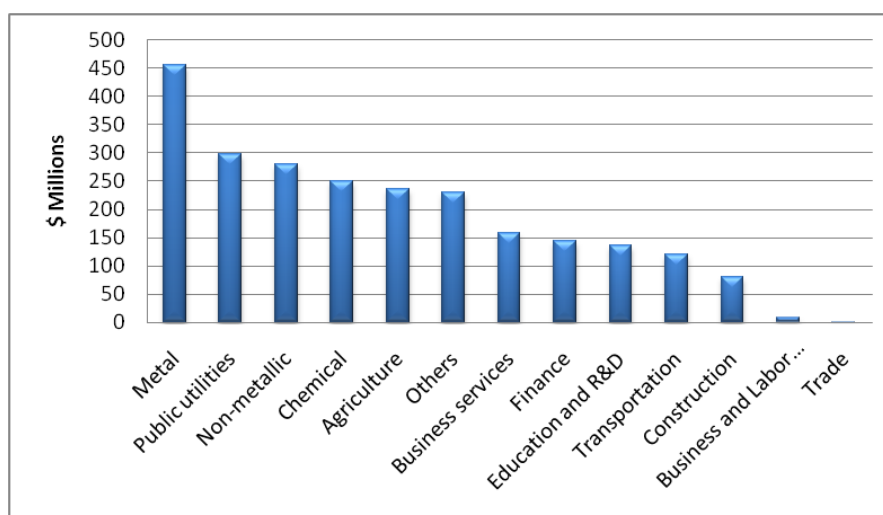
## RESULTS

The total value of Thailand's exports HDD is about \$12,320 million dollars in 2007, a 30 percent increase from the last year. The total economic impacts are summarized in Table 1. On the whole, the HDD industry generates an additional \$7,024 million dollars in output, \$1,614 million dollars in income, and over 2,485 new jobs. Of all the estimated impacts on output, \$2,839 million dollars are from the direct impact, while the indirect impact and induced impact accounts for \$1,431 million dollars and \$2,754 million dollars, respectively. An increase in output is largest in metal sector (\$454 million dollars), followed by public utilities (\$298 million dollars), non-metallic (\$279 million dollars) and chemical (\$250 million dollars) (Figure 2). The other sectors, though not directly related to the HDD industry, experience some degrees of increase in output. This may be a reflection of linkages between the HDD industry and other sectors in the economy in term of induced impact. The forward and backward linkages for the HDD industry equal 0.11 and 0.32, respectively.

**Table 1: Total impact on economy generated by Hard Disk Drive industry, 2007**  
(Millions of US dollars)

| IMPACT                     | Value          |
|----------------------------|----------------|
| <b>Economic activities</b> |                |
| - Direct impact            | 2839.23        |
| - Indirect impact          | 1431.07        |
| - Induced impact           | 2754.87        |
| <b>Total</b>               | <b>7025.17</b> |
| <b>Income</b>              | <b>1614.13</b> |
| <b>Employment</b>          | <b>2485.82</b> |
| <b>Linkages (index)</b>    |                |
| - Forward Linkage          | <b>0.11</b>    |
| - Backward Linkage         | <b>0.32</b>    |

**Figure 4: Total Economic Activities (Output) on The Thai Economy generated by Hard Disk Drive, 2007**



## CONCLUSIONS

This study investigates the economic impacts of Hard Disk Drive cluster on the Thai economy. The results from the I-O model indicate an additional output generated by exports of HDD of \$7,024 million dollars

or 3.4 percent of GDP. Moreover, the result also shows that the direct and induced impacts are relatively equal in generating an addition output (\$2,839 and \$2,754 million dollars, respectively), and that they are larger than the indirect impact (\$1,431million dollars). This implies that an increase in HDD exports (or final demand) generates relatively low increases in local purchasing from service firms and suppliers. The reason is that more than 60 percent of input of HDD such as media and integrated circuits (ICs) have to be imported from overseas, which only 30 percent of them are obtained domestically. This evidence is supported by the very low backward linkage index (0.3). In addition, forward linkage index is lower than backward linkage index (with 0.1). This is because almost all HDD manufacturing in Thailand is for export while domestic consumption is merely 1 percent. Based on the results, there are opportunities for Thailand to increase output, income and employment through the HDD industry by encouraging HDD producers to use more local raw materials. However, it also depends on local supplier capabilities to meet the quality standard of the HDD's materials.

## ACKNOWLEDGEMENTS

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# **DYNAMIC STRATEGIC MANAGEMENT OF ICT: FOCUSING FIRMS IN STRATEGIC ALLIANCE NETWORKS**

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## **ABSTRACT**

*In spite of the awareness of the fundamental importance of guaranteeing effective Information and Communication Technology - ICT operations, many firms still struggle to ensure the necessary alignment between their ICT and business strategies. This has in part to do with the fact that firms' strategies have to undergo frequent changes due to their increasingly dynamic competitive environments. In addition, firms that participate in Strategic Alliance Networks - SANs must consider these relationships when formulating their business and ICT strategies. The objective of this article is to propose an analytical framework designed to provide support for defining and implementing the ICT strategy of a firm embedded in a SAN with the desired strategic alignment. The framework suggests that SANs influence firms' ICT, and that there are interacting factors that moderate the strength of these influences. It is argued that, having understood the possible influences of a SAN, ICT managers can anticipate these influences and better plan the ICT of their firms.*

## **INTRODUCTION**

In the current business environment, where one of the few immutable facts is the unceasing and accelerating pace of change, firms need to respond speedily and continuously to new situations by redefining and adapting their strategies. In this scenario of fierce competition, firms seek to concentrate on what they do best and what is unique to their customers, that is, their essential competencies. This explains, in large measure, why they form networks of relationships with other firms, especially strategic alliances, in order to complement their competencies with those of other partner firms.

One of the main internal organizational factors used to support a firm's strategy is Information and Communication Technology (ICT). Elements such as ICT infrastructure, applications, team and processes need to operate in a coordinated and coherent fashion in order to permit the integration of processes between firms in a network, and enable necessary information to flow between them in a rapid, automatic and controlled way.

From the firm's perspective, the alignment between its ICT and business strategies needs to be flexible and be able to adapt quickly to the new needs defined by these relationships. It is argued here that it is necessary to have an "alignment with slack". To achieve this, it is understood that ICT should not only cater to the current needs of the business and its relationships, assuring the required strategic alignment, but should also be partially or fully prepared to meet future needs.

This study proposes an analytical framework designed to provide support for defining and implementing the ICT strategy of a firm embedded in a strategic alliance network - SAN, that is aligned with its business strategy and has the efficiency and flexibility necessary to successfully operationalize and sustain this strategy, taking into account the various stakeholders involved. Although there is a growing trend on the part of firms in all sectors towards participation in strategic alliance networks, few studies have been carried out on the strategic alignment of ICT in this scenario. Firms are increasingly operating in alliances and SANs and existing models of ICT alignment do not take this, and the necessary dynamics, into account.

The proposed analytical framework seeks to fill the gaps found in the literature on the theme, by considering the dynamic and speedier alignment that is made possible by organizational slack, as well as the development of this alignment in the context of SANs. It contributes to facilitating managers' tasks by articulating various aspects of this interdisciplinary theme that deals with both corporate strategy and ICT management and by proposing variables to better understand and manage this alignment.

This article is divided into six parts. In the first we present the research's theoretical references pertinent to SANs, ICT and ICT's strategic alignment. Some of these references were published by Villas and Macedo-Soares (2007), but we opted to reproduce their main points, with a view to making the present article clearer and more coherent. In the second part we describe the research methods adopted. In the third one we share the investigation's main results, giving special attention to the analytical framework proposed. In the last two parts we discuss these results and formulate some final considerations.

## THEORETICAL REFERENCES

Macedo-Soares (2002) drew up reference lists for her model of strategic analysis for the case of firms that enter into alliances and form networks (SNA – Strategic Network Analysis), with variables and constructs at both firm and industry levels, to capture data regarding the strategic implications of the characteristics of networks of relationships at these levels, notably of SANs. She drew mainly on Galaskiewicz and Zaheer (1999), Gulati, Nohria and Zaheer (2000), Kale, Singh and Perlmutter (2000) and Knoke (2001).

The SAN variables and constructs are organized in four dimensions: network structure, network composition and relationship type, in the case of analyses at firm and industry levels, and network management when the analysis is performed only at firm level. The following characteristics of SANs were chosen from the reference lists used in this study: Cardinality (number of network members), Density (proportion of ties observed relative to the number of possible ones), Centrality (focal firm's ties as a proportion of total existing relationships), Structural equivalence (extent to which ties between members of the network have similar characteristics), Status of the focal firm (importance of the network's focal firm, determined by its size, role or resources), Status of partners (importance of the other members of the network), Nature of relationships (opportunistic or collaborative), Strength of relationships (type of strategic alliance and frequency of interactions), Experience with strategic alliances (duration of strategic alliances formed and the total number of strategic partners), Volume of specific investments (made by the firm in its strategic alliances), Governance mechanism (a set of safeguards to ensure that none of the parties can profit from opportunistic behavior), Degree of change management in the network (formalization and assessment of these management processes) and Degree of multiple dynamic alignment (competencies and processes that assure and sustain compatibility between partners regarding strategy, management styles, culture and resource complementarity).

The ICT function in a firm has various characteristics and properties. One of the most researched properties is its alignment with the firm's business strategy (HENDERSON; VENKATRAMAN, 1993; BROADBENT; WEILL, 1997; LUFTMAN; PAPP; BRIER, 1999). Considering that this alignment should be dynamic, especially in firms operating in turbulent environments, some authors consider that ICT must be more flexible (KNOLL; JARVENPAA, 1994; BYRD, 2001; PRAHALAD; KRISHNAN, 2002). Flexible solutions have costs and risks associated with greater levels of complexity in an organization (DUIMERING; SAFAYENI; PURDY, 1993). More recently, organizations have sought to assess the maturity of ICT's function in order to identify its performance, how it compares with that of other organizations in the same industry and define targets for improvement (ITGI, 2007). For the purposes of this study, it was decided to focus on the following ICT properties: maturity, complexity, flexibility and alignment.

Two models were important as a "source of inspiration" for the model proposed: Henderson and Venkatraman's (1993) SAM model for ICT's strategic alignment, and Melville, Kraemer and Gurbaxani's (2004) ICT value model for a firm's business. Henderson and Venkatraman's (1993) model that deals with the firm's strategic alignment with its ICT considers two domains in its analysis of this alignment: the business domain and the ICT domain. This model does not deal with the influences of the SAN on the other two domains. Melville et al's (2004) model that deals with ICT's impact on firm performance considers three

domains: the focal firm, competitive environment and macro-environment. In this model, ICT characteristics are analyzed in the domain of the focal firm; the influence of this firm's partners' (customers and suppliers), business resources and processes, especially with respect to the definition and operation of inter-organizational systems, are considered in the domain pertinent to the competitive environment.

## METHODOLOGY

The present study was essentially empirical and qualitative, and involved the following stages: i) the development of theoretical references; ii) proposal of an analytical framework; iii) assessment of the analytical framework proposed.

During the first stage, the research undertook a literature review based on rankings of both local and international journals. The method used was developed especially for this study and was published by Russo, Villas e Macedo-Soares (2007). Applying this method resulted in the identification of 72 relevant bibliographical references related to the themes of Strategy, ICT or both.

The second stage involved a survey of ICT managers' perceptions of the influence of SAN characteristics on ICT properties, using two tools: a structured questionnaire, the replies to which were treated statistically (mainly in terms of frequency distribution and correspondence analysis), and confirmation interviews, that were transcribed and codified according to SAN characteristics and ICT properties (for details of the results of this survey, see Villas and Macedo-Soares, 2007). At the end of this stage, an analytical framework of the dynamic strategic management of the ICT of firms that take part in SANs was proposed.

We invited 129 IT managers to partake in the survey of which 55 (43%) accepted. The respondents were on average 47 years old, had been working for 27 years, working in the ICT area for 24 years, had an experience with strategic alliances of 9 years and 13 years experience in ICT management. The research interviewed 10 ICT managers, chosen for their experience in ICT and strategic alliances, focusing on ICT managers from firms in areas that were important to Brazil's economy, such as the retail, industrial, banking, insurance, telecommunications, oil and mining sectors. It was assumed that this group of managers, given their diversified experience, would be better placed to illustrate and explain the various influences under consideration. The average age of these interviewees was similar to that of those that replied to the questionnaire, but they had more experience with strategic alliances (14 years on average).

During the last stage, the research undertook two case studies in order to refine and illustrate the proposed analytical framework. Each study sought to assess the changes in a firm's SAN that implied changes in this same firm's ICT area.

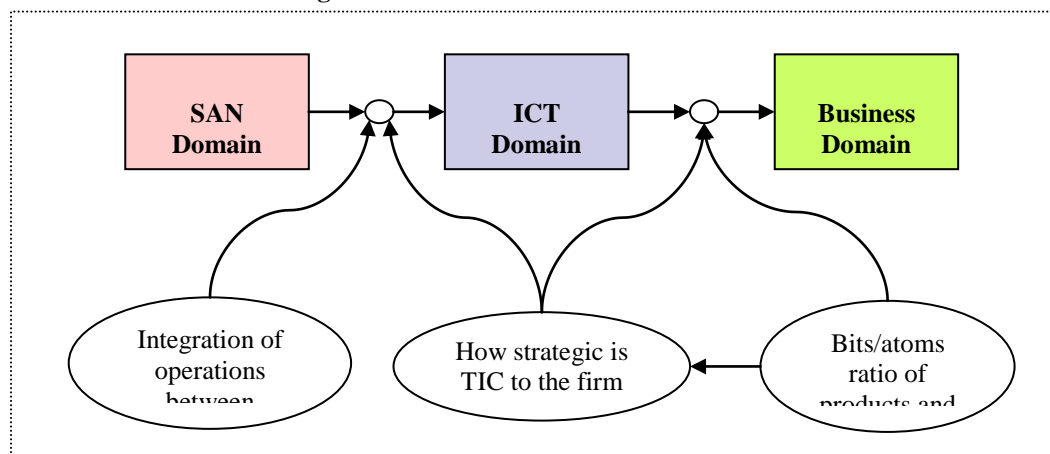
The two cases, analyzed by way of Yin's (1994) methodology for case studies, differed considerably (the firms' real names were replaced by names of Brazilian indigenous groups). The GUARANI insurance company is a US firm that, as part of its internationalization process arrived in Brazil shortly before the year 2000. As an insurance company it is an intensive user of ICT. Due to its relationship with its parent company and the SUSEP (the sectoral regulator), it adopted best market practices. Four managers were interviewed, two of which took part in board decision-making processes (the former CIO and former manager of the strategy, product and marketing areas), the ICT superintendent and the marketing manager. The cosmetics company POTIGUARA is Brazilian and was founded nearly 40 years ago. It is a family firm and the founder is the chairmaNo. ICT supports all company activities, and the company's management practices are being modernized. The research interviewed the company's vice-president and the ICT coordinator.

## RESULTS

The model proposed, shown in Figure 1, considers three domains: SANs, ICT and the business domain. Only two influences were considered: that of the SAN domain on the ICT domain, and that of the latter on the business domain. This model does not describe these domains' multiple mutual influences, nor the impact of other influences on the ICT domain (eg., the macro-environment) and on the business domain (eg., the competitive environment).

In the case of the SAN domain, the research identified the following important characteristics: cardinality, centrality, the status of the focal firm, nature of relationships, experience with strategic alliances, volume of specific investments, network governance (defined as the governance mechanism and the degree of network change management) and the degree of multiple dynamic alignment. In the ICT domain the important properties identified were ICT alignment, maturity and flexibility. In the business domain the research considered the impacts of the ICT domain on the performance of business processes and the firm. Three moderating factors were identified: the integration of operations between partners, the extent to which ICT is strategic in the firm and the bits/atoms ratio of the firm's products and services (the ratio of the quantity of digitized information possessed by the product or service to the quantity of matter contained in this same product or service).

**Figure 1: SANO. ICT.Business Model**



In order to analyze the influences of the SAN on a firm's ICT the research considered its scenarios and signs. A scenario is one of two possible values attributed to a SAN characteristic. For example, low cardinality in the SAN was defined as a "negative scenario" for this characteristic and high cardinality as a "positive scenario". Every possible influence of the SAN on ICT has a positive (eg., activates, favors, enhances, facilitates), negative (eg., de-activates, disfavors, diminishes, hampers) or neutral sign. The aim of the Map of Influences presented in Table 1, is to help the firm's ICT manager assess the possible impacts of changes in SAN characteristics on his area.

We considered that there was positive symmetry when, in the positive scenario, the SAN characteristic influenced the property positively while also influencing this same property negatively in the negative scenario (eg: Cardinality X Maturity). There was positive asymmetry when, in the positive scenario, the SAN characteristic influenced the property positively, while also influencing this same property positively in the negative scenario (eg: Centrality X Flexibility). There were situations where influence could be perceived in one scenario whereas it could not be defined in the other (eg: Nature of the relationship X Alignment).

Table 1 can be useful for the ICT manager of a firm that is entering a SAN, for it enables him to assess the impacts of this new situation on his area's maturity, flexibility and alignment.

## DISCUSSION

The factors and constructs identified by the results of this study enabled the research to propose an analytical framework designed to support the formulation, implementation and management of ICT strategies for firms that operate in SANs.

**Table 1: SAN x ICT Map of Influences**

|                                     | Maturity | Flexibility | Alignment |
|-------------------------------------|----------|-------------|-----------|
| SAN Characteristic                  |          |             |           |
| Cardinality                         | S+       | AN+         | AS+       |
| Centrality                          | AS+      | AS+         | S+        |
| Status of focal firm                | S+       | AS+         | S+        |
| Nature of Relationship              | S+       | S+          | AN+       |
| Experience with strategic alliances | S+       | S+          | AN+       |
| Volume of specific investments      | S+       | S+          | S+        |
| Network Governance                  | SF+      | S+          | SF+       |
| Multiple dynamic alignment          | S+       | S+          | S+        |

Caption: strong symmetry with a positive effect (SF+); symmetry with a positive effect (S+); asymmetry with a positive effect (AS+); partial with a positive effect in the positive scenario (AN+).

A firm's ICT strategy is affected by internal and external factors of the business domain and the ICT domain itself (HENDERSON; VENKATRAMAN, 1993). Besides these domains, one must recognize that firms that operate in alliances are in turn influenced by them. The resources that are pertinent to a SAN's strategic actors have an impact on the strategy and organizational resources of the focal firm. To capture the competitive advantage provided totally or partially by the SAN in which it participates, the focal firm seeks to adapt its strategy to take into account the resources to which it has access in its SANO. The strategic alignment of a firm's ICT with its business strategy is thus partially affected by the SAN in the case of firms that take part in these networks.

A firm's SAN can stimulate its ICT's strategic alignment. The more intense, important, correctly managed and coherent with the firm's mission the relationships of a SAN with the focal firm are, the greater should be the internal consistency between ICT strategy and the firm's business strategy, otherwise the firm will be unable to adequately take advantage of the resources provided by the SANO. The lack of these stimulating factors is not necessarily decisive as ICT's strategic alignment may occur for other reasons, but the absence of this "positive pressure" may hamper the attainment of an internal coherence between the ICT and business domains.

Besides having a direct effect on ICT's strategic alignment, a SAN has a particular influence on two other ICT properties: maturity and flexibility. ICT maturity is directly related to its alignment, as pointed out by COBIT (ITGI, 2007). The greater the firm's need for strategic flexibility the more it will require ICT flexibility. It is this flexibility that makes strategic alignment with "slack" feasible so that ICT can support the firm's operational activities at all times, enabling it to develop innovations that confer competitive advantage.

Of the 24 influences listed in Table 1, 17 were symmetrical, 4 asymmetrical and 3 partial, with a positive effect in the positive scenario. Only one characteristic was mentioned by over 70% of respondents as having an influence on ICT properties: network governance. The main conclusions were: i) in the positive scenario of the SAN domain constructs, all the ICT domain constructs were affected positively (activates, favors, enhances, facilitates, etc); ii) cardinality, centrality and status of the focal firm, of the SAN domain, had asymmetrical influences, indicating that the mere presence of a firm in a SAN, independent of the scenario of these constructs, resulted in positive influences on ICT properties; iii) cardinality, nature of the relationship and

experience with strategic alliances, of the SAN domain, did not have a defined sign of influence in some negative scenarios.

All firms need to manage ICT strategy, because failing to align ICT strategically leads to inefficient and mainly ineffective ICT operations. This alignment was cited by all interviewees as being of fundamental importance. The ICT managers of firms where this alignment existed were fully aware of its value and strived to maintain it, and in those where it did not, ICT managers perceived their areas as being inefficient and ineffective. The influence of a SAN on the strategic alignment of the focal firm's ICT is moderated mainly by whether or not ICT is strategic for the firm, and if it is the SAN can stimulate this alignment. An important factor to be considered in the strategic management of ICT is the firm's competitive environment: the greater its turbulence, the more frequent will the firm's need be to reposition its strategy and also dynamically adapt its ICT area.

## CONCLUSION

The strategic alignment of the ICT area is necessary if it is to provide effective products and services to support the firm's business strategy, that includes its intention to take part in a SANO. The existence of multiple dynamic alignment in the SAN facilitates the alignment of ICT between the various stakeholders involved. ICT maturity makes it possible to define, implement and manage ICT's necessary flexibility, in the light of the firm's need for strategic flexibility and the level of ICT efficiency desired. In some cases due to the great need for strategic flexibility, the organizational slack in ICT may be significant, lessening its efficiency. In others, this flexibility is developed and incorporated into ICT strategy in order to permit the evolution and scalability of its elements (infrastructure, applications, processes, team and management).

ICT's impact on firm performance may be direct or indirect, in this case through its impact of the performance of the firm's business processes. The intensity of this influence is determined by how strategic ICT is for the firm and the bit/atoms ratio of its products and services.

Of all ICT properties, alignment is the one that most affects firm performance. According to this study's theoretical references, the role of a firm's main ICT executive (CIO) is fundamental in achieving this alignment, but his participation in strategic decision-making depends on how strategic ICT is to the firm. In industries with a high bits/atoms ratio in their products and services, as for example in the banking industry, it is usual for the CIO to be a member of the board of directors, which facilitates not only a high degree of ICT strategic alignment but also the introduction of innovations in products and services that enhance a firm's competitive advantage.

The present study contributes, in the realm of the theory of Business Administration, to the study of the influence of SAN domain characteristics on ICT domain properties by proposing: i) a list of SAN characteristics that have the most influence on a firm's ICT; ii) which ICT properties are influenced by SANs; iii) the relation between the SAN, ICT and business domains; iv) the factors that moderate the influences between these domains.

This study makes two main contributions to the tasks of ICT managers / consultants that work for firms that take part in SANs: a model of influences between the SAN, ICT and business domains, and a map that provides support for the definition of an ICT strategy. Based on the characterization of the SAN in which the firm takes part or may take part in the future, an ICT manager is better able to define an ICT strategy for the firm. For instance, if the nature of the relationships is collaborative and the volume of specific investments in these relationships is high, the ICT manager should prepare his area to attain a high level of maturity, by documenting and communicating, for example, its processes (COBIT's maturity model level 3) for, in this scenario, ICT is a factor in the success of these partnerships. Once the possible influences of a SAN have been understood, ICT managers can take these influences into account and better plan their firms' ICT in order to sustain competitiveness.

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# ROLE OF SCENARIO PLANNING IN COMPANY'S STRATEGY MAP DEVELOPMENT

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## ABSTRACT

*This paper serves to discuss an opportunity of appending BSC approach of external analysis results. Companies deal with uncertainly and evolutionary change in their environment. Assessing these changes' implication on firms' strategies require the creation of special techniques. One of these tools is scenario planning. The paper represents possible scenarios of Russian business environment and method of including these results to the strategy implementation process. This analysis was limited by using information from papers, concerning Russian specifics of BSC usage, which sometimes were very limited. A future research project could investigate the characteristics of a cross-national survey of best practice use of the BSC, appended by scenarios.*

## INTRODUCTION

Much of the literature relates to the tradition tools of strategic analysis and planning. Less common are surveys on matching short-term goals with long-term vision of the firm. Political and economical situation in Russia dictates specific terms to domestic companies. It is impossible to build up a sufficient system of organizational objectives without considering political, social and economical factors. To survive and grow in an era of continuous change, organizations must identify upcoming opportunities and threats and consider them in their strategic process.

When things are changing fast, if you wait for a trend to be validated, it's too late—the window of opportunity will have closed or the threat will have already torpedoed your company. Intuition and a sense of urgency become increasingly important as navigational tools. They help give voice to concerns about developments that have yet to appear on the horizon. This is precisely why scenario planning can be so valuable: it's an intuitive means of identifying and reflecting upon uncertainties that companies face. Scenario planning is one of the tools that combine future-open thinking with strategic thinking.

But another problem appears – how to implement scenario planning in strategy process. In too many cases, scenarios have been designed to clarify longer-term visions, without regard for shorter-term decisions. As a result, middle and senior managers often find that time-consuming scenario planning efforts are distractions that provide little insight into the crucial strategic decisions at hand.

Competitive success of a company depends in a greater degree on well-timed reasonable decision-making. Change of a one element of the strategy process should correlate to another component of this process. Organizational diagnostics and competitive analysis do not influence decision-making in the field of further company development in most cases. Strategic choice has intuitive nature, based on individual appraisals and opinions of top-managers. This especially concerns to Russia business. Moreover organization processes do not focus on a company strategy.

Put it otherwise, there is a gap between three elements of strategic management: strategic analysis, strategic choice and strategy implementation, while all this should be parts of one continuous process. Research into strategy implementation (Ghalayini, Noble, 1996; Gregory, 1993) indicates that successful strategy realization system should overtake several aspects of an organization activity. Besides determination and connection strategic and functional levels of management, the system should be both flexible, but sustainable. Balanced Scorecard (BSC), developed by Norton and Kaplan meet these requirements.

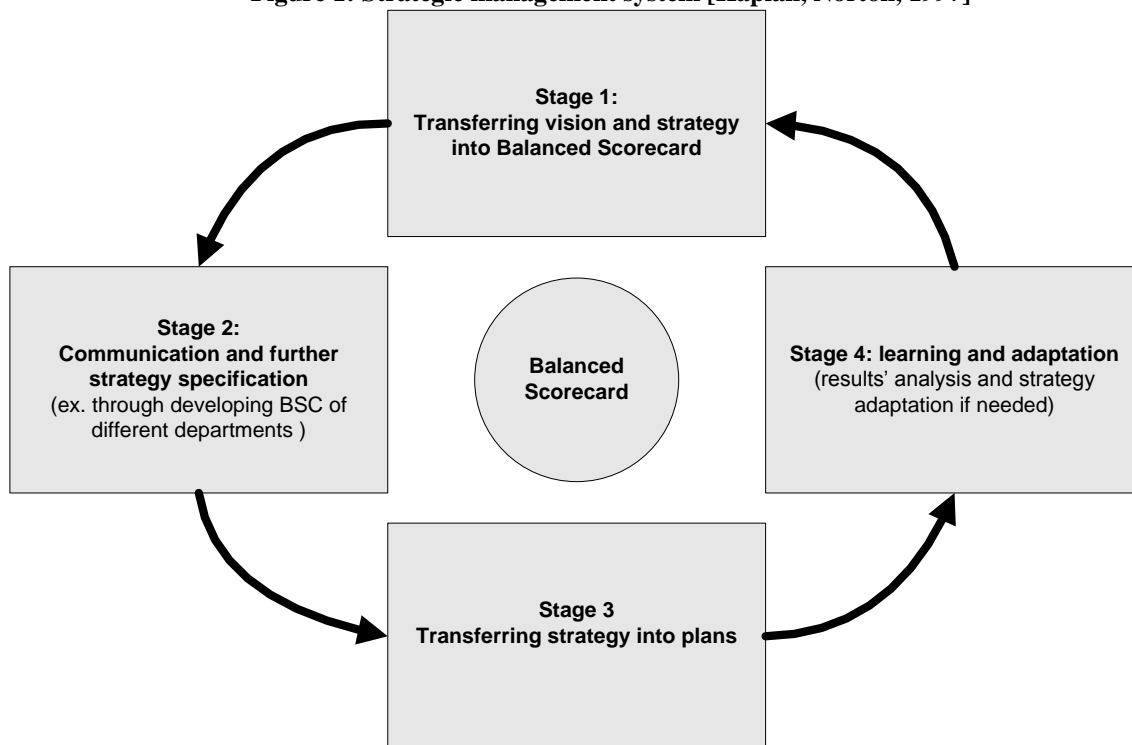
The purpose of this paper is combining BSC by elements of external analysis. In other words, a possible version on appending strategic maps with scenarios will be presented. The case company will be one of the largest financial corporations, belonging to leaders in banking services and insurance.

## ELEMENTS OF CORPORATION'S STRATEGIC PROCESS: BALANCED SCORECARD AND SCENARIO PLANNING

At least three different definitions of the stages of the BSC evolution and usage exist in the literature (Morisawa, 2002; Miyake, 2002; Lawrie and Cobbold, 2004; Speckbacher et al., 2003). All authors agree that the first generation BSC combines financial and non-financial indicators with the four perspectives (financial, customer, internal business process and learning and growth). At this stage, "measurement systems without cause-and-effect logic may also qualify as Balanced Scorecards" (Malmi, 2001, p. 216). Speckbacher et al. (2003) and Lawrie and Cobbold (2004) argue that the second generation BSC emphasised the cause-and-effect relationships between measures and strategic objectives. It became a strategic management tool, usually utilising a strategy map to illustrate the linkage between measures and strategies. In contrast there is a view in the literature (Morisawa, 2002; Miyake, 2002) that the key contribution of second-generation BSC was the formal linkage of strategic management with performance management. There are some variances between definitions of the third BSC stage. Speckbacher et al. (2003) suggested that the third generation BSC was the second generation but adding action plans/targets and linked to incentives. But According to Morisawa and Miyake (2002) the concept of the strategy-focused organization (Kaplan and Norton, 2001) reflected the third-generation application of the BSC. In the last research Norton and Kaplan (2005) present their model as complex strategic tool, included adapted concept of Treacy and Wiersema (1997). At the stage of developing the "client" perspective, the authors point out four available strategies, similar to "value disciplines" by Treacy and Wiersema.

Put it differently, today BSC represents a complex management tool and solves a number of problems of traditional methods of strategic planning by organizing such key processes as transition of vision into strategy, business-planning, and strengthening feedback on results of implementation actions. Management based on BSC becomes a cyclic process (Fig.1), and provides communication between three elements of strategic management: strategic analysis, strategic choice and strategy implementation.

**Figure 1: Strategic management system [Kaplan, Norton, 1997]**



In spite of reviewing BSC as complex strategic tool, BSC has some limitation, both concerning to market application and conceptual.

Firstly system implementation and strategy map actualization require sizable time costs. Under conditions of high-turbulent business environment stages of development, update and implementation of company's strategy are integral with each other ("double-loop" effect). Hence, there is a criticized aspect of the system – BSC enhancement. On the one hand, there is a necessity of supporting alignment between BSC and changing corporate strategy or structure. On the other hand, system maintenance requires significant expenditure of time and resources and creates danger of delaying of all processes that immediately affects company's efficiency as a whole.

As a result, there is a danger of irrelevant system's development, which will not reflect environmental dynamics by the moment of implementation. Especially it is traced in organizations with short production cycle (for example, in non-manufacturing business) where speed of change in industry is very high.

The given threat is a consequence of lack of researches about 5 Porter's forces and possible scenarios' influence on organization activity and success. Some researchers claim that BSC represents only a certain strategy formulation, but threats and opportunities are considered only at a stage of its development. Nevertheless, it is necessary to understand, that frequently BSC is not only a tool of strategy implementation, but also of its update. Changes in company strategy without taking into account possible variants of macro -and microenvironments development seem unwarrantable and risky.

Another drawback of BSC is missing interests of some stakeholders. In spite of the fact that concept of four prospects is often connected with the concept of stakeholders, different preconditions lay in their basis. Main points of the second are revealing and fixation of various groups' interests, in most cases not connected with each other. The chief task of the company consists in finding a compromise between them. There is a number of opinions, that the parameters concerning this or that perspective reflect interest of stakeholders (for example, personnel development in growth perspective, etc.). Nevertheless, it is necessary to underline, that the logic of strategy maps is build on the basis of essentially other concept: first of all the initial prospect (in most cases, it is "Finance") is defined, and then the chain of goal on other perspectives is developed. Measures are connected among themselves by cause-and-effect relation and are in hierarchical submission to each other, in a counterbalance of the stakeholders' concept where interests of various groups are not only interconnected, but contradict each other in most cases. Thus, the stakeholders' concept and BSC have various managerial approaches in their basis.

Thus, inclusion of scenario analysis into the process of strategy maps development and strategy implementation preclude a problem of neglecting of environment changes' influence on organization activity. The term "scenario" is used for a variety of different approaches – from simple alternative projections (e.g. "the high-price-scenario") to results of complex simulation-models. Here, the term scenario is used only for future images that combine future-open thinking with systems thinking. That means a scenario is one of the several future images that describes a future situation based on a significant number of consistent developments (Fink, Marr, 2005).

Strategy development rarely starts with a blank piece of paper. Often the aim is not to invent a completely new strategy, but to examine the suitability of the existing strategy with the help of external scenarios. The strategy in question can be an existing corporate or business strategy, or it can be a hypothesis-based strategic option put forward by the strategy team. Strategy valuation processes can discover problems or inconsistencies in the current strategy as well as new market opportunities. Both could lead to a revision or abandonment of the current strategic direction. This is why the traditional scenario planning process starts with an analysis of the impact of external scenarios on the company or business unit in question.

Within an organization there are often different perspectives on current problems, unsolved conflicts, different assumptions about the levers, where changes can be started, inconsistent compromises, different prioritizations of reasonable measures and resources – and different interests. Not taking those into account in the strategy formulation could turn the strategy implementation into a "suicide mission" right from the beginning. The above challenges can be addressed during the development of alternative strategy scenarios. In this way, management executives bring in their personal ideas and visions of the company's future and systematically link them to several strategy scenarios. The development and interpretation of such strategy scenarios is carried out in the following four steps:

1. *Identification of key elements of the strategy*
2. *Development and description of future options.* The aim of this step is to describe each key element's "windows of opportunities". Consequently the following questions are the centre of attention: What could our portfolio structure look like in the future? How do we cope with our current capabilities?

How are our resources interacting to create a competitive advantage? How significant could alliances and partnerships be in the future? Members of the scenario team rapidly encounter these questions as they are closely related to their daily business.

3. *Combining of future options with strategy scenarios.* Linking the future options for each key factor to strategy scenarios is done in parallel with the creation of external scenarios: this includes a consistency check for all future options and leads to a suitable number of possible strategies that describe a range of “windows of opportunity” for the company or business unit in general. Yet, it is important that the members of the scenario team now develop their own image of every strategy scenario.
4. *Development of a strategy map.*

## INCLUSION OF SCENERIO ANALYSIS’S RESULTS IN A COMPANY’S STRATEGY MAP

For illustrating a possibility of setting connection between scenario planning and BSC formulation of main scenarios of Russian market appears essential.

During scenarios’ developing secondary data, including experts diagnoses and qualitative activities, were used. Research, conducted by Princeton Partners Group in the field of trends and challenges of Russian insurance market, enriched by experts’ diagnoses of case study company’s management applied as a basic model.

Multifactorial model of dependence between realization scenario and qualitative factors has been used:

$$S = f(p; i; r_i; r_e; o_p), \text{ where}$$

$S$  – (scenario),  $p$  – (policy),  $i$  – (international integration),  $r_i$  – (institutional reforms),  $r_e$  – (economical reforms),  $o_p$  – (oil prices).

According to experts’ estimation dynamics of real insurance market has direct correlation with GDP (General Domestic Product). Share of insurance market increases with GDP growth. As GDP growth analysis allows to make some kind of insurance market dynamics estimation, the main dimensional characters of Russian macroeconomics development till 2010 are applied as basics. Key exogenous factor of scenario analysis model is price level of energy sources because this criterion influence business barometer in a greater degree of all others. Let us reviewing variants of each factor’s development in the context of three scenarios: basic, optimistic and pessimistic:

**Table 1: Factors (driving forces) for scenario development**

| Factors/Scenarios         | Optimistic   | Basic   | Pessimistic   |
|---------------------------|--|---|---|
| Internal politics         | <ul style="list-style-type: none"> <li>• Democracy, based on western liberal values</li> <li>• Presence of powerful opposition</li> </ul>    | <ul style="list-style-type: none"> <li>• Stability of existing political system and ruling elite</li> <li>• “Informal rules of the game”, based on preferences of political power</li> <li>• Proactive elimination of social tension</li> </ul> | <ul style="list-style-type: none"> <li>• Harsh contradictions between business and government</li> <li>• Absolute political support by society</li> </ul>                   |
| International integration | <ul style="list-style-type: none"> <li>• Entry into international coalitions</li> <li>• Acceptance of “western rules of the game”</li> </ul> | <ul style="list-style-type: none"> <li>• Forced collaboration with the West in the field of energy carrier’s trade</li> <li>• Formal reservation of “status quo”</li> </ul>   | <ul style="list-style-type: none"> <li>• Loss of interest to long-term investments from the Western side</li> <li>• Loss of influence in international community</li> </ul> |
| Institutional reforms     | <ul style="list-style-type: none"> <li>• Existing institutions’ restructure</li> <li>• Reforms’ support by society</li> </ul>                | <ul style="list-style-type: none"> <li>• Gradual reformation of institutions</li> <li>• Retention of main painful points -</li> </ul>   | <ul style="list-style-type: none"> <li>• “Clan war” for natural resources</li> </ul>  |

|   |   |   |   |
|---|---|---|---|
|   |   | corruption and informal relations prevalence etc.<br>• Strengthening of power structures  |   |
| Economical reforms                            | <ul style="list-style-type: none"> <li>• Auspicious investments climate</li> <li>• Knowledge-based economy development</li> </ul>   | <ul style="list-style-type: none"> <li>• Natural resources sector is the main economic driving force</li> <li>• Economic reforms deceleration in the middle-term period</li> <li>• Reduction of poor population</li> <li>• High level of government participation in the economy</li> </ul> | <ul style="list-style-type: none"> <li>• Strain on economic and social conditions</li> <li>• Economic collapse</li> <li>• Dramatic inflation upswing</li> </ul>                           |
| Energy carriers' prices                       | <ul style="list-style-type: none"> <li>• High level of energy carriers' prices</li> </ul>   | <ul style="list-style-type: none"> <li>• Oil-currency surge</li> <li>• Sufficient level of energy carriers' prices</li> </ul>   | <ul style="list-style-type: none"> <li>• Slump in energy carriers' prices</li> </ul>  |
| <b>Influence on Russian insurance segment</b> | <ul style="list-style-type: none"> <li>• The highest rates of insurance growth</li> <li>• Life-insurance development</li> <li>• Long-term planning horizon of population</li> </ul> | <ul style="list-style-type: none"> <li>• Medium rates of insurance growth</li> <li>• The main parts of the insurance segment are auto insurance and property insurance</li> <li>• Middle-term planning horizon of population</li> </ul>   | <ul style="list-style-type: none"> <li>• Slump in insurance fees</li> <li>• Popularization of state insurance only</li> <li>• Planning is absent as such or is very short-term</li> </ul> |

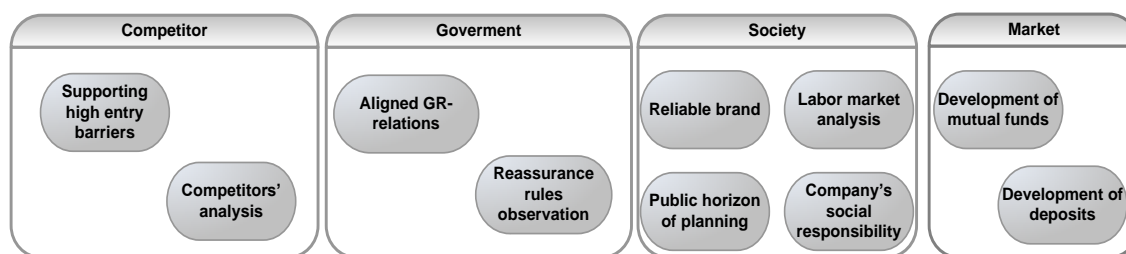
It is possible to divide process of strategy maps development into three large stages: preliminary analysis, direct development and update. Thus, possible scenarios are analyzed at the first stage, and then strategic factors, considering environment trends and forming skeletons of strategy maps are chosen. However, despite of understanding necessity of strategic analysis, results of the conducted stages are considered in many cases. At the same time, strategy maps, generated formally and without taking into account outlined trends, are initially inefficient. Insurance business is a subject of fast and in most cases not obvious changes. Especially, it concerns fast-growing segments of insurance like life insurance.

In other words, considering specificity of insurance business map formulated strategy should reflect possible dynamics of the industry processes' development. Thus, strategy map should initially contain the necessary elements reflecting external factors in it structure.

The perspectives, offered by Kaplan and Norton, are necessary, but not always a sufficient condition of complex management system's efficiency. In author's opinion, it is expediently to formulate the fifth projection - an environment that would overcome restrictions of the system. The fifth perspective should contain driving forces, which will indicate what scenario is realizing and according to what strategy will be changed if necessary.

Company's activity, in particular insurance business, is in to the great degree subject of industry influence. Therefore, during the description of activity specificity and major success factors of company, it is necessary to enter the themes reflecting analysis of outlined trends. The perspective "Environment" is presented on fig. 2.

**Figure 2: Environmental perspective for life insurance**



### Environmental perspective

Four themes have been included in the given prospect, in aggregate reflecting possible environmental factors that influence life insurance. Within the limits of corresponding themes interests of stakeholders groups - government, society, market, and competitors - are reflected.

The industry of insurance develops by high rates that entail increases of probability of market entry by new powerful foreign players. As a result, it is necessary to raise artificial entry barriers like creating alliances with Russian insurers, or through lobbying their interests in the government. However, the threat can proceed not only from future competitors, but also from real ones. From this point of view, constant competitors' monitoring and benchmarking is necessary.

The basic scenario reflects significant participation of the government in national economy and toughening of norms and standards, first of all, on reinsurance. Accordingly, building competent and stable relations with authorities is necessary. Realization of such mechanism is possible, first of all, during observance of necessary requirements and fair business dealing.

One of the major stakeholders for insurers is the society. The previous experience of life insurance in society sets the general level of population trust, thus, it plays a key role at decision-making on purchase of an insurance policy. Experience of insurance includes both duration of using services of life insurance, and presence of cases of means loss put in life insurance. The basic negative aspect of insurance by the current moment is absence of steady traditions of classical life insurance in Russia and negative experience of life insurance after disorder of the USSR. Thus, serious steps on overcoming a negative attitude to insurance, and to insurers in particular are necessary.

Scenario analysis has revealed the factor defining sizes of insurance premiums of a company – planning horizon of the society. As a rule, consumers with long planning horizon are inclined to save a greater share of their income and are ready to buy long-term insurance products, such as life insurance with greater probability. By expert estimations, planning horizon has medium-term character in Russia. Inclusion of the given factor in a strategy map is justified as it is one of defining parameters during the market size analysis.

Insurers actually assume a part of the government risks of in the field of the society well-being during their activity. The business community has realized that social activity of companies can give positive economic benefit. However, not only reputation of a company and actions of its competitors, but also market growth, or its structural changes influence insurance fees. Scenario analysis of the industry has shown that the insurance profit is influenced by development of alternative financial institutions. The degree of development of financial institutions, alternative to insurance, describes real opportunities of forms and methods for savings of a potential buyer of an insurance policy. The number of alternative financial institutions includes, in particular, bank deposits and mutual funds. The given factors are necessary for displaying on the strategy map as they directly influence volumes of insurance premiums of companies.

Thus, inclusion of the fifth perspective in BSC allows overcoming lack of the tool, offered by Norton and Kaplan, in the field of exception of environmental influence on the company. In spite of the fact that theoretically many heads realize the necessity of carrying out of the strategic analysis during maps' development, in practice, results of business are not used anywhere. In respect to it, inclusion of the fifth perspective is necessary for reflection of real market and competitive situation. The full strategic card is presented on fig. 3.

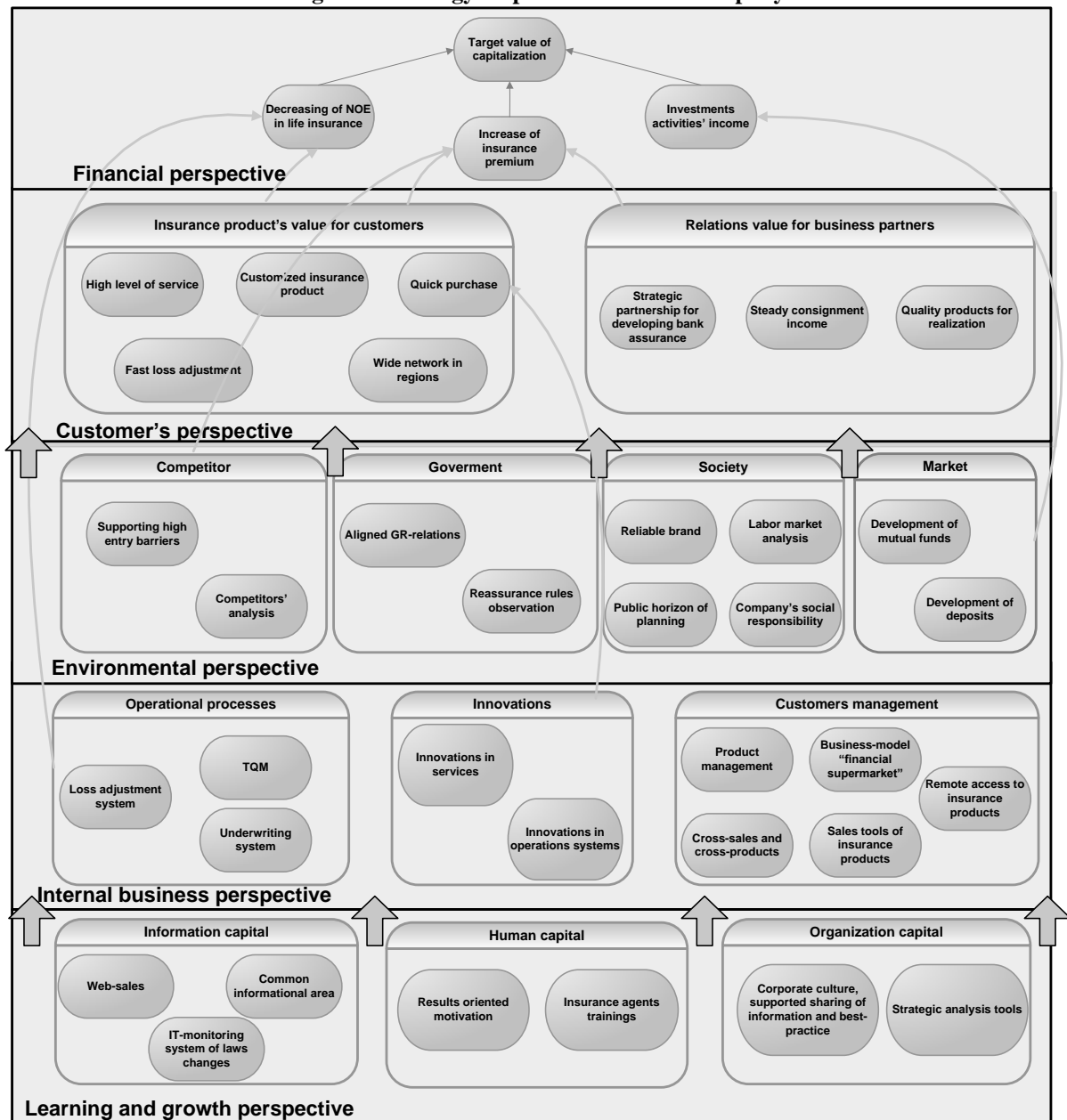
Significant aspects of strategic maps are cause-and-effect relations showing logic of value of Insurance Group. Some strategic themes directly influence result of the company activity like operational processes. At the same time, two prospects, "growth" and "environment" influence all processes. Thus, during strategy map development it is necessary to be precise in building hierarchy of strategic themes and perspectives, considering business specificity.

# CONCLUSION

Usage of scenario planning tool is obviously important not only for achievement of company's long-term objectives, but also for maintenance of stability and increase of organization controllability as a whole. On the basis of conducted scenario analysis, and also on the underlined restrictions of strategy map development methodology, the author has formulated the following recommendations.

First of all, during definition of strategic themes and factors, it is necessary to consider specificity of organization activity within the limits of the chosen strategy. For inclusion of scenario results analysis in strategy maps it is necessary to create the fifth perspective, reflecting a real market and competitive situation. For prevention of conflict of interests in the future, it is necessary to consider stakeholders' interests during map development.

**Figure 3: Strategy map of an insurance company**



On the basis of the conducted analysis, the author considers that taking into account the allocated recommendations scenario planning and balanced scorecard can become real tools of complex strategic management, allowing focusing resources and organization competences for achievement of set goals and aims within the limits of the chosen strategy.

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# WINE BRANDING: DEVELOPING A FRAMEWORK FOR THE CYPRUS WINE INDUSTRY

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## ABSTRACT

*This research seeks to identify the current stakeholders' perceptions with regards to Cyprus Wine and to identify any problems that need to be addressed. This research focused on local, Greek and international wine experts as well local consumers. The methodology employed focus groups and depth interview. The inescapable conclusion is that a number of necessary changes need to be done which will require greater investment in the product and then its promotion and labeling.*

## INTRODUCTION

Cyprus has the longest history of wine making in Europe and Europe accounts for three quarters of the world's wine production. Historical evidence establishes wine being produced in the eastern Mediterranean area between 5000-4000 B.C. Cyprus is considered to be among the first countries to practise viticulture (Johnson and Robinson, 2001). Modern excavations have established that during the Hellenic (Classical) Age, there existed a wealthy and remarkable society whose prosperity seems to have originated from and depended on viticulture, wine production and wine trading. The role of Cyprus as a wine producing country was further highlighted during the period of the Lusignans (1149-1489) and Venetians (1489-1571). During the Middle Ages, Cyprus maintained close links with the Crusader nations and so a sweet wine called *Commandaria*, gained international fame. According to the historian Ludolf von Suchen, who visited the island between 1336 and 1341, *Commandaria*'s trade, was controlled by the Crusader conquerors of the island, the Knights Templar, who arrived on the island in the 12<sup>th</sup> century and this became the source of their wealth and prosperity (Kythreotou, 2003).

The development of Cyprus in the field of viticulture and wine-producing ended in the latter half of the 16<sup>th</sup> century with the Turkish Ottoman occupation. During virtually this entire 300 year period, wine producing would receive little attention. A further important stage in the history of Cyprus wine took place in 1878 when British control over the island replaced the Turkish Ottoman rule and taxation changes that were enacted had the effect of kick starting the local wine making industry once again. In the 1960's, Britain accounted for half of the island's wine production which was then going into sherry but in 1996, the European Commission ruled that only fortified wine from Jerez, Spain, could be called 'sherry'. The other main market for Cyprus was supplying large volumes of low quality wine to the Soviet Bloc countries but this, too, fell away with the collapse of communism following 1989. Within the space of a few years, Cyprus had lost its main exports and its export markets. Volumes of wine traded fell from over 200,000 tonnes in the 1980's to 24,000 tonnes in 2006.

Membership of the EU also meant an end to export subsidies. There is no volume market today for low quality wine and so the response has been to address the quality issue and introduce new internationally popular grape varieties such as Cabernet Sauvignon. Regional wineries were also developed close to where the grapes were produced to avoid the previous quality problems associated with transportation over long distances, when the grapes would immediately start to ferment. From these actions, it is becoming clear that Cyprus is seeking once again to become internationally competitive both in terms of quality and price.

According to figures produced by the Wine Products Council in 2006, vineyards used exclusively for wine making covered an area of 12.358 hectares of which, 9.350 hectares (76%) was made up of domestic varieties and the remaining 3.009 hectares (24%) of international varieties. In comparison with 1999, the land assigned to wine growing was down 5.702 hectares and there was a notable decrease in local varieties. This may have been due to subsidies given by the Cypriot government to remove indigenous varieties like Mavro that do not offer very good wine results. International varieties have decreased to a lesser extent.

In addition, exports of Cyprus wine have been declining in recent years and are now at 3.4 million litres compared to 22 million litres in 2003 and 45 million litres in 1999. Domestic sales have increased only moderately while the per capita wine consumption increased from 13.5 litres in 1996 to 21 litres in 2006 so imports are taking hold. Sales of imported wine have increased from 0.71 million in 2000 to 1.16 million in 2003 and 3.5 million in 2006. Before looking at per capita consumption figures, it has to be borne in mind that while Cyprus has a population of around 800,000 it has an annual intake of 2.5 million tourists, of whom approximately 1.5 million are British, and who know Cyprus wines because they are able to drink Cyprus wines in the UK through the Coop and its Island Vines brand. While the British have traditionally not been the most discerning of wine drinkers, quality is becoming more and more important even to this market.

Consumers expect differentiation and to be met with choice and so the Cypriot wine maker, in order to cope with the demands of consumers, needs to continue to invest in both quality and innovation.

## Literature Review

Branding has many characteristics or facets and so many possible advantages in terms of identifying and profiling a particular product. Definitions vary. A brand is a singular idea or concept that a product owns inside the mind of the prospect (Ries, 1998). A brand usually comes in the form of a name, term, sign, symbol or design, or a combination of these and is intended to identify the goods or services of sellers and to differentiate them from those of competitors (Kotler, 2003). Taking this further, Levitt (1986) stated that the successful seller must surround his product with a cluster of value satisfaction factors, providing a total proposition to customers and a reason to buy.

Kotler (2003) stipulates that a brand is essentially a seller's promise to consistently deliver a specific set of features, benefits, and services to buyers. It is a promise as to what a product/service or a company can deliver. de Chernatony and McDonald (2003) postulate that a successful brand is an identifiable product, person or place, augmented in such a way that the buyer or user perceives relevant unique added value that matches their needs most closely.

Powerful brands have high brand equity which brings with it higher brand loyalty, reputation, credibility, awareness, perceived quality, brand associations and other assets such as trademarks and channel relationships which also provide a defence against fierce competition.

According to Blery and Antoniades (2006) the global spirit market reached a value of 167.2 billion dollars in 2003, having grown with a compound annual growth rate of 1.9 per cent in the 1999-2003 period. Further, the wine market of today is characterized by an ever-increasing plethora of brands (Bruwer, 2004). In addition, Reid (2001) argues that the wine industry is having to cope with the events that accompany such transition: retail sector consolidation; proliferation of brands, fragmentation into a multitude of market segments; and overproduction (Mora, 2006). In this crowded marketplace, it is becoming increasingly difficult to differentiate a wine product from its competitors (Johnson and Bruwer, 2007).

While many wineries are witnessing a slowdown, it is not true of them all. Many of those which are not slowing down, possess strong brand names. Building brands is very important in a wine market where the consumer can be overwhelmed with choices. In having a strong brand, a company enjoys cost-effective marketing campaigns, greater trade leverage, and higher margins and confronts product line extension with ease. Cyprus had such a trade for years with the generic classification 'sherry' until it was withdrawn by the EU. Cyprus therefore has experienced the advantage in the past of being able to trade on known labels and expectations.

Branding in the wine industry is becoming increasingly important.. In June 1996, the Australian Wine Foundation released *Strategy 2025*, a statement of aspirations and goals for the Australian wine industry.

[Strategy 2025](#) addresses Australia's competitiveness, market opportunity, resource requirements and the government facilitation required to fulfill that industry vision. They identified a number of key objectives critical to the ultimate realisation of this vision.

In adopting these objectives, it is important to realise that Australia's industry growth and development will occur gradually. Though Australia is not considered a benchmark for Cyprus, Cypriot practitioners nevertheless monitor what is taking place in Australia and other wine producing countries.

The wine industry internationally is very fragmented and offers a very wide range of brands and grape varieties, which creates a problem for brand recognition and complicates the sales process (Andrew, 2002). It is considerably difficult and costly for a sales team to simultaneously push a number of different brands, each consisting of multiple varieties (Wine Business Monthly, 2002).

For Cyprus no research has been undertaken up to the present day, to portray the importance of branding in the wine industry and the benefits deriving from brand building.

## Methodology

Evidently, the competitive environment has prompted many academics to comment on the need for increased emphasis on branding to ensure success in the future (Reid, 2002; Beverland, 2000; Getz, 2000; Lockshin, 1997). However, despite this general consensus and acknowledgement of the vital role that brands play in the successful marketing of wine, there appears to be a paucity of empirical research into branding in the wine industry (Mowle and Merrilees, 2005).

This research seeks the perceptions of local consumers as well as local, Greek and international wine experts (non Cypriot or Greek) on the Cyprus wine industry. In using the term "wine experts", we refer to people in Cyprus and overseas, who are professionals working in the wine industry, including oenologists, sommeliers, wine makers, wine journalists, owners/managers/ directors of wine companies, wine instructors and cellar owners. This research aims to outline the problems within the industry and examine the factors that consumers value as important when buying and consuming wine. This will allow recommendations to be made in the areas of marketing and more specifically, in branding. The input of experts was of paramount importance here not only in understanding the problems and deficiencies evident in the market, but also in extrapolating opportunities and recommendations for the industry.

The study used both qualitative and quantitative research methods. Primarily this research was qualitative in nature since its main aim was to discover people's views, perceptions and experiences rather than reflect an a-priori reality. Qualitative research is the most popular research method used within the social sciences. It is often a broad term which describes research which focuses on how individuals as well as groups view, understand the world and construct meaning out of their experiences. Qualitative research is an approach to research that uses a variety of methods and involves an interpretive approach (Denzin and Lincoln 1994) dealing with the way that people make sense of their social world and how they express these understandings (Deacon *et al* 1999). Researchers that adhere to this perspective are interested in exploring people's attitudes, motivations, and subjective experiences (Daymon and Holloway 2002).

Quantitative methods were also used. Quantitative research is the systematic scientific investigation of quantitative properties, phenomena and their relationships. It is a widely used method in the social sciences.

With the first category (local Cypriot wine experts), both interviews and focus groups were used. For the second category (Greek wine experts), interviews were held in Greece. For these two categories, qualitative research was used. Finally, for the international experts, an email questionnaire was seen as being most appropriate. This was of a quantitative nature. The sampling procedure used falls to non-probability and specifically a purposive/ judgmental sample (Saunders *et al.*, 2003).

In relation to the consumer focus groups, four focus groups were held in Nicosia, Larnaca, Limassol, and Paphos. All focus groups were held with ten participants, who belonged to the 18-60 age range. The focus groups included individuals who were occasional users of wine and other alcoholic drinks and had a good knowledge of wine. The researchers acted as moderators and observers and used an interview guide in all of the

group interviews. The focus group discussions led to the collection of in-depth qualitative data regarding consumers' attitudes towards wine consumption, life styles, and purchase decision making.

Five exploratory interviews in Cyprus provided an indication of the overall situation in the Cyprus wine industry. Exploratory interviews led to the effective design of the interviews, focus groups and email questionnaire that followed. Further to this, ten in-depth semi-structured interviews were conducted and five focus groups were held with twelve participants in each.

For the primary interviews held in Greece with the Greek wine experts, twenty in-depth semi structured interviews were undertaken. These interviews lasted between one and a half to two hours each. As a result of the proximity of Greece to Cyprus and the close relationship between the two countries, the input and knowledge of Greek experts has proven to be highly significant. Their input in presenting their perceptions, understanding and recommendations for the Cyprus wine industry, in relation to branding, marketing and production, was highly valued.

The questionnaire was piloted with three participants and then circulated. This involved three follow ups, which sought to remind and encourage respondents to complete and return the questionnaire on time. The systematic data collection through semi-structured interviews, focus groups and questionnaires allowed for the analysis and presentation of findings.

## Findings and Discussion

### *Interviews and focus groups with Cypriot wine experts*

To gain an insight into the Cyprus wine industry, interviews were held with local wine experts with the aim of examining and portraying the perceived benefits and drawbacks found in the wine industry. Capitalizing on the strengths and improving the apparent weaknesses can help design an appropriate branding strategy.

The history of Cyprus as a wine producing country was recognized as a strong competitive advantage and may be seen as a strong selling point. It is generally accepted that the terroir found on Cyprus can help develop high quality wine. One respondent said: "Cyprus terroir is one of the best in the world. We should use this for our benefit as it can allow us to produce full bodied wines of a very good quality".

Exploratory research indicated that lack of wine education was an important drawback. This was evident across all levels; wine makers, customers, distributors and restaurants were not equipped with the necessary wine-producing skills or the appropriate handling and storage facilities. Even though the technology used for wine making was appropriate, wine producers were not always qualified or educated. Furthermore, Cypriot wine consumers lacked basic knowledge in relation to wine keeping, serving, drinking and enjoying. An oenologist commented that "lack of education is our biggest problem. We should all work hard to overcome this for the benefit of the industry in general." Finally, branding and marketing related issues, country of origin, friends and peers highly influenced the wine purchasing decision.

In Cyprus, the main local grape varieties used are Mavro and Xynisteri. The average Cyprus wine is light, fresh and for immediate drinking. It is not fruity, mellow or easy to drink or even balanced. Cypriot wine experts have stressed that the existence of indigenous varieties could differentiate Cyprus on the wine map and distinguish them from the new world countries. As customers are always looking for something unique, a well planned and implemented communications approach could highlight those distinctive selling propositions. A winery owner stated: "we can produce wines that are unique and cannot be found anywhere else in the world; and this is because we can use indigenous grape varieties like Maratheftiko. If we manage to produce high quality wines by using mainly local grape varieties then we have something different to offer to consumers".

Appropriate care was not always taken in handling and storing wine in local supermarkets and restaurants, with most places lacking the appropriate technology necessary for the storage of wine. As a winery general manager stated: "this is another big problem that we face. I very often distribute wine to restaurants that do not have the basic technology to store it".

Secondary research had identified that the top selling wines in the world are branded. (Harpers, 2004). They focus on the use of a brand name and they offer specific varietals to consumers, their labels are usually very attractive and sophisticated. In Cyprus, however, Cypriot wine producers make no effort to develop branding where brand names often derive from Greek mythology or history. Similarly, as most wineries are small family businesses, some wine producers use their family surnames or family members' names on the label.

It is commonly recognized among local wine experts that the shelf price for Cypriot wine is high. It is expensive and more than that of other wine producing countries, especially those of the New World which offer very good value for money. "This is true, to some extent, but local wine cellars overemphasise this and push consumers towards purchasing wines imported from Chile, California, South Africa and Argentina.

#### *Interviews and focus groups with local wine consumers*

This research identified that local consumers drank wine when socialising and on special occasions (to celebrate). Interviewees claimed that even though beer and vodka were the most highly preferred alcoholic drinks, the number of Cypriots drinking wine was increasing. A consumer stated: "wine is very trendy nowadays. It is a lifestyle statement for many, especially younger people".

Wine is perceived to be a drink which should be enjoyed among friends and family members since it is viewed as having the following qualities: 'romantic', 'special', and 'aristocratic'. Consumer preference towards red or white wine was determined primarily by the type of food being eaten and are influenced also by the season. "I prefer drinking white wine most of the time; and this is mainly because of the very high temperature especially during the summer period" (wine enthusiast).

Wine tasting events, packaging and advertising can have an impact on wine preferences and consumption patterns. Specifically, when consumers were asked which information sources they used to evaluate various alternatives, they claimed that they relied less on advertising and more on wine tasting. Further, Cypriot consumers (especially women) often use the packaging of a product (bottling and labelling) as an indicator on which to make their purchase choices. A wine consumer added: "I would say that my knowledge regarding wine is moderate. I sometimes make a purchasing decision by giving emphasis to the shape of the bottle and design of the label. I know this is not completely valid, but this is true for me".

When participants were asked to identify the factors which influenced their purchase choices, they identified advertising, price, packaging and word of mouth as the most important. There was some uncertainty regarding the relationship between price and quality. Consumers do not generally believe that a wine with a high price will necessarily be best; whilst those consumers who have a good wine knowledge claimed that they are not influenced by price. An interesting finding was that the mass production of local wine by the big wineries in order to decrease prices and increase demand, has had a negative impact on the image of local wine.

Finally, consumers believe that restaurant owners and waiters should be trained so as to have a good knowledge and understanding of local wine in order to be in a position to offer better advice to consumers. "Waiters in restaurants are not properly trained. Their product knowledge is limited so they do not really offer any reliable advice to consumers. They do not even really know how to present and serve wine properly" (wine connoisseur).

#### *Interviews with Greek wine experts*

This section provides an analysis of the interviews held with wine experts in Greece.

Respondents indicated that the Cyprus wine industry was similar to that of Greece at a previous stage in time, which is not necessarily a negative factor.

The quality of local wine was described simply as 'average'. If compared against foreign wines, Cyprus wine was inferior in terms of quality and more expensive in terms of price. It was recommended that wine makers should concentrate on producing consistently better quality wine and should strive to offer value for money. Wine quality might also be improved if wine makers in Cyprus were to develop their know-how, acquire external expertise, and work more closely with one another.

Greek wine experts stated that the Cyprus wine industry has high potential to expand and develop. Developments in terms of quality, together with appropriate marketing techniques and branding strategies, could increase market volume, value and share. A winery Associate General Manager added: "Cyprus tradition as a wine producing country, together with a wide spectrum of other factors like the terroir and the indigenous varieties that have existed in the island for thousands of years can be used to differentiate against competition". Problems arising from low quality generic house wine served in most Cyprus restaurants (some serve exclusively house wines) can dilute the image of the local wine industry. "This is a problem that we face in Greece too" (wine journalist and book author).

Greek experts stressed that branding in the wine industry should be developed by focusing on the historical heritage of Cyprus in relation to wine, which represents civilization, culture, religion, heritage, and also provides a lifestyle symbol. A wine consultant stated that: "this is the message that should be transmitted to the consumer. The fact that wine is curative should also be indicated. Cypriot wine producers should also perhaps use the international acceptance of Commandaria as a step towards universal acceptance".

An operations manager of one of the biggest Greek wineries commented that: "different wines should be produced for different target market groups". This takes us into marketing segmentation. This was supported by a Sommelier who stated that "fresh, easy to drink, young, and cheap wine may be produced for young people and more distinct, mature and premium wine for older people, who are willing to pay more". Again, another way to increase market share in both local and international markets is to attract tourists by promoting local wine, using foreign varieties blended with indigenous ones.

Currently, Cypriot wine producers work alone without sharing any form of expertise or knowhow. The culture is rather competitive and wine producers do not cooperate with one another. At the same time, only a few wineries will receive advice from a professional oenologist. A winery owner indicated that: "cooperation between wine producers is of paramount importance. This can be in the form of establishing new associations or in the form of achieving economies of scale by sharing expertise and costs associated with the employment of a full time oenologist and sommelier. This is exactly what we did and believe me, it works".

## **Academic Implications**

Brand building can prove effective if issues which differentiate Cyprus as a wine producing country are promoted to consumers as competitive advantages. To begin with, the history, heritage and culture of Cyprus as a wine producing country should be emphasized in order to attract attention and receive wider acceptance from wine consumers. Secondly, Cypriot indigenous varieties can also differentiate Cyprus on the wine map and this could be used to make Cyprus unique when compared with New World wine-producing countries. Moreover, it is strongly recommended that the international acceptance, success and the recognition of Commandaria be used as a first step towards success.

Branding is important but its effectiveness is dependent upon quality. It has to live up to its promise. Wine quality can be improved only if wine makers in Cyprus invest, develop their knowhow, acquire external expertise, and work collectively. Furthermore, stakeholders' lack of wine education needs to be addressed to develop their knowledge in handling, storing, serving, drinking and enjoying wine.

Cooperation between wine producers is of paramount importance. This could be in the form of establishing new associations or in the form of achieving economies of scale by sharing expertise and the costs associated with the employment of a full time oenologist and sommelier. A number of changes are being recommended that need to be implemented in order to allow branding, quality and marketing techniques to be further developed.

In relation to promotion, more attention needs to be given to educating the consumer, which involves demonstrations, wine tasting events and wine exhibitions. Provided that the quality of wine is good, these events will reap benefits through word of mouth, as customers tend to be loyal to brands they have tasted in the past and have enjoyed. Other promotional tools such as sales promotion, retail displays and advertising are of lesser importance.

Unfortunately, as was previously stated, vineyards in Cyprus are not privately owned. Consequently, it is strongly recommended that wine makers take full control of the quality of the grapes produced. Cultivation needs to be restricted to producing a lower volume of higher quality. When examining the present quality of Cyprus wine against the offered shelf price, there is no value for money proposition being presented. Therefore, a new pricing strategy needs to be implemented in order to create customer satisfaction and develop loyalty through offering higher customer value.

The island's native grapes should be used to interest the adventurous consumer, looking for something different. In the first stage, wines from indigenous grape varieties may be blended with international varieties, in order to provide the cautious consumer with the confidence to try wine from local grape varieties. Later, once these varieties have been adopted, wine producers can bottle and sell wine uniquely from these varieties.

A strong brand name carries high credibility, loyalty, name awareness, perceived quality and a strong brand association. Subsequently, the company can then launch line and brand extensions more easily. Branding can differentiate a wine from other national and international competitors, offering a defence against competition. It seems, then, that local wine producers still have a great deal of work to undertake before they can start to enjoy the benefits of strong brands.

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# **AN ANALYSIS OF INVESTMENT BEHAVIOR OF POTENTIAL CLIENTS OF SECURITIES FIRMS IN THAILAND**

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## **ABSTRACT**

*This action research is conducted for a leading securities firm in Thailand. The objective of this study is to give insights into investment behavior of potential customers which are defined as ones with good education and high income. Such target group includes people in five professions, i.e. physicians, engineers, lawyers, professors, and executives of private organizations. Results indicate that these target groups are promising clients who mostly remain intact. This target group prefers low risk. To acquire these target customers, firms should provide knowledge of investment and assure them of the firm reputable management. There is also demand for other financial products, i.e. bonds/debentures and funds. Such target group experiencing investment in stock market mostly uses mobile trading an internet trading rather than traditional trading mediums.*

## **INTRODUCTION**

Recently local financial and securities firms in Thailand have been facing increasing competitive business environment resulting from deregulation. Such deregulation includes the dilution of exchange controls, the liberalization of interest rates, the broadened scope of financial institutions' operations, and the liberalization of securities brokerage fees. The relaxed certain regulations are expected to increase competition and thus leading to greater effectiveness and efficiency that will benefit investors. Consequently, Thai securities firms are expected to be improved and upgraded by takeovers or mergers and acquisitions, or operational efficiency improvement ([www.tdri.or.th](http://www.tdri.or.th)).

To improve operational efficiency, securities companies need to effectively expand customer bases and lower the cost of services. A leading local securities firm in Thailand is concerned about this urgency and this action research is thus conducted to give insights into investment behavior of potential clients. Findings of the study are expected to provide implications for acquiring the target customers by providing products and services that best fit their needs.

Additionally, the trend towards e-services is including trading, portfolio status, payment, and access to stock and market analysis is expected to be found in Thailand as same as in western and industrial countries. E-services can help reduce volume of service transactions between customers and service agents leading to better operational efficiency. Such change also enables securities firms to provide services to customers in the areas that outreach for the firms at lower costs.

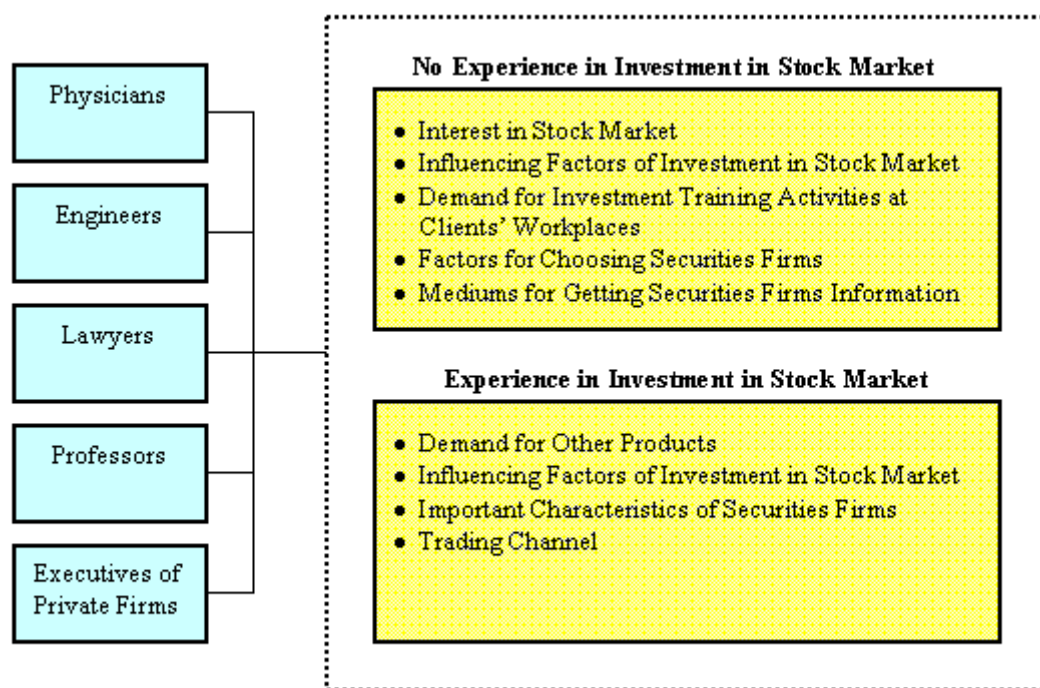
Taking into consideration the conditions, the potential clients for the firm are ones with high income and good education. High income would provide them financial adequacy for investment while good education would ensure technological capability needed for e-services. Based on these characteristics, the potential clients are defined as ones who are physicians, engineers, lawyers, professors, and executives of private organizations. Accordingly, this study is designed to investigate investment behavior of this target group.

## **ANALYTICAL FRAMEWORK**

This study focuses on Thai people working in five professions: physicians, engineers, lawyers, professors, and executives of private organizations. These professions are targeted because of high income and education. With high earning power and career stability, this target group has positive investment potential. Also, as well-educated, these target customers are potential customers for financial products and services.

The analytical model of this study is developed to give insights into investment behavior in three aspects: 1) influencing factors of choosing securities firms, 2) saving and investment behavior, and 3) influencing factors of investment in stock market. The conceptual framework of the study is thus as depicted Figure 1.

**Figure 1: The Conceptual Framework**



The questionnaire is developed based on business needs of the firm. The levels of importance of factors are measured using Likert rating scale ranking from 1 (Not Important) to 5 (Very Important).

## DATA AND RESULTS

Data for this study are cross-sectional data collected from survey using questionnaire during February to April 2006. The sample is 250 Thai people who are physicians, engineers, lawyer, professors, and executives. The proportion of each profession is 20 percent equally. This sample is drawn using multi-sampling methods. After stratifying by profession into five groups, sample units of each group are drawn using systematic random sampling by identification numbers of registered persons of the professional association of Thailand. The unit of observation of this study is individual while the unit of analysis is the target group of five professions.

Table 1 summarizes descriptive statistics of the sample. The proportions of male and female respondents are nearly equal at 48.4 and 58.6 percent respectively. The age of most respondents is between 35 and 44 years old (52.0 percent) while the average monthly income of 69.6 percent of respondents ranges between 30,001Baht to 50,000Baht (32Baht approximately equals to 1US\$). Single respondents account for 65.6 percent and the proportion of respondents having no child is 71.2 percent.

**Table 1: Descriptive Statistics of the Sample**

| <b>Variables</b>             | <b>Frequency</b> | <b>Percentage</b> |
|------------------------------|------------------|-------------------|
| <b>Gender</b>                |                  |                   |
| Male                         | 121              | 48.4              |
| Female                       | 129              | 51.6              |
| <b>Age</b>                   |                  |                   |
| Lower than 25                | 13               | 5.2               |
| 25-34                        | 130              | 52.0              |
| 35-44                        | 56               | 22.4              |
| 45-54                        | 36               | 14.4              |
| 55-64                        | 13               | 5.2               |
| More than 64                 | 2                | .8                |
| <b>Education</b>             |                  |                   |
| Bachelor Degree              | 164              | 65.6              |
| Higher than Bachelor Degree  | 86               | 34.4              |
| <b>Monthly Income (Baht)</b> |                  |                   |
| 30,001 - 50,000              | 174              | 69.6              |
| 50,001 - 70,000              | 35               | 14.0              |
| 70,000 ขึ้นไป                | 41               | 16.4              |
| <b>Marriage Status</b>       |                  |                   |
| Single                       | 164              | 65.6              |
| Married                      | 82               | 32.8              |
| Divorced / Separate          | 4                | 1.6               |
| <b>Children (Person)</b>     |                  |                   |
| None                         | 178              | 71.2              |
| 1-2                          | 58               | 23.2              |
| 3-4                          | 14               | 5.6               |
| More than 4                  | 178              | 71.2              |

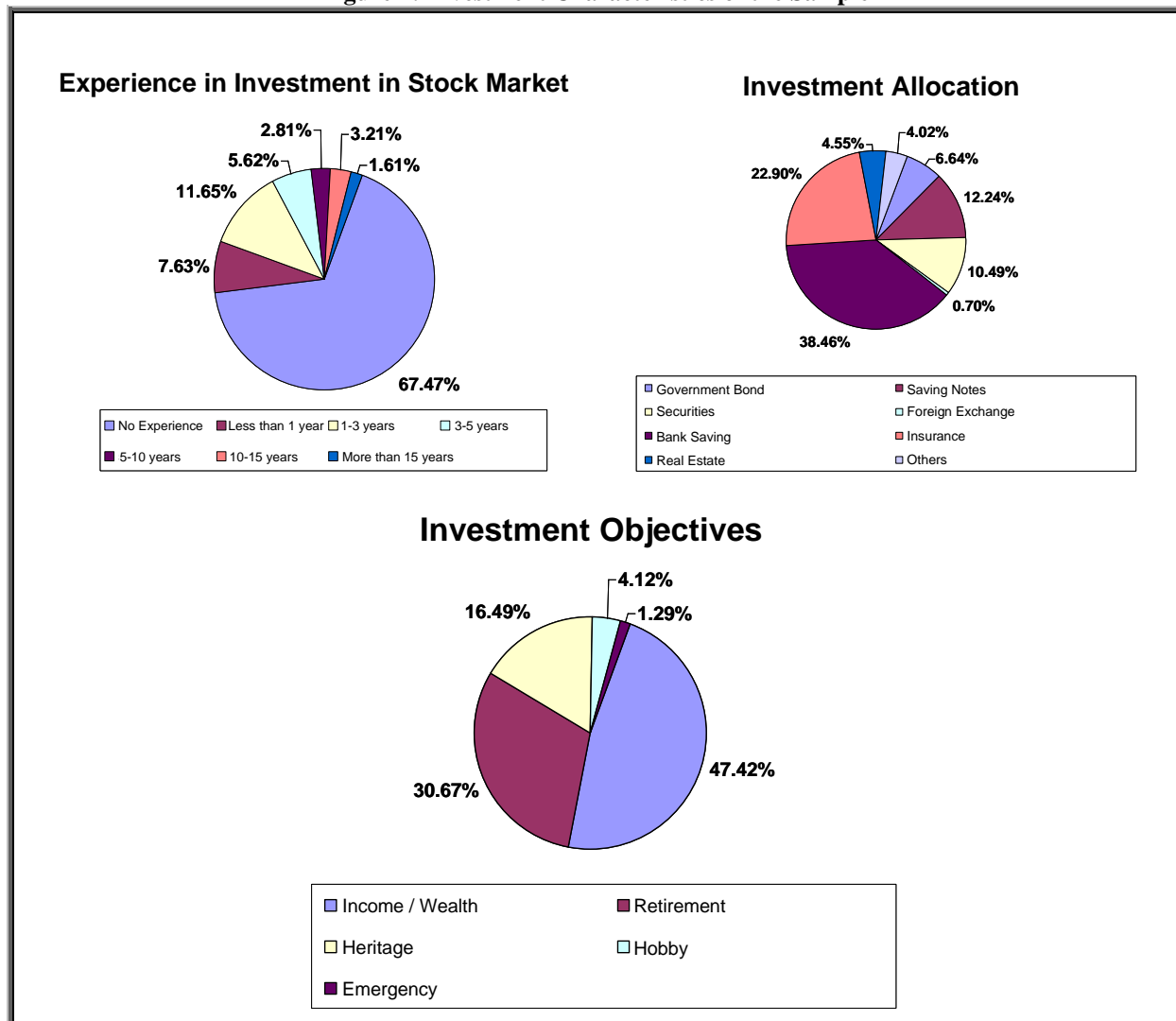
Figure 2 demonstrates the investment characteristics of the sample. Results show that as high as 67.47 percent of the sample has not experienced in investment in stock market, while the proportions of less than 1 year and 1 to 3 year experience in stock market account for 7.63 and 11.65 percent respectively. These findings may indicate that some people of the target group seem to start being interested in investment in stock market.

Beside bank saving (38.46%), insurance (22.90%) and saving notes (12.24%) are another preferred investment for this target group. All are low risk investment indicating that the target group is risk averse. This is consistent to the finding of high degree of certainty avoidance of Thai culture: low tolerance for uncertainty (Watcharasriroj, 2007).

Moreover, the proportion of 10.49 percent of the target group has invested in stock market. Their investment objectives are wealth building (47.42%) preparation for retirement (30.67%) and heritage (16.49%). Considering the major investment objective of wealth building, current investment in insurance and saving notes may not well satisfy such objective.

Figure 3 depicts investment characteristics of the target group that have no experience in investment in stock market. Result shows that 60.28 percent of respondents are interested in investment in stock market expecting return in a form of dividends (23.36%). The result is consistent to low risk preference. Another appeal of investment in stock market for the target customers include capital gain (21.03%) and tax benefits (14.95%). Result also indicates that important factors for these potential clients to invest in stock market are financial sufficiency (32.26%) and knowledge of investment in stock market (25.81%). 53.66 percent of the target group also prefers investment training at the client's workplace

**Figure 2: Investment Characteristics of the Sample**



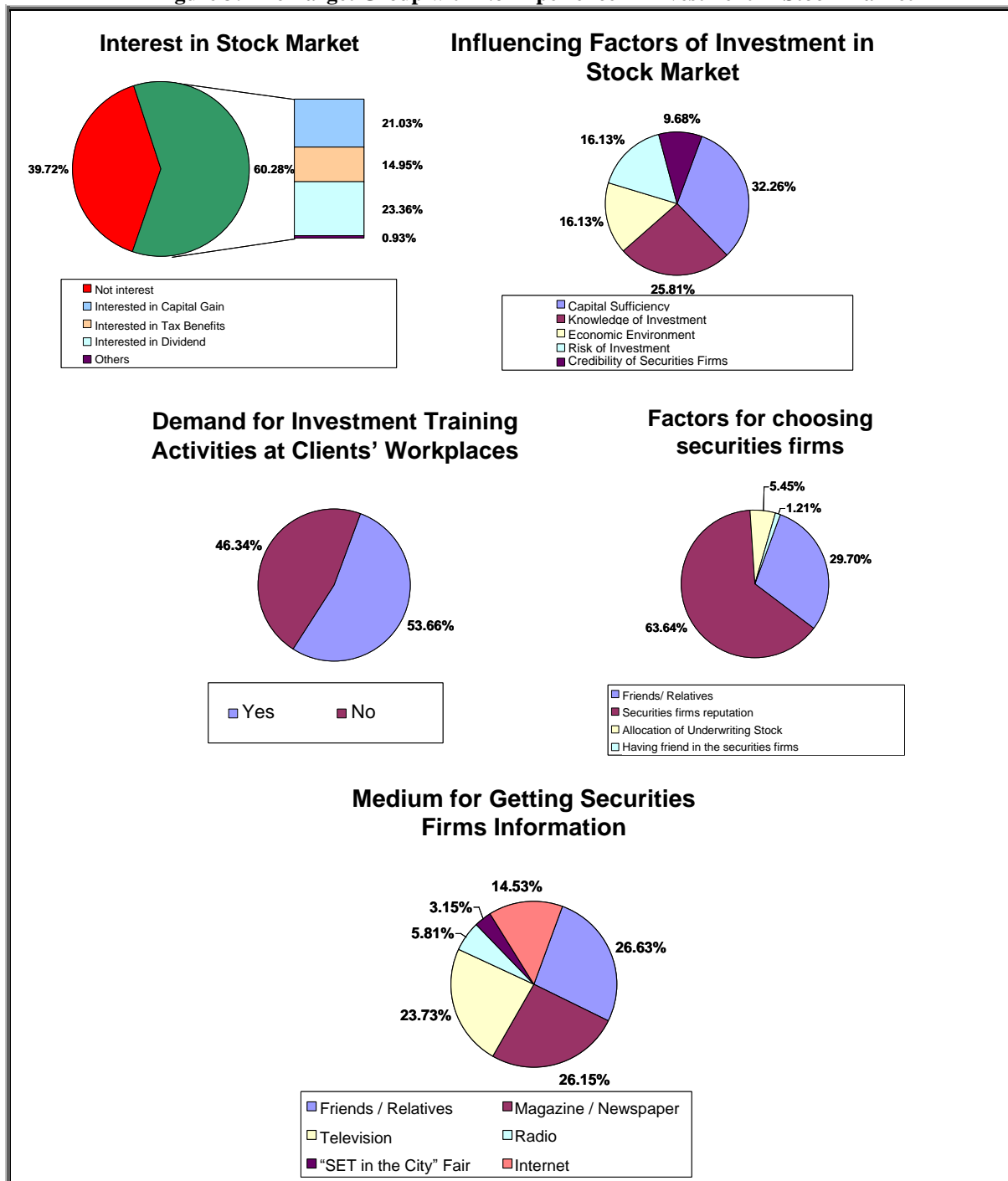
Firm reputation is a significant factor for choosing securities firms of the target group. They learn about securities firms mostly via friends/relatives (26.63%), publication (26.15%) television (23.73%) and the Internet (14.53%). Interestingly, the target group learns least about securities firms from the fair “*SET (Stock Exchange of Thailand) in the City*” conducted by the government agencies (3.15%) since 2002.

For the target group with experience in investment in stock market, 66.67 percent has demand for other financial products, i.e. bonds/debenture (35.42%) and funds (27.08%). They expect return in the forms of capital gain (66.67%), dividends (24.69%), and tax benefits (8.64%). This result is different from that of the target group with no experience who expects dividends (23.36%) rather than capital gain (21.03%). The increase in level of preference for capital gains may due to the fact that ones tend to be risk taking after having experience in investing in stock market.

From this target group’s point of view, important characteristics of securities firms are training activities for clients (26.03%), firm reputation (23.29%), multi-trading channel (19.18%) and reliable stock analysis (15.07%). Results that knowledge and firm reputation are very important are consistent to those of the target group with no experience. The mostly used trading channels are mobile (40.0%), the Internet (30.0%), telephone (26.67%), and trading site (3.33%) respectively. Obviously, mobile and internet trading are most used compared to traditional

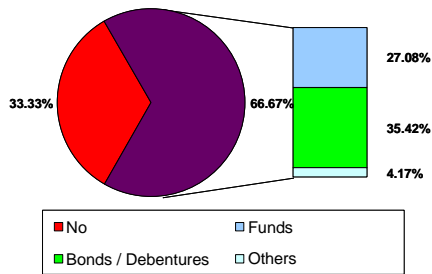
trading channels. The result is consistent to the hypothesis that the well-educated target group is promising for e-services. This may also due to the lack of time that forces them to turn to electronic services.

**Figure 3: The Target Group with No Experience in Investment in Stock Market**

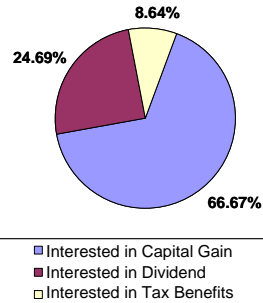


**Figure 4: The Target Group with Experience in Investment in Stock Market**

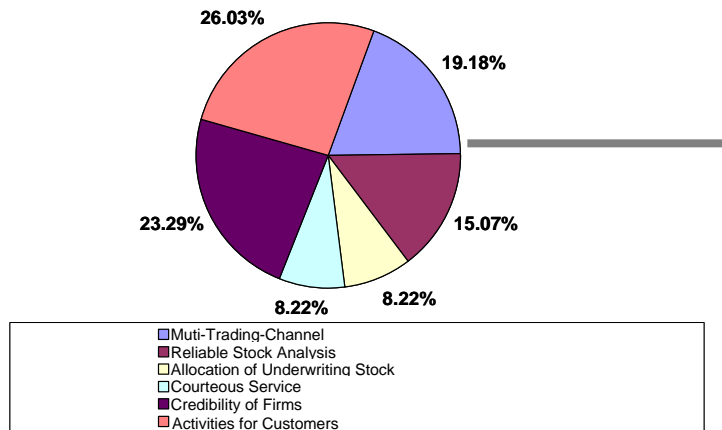
### Demand for Other Products



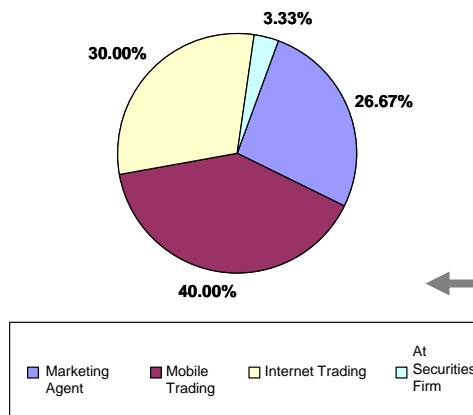
### Influencing Factors of Investment in Stock Market



### Important Characteristics of Securities Firms



### Trading Channel



## CONCLUSION AND RECOMMENDATIONS

This study is an action research conducted for a leading securities firm of Thailand. Based on its business needs to expand customer bases and lower service costs, the analytical framework is developed to provide insights into investment behavior of the potential clients: i.e. physicians, engineers, lawyers, professors, and executives in private organizations.

Results find that most of the target group has no experience in stock market but being interested in investment in stock market. Beside bank saving, the target group currently put their money in insurance and saving notes. Their investment objectives are income/wealth, retirement and heritage. These findings indicate that the target group is risk averse so that there is also demand for other low risk financial products such as bonds/debentures and funds. It also finds that after having experience in investment in stock market, the target group tends to become more risk taking.

Based on results that the target group considers knowledge of investment as an important factor for investing in stock market, the securities firm might emphasize educating the potential customers by either providing investment training on site or other activities. Further as findings suggest that firm reputation is significant characteristics of securities firms in the target group's perspective, the securities firm should promote its credibility and reputation. According to the results, cost-effective mediums seem to be publication and the Internet as television might be costly. Findings also indicate that multi-trading channel is another important service characteristic for the target group. They use mobile trading and the Internet trading in preference to the traditional trading channels.

This study uses questionnaire as a tool for data collection which limiting the access to in-depth understanding of investment behavior of the target group. Future research could use other forms of data collection such as interview or focus group interview to analyze the investment needs of the potential customers. By doing so, a better and fuller understanding of the investment behavior may be achieved.

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# CHARACTERISTICS OF INNOVATION PLANNING IN RUSSIAN SMALL AND MEDIUM VENTURE ENTERPRISES

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## ABSTRACT

*One of the principal generators of innovation's creation are small and medium venture enterprises (SMVE). In USA, for example, the contribution to GNP of SMVEs among all venture companies constitutes 30%-40%. That's why, research of SMVE's activity is very actual for the development of Russian innovative structure. The objective of this article is investigation of the process of innovation planning in SMVE's. The author suggests to study the innovation planning by application of different approaches in all stages of planning, using methods of economic analysis, economic models, induction etc. The result of the current research are recommendations for creation or improving of a system of innovation planning in Russian SMVEs.*

## INTRODUCTION

Nowadays there is a great interest to innovative progress of the economy in Russia. The first steps from the government's side have already been done, but still, they're not quite enough. Innovation development is a main purpose of each country, which tries to become a leader. This fact is a priority for Russia.

Innovations must be embed at all levels of the state: macro-, regional and micro- levels. One of the principal generators of innovation's creation are small and medium venture enterprises (SMVE). In such countries as, for example, USA the contribution to GNP of SMVE among all venture companies constitutes 30%-40%. Unfortunately, Russia can reach such a level profitability of SMVE in a very distant future, if the conditions of innovation's development will be the same as they are now. The experience of the USA can give a positive basis for the further activity of Russian colleagues.

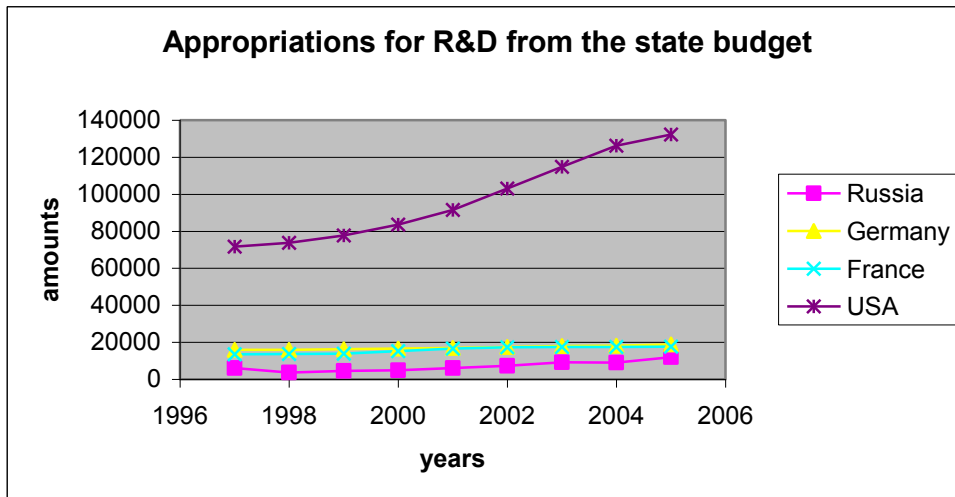
Here we enclose statistic data, regarding the lay-out in Russian venture branch. One of the most important indicators which shows the rate of innovative activity is the R&D expenditures. We would like to show how much Russian SMVEs spend for research next to foreign ones. But, unfortunately, this data is not available. It's explained by the absence of statistical data, connected with SMVE's activities. There is only data about Russian large company's R&D expenditures, which they time to time public in their statements (however we prefer not to use this data, because the companies don't inform about their relationship with the SMVEs). Now in Russia one of most principal sources of investments for SMVEs is a state. That's why we give here the amounts of R&D spending from the state budget of Russia, USA, Germany and France. This data is comparable, so it can present the case obviously enough. [Science indicators, 2007]

Table 1. Appropriations for R&D from the state budget (mln.\$)

| Years<br>Countries | 1997    | 1998    | 1999    | 2000    | 2001    | 2002     | 2003     | 2004     | 2005     |
|--------------------|---------|---------|---------|---------|---------|----------|----------|----------|----------|
| Russia             | 5977,1  | 3689,9  | 4525,7  | 4784,6  | 6004,7  | 7169,6   | 9087,9   | 9047,1   | 11989,3  |
| Germany            | 15903,9 | 15913,5 | 16263,6 | 16549,8 | 16864,4 | 17461,3  | 18015,3  | 18177,8  | 18857    |
| France             | 13466   | 13672,1 | 13893,8 | 15115   | 16487,7 | 17281,3  | 17481,5  | 17394,7  | 17688,1  |
| USA                | 71653,3 | 73658,7 | 77637,1 | 83612,5 | 91505,1 | 103056,7 | 114866,1 | 126270,5 | 132156,1 |

Fig.1 Appropriations for R&D from the state budget





It's evidently, that budget's expenses for R&D in Russia are much less, than such expenditures in the USA and the EU i.e. in ten times. This fact makes the circumstances even worse.

If to touch the problem of SMVEs, regarding the previous table, we should appreciate, that part of budget's R&D costs is sent to special funds which finance SMVEs, using grants for research and creation of the enterprises. Unfortunately, nowadays, there is very small quantity of such organizations (according O. Matsnev (2006) there are 20), but still, there are some and we hope that in some time, their amount will be increased. Now there were created several state programs, which help to develop venture business.

We should say some words about the process of financing of SMVE too. In a world practice such a companies must survive by themselves. But we shouldn't forget that venture enterprises have just appeared in Russia. That's why Russian SMVEs can't do their activity without state's support.

SMVE play a significant role in business of innovations. In reality, many new ideas appear just in such companies. Then, thanks good business model and presence of investor, these ideas can be commercialized and become a new product. It's commonly known that such huge companies as Microsoft, Apple and many others transformed from SMVE to gigant with their own R&D departments. That's why, research of SMVE's activity is very actual, useful and prospective for the development of Russian innovation structure.

Nowadays, SMVE's life is changing very quickly. "Preseed", "Seed", "creation of the product and enterprise", "development", "IPO", "living of first investors" – all these stages last very little time. That's why innovators, investors and managers must have immediate reaction on the ways of regulation of enterprise's activity and influence of external factors (if it's possible). Moreover, dynamically changing character of modern science makes alternation of the firm's or production's stages of life cycle even faster.

Today R&D are not those "in-house innovations" [H.W.G. Chesbrough, 2003] like they were 20-30 years ago. Innovation can't be kept in data bank of the company and to queue the moment when top managers or technical director will remember about them and will understand the value of innovations. In a fast changing environment if to use such a methods of innovation management, it will be high probability of the appearance of analogue technologies in other eneterprises. This fact provokes:

- emergence of new production, made by the business rivals;
- deficiency of potential profit;
- living by innovators their "home-companies" and creation own businesses on the base of their innovation.

To prevent from such a consequences, the company must put into practice all its technologies, or, if it's not possible, a firm should sell or grant its patent for innovation. There are several ways of embodying a new technology:

- internal using in a company, separation of scientific direction and theme;
- creation of the separate department, which will specialize on concrete innovation;
- forming of subsidiary or affiliation;
- cooperation with the Universities, laboratories etc.

In any case, not depending on the way of emergence of SMVE, its objective is further development of innovation and creation of new production with a set of characteristics, responding to market demands.

In order to work successfully, the enterprise must work out detailed organized system of interrelationships between each chain links. This system provides good conditions for the realizing of company's projects and to reach its purposes. All these functions are carried out by the system of innovation planning. So, the aim of this article is research, creation or improving of a system of innovation planning in SMVEs. To achieve this goal, we did analysis of Russian and foreign theoretical and practical sources. At the end of the article we made an offer for creation and improving of such a system in Russian SMVE's.

## THEORETICAL FRAMEWORK

The problem of planning was considered in different works of Russian and foreign scholars. Among them Dictionary of Business and Management 2006, Dictionary of Finance and Banking 2005, P. Moles and N.Terry 1997, B.M. Smekhov 1986, R.L. Akoff 2002. According to P. Moles and N.Terry (1997) it's considered strategic planning as a long-range planning of a firm in relation to its market, competitors, technology, management, resources, funding, and so on. The result is usually the preparation of a strategic plan or business plan covering the medium and long term. According to R.L. Akoff (2002) planning – is activity, where development takes place. This scholar gives typology and phases of planning too.

Planning is a basis of any company's activity, not depending on firm's size and purpose of business. Planning helps to group and define company's objectives, coordinate and concord interactions, organize relationships between subdivisions, choose and think about general strategy of organizational development and work out programs of its realization.

Traditionally, planning of innovation is supposed in context of business planning [Gruber, 2007], it's justified approach, but, with the lapse of time it must be developed and adopted to changing environment. So, to author's opinion it's necessary to consider this problem from wider point of view.

One of the substrategies of a company is innovation strategy, it was considered in [V.M.Anshin, 1995; A.Trifilova, 2005; W.Zoler and J.Gerigk, 2006/07 etc.]. Such a strategy is necessary for a firm in case of following innovation type of development. Nowadays this way of a progress is an objective necessity, because innovations do help a company to compete successfully in the market. And even if not to be a leader, but not to keep up with the leader. Innovations assist a firm in its growth and development, enlarging of possibilities in process of satisfaction customer's needs and to provide long-term prospective and trajectories of company's activity.

So, innovation is a mainstream of a firm, which decided to create unlimited prerequisites for its growth.

Many Russian and foreign scientists dedicated their works to the problems of innovative development, among them - works written by Trifilova A., 2005; Lastochkin, 2003; S. F. Slater and J. J. Mohr., 2006; Dries Faems, et al. 2005, A. Nosella et al. 2006.

To move successfully on the way of innovative development company should work out sufficient innovative strategy, short-term programs and also elaborate mechanism of innovation planning, where all the elements included must be detailed and well-thought out. That's why we should pay attention to such terms like:

“Planning of innovations” is a system of interrelated elements, which function is a providing innovative development of a company *or* it's a process of aim's creation and working out of the ways of achieving these aims, executing a program of innovative development of the enterprise.

“Mechanism of innovation planning” – it's the whole set of actions and methods, which aim is creation of a system of innovation planning.

“Elements of a system of innovation planning” are the rectangular components of the system of innovation planning. We should point these elements. There is a table, where in the second column elements of innovation planning are presented according to each stage of SMVE's life.

As you can see from the table, the third column is spread to all the stages of SMVE's existence. That's why we should speak about it in details. First, we describe the figure 2. On the one hand SMVE is connected with “the rest world”, where it sends knowledge, ideas and resources, which come from the rest world and return there in the form of production. On the other hand, there is one more element – “ecosystem”, which is situated between SMVE and the rest world.

What's the function of the ecosystem? The aim of ecosystem is creation of a set of conditions which help in successful activity and development of a SMVE. The main elements of ecosystem are:

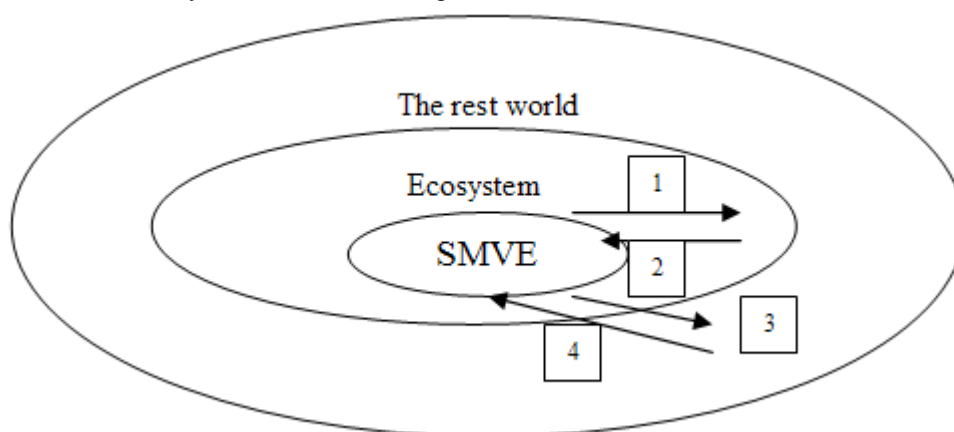
- researchers and companies which make R&D of new technologies, ideas etc. in special fields of study;
- community (production and mutual changing of new ideas);
- innovative managers;

- investors (sort ideas and invest best of them).

Table 2. Relationship and correlation between stages of SMVE's activity, internal and external aspects of SMVE's development

| Stages of SMVE's activity  | Enterprise   | The rest world   |
|--|--|--|
| Preseed, Seed  | Analysis of the internal factors   | Analysis of the environment, relationship with ecosystem |
| Start-up   | Creation of: <ul style="list-style-type: none"> <li>- innovation strategy</li> <li>- organizational structure</li> <li>- life cycle</li> </ul> Choosing of the type of innovative development<br>Attracting of the resources<br>Creation of the business-model etc. <ul style="list-style-type: none"> <li>- innovation</li> <li>- production</li> <li>- target group</li> </ul> |  |
| Sell, Production, Mass-production, IPO, leaving of first investors | Diffusion<br>Monitoring and analysis of consumption process<br>Utilization or modification of a product  |  |

Figure 2. Place of ecosystem in the relationships between SMVE and “the rest world”



Notes:

- 1 – Knowledge, ideas, production
- 2 – Knowledge, ideas, resources
- 3 - Knowledge, ideas, production
- 4 - Knowledge, ideas, resources

Hence, when SMVE enter in such a system, it receives extra possibility of dynamic development, well-timed critical rejection of weak ideas, promotion of the ideas, providing of the financial assistance and also transforming of new ideas to successful projects.

This way, the essence of efficient ecosystem gives better chance for enterprise's activity.

In the article of Kopeikina L. (2008), there is successful example of ecosystem, which takes place in Boston and MIT ().

If to speak about Russian innovative infrastructure, it is need to build ecosystem in our country, undoubtedly there are scientific and technological complexes, which contents some of the elements, described above. But there are few alike complexes in Russia and it's not possible to name them “ecosystem”. Main Russian problems are:

- absence of high-qualified innovative managers, who can promote ideas and connect innovators and investors;
- well-organized system of venture financing.

So, though ecosystem is one of the principle elements of the system of innovation planning, there are many difficulties in Russia.

If to consider the ways of planning of each element of a innovation planning system (column 2 of Table 2), all of them were studied in the works by different scholars: life cycle – in [F. Fortuin and S.W.F. Omta 2007; Jainagesh A. Sekharl, John P. Dismukes 2007; Trifilova A., 2005] , innovation strategy – [W.Zoler, J. Gerigk. 2006/7, L.A. Halla, S.Bagchi-Sen 2007, Wen Bao Lin 2007, Anshin V.M. 1995], organizational structure – [Razu M.L. 2007, M. Newel 2006, A.V. Bhide 2005] , business models – [Slivotski A. et al. 2006, H.W.G. Chesbrough, 2003], typology of innovative development in [D.Eaton, 2001] etc. So, it's evidently, that all these characteristics have already been considered well and there is no sense to study them in depth. That's why it's better to regard the approaches, which are connected with the process of innovation planning, because it will let to form general view of the article's problem.

We should consider the next works: B.B. Lichtenstein et al. (2007), J. Ruokolainen and M.M. Makela (2007), E.Veldhuizen (2006), E.U. Bond and M. B. Houston [2003].

B.B. Lichtenstein et al. (2007) discuss how it's possible to use a theory of complexity for the planning of initial stages of the process of SMVE's creation. On this phase it is supposed to do a special list of jobs, which must be carried out during certain time. Scholars estimate three indicators: rate, concentration and timing; after that they define how firm's success (owner's subjective impression and positive cash flow) correlates with first three indicators. It was allocated three hypotheses:

1. "rate" correlates positively (the more intensive schedule, the more successful start of a company);
2. "concentration" correlates positively too (the more even distribution jobs during the period of creation of enterprise, the more successful start of a company);
3. "timing" correlates negatively (the sooner works will be done, the better for enterprise creation).

Among factors which influence on future success of SMVE there are the following: pre-founding activities, individual factors, initial organizational factors, inter-firm cooperation [Frank Lasch et al., 2005].

On the stage of entrance to the market with new production it's interested to consider methodology, where the role of customer reference is proved [J. Ruokolainen and M.M. Makela, 2007]. The impression of first customer about new production is very important for a company, this way it's checked a business-model of the firm. This action is necessary to avoid negative consequences.

Considering the relationship with "the rest world" in [E.Veldhuizen, 2006] it was found out the importance of market information. It influences on the process of new product's creation. The scholars present a model, where some factors are taken into account: flexibility, novelty, time etc. The role of firm's environment and external information is also studied in [M.Gruber, 2007].

E.U. Bond and M. B. Houston [2003] explore the problems about connection between technology and market. There are some obstacles, which disturb to promote technologies to the market. Technology and market barriers are: technology-market linkage, technology availability, technology and market capabilities of competitors, and business model feasibility. Strategy and structure barriers include competition for limited resources, technology capabilities, technology portfolio goals, current market strategies, and competition for control of market charters. They also consider social and cultural barriers (interpretive and communication barriers between functional units, language and cultural barriers within the technology workforce).

We should also refer to the works of D. Faems et al. (2005), who prove mathematically link between interorganizational collaboration and innovation performance; of D.B. Audretsch (2005) where is the knowledge spillover theory of entrepreneurship and economic growth is presented.

If to speak about Russian scholars, we should add, that we regarded some articles (by I.Sokolovskiy(2007), S.Loboyko (2007), M.Shehovtsov (2007), E. Zaytsev (2007)) about the lay out of Russian venture practice.

## **OPPORTUNITIES FOR FUTURE RESEARCH**

For the resolving the problem of creation of innovation planning mechanism the author of this article supposes to make an enquiry of Russian SMVEs. It was worked out a questionnaire of 20 questions, grouped according to some criterions. Studying these responses it'll be possible to judge about:

1. The results of organizing of innovation planning in SMVE's.
2. The character of the elements of innovation planning's system.
3. The general data of SMVEs researched, which let to make general conclusion about Russian SMVEs.
4. The prerequisites of new ideas appearing: their critics, development, opportunities for their realization in SMVEs.
5. How production and inventions, made in this company correspond to consumers and how SMVE intends to promote new production.

6. How SMVEs suppose to keep the same positions in the market, if their production is successful.
7. The level of foresight of SMVE's innovation strategy, i.e. is production supposed to be developed and modified in the future?

We also intend to present subjective estimation (company's impression) of innovation planning in SMVEs and author's calculation (using method of numerical score).

## **RESULTS & CONCLUSIONS**

The result of the current research are recommendations for creation or improving of a system of innovation planning in Russian SMVEs. Having done the analysis of the elements of innovation planning considered in works of Russian and foreign scholars we can summarize:

1. Innovation planning system must be constructed taking in consideration all the elements of it's system. Unfortunately it's possible to say about absence the element "ecosystem" in Russia.
2. Although all the elements of innovation planning system are studied enough by different researcher, in reality, most part of these approaches are not in use.
3. Despite Russia has very large base for innovative process, it's almost impossible to find any statistical information about R&D spending of SMVE's that makes difficulties in comparison of the data next to foreign one.
4. One of the problem of Russian SMVEs (like in other countries) is financing. It deals not only with finding of investor, but also with detailed creation of innovation planning system's elements of the initial stages (Seed, Start-up). If an enterprise is able to make worthy system and convince investor, it won't have any difficulties with investors.
5. There are many approaches to innovation planning, so it's possible to use any of them depending on the concrete case. For example, on the initial stages it's possible to use [J. Ruokolainen and M.M. Makela, 2007] work to define first customers attitude to new production. Because, it'll make significance contribution in future existence of a firm.
6. Business-model – commercialization. To realize this stage it's needed good innovation manager. It's a problem for Russian SMVEs because: A. there is now developed ecosystem. B. Deficient of good innovation managers
7. Russian SMVEs don't have enough special knowledge, because venture branch is rather new for our country. Very often companies don't know how to organize their system of innovation planning, how to present their project, what questions investors are interested in. All these facts make SMVEs or their production unattractive for investors.
8. There the same barriers for matching new technologies and market opportunities in Russian SMVEs, pointed by E.U. Bond and M.B. Houston: A. It's difficult to connect technology and market needs. B. Very often technologies are not well-studied enough. It's obligatory to put the finishing touches to make a technology being competitive. C. Very often business model doesn't correspond with customer needs etc.
9. One of the principal interconnections is link between interorganizational collaboration and innovation performance, on the level of SMVE it's mutual relation between team's members.
10. When a company makes innovation planning system it must refer on correspondence of business model, innovation project, strong team of the project. In practice there is the following compliance: strong team-weak idea-weak business-model; strong idea or technology-weak team; strong team and idea-nonprofessional organization of the offer for investor.

In conclusion we should say, that spite of many problems of innovation planning in Russian SMVEs, we hope to examine and create useful system, which will be able to favour the process of making a competitive production in fast-changing markets; and becoming a leader.

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# EXPORTS AND CORPORATE SOCIAL PERFORMANCE

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## ABSTRACT

*The present study aims to examine corporate social performance of exporting companies. Enterprises quoted in Istanbul Stock Exchange (ISE) and listed among the ISE-100 companies constitute the sample of this research. Findings delineate a difference in the corporate social performance of exporting companies.*

## INTRODUCTION

Foreign activity is thought to be one of the major determinants of the firm's position on sustainable development (VanLeeuw & Scheerlinck, 2005). Meznar and Johnson (1996) agree that internationally oriented firms are more likely to act in accordance with legal and regulatory requirements in the host country where they operate. Chapple and Moon (2005) state that compared to the companies that restrict their operations only to their home country, multinational companies are more likely to adopt corporate social responsibility (CSR).

On the other hand, Aaronson (2005) states that the lack of universal rules to guide international investment encourages multinational companies to operate in countries with lower social, environmental and transparency requirements. She further claims that while US based companies are subject to strict regulations in USA, they adopt voluntary CSR initiatives to self-control in their overseas investments. Therefore, the adoption of CSR is at the discretion of multinationals in their operations in developing countries, which often lack the necessary requirements and the enforcement of the rules. In fact, multinationals' CSR is usually more in line with the host country rather than their home country (Chapple & Moon, 2005).

The literature on CSP of multinational companies is relatively richer. However, CSP of exporting companies that are at the very beginning of their internationalization strategies, seem to have been neglected. Internationalization strategy usually starts with export activities (Kalika, Helfer, & Orsoni, 2006). Companies may further choose to broaden their internationalization strategy by their investments abroad. They may first aim to become an international company then a multinational or even transnational company. This study aims at investigating CSP of exporting companies. The study intends to answer the following questions:

What is the relationship between export strategy and different dimensions of corporate social performance?

Does foreign market exposure at export level have an impact on community involvement, production standards and employee relations of the company?

The study is conducted among Istanbul Stock Exchange companies (ISE). It aims to contribute to our knowledge on CSP by providing findings from an emerging country context. As in many emerging countries rules for good governance are being lately shaped by regulatory agencies in Turkish business context. ISE encourages companies to disclose publicly a governance report. Therefore, the notions of corporate social responsibility and social performance are becoming increasingly popular among Turkish companies. However, the underlying legal infrastructure lacks the necessary requirements and the enforcement of the rules. So, the legal infrastructure is quite new and weak compared to the one existing in developed countries. There are various modes of foreign exposure among ISE companies. Adopting an export strategy appears to be the most common



foreign exposure. There are also companies which invest in foreign countries. Finally, there is an increasing number of foreign firms in ISE.

Studies on the relationship between foreign exposure and the CSP of the companies in Turkish business context are very limited. In a conceptual paper, Kalaycioglu and Gonel (2005) claim that multinationals with high standards of CSR set a good example for local companies which is also empirically supported by a recent study (Yamak, 2006). However, Kalaycioglu and Gonel also point to the fact that the need for foreign direct investment impedes Turkish authorities to be selective only in favor of foreign companies with high CSR standards. In fact, existing economic policy aims to increase both foreign direct investment and exports. In that sense, it may be useful to understand empirically the CSP of exporting companies in this context. For this paper, this study investigates the relationship between adopting export strategy and corporate social performance in this specific context.

## DATA AND METHODOLOGY

### Sample

Enterprises quoted in Istanbul Stock Exchange (ISE) and listed among the ISE-100 companies in 2005 constitute the sample of this research. This resulted in a sample of 100 companies originating from different industries. The web site and annual report of the companies have been investigated to gather information about the activities related to their corporate social performance (CSP). Furthermore, data about firm size, export ratio and financial results have been obtained from the data base of Istanbul Stock Exchange. Regression analysis is used to conduct the analysis.

### Variables

#### *Dependent variable*

Dependent variable of the study is corporate social performance. Any company initiative, regulation and/or policy that have an impact on different stakeholders are covered by the study as a CSR activity. CSP is a multidimensional construct. Aggregating the KLD's multiple dimensions into a unidimensional index may conceal the individual dimensions that are equally significant and pertinent (Johnson & Greening, 1999). Graves and Maddock (1994) identify the fact of attributing equal weight to each individual dimension as a limitation and propose to use weighted average for attribute ratings. Johnson and Greening (1999) pointing to the shortcomings of using a unidimensional index to measure CSP, have identified several dimensions to measure CSP. The underlying idea behind using multidimensional measures is that investors have different investment objectives and they will act differently with regard to corporate outcomes. Therefore, we identified various dimensions for this construct as did Johnson and Greening (1999) and Chapple and Moon (2005) and we adopted the model of the latter. Accordingly, the CSP of the companies is classified along three dimensions: community involvement, socially responsible products and processes, socially responsible employee relations.

Community involvement: According to Chapple and Moon (2005), "community involvement refers to the traditional assumption about CSR that it is removed from the main business activity and it is outside the firm". So, it is based on how the firm uses its profits. Environmental issues, local economic development, arts and culture, community development, education and training, health, sport, youth and children related projects among others are included in this dimension. This variable is measured as the total number of activities that are classified under the community involvement heading.

Socially responsible production variable relates to product and service quality and to company's standpoint towards environmentally sound manufacturing (Johnson and Greening, 1999). Thus, consisting of issues relating to the environment, health, safety and ethics, it aims to measure whether both supply chain and on site operations of the firm are conducted in a socially responsible fashion (Chapple and Moon, 2005). This variable is assessed as the total number of activities that fall in socially responsible production category.

Employee relations variable aims to assess activities related to the issues of employee welfare and employee engagement. Socially responsible employer relations variable assesses the status of the workforce as a

stakeholder in the context of company decision making and the development of CSR practices (Chapple and Moon, 2005). It also includes facilities and opportunities offered to employees. This variable is assessed by the total number of activities of socially responsible employee relations.

#### *Independent variable*

The independent variable is export ratio. It aims to capture ISE firms' exposure to foreign markets.

Export ratio: This is the percentage of exports in total sales.

#### *Control variables*

Accounting performance: It was included in the study as a control variable since it may influence corporate social performance (Graves and Waddock, 1994; Johnson and Greening, 1999). It is measured by the return on assets (ROA) of the previous year (2004).

Firm size: The second control variable is the firm size. It is measured as the logarithm of total firm employees. Knox et al. (2005) report that only the largest companies pass on their CSR policies effectively.

## Results and Discussion

Table 1 presents the correlation matrix. It is interesting to note that the majority (65%) of the companies in the sample has various community involvement activities. The community involvement covers activities in the domains of health, sports, art, science, education and environment. While 35 % of the firms are not involved in any activity, 15% are active in only one domain. However, 50% of the sample performs community involvement activities in more than one domain.

**Table 1. Correlation matrix**

|  | 1      | 2       | 3     | 4     | 5     |
|--|--------|---------|-------|-------|-------|
| <b>1.Community Involvement</b>           | 1      |         |       |       |       |
| <b>2.Socially Responsible Production</b> | ,176   | 1       |       |       |       |
| <b>3.Employee Relations</b>              | -,045  | ,520 ** | 1     |       |       |
| <b>4.Export</b>                          | -,224* | ,210*   | ,203* | 1     |       |
| <b>5.Size</b>                            | ,145   | ,272**  | ,173  | ,241* | 1     |
| <b>6.ROA</b>                             | -,029  | ,169    | ,129  | ,111  | -,098 |

\* Correlation is significant at the 0.05 level

\*\* Correlation is significant at the 0.01 level

Furthermore, 38% of the firms appear to have socially responsible production. These firms appear to have accomplished the requirements of various international standards such as ISO 14001, OHSAS 18001 and so on. They also seem to emphasize recycling and waste management.

Last, 37% of the firms appear to have socially responsible employee relations. For example, they offer health and child care facilities, they organize various activities of entertainment and socialization, they have well established and written human resources regulations and practices and so on.

Results of the regression analysis are displayed in Table 2. Exporting firms appear to adjust their CSP according to their exposure to foreign markets. Three different regression analyses are conducted for the three

dimensions of the CSP. The first dimension of CSP was community involvement. Export ratio is significantly and negatively related to community involvement. An increase in export ratio is more likely to be accompanied by a decrease in CSP of the firm in terms of community involvement. Therefore, better CSP is observed in low or no export firms. The foreign exposure of the firm at export level seems to have a negative association with community involvement. The explanation may be twofold. First, competitive export markets may require competitive prices which in turn may urge companies to lower their expenses by cutting back on their charity giving. Second, the fact that exporting firms are less exposed to local markets may hinder their aspiration to serve this community. As their exports increase firms may become less attached to the activities in their home country.

**TABLE 2. Regression results**

|                | Community<br>Involvement | Socially<br>Responsible<br>Production | Employee<br>Relations |
|----------------|--------------------------|---------------------------------------|-----------------------|
| Constant       | 0,51                     | -1,37                                 | -0,26                 |
| Export ratio   | -2,76**                  | 3,19**                                | 0,15                  |
| Size           | 2,11**                   | 2,05**                                | 0,21                  |
| ROA            | 0,24                     | 1,74 <sup>†</sup>                     | 0,14                  |
| R <sup>2</sup> | 0,06                     | 0,17                                  | 0,04                  |
| F              | 3,27**                   | 7,89**                                | 2,5                   |

<sup>†</sup> p < 0.10

\* p < 0.05

\*\* p < 0.01

On the contrary, exporting firms appear to score better in the second dimension of CSP which is socially responsible production. There is a positive relationship between export strategy and socially responsible production. One possible explanation of this better performance in terms of socially responsible production may be the requirements of the export market. Developed countries may impose various rules to exporters in terms of environment protection and responsible production. These requirements may force exporting companies to adopt socially responsible production practices. Finally, no significant relationship is detected between foreign exposure and the third dimension of CSP which is socially responsible employee relations. It is also worth mentioning that one of our control variables, firm size is found to have a significant relationship with both community involvement and socially responsible production dimensions. Larger firms are more likely to get involved in community activities and to adopt socially responsible production practices. Financial performance (ROA) is slightly related to socially responsible production which may require substantial investment.

## CONCLUSION

The findings show that foreign exposure at export level may have conflicting effects on corporate social performance. When corporate social performance is divided into subcategories and investigated in terms of these categories, it is observed that the its relationship with foreign exposure is not uniform. Increasing exposure to foreign markets appears to have a negative relationship with community involvement of the companies adopting export strategy. However, another corporate social performance dimension, which is socially responsible production, has a positive association with foreign market exposure measured by the rate of exports.

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# **AN INVESTIGATION INTO PROMOTIONAL PRACTICES OF TURKISH PHARMACEUTICAL INDUSTRY IN THE WIDER INTERNATIONAL CONTEXT**

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## **ABSTRACT**

*The major purpose of this study is to investigate promotional practices of Turkish pharmaceutical industry in the wider international context and establish effective and efficient future strategies. The study gives a brief overview of the pharmaceutical industry both in the world and in Turkey and investigates pharmaceutical marketing, with special emphasis on promotional practices and recent developments in pharmaceutical marketing practices. The research is conducted to find out promotional practices in pharmaceutical marketing in Turkey.*

## **INTRODUCTION**

Since pharmaceutical sector is directly related with human health, it is open to public intervention and different from typical service and manufacturing sectors. In order to create awareness of new products and to sell and promote them, marketing practices are essential for the industry. However, with the recent developments in the health care system globally, the validity of this assumption is questionable. The roles and effects of different pharmaceutical promotional tools are inevitable restructuring process with changing economic and health concerns in the industry. As a result, pharmaceutical marketing operates in a completely unique dimension with the complex environment and rapidly diminishing returns than current business strategies. As a developing country in Turkey, the regulation authorities have an active role in pharmaceutical industry so companies have limited marketing, pricing and operating activities. This complex regulatory environment makes the marketing activities more difficult for the already sensitive industry because of the product characteristics of drug. As a result, the industry is required more sophisticated marketing strategies and must be more vigilant in using promotional tools. Despite of pressure, Turkish pharmaceutical industry has reached a successful position with its high capacity of production and consumption, and high growth potential and technological infrastructure in the international competition area. This study is conducted to examine the promotional practices of Turkish pharmaceutical industry in the wider international context and establish effective and efficient future strategies.

## **LITERATURE REVIEW**

### **Pharmaceutical Marketing in General**

Smith (1991) defined pharmaceutical marketing as it includes giveaway samples, detailing, supportive materials for the target audience, internet initiatives and event sponsorships for the physicians and pharmacists. Although, the available marketing tools are similar to used in other sectors, the buying decision process and the effect of influencers have different structure for the pharmaceuticals. Moreover, the regulations influence the way companies promote their products and the ways or styles that are carried out in one country. (Akalin, 1996).

According to Angell (2004), pharmaceutical companies are said to spend more on marketing than on R&D. Today, most companies are developing appropriate marketing strategies to compete with others in both local and global market. In order to become successful enough to compete in global marketplace, the proper marketing strategies should be conducted at the right time in the right situation. (Harris et al., 2004). As the industry becomes more and more competitive with the developments in technology and merges between corporations, each company creates its own method of marketing. However, promotion tools are widely used by pharmaceutical companies to market their products, makes it easier for new products to get acceptance in the market, so clears the way to innovation and as a result it attracts new firms and products. (Keith 1992).

Pharmaceutical companies direct their promotions to the physicians as they are the deciders of the buying process. The main objective of the promotion is to affect physicians' prescribing behaviors. (Jacobzone, 2000; Rosenthal et al. 2003; Scherer, 2000 all cited Windmeijer et al., 2004). While there is a great deal of concern about the impact of promotion on physicians' prescribing behavior, Wazana (2000 cited Singh Ajai and Singh Shakuntala, 2005) showed that prescribing practices and professional behavior are affected by the interaction between physician and industry. Promotional activities such as sales representative visits, sponsored events of medical education, funding for travel or educational symposia are beneficial for creating non-rational changes in prescription practices.

## **Pharmaceutical Promotion Tools Used by Pharmaceutical Companies**

There are different methods of pharmaceutical promotion used in worldwide, as well as in Turkey: printed materials; advertisements in medical journals; sales representatives; gift giving; and medical symposia.

Printed materials such as brochures, booklets and posters are a major source of clinical information. Meija and Avalos (2001) evaluated samples of printed material distributed in Argentina to physicians by sales representatives in order to control whether the data contained in materials is correct or not. Only 60% of the promotional printed material had statements supported by cited references. Because of misuse, International Federation of Pharmaceutical Manufacturers Association (IFPM) generated many regulations and legal requirements to avoid biased or misleading information. For example, if it is full advertisement, then it must include the dosage and using methods, contra-indications, precautions and side effects.(IFPMA, 2000)

Medical journal advertising is supplementary to direct communication of pharmaceutical companies to the physicians. The ads contribute to the information gathering process of physicians by providing them with effectiveness and safety data, as well as direct patient benefits (Mossinghoff, 1992). The Association of Medical Publications (AMP, 2001) said that medical journal advertising is one of the most frequently used promotional vehicles which can generate sales for both new and existing products since it creates product awareness and message penetration. Unfortunately, even doctors are exposed ungraceful advertisement about drugs which are the most important factors for people's lives (Phillips, 2005).

The most successful promotion tool is pharmaceutical sales representatives according to Bleidt (1992). To establish one-to-one, personal contact with physicians builds a successful campaign for companies. Pharmaceutical sales representatives, also called detailers, play an essential role in pharmaceutical company with physician which is the reason why a large portion of pharmaceutical marketing expenditures go toward for them. (Mossinghoff, 1992). A study, by Caudill et al. (1992), shows that physicians value the information given by sales representatives. They found the information, provided by reps, accurate and useful about newly introduced drugs. On the other hand, Jacobson (2004), a professor of marketing at the University of Washington Business School, and his colleagues found that physicians are mostly skeptical or have negative attitudes toward sales reps because they think that information is biased and not objective and not accurate.

Another promotional tool is sponsoring medical meetings such as conferences, seminars, congresses and symposia. These meetings are designed to familiarize the attendees with the product and its indications and to encourage these individuals to carry the product upon its approval (Bleidt, 1992). According to a study conducted by Escovitz (1991), among five health care professions in Ohio, 89% of respondents view conferences as the most preferred practice of education programs. According to Kessler (1991 cited Bhatt 1993), pharmaceutical industry may be considered as a primary source of continuing medical education however these

are promotional activities and they can create an exchange of biased information and raise questions of professional ethics.

One of the mostly used promotional tools of pharmaceutical companies is giving gifts to physicians. These gifts can be personal products, table top sets, products used in a doctor's office, cars or homes and functional products. The gift usually reminds the doctor about the brand-name of the drug and it results in prescription (Walker 1993, cited Bhatt, 1993). The use of gifts as promotional practices should be questioned from an ethical perspective. As a result, American Medical Association and Pharmaceutical Manufacturers Association adopted voluntary ethical guidelines that include restrictions on type and value of the gifts. These guidelines all over the world state that "No gifts should be accepted if there are strings attached." (Mossinghoff, 1992).

## **Pharmaceutical Information Source Used by Doctors to Prescribe**

There are mainly three sources of information: journal articles, previous experiences of the physician and colleagues. Medical journal articles have been frequently used as a source of medical information. They are the most reliable and most viewed sources of information in many studies. Information in journal articles influence physicians' prescribing behavior, said Williams and Hensel (1991). In a review of literature about physicians' sources of pharmaceutical information, they found that journal articles became the highest ranked source of information about pharmaceuticals. However, Mossinghoff (1992) considers that it is unrealistic to expect many doctors to keep abreast of the large cannon of journal literature. Since there is a non-countable amount of journal literature, and as a result doctors may only read reviews of articles made by experts but they can not trust on such reviews while prescribing the drugs.

Physicians' past experiences with the product is also influential in prescribing decision. Pitt and Nel (1998) studied the factors influencing the prescribing behavior and they concluded that the most significant influence on the medical practitioners' prescribing decisions is their previous experience. According to study of Vicente et al. (2004), the more experienced senior physicians have better capacity to predict the outcome of the treatment than less experienced ones. So, personal previous experience is a strong determinant and information source for physicians.

Physicians communicate pharmaceutical information amongst themselves. In general, colleagues are found to be important sources of information especially for new drugs and when the illness is not well understood. In such situations, recommendation made by colleagues in an informal discussion is one of the important determinants of prescribing decision (Williams and Hensel, 1991). Short (1994) agrees with them and suggests that one way to avoid mistakes is by consultation with colleagues and in this way physicians learn to correct their individual biases. In a research conducted by Wood and Wright (1996) in UK, general practitioners were asked to describe the last time they needed to seek information about the care of a patient and in most cases; information was obtained mainly by telephoning the hospital staff, colleagues and the practice library.

## **An Overview of Turkish Pharmaceutical Industry**

Turkey, which represents one of the successful pharmaceutical industries of the world, has approximately 300 companies including 53 foreign owned-capital, employs about 23,000 workers. Turkish patients are supplied 6.549 variety pharmaceuticals and 3.316 kinds of them are produced domestically (Top and Tarcan, 2004). The wide product variety and the world's highest generic penetration makes the competition fierce in Turkish pharmaceutical industry since the generic brands are so strong and well-established and public does not see any difference between a generic and patented drug. Most multinational companies have established local subsidiaries to manufacture their products in Turkey or import them (Boucheseiche, 2005).

Kanzik (2001) defines the Turkish pharmaceutical industry as an industry that closely follows the technological developments in the world. Since the approximately 90% of the nation is under the national social security, the healthcare expenditures are supplied by the government. The target audiences of pharmaceutical companies are doctors and pharmacists since to advertise directly to the customers is not legal in Turkey. All reminding and informative actions of pharmaceutical companies are regulated by Turkish Health Ministry's Code about Action of Medical Products Promotion, renewed in 2003. In this frame, regardless of whether multinational or local

pharmaceutical companies, all types of promotional tools are regulated by the ministry. For instance, drug advertising is allowed only in medical journals that are distributed to the medical society only. However, with the permission of the Health Ministry, pharmaceutical companies may give advertisements that announce the new drug is launched. All kind of drug advertisements whether published in medical journals or not must be approved by the ministry before published (Turkish Health Ministry's Code about Action of Medical Products Promotion, 2003).

Turkish Health Ministry constituted a code of conduct for the medical meeting organizations and gift-acceptance. For medical meetings, pharmaceutical companies can organize and sponsor the medical meetings that medical society attend and compensate the medical society's travel and accommodation cost. (Akalm, 1996). Moreover, for the stuff that works in any kind of governmental institutions, any kind of thing and benefit that is provided to the doctors in government hospitals is defined as "gift" regardless of monetary value. The gift acceptance is only legal if the provided gift is recorded as an asset of the institution or if the gift is distributed any medical meeting organization for a memory material. All other gifts are legally banned by the government and if it is proved that any physician accept an expensive and unrelated gift for personally usage, s/he may take detraction punishment (cited in website of Investigator Pharmaceutical Companies Association (AIFD)).

## METHODOLOGY

This is a descriptive research, with a phenomenological philosophy and a mixture of an inductive and deductive approach. The objective of this quantitative study is to test hypotheses and examine relationships and research process is formal and structured. The questionnaire was used to collect primary data about the effects of different promotional techniques on doctors' prescribing behaviour. Medical doctors were distributed the questionnaires and collected immediately or left and taken the following days. The convenience method is used to gather answers for the questionnaire. The questionnaire was prepared in two languages; Turkish and English but conducted in Turkish since all doctors can not speak English. There were both open-ended and closed-ended questions. In this study, 170 medical doctors (general practitioners, internists, otorhinolaringologists and pediatricists) actively work in both private and non-private hospitals were contacted. However, 67 doctors refused to fill in the questionnaire and 103 questionnaires were filled in by doctors but 8 respondents gave multiple answers to the same question, and 14 respondents left some questions unanswered. Overall, 81 questionnaires are found to be filled properly and used for this study.

### Limitations

Although it is aimed to conduct the research overall in Turkey at first, as the response rate to mailed questionnaires is quite low and it is very difficult financially to follow up the questionnaires one-by-one personally, the extent of the research was changed from Turkey to Istanbul. The narrower extent and doctors' busy working environment were the other major limitations of the study.

## DATA ANALYSIS

The variables in the questionnaire are analyzed using the statistical analysis program "SPSS 12.0 for Windows". The frequency distributions, chi-square tests, T-tests were applied.

### Findings

#### ❖ Frequency of receiving promotional materials from pharmaceutical companies

As shown in table 5.1 below, the majority of respondents (66.7%) report that they rarely receive promotional materials from pharmaceutical companies. The reasons behind this finding might be the evaluations of frequency are very subjective. Doctors' consideration of "rare" may not be perceived as rare by pharmaceutical companies or by other doctors. One doctor may consider rare a frequency of every week. Second, this might be a bias of the study in that sample chosen may not be representative of all the doctors in Istanbul from this respect.

**Table 1: Promotion Frequency**



|              |                   | Frequency | Percent      | Valid Percent | Cumulative Percent |
|--------------|-------------------|-----------|--------------|---------------|--------------------|
| <b>Valid</b> | <b>Very Often</b> | 6         | 7,4          | 7,4           | 7,4                |
|              | <b>Often</b>      | 21        | 25,9         | 25,9          | 33,3               |
|              | <b>Rare</b>       | 35        | 43,2         | 43,2          | 76,5               |
|              | <b>Very Rare</b>  | 19        | 23,5         | 23,5          | 100,0              |
|              | <b>Total</b>      | <b>81</b> | <b>100,0</b> | <b>100,0</b>  |                    |

❖ **Perceived effectiveness –by doctors- of gifts as promotional materials**

Among the gifts offered to the doctors, functional gifts related to the profession are found to be the most effective by 88.9% of doctors in remembering the company, followed by personal gifts, office products, car products and home products. However, it may be due to the fact that doctors are not willing to declare their real ideas about the effectiveness of such gifts, because after all, it is not ethical for the pharmaceutical companies to offer and for the doctors to accept gifts to be used for any purpose except medical ones.

❖ **Occasions in which pharmaceutical companies offer promotional materials**

The most frequently used occasion in which companies offer promotional materials is a new product launch (46.9%), closely followed by medical meetings and the New Year and then medical meetings, foundations of pharmaceutical companies and seasonal factors come.

❖ **The appropriateness of different occasions in offering promotional materials, as perceived by doctors**

When the doctors' perception of the appropriateness of offering promotional materials is analyzed, it is found that the most appropriate occasions are a new product launch and medical meetings with the same rating (92.6%), followed by new years and foundation days of pharmaceutical companies.

❖ **Prescription information sources used by doctors**

With grouping the answers "always" and "usually", the usage frequency distributions of prescription information sources are shown in table 6.3 below.

**Table 2: Usage frequency distributions of prescription information sources**

|                              | Usage Percentages |
|------------------------------|-------------------|
| <b>Medical Meetings</b>      | <b>77.8%</b>      |
| <b>Foreign Literature</b>    | <b>77.8%</b>      |
| <b>Turkish Literature</b>    | <b>58.0%</b>      |
| <b>Sales Representatives</b> | <b>53.1%</b>      |
| <b>Printed Materials</b>     | <b>49.4%</b>      |
| <b>Colleagues Opinions</b>   | <b>35.8%</b>      |

The findings suggest that when the three major information sources are compared, literature (77.8%+58%) is the most frequently used source of information, followed by the medical society (35.8%+77.8%) and the pharmaceutical company (53.1%+49.4%).

In this study, no difference found between male and female doctors, young and old, those who work in government and private hospitals, those who do not know any foreign language and those who are at least bilingual, with respect to their frequency of using the medical society, literature or the company as a prescription information source.

❖ **Effectiveness of various promotional materials in promoting a drug**

When effectiveness of various promotional materials were asked to doctors, the most effective means of promoting a drug is to support doctors attending to medical meetings (96.3%), followed by medical journal advertising with 91.4%, sales representatives with 61.7%, gift-like items with 49.4% and brochures with 44.4%.

❖ **Importance given by doctors to marketing activities of pharmaceutical companies**

Findings show that 63% of doctors find marketing activities “important” while 17.3% of doctors find it “very important”. However, there are still 19.7% of doctors who find it either “not important” or “not important at all”. Overall, the findings suggest that the majority of doctors believe that marketing activities of pharmaceutical companies is important.

❖ **Effect of information level of doctors on their prescription decision**

According to the findings, all of the respondents believe their information level is very effective in influencing their prescription decision. However, for 21% of doctors, there might be factors other than their own information level.

❖ **Demographic characteristics of doctors**

Majority of respondents were male doctors (63%). 28.4% of respondents were between 20-29 years old, 49.4% are 30-39 years old, 16% are 40-49 years old, 4.9% are 50-59 years old and 1.2% are 60 years old or older. 27.2% of respondents have been working for 0-5 years, 30.9% for 6-10 years, 19.8% for 11-15 years, 13.6% for 16-20 years and 8.6% for 21 years or more. 34.6% of respondents work in private hospitals while 65.4% work in government hospitals. 3.7% of respondents cannot speak any foreign language while 96.3% of respondents can speak at least one language.

To find out the effectiveness of promotional materials based on Turkish doctors’ perceptions, relationships between variables are investigated.

❖ **Analyses on “Prescription Information Source” Relationships**

Different types of statistical analyses conducted to find out the relationship of prescription information source used by doctors with various factors. The major prescription information sources used by doctors are determined at the beginning of the study. However, for the sake of obtaining better results, these variables are divided into groups of two, and transformed into three major factors according to their origin, as follows; *Colleagues’ Opinions and Medical Meetings as Medical Society; Turkish Literature and Foreign Literature as Literature, Sales Representatives and Printed materials as Company.*

The first hypothesis was; **H<sub>10</sub>**: *There is no difference between males and females in their frequency of using the literature as information source for a new drug.* As seen in table,  $p=0.652>0.05$ , there is no difference between males and females in their frequency of using the literature as information source for a new drug.

**Table 3: T-test groups for the use of literature as an information source by female and male doctors**

|                             |   |      |                              |       |                 |
|-----------------------------|---|------|------------------------------|-------|-----------------|
| Variable                    | Mean                                    |      |                              |       |                 |
| Female                      | 1,6667                                  |      |                              |       |                 |
| Male                        | 1,9608                                  |      |                              |       |                 |
|                             | Levene's Test for Equality of Variances |      | t-test for Equality of Means |       |                 |
|                             | F                                       | Sig. | T                            | Df    | Sig. (2-tailed) |
| Equal variances assumed     | 0.205                                   | ,652 | -1.93                        | 79    | ,057            |
| Equal variances not assumed |   |      | -2.00                        | 67.45 | ,050            |

The second hypothesis testing was made to understand if there is a difference between doctors who work at private hospitals and those who work at government hospitals with respect to their use of medical society as the information source for a new drug or not. The results showed that there is no difference between two categories even they are quite close to each other. The third test was if there is a difference between doctors who can not speak any foreign language and those who are at least bilingual with respect to their use of literature as the

information source for a new drug. Results showed that there is no difference between them. Although it is expected a difference between them, the hypothesis testing results give that there is not a difference. This can be resulted from the fact that as the Turkish and foreign literature is grouped under one subtitle.

#### ❖ Analyses on “Promotional Tools by Pharmaceutical Companies” Relationships

The relationships between promotional tools and other various factors are analyzed. According to the findings; there is a positive correlation between experience level of doctors and the frequency of received promotional materials offered by pharmaceutical companies. In other words, as the doctors’ experience level is increasing, the frequency of distributing promotional materials by pharmaceutical companies increases as well.

**Table 4: Pearson correlation between practice period and frequency of promotional materials**

|                  |                     | Frequency of promotional materials |
|------------------|---------------------|------------------------------------|
| Experience Level | Pearson Correlation | ,263(*)                            |
|                  | Sig. (2-tailed)     | ,018                               |
|                  | N                   | 81                                 |

\* Correlation is significant at the 0.05 level (2-tailed).

Moreover, male and female doctors do not differ with respect to their perception of effectiveness of brochure, detailing, gift-like items, medical meetings, video news releases and medical journal advertising in promoting a drug. However, there is a difference between male and female doctors in perception of effectiveness of giving free drug samples. This means female doctors find drug samples more effective than do male doctors in promoting a drug.

**Table 5: T-test groups for the perception of effectiveness of drug samples by female and male doctors**

|           |       |   |       |                              |                 |
|-----------|-------|---|-------|------------------------------|-----------------|
| Variable  |       | Mean                                    |       |                              |                 |
| Female    |       | 1,7000                                  |       |                              |                 |
| Male      |       | 2,0980                                  |       |                              |                 |
|           |       |   |       |                              |                 |
|           |       | Levene's Test for Equality of Variances |       | t-test for Equality of Means |                 |
| Variances | F     | Sig.                                    | T     | Df                           | Sig. (2-tailed) |
| Equal     | 1.147 | ,287                                    | -2.47 | 79                           | ,016            |
| Unequal   |       |   | -2.47 | 60.78                        | ,016            |

## CONCLUSION

Great majority of respondent doctors think that pharmaceutical marketing activities are either important or very important. As the result of frequency analysis, surprisingly it was seen that the great majority of respondents reported that they rarely receive promotional materials from pharmaceutical companies. It can be due to either doctors in the sample understand different things from the word “rare” or doctors can be new in their jobs because a positive correlation was observed between experience level of doctors and the frequency of received promotional materials offered by pharmaceutical companies. In other words, as the doctors’ experience level is increasing, the frequency of receiving promotional materials increases as well.

However, when they were asked the most effective promotional tool, all respondents answered the question and preferred the medical meetings. The second effective tool is medical journal advertising which is followed by sales representatives and then gift-like items come. Respondents were also asked the most effective gift-like item and the results showed that the most effective one among doctors was functional gifts related to profession in remembering company, followed by personal gifts, office products, car products and home products. Moreover, according to doctors involved in sample, the most appropriate occasions to receive a promotional material are new product launches and medical meetings with the same rating (92.6%), followed by new years and foundation days of pharmaceutical companies.

Moreover, male and female doctors do not differ with respect to their perception of effectiveness of brochure, sales representatives, gift-like items, medical meetings and medical journal advertising in promoting a drug.

Foreign literature and medical meetings were found to be the most frequently used prescription information source by doctors, followed by colleagues' opinions. When it comes to the prescription reliance source, doctors rely most frequently on foreign literature in their prescription decision, followed by Turkish literature and sales representatives. Moreover, the majority of the respondents think that their information level about a drug is very effective while prescribing.

There is no difference between males and females in their frequency of using the literature as information source for a new drug. Also, doctors, no matter either work at private or public hospitals are using medical society as the information source for a new or existing drug. Moreover, doctors are using literature as information source to prescribe a drug with no difference who can not speak any foreign language and those who are at least bilingual.

## RECOMMENDATIONS

If a pharmaceutical company in Turkey will introduce a new drug, the company should focus on medical journal articles and try to place in an article in which the author mention positively about the product. The second focus should be medical meeting sponsorship. However, this situation changes a little bit for the already existing drug as the doctors use their previous experience mostly in prescribing and than literature and meetings come. The colleagues' opinions as information source are not commonly used in Turkey as it is in other countries due to the tough competition between doctors in Turkey. The Turkish doctors do not rely on information gathered from pharmaceutical company, sales representatives and brochures mostly. So return on investments made on printed materials and sales representatives can be said that are not high as medical meeting sponsorship, medical journal advertising and free samples respectively. The most effective gift is the functional one which can be a personal computer, any medical equipment or free subscribing to a medical journal. According to Turkish doctors, it is more appropriate if these gifts should be distributed in new product launches, medical meetings and New Years. Therefore, companies should be careful while choosing the occasions to provide gifts to doctors.

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# UNDERSTANDING THE STATE OF CUSTOMER RELATIONSHIP MANAGEMENT PRACTICES OF INTERNET BUSINESSES IN TURKEY

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## ABSTRACT

*Customer relationship management (CRM) is a concept and business process that has occupied significant space in the marketing literature for a long time. With the emergence of Internet technologies, a fruitful environment for the application of CRM emerged. Thus, it became one of the most important competitive tools of e-businesses. This study focuses on the major implementation motivations for an e-business to adopt an e-CRM program, the level of application of numerous e-CRM features by Internet businesses and the popular communication tools and media e-businesses utilize for applying e-CRM. It is a descriptive study aiming to offer the current state of e-CRM practices by Internet businesses in Turkey by reporting findings from a survey conducted on 80 pure click and brick-and-click e-businesses.*

## INTRODUCTION

One of the most important questions of the marketing discipline is how successful relationships can be established and profitably maintained in the long term with the customer base of a company. Surrounded by this challenge, organizations display an increasing tendency to explore an extensive amount of information about their customers and use it in the most effective way to foster lasting relationships with them. Customer relationship management (CRM) is a business process that is based on this approach. It enables organizations to identify, attract, and increase retention of profitable customers by managing relationships with them (Bradshaw and Brash, 2001).

While companies are striving harder to achieve an ultimately satisfactory relationship with their customers so as to retain their loyalty, intensifying competition and diversified customer needs and tastes are increasing the difficulty of achieving this goal. Customer switching continues to be an important threat for companies regardless of the effort and investments directed to retain them. Although this is a tough challenge for companies in the traditional business environment, the risk of losing customers is intensified greatly in the online environment since switching to an alternative company is just a mouse-click away (Karakostas, et al., 2005). Similarly, the well-known premise that it costs approximately five to ten times more to acquire new customers than to retain established ones (Karakostas et al, 2005; Pan and Lee, 2003) is highly and maybe even more intensely valid for the online market. Thus, Internet businesses have to establish a systematic understanding of CRM and invest heavily in this area.

In this competitive environment, companies are directing large amounts of investments in CRM programs. Gartner Group reports that worldwide CRM spending reached \$76.3 billion in 2005, up from \$23 billion in 2000. However, flooding money into these programs is not directly offering companies the key to customer retention and profits. A survey conducted by InfoWorld has reported a failure rate of 77% in e-CRM projects and Gartner Group has also estimated that 50% of e-CRM implementations would be considered as failures by 2006 (Khalifa and Shen, 2005). In short, there is an obvious dilemma in the e-CRM environment. On one side, e-CRM is crucial for businesses in the online area. By expanding traditional CRM techniques with integrated technologies and combining them with e-business applications in the overall enterprise, the benefits

reaped from applying a CRM program in an online context can be much higher compared to offline applications (Pan and Lee, 2003). On the other side, the investments in e-CRM applications do not always produce the expected outcomes. Therefore, it is essential to see the major drivers in implementing e-CRM and the current scope of activities performed in these programs. Such a state-of-the-art examination might enlighten the missing points in the current e-CRM strategies of Internet businesses.

In this direction, the purpose of this study is to provide an understanding of the current state of e-CRM practices in Internet businesses in Turkey. Data has been collected from a sample of 80 Internet businesses operating in various sectors in the online environment such as e-tailing, banking, airlines, travel companies, etc. One of the major themes in the study is the identification of the basic motivations for an e-business to adopt e-CRM applications. Companies have been investigated with respect to the importance they attached to six major implementation orientations of e-CRM which are: catching up with competitors, internal efficiency, cost reduction, customer satisfaction, financial advantages, and innovation and continuous development. Another theme of the study is discovering the implementation intensities of an exhaustive list of e-CRM activities that have been compiled through reviewing the literature about this area. These activities have been grouped into two as “interface-based” and “relationship-based” ones and the current portfolio of CRM practices in the e-business environment have been examined with respect to their popularity. Finally, the utilization of various communication channels for e-CRM purposes has been investigated and the more vs. less popular tools have been discovered.

## LITERATURE REVIEW

Although customer relationship management (CRM) is a well-established theme in the marketing literature, the importance of the topic was strengthened with the emergence of the Internet environment. In this interactive, one-to-one platform of communication between companies and customers, building and maintaining relationships have become even more challenging and crucial compared to the offline environment. In Ngai's (2005) literature review about CRM covering the 1992-2002 period, IT/IS is considered as the fourth component added to the traditional three components of CRM which are marketing, sales, and service and support. This confirms the fact that advancing technologies and emerging media like the Internet put heightened attention on CRM.

### Motivations Behind E-Businesses' Adoption of E-CRM Programs

The realization that the sustainability of an e-business is at risk without an effective e-CRM program led many online organizations to invest heavily in this area. However, their motivations for implementation might be quite different from each other. In a study that is done in an offline context about CRM adoption by financial services in the UK, Karakostas et al. (2005) have outlined four very important motivations for CRM implementation as: the need to catch up with competitors, cost reduction, internal efficiency, and customer satisfaction. Findings of this study show that customer satisfaction is the most dominant concern followed by increasing internal efficiency while fear of being left behind from competitors and reducing costs are not very strong implementation drivers. Similar implementation motivations can be applicable in an online context as well.

Coltman and Dolnicar (2004) have investigated the background variables behind e-CRM implementations. In this attempt, they have included Internet's power to improve the competitive standing of a firm and building successful relationships with and creating value for customers as environmental pressures leading to adopt e-CRM. Similarly, in Frawley's (2000) answer to the question “Why employ e-CRM?”, some of the major drivers mentioned are: optimizing interactive relationships between customers and companies, coordinating marketing activities across all customer channels, and earning a greater share of each customer's business. The list of e-CRM benefits as adapted from Scullin et al. (2002) by Fjermestad and Romano (2003) is also a very striking set of factors that can drive online firms to adopt e-CRM implementations. They mention increased customer loyalty, more effective marketing, improved customer service and support and greater efficiency and cost reduction as the major benefits of e-CRM. Finally, Hamid (2005) has answered the question of why companies should adopt e-CRM with five factors as: reducing communication costs, reducing administrative and operational costs, more efficient workflows as a result of integration between e-CRM



applications and back-office systems, improved sales by better market segmentation, and improved customer satisfaction, loyalty, and lifetime value.

In short, building and maintaining satisfactory relationships with customers and earning their loyalty is the major theme while cost reductions, efficiency considerations, and competitive concerns have also been cited as common factors in the literature with respect to the major reasons for implementing e-CRM. In this study, the applicability of each of these motivations and two additional themes which are financial advantages and need for innovation and continuous development have been investigated for Internet businesses in Turkey.

## **Scope of E-CRM: Common Applications and Activities**

Probably, one of the most important topics under e-CRM is discovering what kinds of activities can be performed by online businesses in order to attract and retain customers. Feinberg et al.'s (2002) study offers a comprehensive list of 41 e-CRM features which they came up with by adding 16 items to a 25-item list identified by Anton and Postmus (1999). This list includes many features some of which are about customer contact and communication channels, information, customization, online purchasing, after-sale support services, problem solving, membership, various customer services, etc.

This list of e-CRM features shows that e-CRM starts immediately at the first contact between a customer and the company. Although CRM's main goal is to retain existing customers, especially online companies initially have to do a lot to attract individuals to become a part of their customer base. Therefore, e-CRM features should not only be retention-based but should also include attraction-based elements. In this direction, Khalifa and Shen (2005) have classified e-CRM activities into three as pre-purchase, at-purchase and post-purchase e-CRM. They have shown that pre-purchase and at-purchase e-CRM activities are critically important in attracting customers while all three groups are important in retaining them.

With this idea, the current study aims to investigate the implementation intensities of a variety of e-CRM features in Turkish Internet businesses. While some of these features are totally about the effectiveness of the interface-based elements of these Internet businesses, others are related to the relationship-based elements which are more retention-oriented. This distinction is inspired from the studies in the literature that focus equally in pre-purchase e-CRM features as well as at-purchase and post-purchase ones.

## **E-CRM Communication Tools**

Considering that initiating and carrying out successful communications is the starting point of the relationship between companies and customers, it is essential to examine which communication tools are available for e-CRM purposes as well as their utilization levels. According to Anton (2000), the touch points between a company and a customer are various; ranging from more traditional media such as mail, fax and telephone to more high-tech tools like e-mail, voice response, kiosks, chatting or Web sites. Romano and Fjermestad (2003) have made a successful categorization of various e-CRM technologies into three groups as passive, active, and interactive tools. Passive tools include one-way communication and information delivery media such as cookies, mailing lists or newsgroups; active tools include chat rooms, bulletin boards or forums hosted by the seller; and interactive tools include e-mail, online focus groups or interviews, shopping agents, etc. These examples show that the available tools to use for communication in e-CRM activities are various but their suitability, costs, implementation popularity or other factors might vary.

In this study, 14 communication tools have been selected and how much each one is utilized by Internet businesses in Turkey has been investigated. Determining the preference between less high-tech but more common and convenient tools vs. technologically more advanced but less diffused tools can contribute to the findings in the literature by offering insights from the Turkish e-business context.

## **RESEARCH DESIGN**

## Data Collection and Sampling

The data for this study has been collected from 80 Internet businesses in Turkey functioning in various areas in the online environment as mostly e-tailing, banking, and travel companies along with some companies from airlines, GSM operating, cargo, insurance and ISP businesses. Data collection was conducted by sending surveys to e-businesses through e-mail with follow-up calls and necessary support when required.

Since there is no exhaustive list of all online businesses in Turkey and since this is a study with a descriptive nature, non-probability sampling was found to be appropriate and convenience sampling was used to locate available e-business organizations. The fact that many e-businesses had not yet adopted e-CRM systems or programs, there were a number of businesses that were contacted but did not have the qualifications to respond to the survey which was one of the important limitations of the study. Considering that the Internet is still a rather novel environment for performing business and especially advanced processes such as e-CRM, this sample of 80 e-businesses can be considered rather representative and satisfactory to depict the current state of the e-CRM environment in Turkey.

## Research Questions and Measures of Variables

In this study, there are three important research questions that are answered. In this section, each question and how it was answered by the data collection tool used in the study are briefly explained.

Research Question 1: Why do e-businesses in Turkey engage in e-CRM?

In order to find an answer to this question, companies in the sample have been asked to state the level of importance they attach to six major orientations for implementing e-CRM over 4-point interval scale questions with the labels *highly effective*, *partially effective*, *slightly effective* and *not effective at all*. Four of these main drives (catching up with competitors, internal efficiency, cost reduction, customer satisfaction) are adopted from an existing study in the literature (Karakostas, 2005) and two additional drives (financial advantages and innovation & continuous development) have been contributed by the authors. Financial advantages can be a motive since companies perform CRM to improve their profits. Innovation and continuous development can also be a major motive to implement e-CRM because although it might not pay off in the short run, businesses with a longer vision can be expected to reap the benefits of this management approach in the long run.

Research Question 2: What are the implementation intensities of various e-CRM features by Internet businesses in Turkey?

In this section, a two-group list of e-CRM features has been created. The first group of features aims to measure the success of the company Web site's interface elements. This is assumed to be an important part of a company's e-CRM success since communication and relationship start at first sight with the initial contact between companies and customers. Therefore, the selected e-businesses have been asked to respond to statements which claim the implementations or success of 23 interface-based items in their e-business by stating their agreement level with them. A 4-point interval scale with the labels *strongly agree*, *agree*, *disagree*, and *strongly disagree* is used. The second part of this section includes 21 items which are more "relationship-based" and measured with 4-point interval scales with respect to the level of implementation for each activity with the labels *always*, *frequently*, *sometimes*, and *never*.

Research Question 3: Which e-CRM communication tools are utilized by Internet businesses in Turkey?

Finally, this section of the study focuses on the usage vs. non-usage of a list of 14 communication tools available for e-CRM implementations. Companies have been asked to check each tool that is currently available in their context of e-business activities. The aim is to discover the popularity level of each tool in general.

## DATA ANALYSIS AND FINDINGS

### Demographic Profile of Respondent Companies

In this study, 80 businesses that have an existence in the online environment have been surveyed. Both pure click and brick-and-click businesses are included in the sample since this distinction is not important in terms of assessing the e-CRM applications of these companies. From these 80 businesses, 71 of them are functioning in both B2C and B2B markets while 9 of them are active only in the B2B business domain. Since CRM activities are applicable and important both in B2C and B2B contexts, having companies functioning in both markets enriches the profile of the sample. Other identifying characteristics of these businesses are displayed in Table 1.

**Table 1: Profile of Respondent Companies**

|                           | 0-1 year | 2-3 years | 4-5 years | >5 years | Missing |
|---------------------------|----------|-----------|-----------|----------|---------|
| Year of Internet activity | 16       | 8         | 9         | 46       | 1       |

|  | 0-10 | 11-50 | 51-100 | >100 | Missing |
|--|------|-------|--------|------|---------|
| Number of People Working in E-Business Functions | 37   | 26    | 4      | 10   | 3       |

|               | Large | Medium | Small | Missing |
|---------------|-------|--------|-------|---------|
| Company Scale | 40    | 24     | 13    | 3       |

As seen in Table 1, more than half of the companies in the sample are quite experienced in e-business surpassing 5 years of operations in the online environment. Although their experience level is high, most of them have less than 50 people working in e-business functions. This can be attributed to the fact that the e-business environment is less labor-heavy. Another reason might be the considerable number of brick-and-click businesses in the sample. These companies are expected to integrate e-business functions into the regular functional areas of their companies' operations, thus, the number of people solely assigned for e-business functions might not have to be very high. This sample can be considered to accommodate a profile that contains a well-distributed and meaningful combination of characteristics that can be representative of the Turkish e-business environment for a descriptive study.

## Findings About the Motivations Leading to e-CRM Adoption

As stated before in the literature review, there has been a concentration on considering increasing customer satisfaction and loyalty as the major driver to adopt e-CRM programs. However, e-CRM is a win-win management approach and is expected to provide many returns and benefits to the company as well as customers. Therefore, in this study, companies have been asked to state the importance they attributed to six major implementation orientations of e-CRM. Four of these have been inspired from the studies cited in the literature review: competitors' adoption of e-CRM, cost reduction, increasing internal efficiency, and improving customer satisfaction. Two additional motives have been contributed in this study as: need for innovation and continuous development and financial advantages. The importance levels attached to each of these motivations can be seen in Table 2.

**Table 2: Mean Levels of Importance Attached to e-CRM Implementation Orientations by Internet Businesses**

|  | N  | Mean (over 4) | Std. Deviation |
|--|----|---------------|----------------|
| Improving Customer Satisfaction              | 75 | 3.80          | 0.52           |
| Need for Innovation & Continuous Development | 76 | 3.66          | 0.64           |
| Increasing Internal Efficiency               | 75 | 3.43          | 0.84           |
| Financial Advantages                         | 76 | 3.14          | 0.86           |
| Cost Reduction                               | 75 | 3.05          | 0.96           |
| Competitors' Adoption of e-CRM               | 73 | 2.52          | 1.04           |

These findings show that improving customer satisfaction is the major goal of Internet businesses in adopting e-CRM programs with a large mean value of 3.8 over 4 which is a highly expected result. The second most important motivator is the need for innovation and continuous development which is one of the variables contributed by this study. The mean value 3.66 over 4 attributed to this variable shows that Internet businesses

want to adopt e-CRM activities because of their realization of its strategic importance in the long run. Companies with a high need for innovation and continuous development would not want to be left behind the changes taking place around them; moreover, they want to be leaders or initial adopters of such developments. This shows that Internet businesses adopting e-CRM have this kind of vision and strategic understanding of the issue. The findings also show that companies want to adopt e-CRM for the purpose of increasing the efficiency of business processes and company workflow, as well making use of cost reductions in various areas. Additionally, they are aware that successful e-CRM implementations will produce financial returns for them from various sources such as reduced costs or higher sales made to more loyal customers. However, companies are not adopting e-CRM programs only for the sake of not staying behind their competitors. This implementation orientation has the lowest mean value with 2.52 over 4. Although a moderate importance is given to this factor, companies are obviously approaching e-CRM with a more strategic perspective rather than a simple competitive tactic.

These findings are mostly consistent with Karakostas et al.'s (2005) study where empirical investigation on UK financial services showed that customer satisfaction is the leading motivator followed by increasing internal efficiency, competitor effects and cost reduction respectively.

## Findings About e-CRM Activities: Interface-Based Features

In this study, e-CRM features have been grouped into two as “interface-based” and “relationship-based” ones. The reason for this is that the initiation of a relationship between a company and a customer takes place at the first contact between them which most commonly happens through Web site visits. Therefore, even though the features considered under the interface-based activities are mostly related to the design of the Web site and do not aim to build long-term relationships with customers, they are considered as the threshold that a company must pass in order to engage in any sort of relationship with a customer. Table 3 shows the agreement levels of Internet businesses with the existence of or their success in 23 “interface-based” Web site features.

**Table 3: Mean Agreement Levels of Internet Businesses with the Existence or Success of Interface-Based Web Site Features**

|   | N  | Mean<br>(over 4) | Std.<br>Deviation |
|---|----|------------------|-------------------|
| Our site has a domain name that is easy to remember.  | 80 | 3.63             | 0.60              |
| Our site has a simple and understandable language.  | 79 | 3.59             | 0.59              |
| Our site has an appropriate domain name.  | 80 | 3.54             | 0.75              |
| Our site is often updated.  | 80 | 3.51             | 0.73              |
| Various security precautions are used during transactions on our site.  | 79 | 3.51             | 0.60              |
| All links on the site work in a correct and proper way.   | 80 | 3.45             | 0.65              |
| It is easy to access our site from other sites and search engines.  | 80 | 3.41             | 0.67              |
| The information about our products/services is presented in an easily accessible style.                             | 78 | 3.41             | 0.57              |
| On our site, even a first time user can easily complete his/her work.   | 80 | 3.35             | 0.58              |
| On our site, questions and help requests are answered very quickly.   | 78 | 3.35             | 0.64              |
| Our site has been designed such that it offers easy navigation within the site.                                     | 80 | 3.34             | 0.59              |
| Our site has a technological infrastructure which supports traffic at busy times.                                   | 79 | 3.30             | 0.63              |
| Users can complete many tasks with a minimum number of steps on our site.   | 80 | 3.28             | 0.48              |
| Our site includes all relevant content about the products/services that we offer.                                   | 79 | 3.27             | 0.67              |
| Our users have rapid access to our site and can complete their tasks quickly within the site on fast-loading pages. | 78 | 3.24             | 0.67              |
| On our site, an efficient customer registration system is used.   | 80 | 3.24             | 0.75              |
| Our site has an aesthetic and interesting design.   | 80 | 3.19             | 0.80              |

|  |    |      |      |
|--|----|------|------|
| Our site works properly in all browsers (Internet Explorer, Mozilla Firefox, etc.).            | 78 | 3.18 | 0.73 |
| Our site gets located in prior results in major search engines.                                | 78 | 3.06 | 0.93 |
| Our site has interactive elements that enhance communication between the company and the user. | 80 | 3.01 | 0.85 |
| Better security systems should be used on our site. ( <i>reverse</i> )                         | 77 | 2.62 | 0.93 |
| Our site can be personalized.  | 79 | 2.53 | 1.05 |
| It is necessary to be a good computer user to use our site. ( <i>reverse</i> )                 | 80 | 1.98 | 0.75 |

These findings show that from 23 important Web site features that can play a role in initiating a relationship between an Internet business and a customer, 20 items are available and successfully designed by the companies in the sample. Some of the features that seem to be very commonly observed in Internet businesses are those about attracting customers to the site such as having a good domain name and well-placed links and good positions in search engines. Another important group of features are those about the content of the site such as having a simple and understandable language and accurate and relevant product and service information. Features about the technological infrastructure of the site are also given great importance to since most Internet businesses seem to have worked heavily on these relatively technical features. Frequent updates, security precautions, properly working links, supporting heavy traffic and working properly in various browsers are the characteristics that have been found to exist in the Internet businesses in this sample.

Findings reveal that companies give great importance to the user-friendliness of their Web site which is crucial to initiate the basis of a long-term relationship with customers. Sites give importance to simplicity and convenience in usage, easy navigation, aesthetic design, efficient customer registration systems and rapid responses to questions and help requests. Especially, the fact that they have interactive features enhancing two-way communication is an important issue. The only feature that has a comparably lower level of existence in this sample of Internet businesses is the personalization issue. Although most of these sites accommodate the above features at extensive levels, the personalization feature which has a critical importance in e-CRM has a lower level of popularity with a moderate level of existence. This shows that all companies have the know-how and technology to invest in good Web site design with customer-friendly features. However, competitive power will come when companies begin to invest in more interactive and personalized features since such attributes have greater role in creating customer stickiness and loyalty compared to the more standard and generalized design characteristics.

## Findings About e-CRM Activities: Relationship-Based Activities

The second set of variables investigated in this study is 21 e-CRM activities that have a more relationship-building and enhancement focus for the purpose of satisfying customers and earning their loyalty. Table 4 shows the mean levels of implementation for each feature over a 4-point interval scale.

**Table 4: Mean Levels of Implementation Intensities of Relationship-Based e-CRM Activities**

|  | N  | Mean<br>(over 4) | Std. Dev. |
|--|----|------------------|-----------|
| <b>Commonly Implemented Features</b>   |    |                  |           |
| Offering various contact information about the company on the site                       | 79 | 3.75             | 0.57      |
| Ensuring security in transaction processing  | 78 | 3.54             | 0.78      |
| Producing one-to-one solutions in a short time in case of customer complaint             | 78 | 3.45             | 0.66      |
| Offering the opportunity for customers to follow their orders/services/activities online | 78 | 3.28             | 0.97      |
| Informing customers about new campaigns and services by e-mail                           | 79 | 3.20             | 0.93      |
| Offering various payment alternatives (credit card, money order, etc.) to customers      | 78 | 3.09             | 1.13      |

| <b>Moderately Implemented Features</b>   | N  | Mean<br>(over 4) | Std. Dev. |
|--|----|------------------|-----------|
| Recognizing customers who enter the site   | 79 | 2.90             | 1.18      |
| Registering customers  | 76 | 2.86             | 1.16      |
| Sending personalized SMS/e-mail or offering personalized promotions to customers                     | 79 | 2.67             | 1.00      |
| Sending SMS/e-mails or giving calls on special days (birthdays, Mother's day, Valentine's Day, etc.) | 77 | 2.66             | 1.17      |
| Offering campaigns appropriate to different customer groups  | 77 | 2.59             | 1.04      |

| <b>Less Commonly Implemented Features</b>   | N  | Mean<br>(over 4) | Std. Dev. |
|---|----|------------------|-----------|
| Providing 24-hour online support to customers   | 79 | 2.44             | 1.22      |
| Informing customers about new campaigns and services by SMS   | 78 | 2.42             | 1.20      |
| Making offers to customers according to previous usage and preferences  | 78 | 2.41             | 1.11      |
| Offering various security options (SMS approval, password provider, etc.)   | 77 | 2.35             | 1.23      |
| Providing special advantages for customers according to the type and frequency of services they use (gaining extra money/discounts, etc.) | 78 | 2.35             | 1.04      |
| Making suggestions to customers based on their predicted buying behavior  | 79 | 2.34             | 1.06      |
| Offering online consultancy and guidance to the customers on the site   | 78 | 2.33             | 1.20      |
| Offering free services according to the degree of customer loyalty/profitability  | 78 | 2.23             | 1.07      |
| Making discounts to customers on special days (birthdays, Mother's day, Valentine's Day, etc.)  | 78 | 2.10             | 1.05      |
| Offering the opportunity to personalize the site  | 78 | 1.54             | 0.92      |

An analysis of the most commonly implemented relationship-based e-CRM features shows that the major focus of companies in their e-CRM implementations is to provide customers with a trustworthy shopping environment and a high level of information and functionality. This includes offering standard transactional advantages such as providing various contact information, the opportunity to track orders, a secure transaction environment and various payment options. However, it also includes customer information and problem solving attributes such as informing them about campaigns and services and solving customer problems in a short time.

On the other hand, findings show that the implementation intensity of more personal and customized features is at a moderate level. Recognizing customers, sending personalized messages and promotions to them, remembering special days or offering different campaigns for different groups are the moderately implemented e-CRM activities. This obviously implies that Internet businesses in the sample are still approaching e-CRM from a transactional perspective with a process-based satisfaction. However, their e-CRM programs lack the personalized touch that actually will create a competitive advantage.

This is confirmed even further with the findings about the less commonly implemented features. Making offers or suggestions to customers according to previous usage and preferences or according to predicted buying behavior, personalization of the site, making discounts or offering free services according to customers' loyalty levels, providing special advantages according to the type and frequency of services each customer uses are features that a successful e-CRM program should have but they are not implemented commonly at the time being. Additionally, advanced features such as 24-hour online support, using offline communication channels as well as online ones, offering advanced security options or online consultancy and guidance are among the less

commonly implemented features which show another area for development in the current e-CRM applications of companies.

In short, Internet businesses have a higher tendency to engage in more standard and transactional advantages to satisfy their customers. However, the personalized or more advanced features that could create stronger competitive advantage and higher loyalty are not implemented very commonly yet.

## Findings About e-CRM Communication Tools

Another important research question of this study is to identify which communication and CRM media or tools are more commonly used and which ones have not penetrated into the Internet environment yet. For this purpose, 14 communication tools and media which can be used in e-CRM have been listed and Internet businesses have been asked to state whether they use these channels or not. Table 5 displays the usage frequencies for each channel.

**Table 5: Usage Frequencies of Various e-CRM Communication Tools and Channels**

|                                  | N  | Used | Not Used |
|----------------------------------|----|------|----------|
| e-mail address                   | 80 | 79   | 1        |
| Mailing address                  | 80 | 77   | 3        |
| Phone number                     | 80 | 76   | 4        |
| Fax number                       | 80 | 69   | 11       |
| Message/request/complaint forms  | 80 | 66   | 14       |
| Frequently Asked Questions (FAQ) | 80 | 51   | 29       |
| E-mail lists                     | 80 | 26   | 54       |
| Online support/help              | 80 | 23   | 57       |
| Newsgroups                       | 80 | 12   | 68       |
| Forums                           | 80 | 8    | 72       |
| Voice messaging system           | 80 | 7    | 73       |
| Chat room                        | 80 | 5    | 75       |
| Video conferencing               | 80 | 0    | 80       |
| Online conferencing              | 80 | 0    | 80       |

These findings clearly show that the communication tools that are most commonly found on the Web sites of e-businesses are e-mail and mailing addresses and phone numbers, closely followed by fax numbers and message, request and complaint forms. Although it is promising to see that companies provide online and offline communication and contact information at the same time, this obviously shows the dominance of preference toward one-way communications instead of interactive channels. An important number of companies are using FAQs but the use of e-mail lists and online support and help features are quite low. This indicates the lack of guidance companies should offer to their customers. The implementation of such features can obviously decrease problems and complaints and improve customer satisfaction. At a further level, totally interactive environments like newsgroups, forums, voice messaging, chatting and video and online conferencing are used by very few companies; some of them are even not used at all. Thus, companies obviously must invest in more interactive technologies which will contribute to the success of their customer satisfaction and loyalty rates greatly. Such implementations can overcome one of the most important concerns of consumers toward the online environment, which is the anti-social and virtual nature of the Web and not having the opportunity to communicate with the company through more personal and one-to-one environments.

## CONCLUDING REMARKS

The purpose of this study is to draw the current picture of e-CRM implementations in a country with a rapidly increasing rate of Internet usage and e-business activities. There are three major questions that are answered by this research: Why do e-businesses in Turkey engage in e-CRM? What are the implementation

intensities of various e-CRM features by Internet businesses in Turkey? Which e-CRM communication tools are utilized by Internet businesses in Turkey?

Findings of the study show that Internet businesses are highly aware of most of the benefits that will be gained by implementing an e-CRM program. Their major motivation to invest in e-CRM is to achieve customer satisfaction along with many other factors such as reducing their costs and increasing business efficiency, being an innovative business as well as expecting these to turn into financial advantages. However, although companies are highly aware of the benefits they will reap from an e-CRM program, the implementation intensities of various e-CRM features by Internet businesses shows that they are still at the beginning phase. Most of the e-CRM activities that are commonly employed by e-businesses aim to attract customers to the site, provide satisfactory content and information, offer a technologically functional environment and a user-friendly interface. However, in contrast to the transactional opportunities offered to customers, these businesses have not developed a more retention-based focus which is more important in CRM compared to the acquisition focus. Activities that create a personal, one-to-one and interactive conversation or communication between customers and companies are not implemented intensively yet. Features requiring personalization are the least common ones implying that the greatest interest and investment needs to be in these types of applications. Furthermore, Internet businesses still display a greater tendency to use one-way e-CRM communication channels through which customers can reach companies but cannot receive an immediate response and engage in one-to-one real-time communication. Interactive tools and media are used by a very small percentage of companies, however, since CRM is based on communication and interaction with customers, interactive channels should be much more preferred by businesses functioning in the Internet environment.

Finally, as for future research opportunities regarding this topic, one of the most promising areas is sector-based attempts to see which industries or business areas are more innovative and leading in e-CRM. Also, the customer point of view is critically important and consumer research attempts aiming to investigate which e-CRM features are more valuable from their perspective and which ones are more powerful in increasing their satisfaction and loyalty are crucial.

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# ENTERPRICE FINANCIAL MONITORING IN THE GLOBAL KNOWLEDGE ECONOMY

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## ABSTRACT

*This article is dedicated to solving problems of a management quality financial control organization in an enterprise in accordance with the global knowledge economy. The problems of a quality control, management quality and financial management quality are the kea problems in any enterprise. This very problem can be solving by constant enterprise financial monitoring & by using its results in knowledge management.*

## INTRODUCTION

Financial monitoring is a systematic, independent and documented process for obtaining financial monitoring evidence and evaluating it objectively to determine the extent to which financial monitoring criteria are fulfilled. Internal financial monitoring, sometimes called first-party financial monitoring are conducted by, or on behalf of, the organization itself for internal purposes and can form the basis for an organization's self-declaration of conformity [1: ISO 9000:2000]. External financial monitoring includes what are generally termed second- and third-party financial monitoring. Second-party financial monitoring is conducted by parties having an interest in the organization, such as customers, or by other persons on their behalf. Third party audits are conducted by external independent financial monitoring service organizations.

This article continues the solving problems of a quality control, management quality and financial management quality in an enterprise.

## FINANCIAL MONITORING ACTIVITIES

This clause contains guidance on managing and conducting management systems monitorings, including the selection of monitoring team members [5: Deming, 1986; 6: Deming, 1993; 8: Feigenbaum, 1983; 10: . Juran,1964].

After completion of a monitoring, monitoring follow-up actions can take place. These actions are usually not considered to be part of the monitoring unless they are included in the monitoring plan. A financial monitoring activity provides a flowchart of the monitoring process as described in this clause. Flowchart of the audit process includes the following:

- document review- review of relevant management system documents and records and determination of their adequacy;
- preparing for the on-site monitoring activities - planning the on-site monitoring activities; monitoring team work assignments; preparation of work documents;
- on-site monitoring activities - conducting opening meeting; collecting and verifying information; identifying monitoring findings; communication during the monitoring; preparation for the closing meeting; conducting closing meeting;
- reporting on the monitoring – monitoring report preparation; report approval and distribution; retention of documents;
- monitoring follow-up;

- Initiating the monitoring - definition of objectives, scope and criteria; determination of the feasibility of the monitoring; establishing the monitoring team; initial contact with the financial monitoring client;
- monitoring completion.

## **INITIATING THE MONITORING**

### **Monitoring objectives, scope and criteria**

Within the overall objectives of a monitoring programme, an individual monitoring should be based on defined objectives, scope and criteria.

Examples of objectives for a monitoring are:

- a) determining the extent of conformity of the monitoring's management system, or parts of it, with monitoring criteria;
- b) evaluating the capability of the management system to ensure compliance with laws, regulations and contractual requirements;
- c) evaluating the effectiveness of the management system in meeting specified objectives;
- d) identifying areas of potential improvement of the management system.

The monitoring scope describes the extent and boundaries of the monitoring in terms of factors such as physical locations, organizational units, activities and processes to be monitored and, where relevant, the time period covered by the monitoring.

The monitoring criteria can include applicable policies, procedures, standards, including those relating to laws and regulations, management system requirements, contract requirements, industry/business sector codes of conduct, or environmental guidelines.

The monitoring objectives, scope and criteria should be defined by the financial monitoring client.

Any subsequent changes to these should be agreed by the financial monitoring client, and, as appropriate, by those responsible for managing the monitoring programme and the financial monitree, after consultation with the monitoring team leader.

### **Feasibility of the monitoring**

Those responsible for managing the monitoring programme should determine the feasibility of the monitoring, taking into consideration such factors as:

- a) sufficient and appropriate information for planning the monitoring;
- b) adequate cooperation from the financial monitree;
- c) availability of time and adequate resources.

Where the monitoring is not feasible, an alternative should be proposed to the monitoring client by those responsible for the monitoring programme management, in consultation with the financial monitree.

### **Establishing the monitoring team**

When the monitoring has been declared feasible, a monitoring team should be established and a monitoring team leader is appointed taking into account the competence needed to achieve the objectives of the monitoring. When there is only one monitor, the monitor should perform all applicable duties of an audit team leader [11, 16].

Those responsible for managing the monitoring programme and/or the monitoring team leader, in consultation with the monitoring client and, if necessary, the monitree, should identify the resources necessary.

When deciding the size and composition of the monitoring team, consideration should be given to the following:

- a) monitoring objectives, scope, criteria, location(s) and estimated duration;
- b) the overall competence of the monitoring team needed to achieve the objectives of the monitoring;
- c) requirements from accreditation/certification bodies, as applicable;

d) the language of the monitoring and understanding of the monitoree's social and cultural characteristics either through their own skills or through the support of a technical expert;

e) the need to assure the independence of the monitoring team from the activities to be monitored and to avoid conflict of interest;

f) the ability of the monitoring team members to interact effectively with the monitoree and to work together .

The process of assuring the competence of the monitoring team should comprise the following steps:

1) identifying the knowledge and skills needed to achieve the objectives of the monitoring;

2) defining the criteria by which knowledge and skills are to be evaluated;

3) selecting the monitoring team such that all of the knowledge and skills needed to conduct the monitoring and to achieve the monitoring objectives are present in the monitoring team. If not fully covered by the monitors in the team, the overall competence may be satisfied by including technical experts in the team.

Technical experts should operate under the direction of a monitor.

Both the monitoring client and monitoree have a right to request the replacement of particular team members on reasonable grounds which should be communicated to those responsible for managing the monitoring programme. Any decisions to replace team members should be taken by those responsible for managing the monitoring programme. Examples of reasonable grounds can be conflict of interest situations (such as a monitoring team member having been a former employee of the monitoree or having provided consultancy services) or previous unethical behaviour.

## Document review

Relevant management system documents, including records, from the monitoree, including any previous monitoring reports, should be reviewed to determine the conformity of the system components or processes, as documented, with monitoring criteria. The review, by the monitoring team leader or by one or more monitors assigned by the monitoring team leader, should take into account the size, nature and complexity of the organization, and the objectives and scope of the audit. A preliminary on-site visit can be necessary to get a good overview of available information.

If the monitoree's management system documentation is found to be inadequate, such that it is not commensurate with the monitoring scope or criteria, the monitoring client, those responsible for managing the monitoring programme and the monitoree should be informed. Further resources should not be expended on the audit until such concerns are resolved to the satisfaction of those responsible for managing the audit programme in consultation with the monitoring client, the monitoring team leader and, if appropriate, the monitoree.

## FINANCIAL MONITORING CRITERIA

The enterprise finance management problems [2: Anthony, Dearden, Govmdarajan. 2000; 4. Davenport, Prusak, 1998; 17: Битюцких , 2007; 18: Грязнова, 2005; 20: Караванова. 2006; 21: Лапуста, 2007] can be bring to light and solve by constant monitoring the “**complete criterion of quality enterprise finance management (CCQEFM)**” (see pic. 1).

**Pic.1. A structure of complete criterion of quality enterprise finance management (CCQEFM)**

| The level of CCQEFM | Finance index (fact) of |           |                           |                                 |                  |                  |
|---------------------|-------------------------|-----------|---------------------------|---------------------------------|------------------|------------------|
|                     | Finance stability       | Liquidity | Probability of bankruptcy | Return on sales (Profit margin) | Return on assets | Return on equity |
| Optimal             | Absolute                | Absolute  | Low                       | Increasing                      | Increasing       | Increasing       |
|                     | Normal                  |           |                           |                                 |                  |                  |
| Low                 | Unstable                | Low       | Middle                    | Invariable                      | Invariable       | Invariable       |
| Critical            | Critical                | Critical  | High                      | Decreasing                      | Decreasing       | Decreasing       |

The finance statement level criterions represents in tab.1.

**Table 1: The finance statement level criterions**

| Level   | State                                | Formula                  |
|---------|--------------------------------------|--------------------------|
| Optimal | absolute or normal finance stability | $FA + Inv \leq Eq + LTD$ |

| Level    | State                            | Formula                                   |
|----------|----------------------------------|---|
|          | absolute liquidity               | $DA \geq DD$                              |
|          | low probability of bankruptcy    | $MCA \geq CL$                             |
|          | return on sails                  | $ROS_{bp} > ROS_{ep}$                     |
|          | return on assets                 | $ROA_{bp} > ROA_{ep}$                     |
|          | return on equity                 | $ROE_{bp} > ROE_{ep}$                     |
| Low      | finance instability              | $Eq + LTD < FA + Inv \leq Eq + LTD + STC$ |
|          | low liquidity                    | $DA \geq 0,5 * DD$                        |
|          | middle probability of bankruptcy | $MCA \geq 0,75 * CL$                      |
|          | return on sails                  | $ROS_{bp} = ROS_{ep}$                     |
|          | return on assets                 | $ROA_{bp} = ROA_{ep}$                     |
|          | return on equity                 | $ROE_{bp} = ROE_{ep}$                     |
| Critical | critical finance stability       | $FA + Inv > Eq + LTD + STC$               |
|          | critical liquidity               | $DA < 0,5 * DD$                           |
|          | high probability of bankruptcy   | $MCA < 0,75 * CL$                         |
|          | return on sails (profit margin)  | $ROS_{bp} < ROS_{ep}$                     |
|          | return on assets                 | $ROA_{bp} < ROA_{ep}$                     |
|          | return on equity                 | $ROE_{bp} < ROE_{ep}$                     |

FA - fixed assets;  
 Inv - inventory  
 Eq - equity  
 LTD – long-term debt  
 DA - discount asserts (Cash + 0,5\* + 0,3\*  
 DD - discount debts (+ 0,5\*+ 0,3\*  
 MCA - material current assets (cash and inventory)  
 CL - current liabilities  
 STC - shot-tern credit  
 ROS<sub>bp</sub> – return on sails at the beginning of the analyzing period;  
 ROS<sub>ep</sub> – return on sails at the end of the analyzing period;  
 ROA<sub>bp</sub> – return on assets at the beginning of the analyzing period;  
 ROA<sub>ep</sub> – return on assets at the end of the analyzing period;  
 ROE<sub>bp</sub> – return on equity at the beginning of the analyzing period;  
 ROE<sub>ep</sub> – return on equity at the end of the analyzing period;

If we calculate the finance indexes by formulas tab 1 and date from appendix A, we will have the following results (tab.2):

**Table 2. The finance statement level criterions.**

| Index                     | Finance index (fact) in analyzing period |                                  | Tendency   |
|---------------------------|--|----------------------------------|------------|
|                           | at the beginning                         | at the end                       |            |
| finance stability         | finance instability                      | critical finance stability       | bad        |
| liquidity                 | low liquidity                            | low liquidity                    | invariable |
| probability of bankruptcy | middle probability of bankruptcy         | middle probability of bankruptcy | invariable |
| return on sails           | 0.20                                     | 0.10                             | bad        |
| return on assets          | 0.22                                     | 0.10                             | bad        |
| return on equity          | 0.41                                     | 0.20                             | bad        |

The enterprise “**complete criterion of quality enterprise finance management (CCQEFM)**” will be the following (see pic. 2).

Pic.2 The enterprise complete criterion of quality enterprise finance management (CCQEFM).

| The level of CCQEFM | Finance index (fact) of |           |                           |                         |                  |                  |
|---------------------|-------------------------|-----------|---------------------------|-------------------------|------------------|------------------|
|                     | Finance stability       | Liquidity | Probability of bankruptcy | Return on sales (Profit | Return on assets | Return on equity |

|          |          |          |        |            |            |            |
|----------|----------|----------|--------|------------|------------|------------|
|          |          |          |        | margin)    |            |            |
| Optimal  | Absolute | Absolute | Low    | Increasing | Increasing | Increasing |
|          | Normal   |          |        |            |            |            |
| Low      | Unstable | Low      | Middle | Invariable | Invariable | Invariable |
| Critical | Critical | Critical | High   | Decreasing | Decreasing | Decreasing |

In this very case an enterprise financial manager must make a solution how the enterprise can return in unstable finance state and how it can increase it's profit.

Therefore the problems of a quality control, management quality and financial management quality can be solving by constant enterprise financial monitoring & by using its results in knowledge management at knowledge economy.

## APPENDIX

| Balance Sheets as of December 31, 2005 and 2006 (\$ in millions) |        |        |                                       |        |        |
|--|--------|--------|---------------------------------------|--------|--------|
| Assets   | 2005   | 2006   | <i>Liabilities and Owners' Equity</i> | 2005   | 2006   |
| Current assets   |        |        | Current liabilities                   |        |        |
| Cash   | 2,350  | 1,695  | Accounts payable                      | 8,150  | 10,145 |
| Accounts receivable  | 6,150  | 6,875  | Short-term debt                       | 2,100  | 5,400  |
| Inventory  | 6,250  | 11,995 | Total                                 | 10,250 | 15,645 |
| Total  | 14,750 | 20,565 | Long-term debt                        | 4,000  | 3,600  |
| Fixed assets   | 15,500 | 18,680 | Owners' equity                        |        |        |
| Net plant and equipment  | 15,500 | 18,680 | Common stock and paid-in surplus      |        |        |
|  |        |        | Retained earnings                     |        |        |
|  |        |        | Total                                 | 16,000 | 20,000 |
| Total assets   | 30,250 | 39,245 | Total liabilities and owners' equity  | 30,250 | 39,245 |

| Income Statement (\$ in millions) | 2005   | 2006   |
|-----------------------------------|--------|--------|
| Net sales                         | 32,000 | 41,000 |
| Net income                        | 6,500  | 37,100 |

## MAIN DEFINITIONS

**Financial monitoring** is a systematic, independent and documented process for obtaining financial monitoring evidence and evaluating it objectively to determine the extent to which financial monitoring criteria are fulfilled.

**Financial monitoring criteria** set of policies, procedures or requirements used as a reference.

**Financial monitoring evidence** is records, statements of fact or other information, relevant to the financial monitoring criteria and which are verifiable. Financial monitoring evidence can be qualitative or quantitative.

**Financial monitoring findings** are the results of the evaluation of the collected financial monitoring evidence against financial monitoring criteria. Financial monitoring findings can indicate either conformity or nonconformity with financial monitoring criteria and/or opportunities for improvement.

**Financial monitoring conclusions** are the outcome of a financial monitoring, reached by the financial monitoring team after consideration of the financial monitoring objectives and all financial monitoring findings.

**Financial monitoring client** organization or department requesting a financial monitoring.

**Financial monitoree** is an organization or department being monitored.

**Financial monitor** is a person with the competence to conduct a financial monitoring.

**Financial monitoring team** is one or more financial monitors conducting an financial monitoring. One financial monitor of the financial monitoring team is appointed as financial monitoring team leader. The financial monitoring team can include financial monitors-in-training and, where required, technical experts. Observers can accompany the financial monitoring team but do not act as part of it.

**Technical expert** is a person who provides specific knowledge or expertise with respect to the subject to be monitored. Specific knowledge or expertise includes those on the organization, process, or activity to be monitored, as well as language or cultural guidance. A technical expert does not act as a financial monitor in the financial monitoring team.

**Financial monitoring programme** set of one or more financial monitors planned for a specific time frame and directed toward a specific purpose.

**Financial monitoring plan** is a description of the on-site activities and arrangements for a financial monitoring.

**Financial monitoring scope** extent and boundaries of a financial monitoring. The scope typically includes a description of physical locations, organizational units, activities and processes, as well as the time period covered.

**Competence of a financial monitor** demonstrated capability to apply knowledge and skills.

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# **BUSINESS GAMING SIMULATIONS IN INTERNATIONAL BUSINESS EDUCATION, APPROACHING LEARNING TO REALITIES: A COLOMBIAN CASE STUDY**

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## **ABSTRACT**

*This paper discusses the planning and execution of a technology enhanced learning (TEL) experience for undergraduate International Business and Administration students. The Global View Challenge consists of multilevel competition between student teams from universities around the world through the on-line international business management simulation, Global View Advanced Management Game, followed by an on-site competition at the national level. Student surveys indicate the competences development in a standard class format, through the gaming simulation, and at the on-site competition.*

## **INTRODUCTION**

*'Learning games incorporating digital simulation are ideally suited to learning in multiple domains and may represent the future of learning in technological societies (Vogel et al., 2006, p. 106)*

EAFIT University is a private secular, institution of higher education in Medellín, Colombia with approximately 10,000 students, combined undergraduate, master and doctoral. The Faculty of Administration is by far the largest of the four faculties, with Business Administration being the largest undergraduate program, followed by International Business.

The Department of International Business, with its obvious interest in providing students with international and intercultural learning experiences, has eagerly adopted technological teaching enhancements, both for their own sake and in order to compensate for the geographical, lingual, and social disadvantages associated with being located in Medellín, Colombia. All classes are currently web-enhanced. EAFIT Interactiva, a proprietary password-restricted course authoring and course management platform, houses course syllabi, course contents, course calendar, hyperlinks to web reading materials, downloadable files, chat room, threaded discussion forums, electronic mail, on-line graded or practice assessments, and on-line grade books.

In addition to the platform usage, initial incursions into ICT enhanced learning have included the use of loaner palm pilots and laptops with wireless access during class to allow for real-time research and interaction, video-conference role-play negotiations with students of foreign universities, business plan competitions with teams conformed by students of distinct international universities, blog learning journals, CD Rom-based training simulations, and finally web-based gaming simulations. It is on the latter that this paper will focus.

## **Pedagogical Premise**

The Vision of the University states that EAFIT 'will use advanced technologies and a pedagogical model centered on the student. . .' ([www.eafit.edu.co/EafitCn/English/TheUniversity/](http://www.eafit.edu.co/EafitCn/English/TheUniversity/), 2007).

According to Budd (2002, p. 368):

. . . The dominant theoretical base for technologically based educational tools is constructivism. In fact, the hypertext structure of the Internet in which students can explore various links in their own personal ways is argued to be constructivist in nature because it allows learners to create their own understanding. Moreover, to the extent that collaboration and interaction are fundamental to learning in constructivism, synchronous and asynchronous communication tools are central to efforts to incorporate technology into education (Miller and Miller, 2000; Palloff & Pratt, 2001; Smith-Gratto, 2000 in Budd 2002, p. 368).

As Barack et al (2006, p. 246) assert, 'contemporary innovative learning environments base their theoretical framework on constructivism'. Learning occurs through self-created mental frameworks and self-formulated conceptual models applied in the solution of hands-on problems.

The four cyclical stages of the Kolb model of experiential learning—concrete experience, observation and reflection, abstract conceptualization, and active experimentation are considered crucial to student development and are an inherent component of gaming simulations given that students make decisions based on previous knowledge; reflect upon those decisions once the data has run through the simulator; compare the results with previous, expected, and competitor results; and participate in teamwork to build the next decisions (Tonks, 2002, p. 180). As explained in Crittenden & Woodside (2007, pp. 38-39), 'in an experiential exercise, learners can construct a world by combining past information with future-oriented dispositions to actively engage in the learning process.'

As Crittenden & Woodside continue, students may be unfamiliar and uncomfortable with this method of thought-process, 'metathinking'. 'Yet, becoming aware of one's individual knowledge, assumptions, skills, and intellectual resources is a critical success factor in business' (Davenport, 2004 in Crittenden & Woodside, 2007, p. 39). This resembles the premise of the 'reflective practitioner' offered by Cowan (1998) and Belton & Thornbury Gould (2006) and the differentiation between 'deep' and 'surface' level learning offered by Lundy (1991) as cited in Tonks (2002).

So, web-based gaming simulations, as stemming from the model of active or experiential learning, assume the active and pensive participation of students; but as Smart & Csapo (2007, p. 452) clarify, 'the activities, experiences, or interventions must be focused around clear objectives.' These objectives originate in the competences to be developed in the student.

The Colombian Network of International Professions (Red Colombiana de Profesiones Internacionales (RCPI)) establishes the following competences for students of International Business and related majors in the Colombian system of higher education:

1. Decision-making skills;
2. Multi-lingualism;
3. Ability to analyze, adapt, plan, act, interact, and communicate in diverse international environments;
4. Ability to work effectively and efficiently in cross-cultural and interdisciplinary teams;
5. Ability to debate and persuade;
6. Emotional intelligence;
7. Tolerance;
8. Creativity;
9. Ability to apply knowledge in praxis;
10. Ability to foresee and prevent negative events;
11. Ethical compromise;
12. Ability to analyze environments;
13. Adaptation to change;
14. Ability to understand diverse types of negotiations and obtain favorable results while respecting cultural differences;
15. Ability to propose solutions and generate alternatives;
16. Ability to identify interests, desires, and necessities;
17. Ability to resolve conflicts through negotiation;
18. Facility in processes of internationalization;
19. Ability to interpret and understand different cultures (RCPI, 2006)

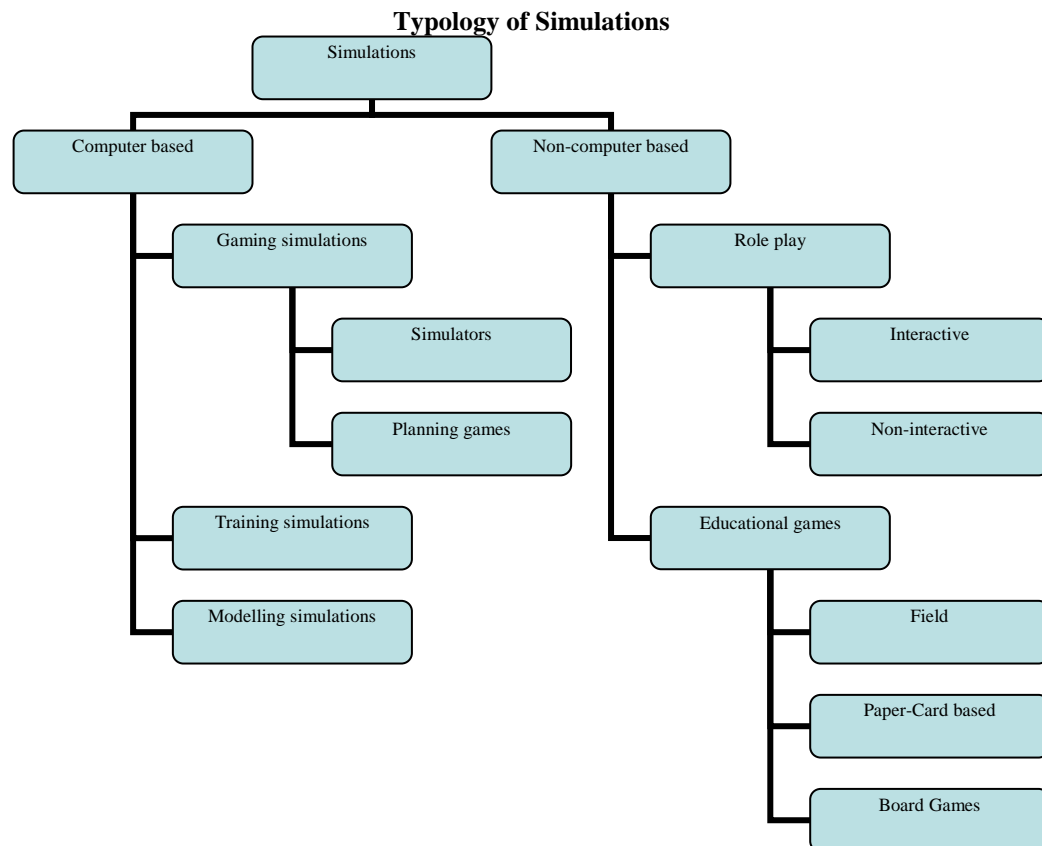
Many of these are comparable to the metacompetences or generic competences which according to Arnold et al., (1999, pp. 44-45) 'are relatively transferable between settings and tasks, and are more useful than [profession-specific] competences in dealing with non-routine or changing tasks':

1. Achievement orientation;
2. Analytical reasoning;
3. Coping with uncertainty;
4. Decision-making;
5. Leadership;
6. Networking;
7. Oral communication;
8. Personal drive and initiative;
9. Persuasiveness/impact;
10. Planning and organizing;
11. Political awareness;
12. Self-awareness and self-development;
13. Teamworking;
14. Knowledge and skill in degree;
15. Written communication (Arnold et al., 1999, p. 51).

It was from this premise that I embarked on the task of designing a valuable technology enhanced, particularly simulation-based, experience for my students.

## Typology of Simulations

Though terminology is not unanimously applied, for the purpose of clarifying the language assumed in this paper, I offer the following understanding of simulations:



Author conception based on Lean et al. (2006) and Maier and Größler (2000) in Lean et al. (2006, pp. 228-229).

From here on out, we will focus on the computer-based, gaming simulation, planning game which 'is a series of mathematical formulae, which represent the structures, relationships and sensitivities in the simulated environment' (Tonk, 2002, p. 179); is a 'multi-user application (played against other users through a computer application)' (Maier and Größler, 2000 cited in Lean et al., 2006, p.228); and offers the prominent factors of motivation, play, reward (feedback), interactivity, score, and challenge (Vogel et al., 2006, pp. 105-106).

## **THE ON-LINE COMPETITION**

The Advanced Management Game from Association Global View (AGV) with its integral approach to international business was chosen as the base platform. According to AGV, students 'make decisions on all aspects of the business' which provides them with an 'integrative view' ([http://www.globalview.org/default\\_files/capstone.htm](http://www.globalview.org/default_files/capstone.htm) 2008). Like most business gaming simulations, decisions include target market countries, advertising budget, sales price, number of sales representatives with their salaries and commissions, credit policy, production countries, production per shift, maintenance budget, engineering budget, quality control budget, R&D budget, short term investment options, factoring receivables, short term loans, issue of bonds and stock, dividends, raw materials purchase, ocean freight shipping, just-in-time shipping, plant production or expansion—all while political, technological, and economic factors 'influence markets and create unique opportunities and threat' (Schlais et al, 1998, p. 1).

Now just because the simulation involves a multinational company, though, does not justify it as being an international business simulation. In the case of Global View, however, the simulation rightfully earns this nomenclature given that competitors come from around the world and that teams trade product and production facilities amongst themselves. 'This creates learning opportunities not found in other simulations, such as real b-to-b experiences, international business law, and cross-cultural negotiation' ([http://www.globalview.org/default\\_files/capstone.htm](http://www.globalview.org/default_files/capstone.htm) 2008).

Every Friday teams enter their decisions, with each week equivalent to one business quarter. By Monday, the results are posted in 'The Boss' (the Global View on-line newspaper) and in a multitude of managerial reports, the most eagerly awaited being the stock report.

## **THE ON-SITE CHALLENGE**

The cross-border aspects in the Global View simulation added to the IB reality I was seeking, but ever-increasingly important issues such as environmental and social responsibility were still not included. How to include these in an on-line business simulation is certainly a research topic for the future. I, however, am concerned with the immediate application. That is why I decided to add IB reality by adding a reality show flavor.

Instead of limiting participation in the simulation to the confines of the EAFIT University campus, I contacted Association Global View with the idea of extending the competition to other Colombian universities and adding an integrative event at the end of the on-line phase. AGV, with virtually no experience in the Latin American market, was enthusiastic about extending the simulation to other Colombian universities and offered invaluable support.

I proceeded to extend massive invitations to other Colombian universities, of which ten accepted the challenge. Interestingly, all participating universities are private and of similar size, academic level, and social level. The probable explanation for such similarity is the level of English language skills required for students to be able to play in the AGV simulation; however, this could be a topic of further research. For eight weeks, the teams participate in the on-line decision making as per the standard GV simulation. The five teams with the highest Net Present Value after the eight weeks are invited to the EAFIT University campus to compete in the on-site phase.

While still in their roles as executives of the international perfume companies, the students meet in a variety of challenges much in the essence of the popular television series, *The Apprentice*, which originated in the United States with the participation of Donald Trump and was later syndicated internationally. The Colombian version starred Jean-Claude Bessudo, President of the Aviator Group. In the television program, teams face weekly challenges, with one member of the losing team being 'fired'. Finally, after a season of programs, the one remaining contestant is appointed to the position of apprentice.

In the EAFIT-Global View Challenge, during a period of just three days, teams of students are confronted with a business communication skills challenge in the press conference with national journalists; they

experience a logistics dilemma thanks to sponsor DHL; Chevignon offers a test of product strategy; Almacenes Exito (majority owned by Groupe Casino) provides a challenge in distribution channel negotiations. I coached the company sponsors so that their international business challenges would include social, cultural, interpersonal, and environmental aspects that were not previously considered in the on-line phase. The closing ceremony and awards presentation is hosted by Mr. Bessudo, which is a real treat and photo opportunity for the young people who have watched him on the television program.

## **OPERATIONAL CONSIDERATIONS**

Preparations for the game began a semester in advance, researching the available gaming simulations and determining student interest. When I found the AGV Advanced Management Game and determined that I could easily gather the four to six undergraduate students to form a team, I started on the detail work for the event. In order to guarantee all the assistance necessary to host the on-site event, I decided to offer participation in the game as a full four credit, elective course instead of just an extra-curricular activity. A good two months before students would register for classes, I began sending announcements about the new class through the university-wide e-mail service.

Originally, the course was restricted to upperclassmen, but many freshman and sophomores were expressing sincere interest; and I realized that the younger students were the ones who were much more excited about the event. They saw this as the chance to get a look at what was in store for them in the future. Many older students saw this as extra work when they were already tied down with rigorous coursework. I then decided to lower the requirement to allow sophomores to participate.

Freshmen, as eager as they were, just would not have the skill set required to be competitive in the game. As we have already discussed in the section on typology, challenge is a main distinguishing factor in planning game, gaming simulations and as stated in Vogel et al. (2006, p. 106), when ‘challenge is too high, the learner may feel hopeless and quit trying.’

Though there was no actual means of enforcement, students were asked to schedule an interview with me before registering. The interview was more for the benefit of the students than for me. I wanted them to be fully aware of what would be expected of them and how the class would operate. I certainly did not want anyone to associate the word ‘game’ with ‘goofing-off’.

In total ten students enrolled, seven males and three females, ranging in age between eighteen and twenty-six years old. In the first class session, we discussed the academic strengths and weaknesses of each individual and divided the group into two teams with each team consisting of at least one student who felt strong in each of the main business skills to be tested in the game.

Though the official class schedule was just once a week, we decided that we needed two sessions per week: one to discuss the gaming decisions and one to discuss the on-site event planning. This decision was quickly rescinded, though. By the third week, we were not even meeting once a week as a group. The students decided that they preferred to communicate through MS Messenger to make their decisions rather than meeting personally. Though I would not have made that choice for myself, I respected their choice and accounted my differing opinion to ‘generation gap’.

Also by the third week, I was receiving many visits and e-mails from the students, which I encouraged and enjoyed; but then I realized that since I had been speaking to them randomly all week, we did not have anything new to bring up in the meeting. So, the event planning weekly session was also eliminated, with the understanding that each individual would report in to me at least once a week. Since the students had more direct contact with me, they became even more active with their planning responsibilities which are discussed in the next section.

## **BARRIERS TO IMPLEMENTATION**

As a lecturer in Colombia, I faced certain restrictions that might not be apparent in more developed country universities. First is the question of funds. At \$300 USD per team, the Global View simulation is quite competitive; but converted to Colombian pesos, it was hard to swallow for both students and university administration alike. Negotiating with Global View, I arranged a 30% ‘developing country discount’; but this still seemed high to many. EAFIT decided that the students should pay their own inscription fees just as they would be obliged to pay for their own texts and supplies.

Second is the trust-factor. Being a provincial culture, there is some level of skepticism about who is receiving the funds and what guarantees there are upon paying. In fact, most students still had not paid several weeks into the simulation phase. Also included in the trust-factor is the sponsor trust. Colombian executives are generally very closed as to the amount of involvement with outside entities. The first few sponsors were certainly the hardest to convince. Of course, once some big names signed on; other sponsors were easier to come by. Early media coverage of this event also aided in bringing sponsors on board.

A final restriction is the fear factor: fear of not being technologically-inclined enough to understand the on-line simulation, fear of losing face to the international community playing the game, and the general fear of participating in such an innovative event.

## **COMPETENCY DEVELOPMENT**

On three occasions during the competition, I survey the Colombian participants about their perceived competency development in traditional classes, the simulation, and the on-site activity.

### **Metacompetences**

The first sets of competences analyzed are the metacompetences, which the students evaluated on a 5 point scale from 1, not included, to 5, major emphasis.

Written communication and ethical compromise were two competences that the students perceived to be more strongly developed in the traditional class setting, with 75% and 65% ratings as important emphasis (4) or major emphasis (5), respectively. With the written communication competency, in particular, this is to be expected since the simulation and on-site competition include little, if any, writing. The fact that 50% of the students identified important or major emphasis in written communication in the on-line simulation seems exaggerated; however, additional questioning could determine that these students took full advantage of the possibilities to conduct chat-room negotiations with the other participating teams.

Competences in which the students perceived important (4) or major (5) emphasis during the on-line simulation at a greater degree than in the other two learning environments include: achievement orientation (82%), analytic reasoning (86%), decision-making (96%), leadership (82%), planning and organization (86%), and ability to resolve conflict through negotiation (77%).

The on-site competition offered higher levels of perceived competency development in ability to propose solutions and generate alternatives with 86% and teamwork with 100% 4 and 5 ratings. I had expected self-awareness and self-development to rate higher in the on-site environment; however, students perceive this competency to be equally well developed in all learning environments: 70% 4 and 5's in the traditional environment, 64% in the simulation, and 74% in the on-site. Ability to analyze environments is another equally performing competency at 80%, 77%, and 79% respectively.

### **Profession Specific Competences**

The next sets of competences analyzed are those which are more specific to business related professions, and these competences were equally evaluated by students on a scale of 1 to 5.

The traditional, on-line, and on-site learning environments are rated equally high in finance with 88%, 82% 89%. Logistics is rated approximately equally, though less highly, across the three environments, with 50%, 45%, and 57% respectively.

Pricing and product management competences are most highly perceived in the on-line simulation at 82% compared with 31% in the traditional class and 68% in the on-site and 68% compared with 25% and 32%.

The students perceived greater development of advertising and quality control competences in the on-site setting. Advertising received 74% 4 and 5 ratings compared with 38% in the traditional class and 61% in the simulation, while quality control received 63% compared with 31% and 32% respectively.

## **FOR THE FUTURE**

The future holds engaging challenges on both the operational and academic fronts. On the operational side, my biggest question is how to keep this game fresh and exciting for students while maintaining the same

relationships with AGV and the corporate sponsors. For the same team of people and companies to offer something next year that is distinct from this year will require a lot of creative inspiration.

How to continually add more international interaction is also a priority. Chevignon, headquartered in France, has shown interest in aiding us in taking the competition to the countries in which it operates.

The game has been so well received that it is highly in demand by students and sponsors alike. Since sponsors are now going to compete amongst themselves for the limited number of challenges, this event can become a source of revenue for the university. The student awards will also become more significant and commercial.

There are also many academic questions to be researched: specific learning outcome assessment in gaming simulation participation, incorporation of corporate social responsibility in on-line gaming simulations, gender and other demographic-specific social and academic responses to participation in simulations, and simulation usage rates by country/world region and as a function of university size, class size, and professor characteristics.

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## AUTHOR INDEX

---

- Aarikka-Stenroos, Leena, 980  
Acharya, Parul, 1  
Acimovic, Jelena, 12  
Acimovic, Slobodan, 12  
Akman, Ozlem Kacar , 21  
Ali, Shaukat , 583  
Amira, Eleuch, 29  
Anna, Yakovleva, 1160  
Aragao, Alessandra De Carvalho, 649  
Atalik, Özlem, 36  
Auruskeviciene, Vilte , 917  
Azevedo, Susana Garrido, 44  
Balaban, Mladenka, 54  
Banar, Mufide, 315  
Barisan, Luigino, 61  
Barone, Francisco Marcelo, 69, 808  
Bassani, Sara, 79  
Battal, Ünal, 88  
Battiston, Simone, 728  
Bayma De Oliveira, Fatima, 69, 808  
Bettinelli, Cristina, 106, 114  
Bjorkman, Ingmar, 158  
Bobadilla, Luis M<sup>a</sup> García , 532  
Boone, Larry W. , 122  
Borges, Ana Cristina Valente, 130  
Boudali, Rim Methamem, 508  
Bracken, Ann , 744  
Braun, P., 191  
Bresler, Nerine, 139  
Breytenbach, Amanda, 147  
Budhwar, Pawan S, 158  
Büker, Yeşim, 1168  
Butel, Lynne, 222  
Calarge, Felipe Araújo , 1004  
Caldeira, André M., 167  
Çalışkan, Sezer Günaydın , 410, 422  
Callender, Guy, 175  
Camilovic, Dragana, 183  
Campos, Sergio F. , 942  
Cavadinha, Sílvia, 988  
Chailan, C., 191  
Chambers, Shonta, 1  
Chao, Chiang-nan, 198  
Chen, Hsueh-Chih, 595  
Chen, Lee Shiu, 206  
Cheng, Chi Ho, 122  
Chou, Geno , 122  
Chou, Hsin-hui, 214  
Chowdhury, Dababrata N., 222  
Chugh, Lal , 106, 114  
Chung, Mona, 232  
Coelho Bena, Joao Renato De Souza, 97  
Cohen, Marcel, 391  
Cohen, Marcos, 239, 247  
Cohn, Deborah Y. , 1012  
Coulthard, Max, 255  
da Rocha, André L. P. , 942  
da Rocha-Pinto, Sandra Regina , 957  
da Silva, Renata Céli Moreira, 649  
da Silva, Rita Gonçalves Ferreira , 1035  
Danford, Gerard, 265  
Dayar, Elif, 274  
de Jager, Johna W, 307, 375  
de Macedo Soares, T. Diana L. van Aduard , 340, 649, 1130  
De Oliveira, Fátima Bayma, 808, 988  
De Oliveira, Marina Fernandes, 649  
de Sá Brito e Freitas , Jorge Augusto , 967  
Del Carpio, Gisele Rosenda Araujo Mello , 957  
Denan, Zarina, 281  
Deniz, Zeynep, 289  
Dhurup, Manilall, 297  
Díaz, Luis Eugenio Carretero , 1004  
Dologite, Dorothy, 198

Domarkas, Aleksas, 666  
dos Santos ,Rodrigo Costa , 996  
dos Santos, Gilson , 988  
Drotsky, Antonie, 307  
du Plessis, Andries J , 869  
du Plooy, Thérèse, 877  
Durmaz, Kursat, 524  
Durmaz, Vildan, 315  
Eduardo, Guilherme Satolo, 1004  
Erim, Asli, 422  
Esperança, José Paulo , 638  
Ferreira da Silva, Jorge, Jorge, 239  
Filinov, Nikolay, 320  
Flanagan, Patrick, 546  
Flaschner, Alan B. , 709  
Flåten, Bjørn-Tore, 328  
Fort, Fatiha , 508  
Fortunato, Graziela Xavier, 247  
Fuchs, Paulo Gustavo , 340  
Fuxman, Leonora, 198, 351  
Galvão, Ilsa Maria Araújo , 988  
Garnett, Andrea, 358  
Garnett, Dylan, 358  
Gassenferth, Walter, 167, 996, 1079  
Gawlik, Remigiusz, 366  
Gbadamosi, Gbolahan, 375  
Gogoleva, Anna, 385  
Goldman, Geoff , 784  
Goldman, Geoff A, 147  
Gomes, Emanuel, 391  
Goodwin, Catherine, 709  
Grossi, Patricia, 401  
Grundling, Jan, 774  
Grynberg, Caio A. , 942  
Hadjicharalambous, Costas, 428  
Halliday, Sue Vaux , 768  
Hill, Railton, 206  
Holden, Neil D. , 751  
Holtzhausen, Natasja, 433  
Hong, Tae-Song, 457  
Hor-Meyll, Luis F., 401  
Hotchkiss, Renee, 1

Ismail, Noraini, 281  
Jallat, Frédéric, 441  
Jun, Jong Kun, 457  
Joubert, Pierre, 450  
Kantabutr, Saranya , 1028  
Karahasan, Burhan Can, 463  
Kardeş, Nur Esra, 470  
Khamjan, Sakda , 847  
Khutorova, Natalia, 480  
Kimiloğlu, Hande, 470, 1183  
Ko, Stephen, 484  
Kokalan, Ozgur, 21  
Kolakovic, Krisitijan, 494  
Kollars, Thomas, 501  
Koubaa, Yamen, 508, 516  
Kucukkaya, Engin, 524  
Kucukonal, Hatice, 315  
Lages, Carmen, 631  
Lai, Ching-Yi, 603  
Laimona, Sliburyte , 900  
Lara, Pedro Reinares , 532  
Lazarevic, Violet, 538  
Le Veness, Frank Paul , 546  
Ledlow, Gerald, 1, 501  
Lee, Tae Min, 457  
Lee, Yun Jung , 565  
Leen, Auke R. , 572  
Legeeva, Anna , 578  
Leonova, Tatiana, 578  
Lewis, Eric, 1  
Li, LiLi, 583  
Lima, Antonio Inocência , 988  
Lin, Grace T.R., 611  
Lin, Yaonan, 595, 603  
Lisboa, Ana, 631  
Lisboa, Inês, 638  
Magee-Egan, Pauline, 662  
Makštutis, Antanas, 666  
Malanicheva, Natalia, 578  
Malovikas, Aleksejus , 666  
Mändmaa, Sirli, 673  
Manzoni, Andrea, 681

Maran, Michael J. , 690  
 Marelli, Giuseppe, 709  
 Maronick, Thomas J. , 717  
 Marques, Alzira , 862  
 Marx, Andrew E , 869  
 Mascitelli, Bruno, 232, 728  
 Masilo, Kgomotso, 736  
 Matveev, Alexei V. , 744  
 Mauer, Laurence, 751  
 McCorkle, Denny , 917  
 Melnikas, Borisas, 757  
 Milmine, Elizabeth, 1  
 Milter, Richard G. , 744  
 Mitreęa, Maciej, 768  
 Mockler, Robert J., 198  
 Moschis, George P. , 1110  
 Motta, Paulo C., 401  
 Muller, Claribel , 908  
 Myburgh, Philip, 774  
 Myers, Graham, 784  
 Nasir, Aslıhan, 792  
 Nikovskaya, Larissa, 801  
 Oliveira, Helberte B., 167  
 Öncel, Aslı Gül , 815  
 Othman, Akmal Aini , 823  
 Özel, Emin, 36  
 Ozen, Mustafa, 315  
 Paju, Taina, 827  
 Paliwoda, Stanley J. , 1145  
 Pancera, Osmar , 130  
 Park, JungKun, 565  
 Park, Kathleen, 441, 833  
 Patel, Sneha, 1  
 Pathumnakul, Supachai, 847  
 Petretto, Lorenzo, 839  
 Petrovic-Lazarevic, Sonja, 538  
 Piewthongngam, Kullapapruk, 847, 1123  
 Pinto, Filipe, 862  
 Pinto, Mario, 855  
 Pradhan, Rudra Prakash , 885  
 Putnová, Anna, 892

Ramune, Kugyte, 900  
 Rankhumishe, Edward, 736  
 Ras, Peter J , 908  
 Reardon, James, 917  
 Robertson, Nichola, 923  
 Rocha, Eduardo Peixoto , 931  
 Rolim, Carolina , 130  
 Salles, José Antônio Arantes , 931  
 Salles, José Antonio Arantes , 1004  
 Samoldin, Alexander, 480, 976  
 Sandberg, Birgitta, 980  
 Santos, Manuel Filipe , 862  
 Schiffman, Leon G. , 1012  
 Seknička, Pavel , 892  
 Sener, Pinar, 1020  
 Sengoz, Mehmet Hakan, 463  
 Shaw, Robin N , 923  
 Shen, Yung-Chi , 611  
 Sherman, Elaine , 1012  
 Shneor, Rotem, 328  
 Siengthai, Sununta, 1028  
 Singh, Virender, 158  
 Skudiene, Vida , 917  
 Smaliukienė, Rasa , 666  
 Soares Machado, Maria Augusta, 167, 996, 1079  
 Soloviev, Vladimir I. , 1041  
 Sterligova, Alla N. , 1045  
 Steynberg, Lizl, 774  
 Süer, Ömür, 815  
 Sun, Chia-Chi, 611  
 Swanepoel, Sonia, 1052  
 Teixeira, Ana Christina Celano , 967  
 Thiangtong, Vilaiwan, 1062  
 Tokmakçioęlu, Kaya, 1066  
 Toninelli, Daniele, 79  
 Torres Júnior, Rubiãõ Gomes , 1079  
 Torres, Camila Raemy Rangel , 1079  
 Tsarkov, Igor, 1087  
 Tzannis, Alessandra, 681  
 Uhlář, Pavel, 892  
 Uyanık, Hakan , 792

Vainu, Jaan, 673  
Van Rensburg, Ben Janse, 307  
Vargas, Fundação Getúlio , 988  
Vasconcelos Costa, Lenise Saraiva, 247  
Vasilopoulos, A., 1093  
Vel, Prakash, 1110  
Vermeulen, Walter J , 908  
Vignarajah, Anandasothy, 1115  
Vijeikis, Juozas, 666  
Vijitnopparat, Prasert, 1123  
Villas, Marcos Vianna , 1130  
Visser, Hennie , 877  
Vladimirova, Nina, 1137  
Vrontis, Demetris, 1145

Wander, Larry, 198  
Watcharasriroj, Budsakorn, 1153  
Wilson, Gregory, 869  
Yakimets, Vladimir, 801  
Yamak, Sibel, 1168  
Yelgecen, Elvin, 1173  
Yu, Hsiao-Chen, 611  
Žák, Libor , 892  
Zaleska, K. Joanna , 1028  
Zaralı, Hülya, 1183  
Zhilkina, Anna N. , 1194  
Zolkiewski, Judy, 214  
Zouain, Deborah Moraes , 69, 808  
Zwerg-Villegas, Anne Marie , 1201