

**GLOBAL BUSINESS AND TECHNOLOGY  
ASSOCIATION**

**MAPPING THE GLOBAL FUTURE: EVOLUTION  
THROUGH INNOVATION AND EXCELLENCE**

**ISBN: 1-932917-08-X**



**Editors:**

**Nejdet Delener, Ph.D  
Leonora Fuxman, Ph.D.  
F. Victor Lu, Ph.D.  
Susana Rodrigues, Ph.D.**

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**FOURTEENTH ANNUAL  
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**READINGS BOOK**

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NJ Delener, Ph.D.  
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# **A RESEARCH FRAMEWORK FOR THE E-LEARNING ADOPTION PROCESS: A STRUCTURATION THEORY APPROACH**

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## **ABSTRACT**

*Previous studies examining the adoption of eLearning can be categorized as having a macro- or micro-level approach. In the one hand, macro-level studies have been concerned with systemic change that transforms the entire institution (Yates, 2001). Typically in such studies, the technology is a major driver for change and is a precursor for the adoption of innovative products and practices. Thus, macro-level studies have endeavored to identify the unique organizational factors in the process of adoption of learning technologies (Surry and Farquhar, 1997). These approaches tend to be limited in failing to appreciate that users do not necessarily adopt technologically superior products (Surry and Farquhar, 1997). In the other hand, the micro-level approach, reporting to behavioural sciences, adopts models and theories which mainly aim to understand and explain individual's reaction and behavior towards technology innovation adoption. Individuals, departments in universities, have their own desires, abilities, histories and preferred artefacts (Salmon, 2005). Thus, diffusion of innovation theories research is seen to be limited in exploring the hermeneutic nature of technologies as well as their "embeddedness" into social systems (Yang et al., 2003). Adoption and diffusion research would benefit from a combining approach that takes into account both institutional and individual factors that lead to the adoption, or otherwise, of eLearning (de Freitas and Oliver, 2005). Drawn from Giddens's theory of structuration, this paper provides an integrated approach to the two perspectives and provides a theoretical research framework to analyze interactions between structure and agency.*

## **INTRODUCTION**

Elearning, whatever its limitations, has become true for all educational institutions across the four corners of the world. This evolution, related to internet development, opens the way for new training offers founded on socio-constructivism which links distant learning activities and calls for new adoption of information technologies. For this research eLearning is conceptualised as technological innovation situated in the interplay between structure and individual and how this leads to adoption and diffusion (Glen and Gurmak, 2011). Technological innovation at the macro and micro levels has long been understood in previous research. Indeed, most studies on information systems have for long limited themselves to study a macro- or micro-level approach. Macro-level approaches tend to be limited in failing to appreciate that users do not necessarily adopt technologically superior products (Surry and Farquhar, 1997) and as a consequence research is limited in understanding the complex, ambiguous and networked nature of technologies in social systems (Yang et al., 2003). The underlying premise is mainly represented by technological superiority as a precursor for the adoption of innovative products and practices. In the other hand, Salmon (2005) notes that individuals, departments in universities, have their own desires, abilities, histories and preferred artefacts. The micro-level approaches adopt models and theories which mainly aim at understanding and explaining individual reactions and behavior towards adoption of information technology. Technology acceptance model (TAM) and planned behavior model (PBM) are the two models most cited within information system literature (Yayla and Hu, 2007). Nevertheless, these acceptance models seem to consider technology tools as univocal. Besides, they forget that the process of implementation of one technology considerably differs from one culture to another, one organisation to another and from one individual to another. These individual models are unable to consider unexpected consequences of

technology and focus only on the analysis of the micro-level regardless of the influence that organisation imposes on its adoption by groups. They tend consequently to forget that implementing is above all a social and human change process which needs appropriation technology. Surry and Farquhar (1997) highlighted the challenges of the adoption of one approach against another. Burnett and Birch (2009) and Eynon (2005) have noted the shift in innovation research from solely macro and micro-level perspectives towards a more interactive view, which emphasizes the interactions and interconnections between individual actions and structural influences.

However, eLearning research shows that while there is a substantive theoretical study that deals with structural influences and individual action on adoption and diffusion. Indeed, there is a need for a conceptual framework that takes into account both micro and macro perspectives. From a theoretical perspective, authors such as Birch and Giddens's theory of structuration provide an integrated approach to the two perspectives and provide a framework to analyze interactions between structure and agency. These perspectives enable the integration of both macro and micro levels of analysis by recognizing the equal contributions of both structural processes and human agential powers (Parker, 2000). In what follows, we analyze the question of technology acceptance, thanks to an IS literature review. We move then to introduce the Giddens's theory of structuration, as an interactive approach for understanding adoption of elearning.

## **THEORETICAL FRAMEWORK: ANALYSIS OF MAIN MODELS OF INDIVIDUAL ACCEPTANCE TECHNOLOGY**

It is necessary that technology be accepted, adopted and then used by organisations. Technology acceptance has been one of the significant research streams in the information systems (IS) literature. Researchers utilized a variety of theoretical frameworks to understand the determinants of individual's technology acceptance behavior, including the Technology Acceptance Model (Davis, 1989, , Theory of Reasoned Action, (Davis, 1989; Davis et al., 1989), Diffusion of Innovation (Karahanna et al., 1999; Moore and Benbasat, 1991), Theory of Planned Behavior (Mathieson, 1991; Taylor and Todd, 1995b), Domestication framework (Silverstone and Haddon, 1996), and Hospitality metaphor (Ciborra, 2002). The Technology Acceptance Model (TAM) and Theory of Planned Behavior (TPB) have been two of the widely utilized models in the IS literature. In the early years of the theories, studies used TAM and TPB separately to compare their explanatory power (Mathieson, 1991; Taylor & Todd, 1995b). However, as the theories gained popularity in the literature, researchers combined them to have a richer understanding of technology acceptance behavior. Many hybrid models of TPB and TAM were proposed and tested in the literature (Hu and Dinev, 2005; Hsu and Chiu, 2004; Pavlou and Fygenson, 2006; Taylor and Todd, 1995a; Venkatesh and Davis, 2000; Venkatesh et al., 2003). Information systems researchers have often proposed to evaluate the "success" of a project by means of indicators in the form of use intensity and users satisfaction (Chang et al, 2005). For instance, in some studies ease of use is considered as an antecedent of behavioral control (Hu and Dinev, 2005; Pavlou and Fygenson, 2006), whereas in others, this construct has on relationship with behavioral control (Taylor and Todd, 1995a, 1995b). Similarly, some IS scholars used subjective norm as a moderator between perceived usefulness and intentions (Hu and Dinev, 2005) and the others used perceived usefulness as a moderator between subjective norm and intentions (Venkatesh and Davis, 2000). Different theoretical frameworks used in the literature explain 70% of the variance in terms of adoption intentions. They consider intention as the predicting variable technology adoption behaviour under study. Intentions are known to be captured by motivational factors which influence behaviour; they are indicators willing to try intensity, the effort individuals plan to deploy to behave in a certain way (Ajzen, 1991). They correspond to instructions self-given by individuals to behave in a certain way. It is a mediator of the influence of other factors on the immediate use or the short-term use of an information system (Venkatesh and Davis, 2000). All these theories and models have been extensively used to explain technology acceptance. Nevertheless, the TAM and other models seem to forget that implementation is mainly a social and human change system which needs the individual's adaptation of technology. As stated by Weick (1990), technology is fundamentally equivocal as it may be conceived and used in different ways. A better understanding of technology adoption clearly requires then to go beyond classic models of acceptance.

# **Adoption of technology: beyond the TAM models and towards the structurationist approach**

The adoption described within the operational models, by means of user manuals and manufacturer guidelines and an efficient usage that is really true and used often shows a form of deviation. Adoptions are far from being influenced by creativity of specific users. Indeed, even if these technologies are conceived in a way to satisfy users' functional needs, designers are unable to define and respond to all users' needs. This is essentially due to the fact that their needs change and are constructed along process of adoption and use and in function of their contexts. Then, adoption contexts or situations may lead to unexpected consequences and so to an individual and independent adaptation of technology use. It is more about the way we manipulate technology than technology per se (Orlikowki, 1995). It is not then about studying the relationship between a learner and a tool or another within a learning process in a specific pedagogic situation. In order to examine and understand the role of the individual (agency) and institution mechanisms (structure) that influence adoption of eLearning, recent studies of management focused on this side of the issue and consider the tool's post-implementation actions, destined towards manipulating value creating process. These approaches which best approximate users consist to examine the relationship between users and this set of elements. The main interest for managers is so to understand how users of a technology may oscillate from an existing function of reproduction of modes to a new function of production of new modes. In this paper, Giddens theory of structuration was considered to offer considerable analytic advantages. The main aim of structuration theory according to Giddens, is to reconcile two the long-standing divisions between two differing perspective held by social theorists.

## **Structuration theory: as a conceptual framework to understand adoption**

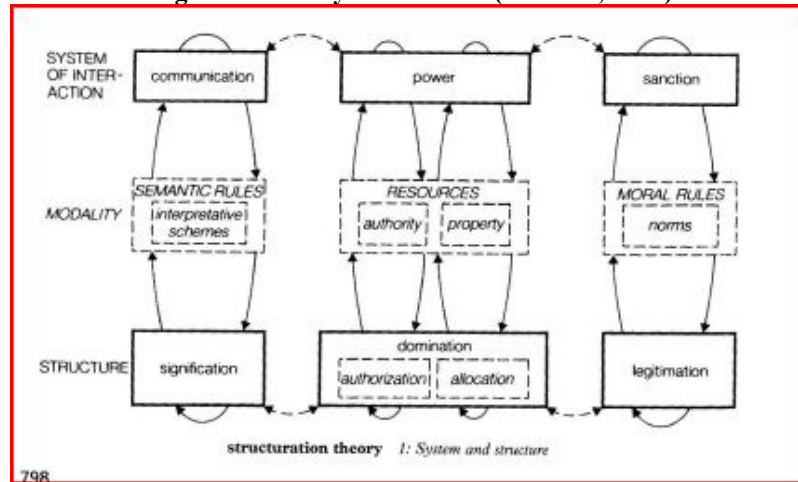
Giddens' structuration theory is an attempt to 'put sociology back together again'. Its starting point is that the division between structural and social action approaches is essentially false. He argues, structuralists and functionalists (macro-level studies) have provided explanations of social behaviour in terms of structural forces that limits individual's capability to do things in their own way. On the other hand studies focusing on the individual behavior (hermeneutics, phenomenology) explain the social life by have generally ignored the influence of external entities. Giddens's structuration theory asserts that the both perspectives are interlinked, in that, social life is not simply a "micro"-level activity and conversely it cannot be studied by purely. Giddens (1984) seeks to demonstrate that social structures and social actions have a symbiotic relationship. They are dependent upon each other, but also constrain each other. Therefore, neither social structures nor social actions can exist independently of one another. Consider language as an example: The structure of a language (grammar, construction, and spelling) exists independently of any one individual. The structure is, however, shared between individuals to allow communication, which is a social activity, and all other social actions are possible because of this ability to communicate. Furthermore, language, and therefore structure, is constantly evolving or being re-invented through communication/social action. These ideas help to demonstrate Giddens' key idea of the 'duality of structure', the fact that it both constrains and enables.

In Giddens's duality of structure, social structure and human interaction are broken down into three columns. Each structure and interaction are then associated with each other recursively via the linking modalities (interpretive scheme, facility, and norm). Giddens (1984) identifies three dimensions of structure; signification, domination and legitimization that are interlinked with corresponding dimension of agency; communication, power and sanctions. Signification refers to how individuals produce meanings of the structure through communication and language. Agents draw on interpretative schemes to make sense of actors own actions and actions of others.

The structure of domination relates to the use of power through the modality of facility. Facility refers to allocative resources (control over objects or materials) and authoritative resources (command over individuals). In the context of eLearning, institutional structures are able to exercise power through allocation of resources (for example, providing administrative and technical support, allocating time to develop eLearning courses, (allocative resources) or through issuing policy requirements, procedures, and guidelines that actors are expected to adhere to (authoritative resources). The justification of action focuses on the individual's ability to maintain "understanding" of their activities so they could provide reasons for their conduct if necessary (Giddens, 1984).

Individual actions are guided by application of normative sanctions, expressed through the cultural norms prevailing in an organization. These norms impose social obligations to act in certain ways under particular conditions through cultural norms and values. For example acceptance of eLearning by elearners at a subject discipline (Eynon, 2005) can determine how eLearning is likely to be adopted by others. Individuals and collectivities, such as departments in universities, have their own intentions, abilities, histories and preferred artefacts (Salmon, 2005). Thus cultural differences between institutions, departments and subject groups have implications for adoption of eLearning (Gibbs and Gosper, 2006). However, as we create our own structures we are not, as structuralists argue, ‘cultural dupes’ but can always exercise some choice (course, job, egg). Structuration refers to the dynamic process whereby structures come into being and are reproduced recursively through social practices via the duality of structure.

**Figure 1: Duality of structure (Giddens, 1984)**



Other authors have examined this issue borrowing for the purpose the theory proposed by Giddens(1984), Barley(1986), Desanctis and Poole (1994) and Orlikowski (1992, 1994). Technology does not feature explicitly in Giddens structuration paradigm. However, structuration theory has been employed to study technology-induced organisational change. As stated by Weick (1990) technology is fundamentally equivocal as it may be conceived and used in different ways. In his definition, Barley (1986) uniquely considers the social dimension, showing that technology is defined by its context of use. Being a student of new technologies, the author shows then that the same technology may lead to different organisational configurations because of its adoption variance by individuals. However, Orlikowski (1992) considers that technology is the fruit of a construction process containing both material and social determinants. Orlikowski's structural model of technology uses that as three components:

- (1) Human agents.
- (2) Technology-material artifacts that mediate work tasks of the individuals.
- (3) Institutional properties of organizations (such as structural arrangements, business strategies, culture, control mechanisms, division of labor, expertise, communication patterns).

Likewise, the author presents the concept of “technology duality” and the concept of “interpretive flexibility” which sum up the equivocal nature of technology and the unexpectedness of the consequences related to introducing technology.

- Technology duality: technology is a human production. On the one hand, it is physically constructed by individuals working within a given social context and on the other hand it is socially constructed by individuals with the different specifications allocated to technology. Nevertheless, it is not about viewing conception and usage as disconnected moments of technology's lifecycle. It is potentially modifiable all along its existence (Orlikowski, 1994).
- Interpretive flexibility refers back to the degree technology users are involved in its conception during its development or adoption (Orlikowski, 1994).

The consequence of technology introduction within an organisation mainly depends on individuals' adaptation and on the significance individuals give to it (De Sanctis et Poole, 1994). This is why structurationist models, which consider technology as equivocal and adaptation of technology by individuals as necessary, seem particularly suitable to understand adoption of technology in the context of e-learning

## **A structuration perspective for e-learning system adoption**

Structuration theory has also been applied to e-learning research to examine the organizational learning process during project implementation (Phang et al. 2008), analyze the adoption and application practice of e-learning systems (Eynon, 2005; Gibbs and Gosper, 2006), analyze management accounting practices (Coad and Herbert, 2009), and analyze e-technology and the emergent environment (Tassabehji et al. 2007). A recent study of (Glen and Gurmak, 2011) extended the theoretical perspective of e-learning through a structurationist lens which focused to examine the organizational factors that enable and inhibit organizational adoption and diffusion of innovation. We applied the underlying duality of technology concept which is based on Giddens' duality of structure and structuration model of technology adoption (Orlikowski 1992, Scott 1995) to gain insight into the structuration of e-learning systems so as to understand the relationships between an organization's attributes and its adoption of e-learning systems. The structurationist model of technology adoption focuses on the relationship between social structure and human actions and suggests that adoption of e-learning system innovations is a cumulative consequence of individual actions, which are shaped by organizational meta-structures (Giddens 1984). These meta-structures reinforce established structures and patterns of action that reproduce established behaviors or enable the emergence of new structures and actions that generate innovative behavior. The structurationist model of technology adoption has been used to inform studies related to organizational adoption of information technology innovations for business processes such as the adoption of computer-aided software engineering technology (Purvis et al. 2001), Web services (Chatterjee et al. 2002), and the assimilation of electronic procurement innovations (Rai et al. 2006).

In our context, adoption of e-learning systems emerges from the structuring actions of individuals, whose cognitions and behaviors are influenced by institutional meta-structures. The three key meta-structures of signification, domination, and legitimization (Orlikowski 1992, Scott 1995) exclusively influence the cognitions and behaviors of individuals. Signification is established by meta-structures that provide meaning and promote understanding, thereby serving as cognitive guides for individual action and behavior. Meta-structures for signification are provided by the strategic, relational, and technological contexts in which e-learning systems must be interpreted and used. Legitimization is established by those meta-structures that validate behaviors as desirable and congruent with the goals and values of the organization. Meta-structures for legitimization are established by top management imperatives for e-learning systems and behavioral regulations associated with e-learning system usage. Finally, domination is provided by the meta-structures that enforce established institutional rules to regulate the actions and behaviors of individuals. Meta-structures for domination are provided by top management support, human resources, and financial commitment to e-learning system adoption and the extent to which IS innovativeness, in general, is desirable and pursued in an organization.

## **METHODOLOGY AND DATA COLLECTION**

A qualitative exploratory case approach should be adopted to address the research, by means of structured in-depth interviews with the main actors: elearners (in Tunisian university in our case) and selected lecturers (academic staff). The qualitative research should be designed to offer a possibility of apprehending further the issue under investigation, to understand perceptions, representations, motivations and attitudes of people involved without limiting them to a specific analytical framework.. Attention needs to be given to the perceived problems with e-learning adoption. The case study projects should allow for different contexts of eLearning adoption to be examined. Drawing on the structuration theory to conceptualize the adoption of eLearning composed of three modalities. The microanalysis should be focused on examining how participants draw on, and mobilize their context in adopting (or otherwise) eLearning. Using Giddens structuration theory three components could be framed the data collection. This phase of the interview should be focused on how structural, cultural, and agential elements influenced each other in the development of this process. Thus the interview questions should be sought shifts in meanings, social structure, and their associations with specific participant actions. The macro-analysis should be conducted using two guiding questions:

- (1) What are the causal mechanisms for adoption of eLearning within the organization; and
- (2) How did contextual influences and conditions shape the adoption of eLearning?

## CONCLUSION

Social processes such as learning or communication constitute an important application of information and communication technology (ICT). Widely practised within companies and administrations, “e-learning”, a label given to digital learning, occupies since many years a growing position within higher education. Previous studies examining the adoption of eLearning can be categorized as having a macro- or micro-level approach. Very often the organisation limits itself to choosing and implementing the “good” technology at the expense of its adoption. Technology in itself is not profitable. It is the way of its use that is a major competitive advantage. At the micro level approach, technology acceptance has been one of the significant research streams in the information systems (IS) literature. Researchers utilized a variety of theoretical frameworks to understand the determinants of individual’s technology acceptance behavior, including the Technology Acceptance Model (Davis, 1989; Davis et al., 1989; Mathieson, 1991; Taylor & Todd, 1995b), Theory of Reasoned Action, (Davis, 1989; Davis et al., 1989), Diffusion of Innovation (Karahanna et al., 1999; Moore & Benbasat, 1991), Theory of Planned Behavior (Mathieson, 1991; Taylor & Todd, 1995b), Domestication framework (Silverstone & Haddon, 1996), and Hospitality metaphor (Ciborra, 2002). In this study, we tried to adapt a theoretical framework which may better explain adoption of elearning by moving from individual models towards more interactive approach which recursively combine micro and macro levels of analysis. Therefore, an important contribution of this study would be our attempt to go beyond the TAM models. Giddens’s structuration theory then provided a sensitizing theoretical framework for understanding the dialectical nature of adoption of eLearning. Structuration theory is concerned with the interplay of agents’ actions and social structures in the production, reproduction, transformation and regulation of any social order (Giddens, 1984). The structuration of relations in time and space takes place along the dimensions of signification, domination and legitimation, which are inextricably intertwined, and agents draw on these dimensions as an integrated set. We applied the underlying duality of technology concept which is based on Giddens’s duality of structure and structuration model of technology adoption (Orlikowski 1992, Scott 1995) to gain insight into the structuration of e-learning systems so as to understand the relationships between an organization’s attributes and its adoption of e-learning systems. Further, we use the structuration analysis in a case study to apply our theoretical framework. Based on the results, the framework would be updated. The theory developed in this paper offers a basis for such future work.

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# EVALUATING SERVICE DELIVERY PERFORMANCE OF THE NAMIBIAN MINISTRY OF HEALTH AND SOCIAL SERVICES

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## ABSTRACT

*Namibia is a unitary state with three levels of government: national, regional and local. Government comprises twenty ministries that provide services and supervise national development within the specific sectors it has created. One such ministry is Health and Social Services (MoHSS). The overall aim of the MoHSS is to provide primary health care services to the Namibian people focusing on the prevention and curing diseases in an efficient and effective manner. Although Namibia has an elaborate institutional setting in which to providing health services, the scale of the HIV/AIDS pandemic poses a great challenge to the efficacy of its health system. The management of the disease requires proper planning and an ability to execute intelligible procedural actions need to be put in place for those who are not infected, the affected, as well as children and family members left behind by deceased parents and breadwinners. It further requires cooperation and partnership with international donor agencies, the World Health Organisation (WHO) and the community. Community participation and involvement is critical in enhancing the viability and applicability of strategies that are put in place to deal with the pandemic.*

*The purpose of the study is three-fold:*

- 1. To critically assess the performance of the Ministry of Health and Social Services in providing HIV/AIDS services to the community between 2000 and 2007 with specific focus on:*
  - a. democratic participation in service provision, that is, the participation of stakeholders, particularly communities and non- governmental organisations in determining the kind of services required and the programmes to be initiated in order to provide such services;*
  - b. the ability of the MoHSS to handle HIV/AIDS programmes as part of service delivery management; and*
  - c. how the MoHSS mitigates through programmes the impact of HIV/AIDS on communities, as presented in the MOHSS programmes.*
- 2. To expose inherent problems the Ministry of Health and Social Services face in dealing with HIV/AIDS service delivery in Namibia.*
- 3. To provide recommendations in order to improve the performance of the Ministry of Health and Social Welfare in its HIV/AIDS service delivery.*

*Finally, the study considers issues of public sector performance in a bid to enhance service delivery and policy.*

*The study is qualitative, where focus is on experiencing human behaviour in relation with institutional and community dispositions in dealing with the HIV/AIDS pandemic. In this regard, the case study research design was adopted. Documentary search, interview schedules and questionnaires are some of the tools used in the study to collect data. The study found that the MOHSS encourages communities to find out about their HIV/AIDS status. MOHSS uses the media, such as television, radio, and newspapers to broaden the participation base of communities and other stakeholders. It also has a collaborative approach of dealing with the pandemic where it encourages partnership with NGOs and CBOs. These results indicate that the MOHSS provides effective and efficient HIV/AIDS services. The spread of information through the media has led to more people participating in HIV/AIDS advocacy. Communities now realise the devastating effect of the pandemic and feel obliged to join the bandwagon to deal with it. However, the MOHSS needs to sustain its efforts through proper planning and making sure that it has enough health personnel, particularly community based nurses, trained in dealing with the pandemic. There is also a need to adopt good practices from other countries as lessons to improve MOHSS's HIV/AIDS service delivery systems. Thus, the MOHSS needs to be holistic in its approach to try and incorporate a wide array of strategies that can yield positive results in its fight against HIV/AIDS.*

# INTRODUCTION

Namibia is a unitary state with three levels of government: national, regional and local. Government comprises of twenty ministries that provide services and supervise national development within the specific sectors it has created. One of the ministries is the Ministry of Health and Social Services (MOHSS). The overall aim of the MOHSS is to provide primary health care services to the Namibian people focusing on the prevention and curing diseases in an efficient and effective manner. Since independence in 1990, most of the health services are provided at outreach points, clinics, health centres and district hospitals. There are three referral hospitals in the country situated in Rundu, Oshakati and Windhoek. These hospitals cater largely for referred cases. The HIV/AIDS pandemic is not restricted to Namibia. It is a global disease that is particularly devastating in the developing world and more specifically, in sub-Saharan Africa. The disease has been known for more than twenty years yet its effects and high death toll are astonishing when compared to other diseases. The name HIV/AIDS is an abbreviation of the Human Immunodeficiency Virus (HIV). This virus attacks the white cells (T-cells) of the immune system leading to a reduction in these cells (specifically the CD4 cells). This disease severely tests any health system particularly those in developing countries, and even in the developed world, because there is no cure yet.

The HIV/AIDS pandemic is not peculiar to Namibia. It is a global disease that is particularly devastating in the developing world and more specifically, in sub-Saharan Africa. In spite of the fact that there is no cure, the pandemic can be effectively managed so that it becomes a chronic disease. The management of the disease requires proper planning and an ability to execute intelligible procedural actions need to be put in place for those who are not infected, the affected, as well as children and family members left behind by deceased parents and breadwinners. Management of the disease requires commitment to action rather than eloquent speeches and impracticable plans. It requires cooperation and partnerships with international donor agencies, the World Health Organisation (WHO) and the community. Involvement of the community is critical to enhance the viability and applicability of strategies put in place to deal with the pandemic. The MOHSS should position itself to mobilise all stakeholders, design appropriate intervention programmes, and provide leadership for dealing with the pandemic and carry out regular evaluations to determine programme efficacy. The above-mentioned issues raised form the basis of the study presented in the paper.

The paper presents results of a study undertaken to determine the performance of MOHSS in dealing with the provision of health services, in particular the HIV/AIDS pandemic in Namibia as well as recommendations that will assist the MOHSS in rendering effective and efficient HIV/AIDS services. There is a public concern on whether the MOHSS deals appropriately with the HIV/AIDS pandemic. First, the concern is the level of participation by stakeholders (the affected and infected communities, NGOs, public officials and the business community) in the provision of HIV/AIDS services; second, the manner in which the MOHSS sensitises communities on HIV/AIDS prevalence and its dangers; third, the nature of support given to the infected and affected; and fourth, the impact of the pandemic on the community.

## STATEMENT OF THE PROBLEM

Since the beginning of the New Millennium, no meaningful study has been conducted to determine the performance of the MOHSS in HIV/AIDS service delivery in Namibia. This is in spite of mixed reactions from different sections of society on the manner in which the MOHSS deals with the HIV/AIDS pandemic. What exist currently are baseline surveys, such as the research conducted by the MOHSS and NGOs providing the infection rates, death toll and the burdens on health institutions the pandemic has caused. NGOs have assessed their contribution to the cause rather than offering a coherent holistic analysis of the performance of the MOHSS in handling the pandemic. An assessment of the ministry's performance is critical as a basis for developing capacity- building mechanisms that will improve the operations of the MOHSS and indicates how it should deal with the HIV/AIDS pandemic. When there is no performance measurement, it is difficult to ascertain whether communities are satisfied with the service or not. The ministry is unable to report whether it is performing effectively or not. There is lack of information on the status quo. This total lack of assessment and criteria makes the study all the more important and necessary.

## **THE RESEARCH QUESTION**

The research question addressed in the study is:

How far did the MOHSS succeed in providing HIV/AIDS services to communities in Namibia between 2000 and 2007?

In order to answer this question the following sub-questions are addressed:

- a) Did the MOHSS involve communities, the private sector and NGOs when determining the kind of services and programmes needed to deliver HIV/AIDS services?
- b) Did the MOHSS handle HIV/AIDS issues appropriately and has the impact of such actions been positive or not?
- c) Are there any problems that can be identified as impeding the capacity of the MOHSS to deliver HIV/AIDS services effectively?
- d) Are there any suggestions that can be proffered to the MOHSS to improve its management of the HIV/AIDS pandemic in Namibia?

## **DATA COLLECTION**

In order to answer the research questions and indeed authenticate this scientific inquiry, both primary and secondary data were collected. Secondary data involved looking at other publications of scholars on the same subject, but for different reasons; minutes of meetings; and archival information. Due to the nature of the study, primary data were collected using questionnaires and interviews. Questionnaires were the key data collection instruments as they assisted the writer to collect information from a variety of respondents who wanted to remain anonymous. As pandemic carries stigma, people do not free to talk about it openly therefore they require a means chance to air their views in privacy without fear of their identity being revealed. Interviews were used to collect data from officials of different organisations. These officials were selected for their expert knowledge in HIV/AIDS.

## **PUBLIC SECTOR SERVICE PROVISION AND PERFORMANCE MEASUREMENT**

Public sector performance has become a topical issue in Africa and elsewhere, where issues relating to democratic good governance and service delivery both at national and sub-national level have become highly controversial. The purpose of measuring performance is to determine whether or not public sector institutions are working towards achieving the fundamental mission and purpose of government, that is, to enhance service provision and improve the lives of communities. In fact, most democratic regimes in Africa are interested in gauging the performance of their institutions. It is through such knowledge that measures to improve service delivery can be developed. While all sectors of the economy have to focus on this imperative, it has become even more important in the health sectors of African countries, particularly in sub-Saharan Africa, where a devastating HIV/AIDS pandemic is taking its toll and is growing unabated.

### **Service provision in the Namibian public sector**

The most challenging task facing the Government of the Republic of Namibia (GRN) in the New Millennium is to deliver quality services to its citizenry. The transformation of government institutions in the country is geared towards attaining this fundamental goal and among others, rehabilitating and rationalising colonial institutions to be responsive to communities, cutting costs in order to deliver efficient public services, and training and development to have an effective, accountable and ethical workforce. These reasons for transformation point to the fundamental purpose of government that is, enhancing service delivery to improve social welfare and make life good for all in Namibia. Critical among these services is the health service as a right to all. This is even more serious where the scourge of the HIV/AIDS pandemic is threatening the very existence of society. At the centre of excellent service delivery by government institutions is an efficient public administration and management system that is able to balance rational policy-making and planning, community interest and the interest of

political office bearers. The efficiency system can only be known using an intelligible performance evaluation system, that is cognisance of critical indicators of performance and checks whether or not there is adherence to these pointers in all service delivery actions. Service delivery forms the basis for the existence of public sector organizations, such as the MOHSS. It is the ability of public institutions to offer service users what they want in an efficient, effective, responsive and fair manner. The services offered by government are the most tangible outputs of administrative agencies (Sharkansky, 1975:334) and this output would be meaningless to consumers or publics (or customers) if they do not derive the intended satisfaction from these. This is solely because service users see services as a means to a better life.

Although this is not the case both in the public and private sector, communities are expected to accept a service if it is of quality. The concept of quality has been there for a long time. Fredrick Taylor referred to attaining quality through inspection (Taylor, 1911, and Knouse, Carson and Carson, 1993). The concept has been resuscitated and has achieved prominence in current management parlance in both the public and private sector. Consequently, there is an abundance of definitions of quality. Some notable ones include the following: A 'conformance to requirements': discover what the customer wants, train everyone how to accomplish it, and then deliver that to the customer on time (Crosby, 1992:116).

- (i) A customer-based way of doing business, the user of the product or service can count on it achieve its intended purpose (Juran and Gryna, 1980:1-2).
- (ii) Meeting your customer's requirements 100 percent all the time (Noel, 1995:3).
- (iii) Quality means refusing to accept error (Connor, 1999:96).

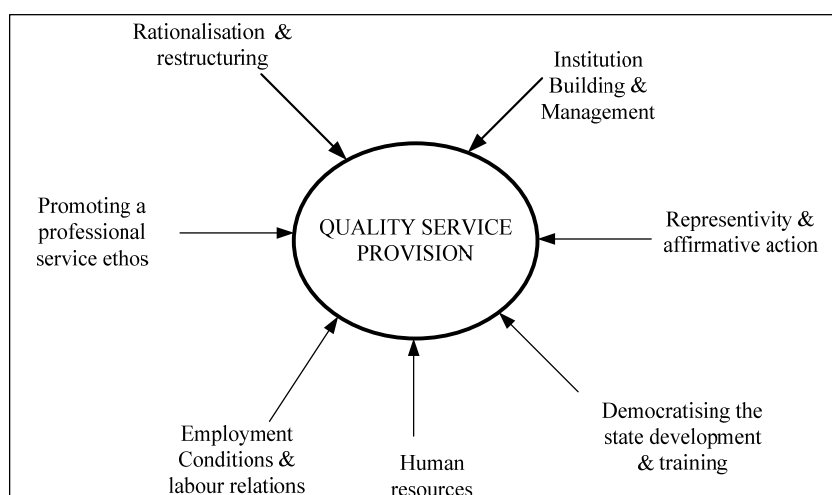
As can be seen from the definitions, quality is a customer-oriented concept. It is about doing the right things right the first time. It is about doing things perfectly. The citizen is taken as a customer and all the services should be tailor made to his/her satisfaction, hence the development of Customer Service Charters in Namibia, which are discussed later in this chapter. The intention is to provide quality services and give the customer the opportunity to question any products or services he/she finds to be unsatisfactory. The common business saying that "The customer is King or Queen" is mentioned here.

In the public sector, specifically the Namibian public sector, quality service provision can be improved through:

- a. Improving communication within the organisation and with customers, suppliers of goods and services to the organisation and other sister government organisations who have a stake in the process of service provision. The MOHSS needs to maintain excellent communication links with the Ministry of Finance (MF), the Ministry of Women Affairs and Child Welfare (MWACW) and the Ministry of Education and Culture (MEC). These ministries deal with members of society who may be affected by HIV/AIDS. A synergic cooperation is indeed a requirement if there has to be a meaningful impact in providing mechanisms to deal with the HIV/AIDS pandemic. On the other hand, communication with the customer calls for consultation and involvement with those affected by HIV/AIDS in order to have a 'mutual think' on the strategies that can be pursued to reduce the effects of the pandemic. There is also a need for communication with NGOs who may have critical financial and material injections to bolster the efforts of the MOHSS.
- b. Instituting a vigorous programme of educating and training service providers, that is, both administrative and professional officers in the MOHSS (Deming, 1982:47). Through training, officers can understand and appreciate the need for quality service provision in health and all HIV/AIDS- related work. Training and education help to improve the skill base of service providers and strengthen their emotional and ethical concerns to spur them on in their holistic involvement in their work. Thus, this process helps to stimulate human capacities and to draw out each individual's infinite potential to deal with the situation (Deming, 1982:47).
- c. Generating a culture built on respect for the individual affected with HIV/AIDS first as a citizen and secondly as a patient whose life should be protected. This helps to remove stigma attached to pandemic and to foster mutual acceptance and tolerance of one another. Such a culture is consistent with constitutional provisions. The Constitution of Namibia, Chapter 3 Article 6 provides for the protection of life as fundamental to all citizens.

The process of quality service provision should be geared towards maintaining quality as exhibited by these characteristics and more importantly, it should be aimed at improving the quality of such provision constantly. This is the challenge public institutions have. According to Kroukamp (1999:300), quality service delivery can be maintained if the public service is rationalised and restructured, a professional service ethos is infused into the service, civil servants are motivated through appropriate employment conditions and labour

relations, human resource development and training are adopted, the state is democratised, representivity and affirmative action are adopted, and management and institution building mechanisms are put in place. Figure 2.1 illustrates these concerns of quality service delivery as postulated in Kroukamp (1999:300).



**Figure 1: Quality service delivery priorities, adapted from Kroukamp, 1999:300.**

In order to make sure that the public service in Namibia is driven by a professional ethos, efficiency, effectiveness, transparency, accountability and customer focused-service provision, the GRN developed a guide to the public service entitled: Being a public servant in Namibia. Part one of the guide focuses on delivering service. It begins by defining the Public Service of the Republic of Namibia. It states that the service is impartial and professional. It strives for efficiency and efficacy and endeavours to execute promptly government policy and directives so as to serve the people of the Republic of Namibia and promote their welfare and lawful interests (PSRN, 2003:19 as extracted from the Public Service Act [No 13 of 1995m Part 1, Section 2]). According to the guide a public servant is any person who works for any part of the central, regional or local Government, or a parastatal. The Namibian public servant is expected to be neutral towards the government of the day. He/she is expected to execute policies of the government and to provide services to communities without fear or favour. In addition he/she should be loyal to the government in line with constitutional provisions and execute his/her duties in the best interests of the government.

Fundamental to the work of the public servant as stated earlier, is to provide quality services to communities. The guide reminds these functionaries of the state to be cognisant of the fact that the public pays for the services through taxes such as income tax and value-added tax. As such, every customer is entitled to service that is:

- a) polite and helpful;
- b) without discrimination of any kind;
- c) professional and competent (doing the job properly); and
- d) open (offers information consumers have a right to know) (PSRN, 2003:21).

On openness during service delivery, the public servant has to strike a balance between confidentiality with private information, such as (secret since he/she is entrusted with private information, such as knowing the HIV status of a customer) and transparency (matters that should be known by the public and are easily seen or known, such as knowing the budget of ARVs and how much it costs per year to provide these medications to one infected person). For an effective discharge of duties the PSRN recommends that each public servant be trained first, in line with the activities he/she performs and secondly, in customer care.

## **Provision of HIV/AIDS services in Namibia**

Provision of HIV/AIDS services is viewed within a broader context of health service provision in Namibia. If Namibia is unable to provide other health services adequately, it will be difficult for it to provide meaningful

services to deal with the HIV/AIDS pandemic. Furthermore, HIV/AIDS leads to the proliferation and multiplication of other opportunistic diseases that if not attended to timeously may be difficult to treat and lead to death. These include pneumonia, diarrhoea, tuberculosis, acute respiratory infections, genitor-urinary diseases, colds and flu, throat infections, herpes and other gastro-intestinal diseases. The ability to deal with these effectively, whatever their cause increases the chance of improving the lives of those infected with HIV/AIDS and lengthens their life span.

The provision of services for HIV/AIDS is important because the disease is the number one killer in Namibia. Between 1995 and 1999, a total of 41 598 deaths were recorded in Namibia. HIV/AIDS caused 19% of these deaths. The other deaths are attributed to tuberculosis, acute respiratory infections, cerebro-vascular accidents, gastro-enteritis, malaria, cancer, pre-maturite births, malnutrition and septicaemia. Table 1 below shows this distribution in a more vivid manner.

Table 1: Causes of death between 1995 and 1999.

Causes of death	Number	Percentage
HIV/AIDS	8 008	19
Tuberculosis	4 248	10
Acute respiratory infection	3 603	9
Cerebro-vascular accidents	3 253	8
Gastro-enteritis	2 869	7
Gastro-enteritis	2 588	6
Cancer	2 564	6
Prematurite births	1 842	4
Malnutrition	1 406	3
Septicaemia	1 280	3

Source: Ministry of Health, Namibia, 2001.

Table 1 provides for deaths attributed to the seven most frequent causes of death in public hospitals between 1995 and 1999. HIV/AIDS deaths are more prevalent in the 16 – 49 year age group. As this is the most productive age group, this scenario highlights the urgent need to manage the pandemic and turn it to a chronic disease. This requires an understanding of HIV/AIDS prevalence in Namibia and how the disease is treated or how the pandemic is managed. This information is vital when attempting to determine whether or not Namibia has performed well in the past seven years (2000 – 2007).

The first HIV/AIDS case in Namibia was recorded in 1986. A survey of pregnant women between 1992 and 1999 indicates HIV infection rates among all sexually active Namibians (Health in Namibia, 2001:44). The infection rate that was 4% in 1992 rose to 22.3% in 1999. The figures show that the highest infection rate was in KatimaMulilo, followed by Oshakati and Windhoek. Increased urbanization appears to lead to an increased rate of infection. Rural urban drift inevitably leads to a concentration of people in urban areas who are poor and have no proper nutrition. They engage in drinking which leads to promiscuity. Young girls engage in commercial sex at invariably exposes them to infection. These figures together with those of the death toll highlight the need for proper management of the pandemic through a variety of advocacy programmes to minimise infection programmes for treating the infected, and programmes for taking care of affected children.

What is disturbing is that increased figures of infection indicate that more will die from the pandemic. The effects may be minimal now but the rate of infection indicates that more horrendous effects are still to come with the devastating effect on Namibia's economy. The first to be affected is the health care system. The health care system will need more health care centres, more hospital beds, more doctors, nurses, medicines and community-based care centres to look after the sick and provide essential nutrition to those infected by the virus. In addition, CBOs will be necessary to offer support to both the infected and those affected.

Another sector to be affected is the economy through loss of the productive members of society, loss in working time, exports and tax revenue. Households will be affected as they lose income. The number of farm labourers will be reduced. More funds will be needed for medication. Besides, the GRN will be expected to increase the health budget at the expense of other sectors of the economy.

One of the social effects of HIV/AIDS is the increasing number of orphans who will need a lot of support from the MOHSS and other ministries concerned with the protection of children such as the Ministry of Gender and Women Affairs. Another effect would be the increased number of other diseases, which are directly related to HIV/AIDS. However, it is important to mention one such disease. This is tuberculosis (TB) that is known to have a devastating effect on its own and one shudders to think of the effects of this disease when combined with the HIV/AIDS pandemic. Tuberculosis is one of the scourges of the 21<sup>st</sup> century. A bacterium called mycobacterium tuberculosis causes TB. The disease manifests first as a mild, primary infection and secondly develops into an active disease. Studies show that in 90% of the cases, the second stage will not normally arise, as the body is able to defend itself. However, nowadays the second stage is often reached or realised in HIV infected people since their immune systems are be weak and unable to provide the necessary defence to the body.

In Namibia the incidence of TB between 1995 and 1999 was 467 per 100 000. Table 1 shows the incidence of TB across the country for people aged 5 and above. The death toll from TB increased between 1995 and 1999 due mostly to the rising number of those infected with the HIV virus. TB places a high demand on the health care system through increased medication and bed space because TB sufferers spend about two months in hospital compared with an average of about 8 days for other diseases (Health in Namibia, 2001:50).

All these figures indicate the need for a health care system to be properly managed to cope with these significant demands. Most of the data discussed refer to the nature of the HIV/AIDS pandemic between 1995 and 1999. It is therefore important to see how the MOHSS managed the pandemic given these documented figures (up to 1999), the increased infection rates demand for more care for infected and affected children, adolescents and the working population.

It would be interesting to note how the MOHSS managed the pandemic in the new millennium (>2000).

#### **Efficacy of health care systems**

Several factors contribute to the efficacy of a health system. These include:

- a) easy access to health services by those who need treatment and preventative measures;
- b) efficient utilisation of health services throughout the country;
- c) proper management of health services;
- d) community participation in health service provision;
- e) the involvement of donor agencies to complement health service provision;
- f) availability of professional health service providers (medical doctors and nurses);
- g) availability of medicines; and
- h) ability to continue research on medical issues.

These factors are critical and a synergic operation inclusive of all of them would produce excellence in health service provision.

## **PRESENTATION OF FINDINGS**

The main purpose of the study was to measure the performance of the Ministry of Health and Social Services in managing the HIV/AIDS pandemic in Namibia between 2000 and 2007. While the scope of such a study could be wide and difficult to limit, this study focused on the participation of other stakeholders, particularly the community, in HIV/AIDS service delivery; the capacity of the MOHSS to deal with the pandemic; and how the MOHSS has dealt with the impact of the disease on the communities in the country. The purpose of this study is to prove that no matter how devastating the epidemic is in Namibia, good vision and focus in handling the pandemic can minimise the effects of the disease and enable communities to take responsibility for curbing the spread of the accompanying diseases and providing valuable assistance to the infected and affected. This is critical if Namibia wants to achieve a measure of success in its dealing with the disease. Thus, to manage the pandemic appropriately, the MOHSS is obliged to:

- a) promote a participatory approach to planning, designing programmes and implementing these for the benefit of communities;
- b) create an amicable relationship among medical/professional staff, communities, the MOHSS and other stakeholders;

- c) rationalise national operations and see to it that the right advocacy is done and that those who are infected and affected receive care that is consistent with policy provisions;
- d) infuse a culture of responsibility, responsiveness, accountability and good performance among all those who are engaged in HIV/AIDS service delivery;
- e) re-position the values of efficiency and effectiveness in health service delivery; and
- f) re-orient the MOHSS to be output rather than input-oriented in deal with the HIV/ADS pandemic effectively.

The process of collecting data involved the use of the triangulation method, which employed documentary search, interviews and questionnaires as instruments deliver with relevant information for research. In all, one hundred (100) questionnaires were distributed. Of these, fifty-three (53) were completed. Of these respondents, twenty (20) were male while thirty three (33) were female. This shows a 32%/68% gender share of respondents willing and prepared to express their views on HIV/AIDS issues. The age distribution of respondents was as follows: from 18 – 29 years of age accounted for 20 (36.0%); from 30 – 49 years account for 31 (60.4%) and from 50 – 69 years accounted for 2 (3.6%). Of the 53 respondents, 36 (83.0%) respondents had had direct experience with HIV/AIDS while 21 (17.0%) had not had the experience. On whether the MOHSS should support or assist those infected and affected, 26 (49.0%) respondents indicated that the MOHSS provides ARVs; 10 (18.8%) respondents indicated that the Ministry uses counseling as an intervention; 2 (3.6%) indicated that there was home visiting by Town Council appointed personnel, at village or central government level, while 16 (28.6%) indicated a lack of knowledge of what the MOHSS does. This is a significant number, which means that the actions of the MOHSS need to be published and made known to all social groupings. Forty eight (48) out of the fifty three (53) respondents indicated that the MOHSS encourages communities to find out about their HIV/AIDS status. This was a 90.5% positive response for the MOHSS. Only 5.5% indicated to the contrary, while 4.0% indicated a lack of knowledge on this issue. If people are tested and found to be HIV positive, the MOHSS helps these people through the provision of free ARVs (32) and counseling (42). In addition it sometimes provides food for these people (2).

In order to put across the message on HIV/AIDS awareness, treatment and control, the MOHSS uses different types of media. 38 out of 53 respondents (72.0%) indicated that information was spread through the radio while 47.0% indicated that the television was used. Newspapers accounted for 36.0%; posters accounted for 36.0%; Ministry and NGO booklets 2.5%; and workshops 1.0%. In essence, the message conveyed is on condom use, voluntary testing and abstinence.

Of importance is to note that the spread of information through these media has led to heightened participation in HIV/AIDS advocacy. About 90.0% of the respondents indicated that there was a high degree of participation in HIV/AIDS-related matters because 25.0% of respondents indicated that they participated through home- based care (the CBO approach to awareness creation); 34.0% used support groups; 34.0% participated through the distribution of ARVs and conducting individual or group-based advocacy sessions. To support these findings, 94.0% of the respondents indicated that there were NGOs such as Red Cross (34.0%), WHO (4.0%), ErongoEparu (28.0%) and USAID (4.0%) that helped the MOHSS to deal with the HIV/AIDS pandemic. The Director of the Tuberculosis (TB) Special Programme, firstly, indicated that the MOHSS had mobilised communities as well as the above-mentioned NGOs, including the line ministries such as the Ministry of Finance and the Ministry of Women and Child Welfare. Secondly, the MOHSS has decentralised its operations to make sure that more people are involved in the management of HIV/AIDS. It has allowed other organisations to partner it in dealing with the HIV/AIDS pandemic where the weakness of one institution can be complemented by another. In fact, involving other actors allows HIV/AIDS programmes to reach more people. In addition, although the MOHSS is central in the planning process, it leaves room for participation by other stakeholders. The structural configuration for dealing with HIV/AIDS in Namibia is as outlined below.

The National AIDS Committee (NAC), chaired by the Minister of Health and Social Services, is the highest policy- making body on all matters related to HIV/AIDS The National Multi-sectoral AIDS Coordination Committee (NAMACOC), chaired by the Permanent Secretary of the Ministry of Health and Social Services provides leadership for multi-sectoral and regional implementation The National AIDS Executive Committee (NAEC) provides the technical leadership and is responsible for the co-ordination of the implementation of the multi-sectoral response.



The third question related to whether the communities were satisfied with the MOHSS's provision of HIV/AIDS service. 43% respondents indicated that the community was satisfied with the MOHSS. 57% respondents indicated that the MOHSS made ARVs available to all. Additional to this is, the Katutura hospital superintendent who indicated that the MOHSS had been successful in prevention of mother-to child infections. Furthermore, the Director of TB special programme in the MOHSS indicated that MTP3 (Medium Term Plan 111) had been initiated in the public sector and ARVs were accessible to all. She did however indicate that the HIV/AIDS pandemic was unpredictable, putting management in difficult position.

The fourth question dealt with problems the MOHSS experienced that could be identified as impeding its capacity in managing the HIV/AIDS pandemic. Approximately 13% of the respondents indicated that there was lack of resources, 13% indicated that people did not want to get tested, while 11% indicated that people were ignorant, health facilities were not adequate. This point is supported by the response of the Matron of Katutura Hospital during an interview. She indicated that there was a lack of venues. This precluded meaningful counseling programmes. Regardless of shortage of venues, she also noted that the MOHSS experiences shortage of personnel and this is a problem that needs attention.

The fifth question calls for suggestions that could be offered to the MOHSS to improve its management of the HIV/AIDS pandemic in Namibia. 28% of the respondents indicated that more training was needed in order to manage HIV/AIDS services, while 17% of the respondents emphasised on continuing on health education. Besides the information from the questionnaires, the respondents interviewed (i.e. Deputy Minister of the MOHSS, the acting Director of special programmes on T.B) once again indicated that the MOHSS had done well in the management of HIV/AIDS, especially in making the ARVs available to all. They further noted that the MOHSS had done tremendously well in conjunction with the stakeholders, but more needed to be done. In addition to the above findings, respondents indicated a high degree of satisfaction when responding to questions on the capacity of the MOHSS to deal with the pandemic.

A summary of responses to question 16 of the questionnaire indicated this positive view. The question is: Indicate very satisfied (1); satisfied (2); Do not know (3); dissatisfied (4); and very dissatisfied (5), with the capacity of the MOHSS to deal with the HIV/AIDS pandemic using each of the indicators highlighted below: On average, the responses reveal an 89% satisfaction level. This is highly significant and shows that the MOHSS is putting tremendous effort in trying to contain the pandemic. It also forms partnership rather than working on its own alone. This is important as it allows other partners to take ownership of the programme and in so doing, all work towards its success. In the same manner, question 17 in the questionnaire requested the respondents to indicate their degree of satisfaction, using a similar scale as above, with how the MOHSS dealt with the issues. This gives the result is 83% as the average percentage of satisfaction. The significance of this is that the MOHSS is implementing a broad-based programme which looks at both prevention and treatment. This is important as this can reduce the infection rate, monitor and control the pandemic and ultimately create a better and healthy society. Another important question (question 19) was how respondents would rate the capacity of medical personnel to deal with the HIV/AIDS pandemic. A scale similar to that for questions 17 and 18 was used. A high percentage of satisfaction is evident as the average for these indicators is 88%. Given the above situation, the questionnaire also sought to determine what respondents thought should be done to improve the manner in which the MOHSS dealt with the HIV/AIDS pandemic. While it can be acknowledged from these responses that the MOHSS is doing well in dealing with HIV/AIDS, question 20 sought to determine the problems that the MOHSS faced in its attempt to be the leading institution in its handling of the HIV/AIDS pandemic. These problems indicate the limitations that the MOHSS faces in dealing with the HIV/AIDS pandemic. There is a need for critical reflection on these so that action that would turn these shortcomings into advantages can be undertaken.

## **CONCLUSIONS AND RECOMMENDATIONS**

Conclusion 1: Contrary to current opinion, the MOHSS has managed the HIV/AIDS pandemic effectively and efficiently. The Ministry has a broad-based programme which involves different players both national and international in nature.

Conclusion 2: In managing the HIV/AIDS pandemic, the MOHSS upholds the basic principles of mobilisation, community participation, consultation and collaboration. The MOHSS reaches out to all members of the community so that they can understand the nature of the pandemic, how it affects society and what can be done to contain the pandemic.

Conclusion 3: Although the MOHSS manages the pandemic positively, HIV/AIDS has had a devastating effect on communities in Namibia. The effects of HIV/AIDS have rippled through society leaving indelible marks on children, parents, communities and organisations.

Conclusion 4: Although the MOHSS has an extensive programme on HIV/AIDS and implements it as best as it can, it still encounters problems that affect its operations and reduces the success of its programmes. These problems include limited financial resources; shortage of medical staff, overworked available medical staff; limited transport to carry out marketing, monitoring and evaluating of the programme; resistance by the infected to go public on their status; and inadequate medical facilities.

## **RECOMMENDATIONS**

In spite of the positive aspects that the MOHSS continues to exhibit in its bid to deal with the HIV/AIDS pandemic, it is within the framework of this study to make recommendations that can enhance its operations and improve the manner in which it deals with the pandemic.

Recommendation 1: The study advocates a holistic approach in dealing with the HIV/AIDS pandemic. This is an approach which includes those who feel the use of condoms is critical for containing the pandemic. This is an approach which includes those who feel the use of condoms is critical for containing the pandemic, those who think abstinence is the best solution, and those who consider sex only after marriage as the solution. These approaches should not be viewed as conflicting; therefore they should not be expressed in conflicting terms. Instead they should be expressed in a mutually compatible and complementary manner. The most important factors are vision and focus. At the core of each approach is the need to curtail the spread of HIV/AIDS and to reduce fatalities caused by the disease.

Recommendation 2: Significant to note is that HIV/AIDS programmes are developed worldwide to assist the infected and the affected. There is a wide variety of these programmes. The UNAIDS has developed a global strategy for dealing with the pandemic. It is known as the Global Strategy Framework on HIV/AIDS. The MOHSS engages in these activities, but should strengthen this approach to make it an integral part of its HIV/AIDS management strategy.

Recommendation 3: The MOHSS should consider building up its financial resource base for dealing with the HIV/AIDS pandemic. In this regard, sufficient finance is the cornerstone for efficacy. The resources would be used to provide secure transport for outreach programmes, pay volunteers who spread the HIV/AIDS message stipend, train and employ more medical personnel, carry out regular evaluations of the HIV/AIDS programme, deal with OVCs and assist the community to establish sustainable community-based programmes for dealing with the pandemic.

## **Final conclusion**

The study considered the performance of the MOHSS in providing HIV/AIDS services. Literature on service delivery was reviewed; the structural configuration of the MOHSS to provide a clear view of how it is positioned to provide HIV/AIDS services was outlined. The study applied a qualitative approach where the central data collection instruments were questionnaires, interviews and documentary search. The study found that the MOHSS interacts closely with civil society, the media and NGOs to enhance HIV/AIDS service delivery. This is plausible as it widens the participatory space which enhances the acceptance of the programmes and projects of the MOHSS. This approach has also enhanced the efficiency and effectiveness of the MOHSS in providing HIV/AIDS services. It is important that the MOHSS maintains this approach and also opens up its information space to learn more from other countries for efficiency and effectiveness in dealing with the pandemic.

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# **ECONOMIC DEVELOPMENT AND COMPETITIVENESS IN SUB-SAHARAN AFRICA: DO CULTURE AND COLONIAL LEGACY *REALLY* MATTER?**

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## **ABSTRACT**

*The economic performance of Sub-Saharan Africa (SSA) is far less than desirable. Some have attributed this state of affairs to culture and colonial legacy. The debate on whether culture and colonial legacy do influence economic development has engaged the attention of researchers for decades. However, empirical studies have shown inconclusiveness. The purpose of this systematic literature review is to evaluate the relative merit of those debates. This review may help define the much broader philosophical question of the appropriate role of the modern SSA state and leading international institutions in analyzing policy issues that are aimed at minimizing economic disparities between developed states and SSA states.*

## **INTRODUCTION**

Since 1960 all regions have experienced improvements in their incomes relative to the OECD (or at least remained the same) except for Sub-Sahara Africa (SSA), which has seen dramatic economic underperformance. By 2005 per capita incomes in the OECD were \$36,780 and in SSA \$746 (UNDP, 2001; World Bank, 2006b). Real growth per capita for SSA had centered below 1 per cent for the period 1965–2005, and the share of SSA world exports had fallen from 3 per cent in 1950 to less than 1 percent by 2005. Real per capita capital inflows in 2005 were less than a third of the level reached two decades earlier. Whilst 10 per cent of the world's population lived in SSA, the region produced just 1 per cent of global GDP (World Bank, 2006a). Some studies (e.g., Glaeser, La Porta, Lopez-de-Silanes, & Schleifer, 2004; Acemoglu, Johnson, & Robinson, 2001) have attributed this state of affairs to the effect of culture and colonial legacy.

The debate on whether culture and colonial legacy do influence economic development has engaged the attention of social scientists for decades. However, empirical studies have been inconclusive, and have shown mixed results (Uy, 2009). Leading international institutions, such as the IMF, World Bank, UNDP, and OECD appear to have encapsulated the cause of the relative lack-luster economic performance of SSA on inadequate or deficiency in competitiveness, entrepreneurialism, and free market rationality that must be cured through expansive project institutional reform directed at minimizing constraints imposed by culture, social, and political tendencies (Cammack, 2006). A number of studies (e.g., [Platteau, 2009](#); Glaeser, La Porta, Lopez-de-Silanes, & Schleifer, 2004; Ichino & Maggi, 1999) appear to suggest a link between culture and economic development. Continuing on the work of North (1981), growing number of studies also appears to subscribe to the perspective that historical antecedent does impact on current economic development. For example, continuing on the work of Hall and Jones (1999), studies by Acemoglu, Johnson, and Robinson (2001) have indicated that colonial legacy has a strong correlation with economic development.

This paper is a systematic literature review of the relative merit of this debate using certain cultural dimensions of the United States and Ghana as representative of levels of economic development. This paper also reviews the role colonial legacy may have played on SSA economic development; how unrecognizable and

intrinsic feature of global capitalism may have impacted on SSA economic development; and contribute to the literature on the effects of culture and colonial legacy on SSA. This review may help define the much broader philosophical question of the appropriate role of the state and leading international institutions in analyzing policy issues, aimed at minimizing economic disparities between developed and developing economies.

## CULTURE AND ITS INFLUENCE ON ECONOMIC DEVELOPMENT

The problem with culture is that by definition, it is a very qualitative concept having different operational constructs that measure each of its dimensions. Thus most studies into culture employ either a single or a set of dimensional variables (e.g., African work culture) separately and in a single time period (Uy, 2009). Furthermore, there appears to be a general lack of consensus among scholars regarding which cultural construct is superior or is at least widely accepted, a result of the lack of holistic measurement of culture. Therefore to measure culture as a whole appears to be an unrealistic undertaking. Thus, this article employs certain comparative dimensions of culture in its attempts to review its influence on economic development.

Given the link between culture and economic development, what then is the central feature of culture that so much makes it a phenomenon that apparently impact economic development and hold sway the economic destiny of millions of other human beings? This paper attempts to answer this question by harnessing some major themes or dimensions of culture. Culture has been defined as “all that human beings learn to do, to use, to produce, to know, and to believe as they grow to maturity and live out their lives in the social groups to which they belong” (Tischler, 1993, p. 46). Trompenaars (1994) noted that culture can be examined on three different levels, comprising of individual, organizational and national. On an individual level, culture can be viewed as the way people share and express their values; on an organizational level, it can be examined from the way people within an organization express attitudes; and on a national level, it can be viewed as in the way attitudes are expressed in a particular country or geographical region. Trompenaars further observed that every culture distinguishes itself from others by the specific solutions it chooses to respond to problems that reveal themselves as dilemmas. Tabellini (2010) observed that culture is measured by indicators of individual values and beliefs, such as (a) trust and respect for others and (b) confidence in individual self determination. Tabellini further noted that to isolate the exogenous variation in culture, two main historical variables are utilized as instruments: the literacy rate and political institutions.

A comparative example to buttress observations by Tabellini and Trompenaar regarding trust and respect for others, and confidence in self determination at national levels may be found in recent reactions of two world leaders from two distinct cultural and national economic backgrounds to major national dilemmas in their respective countries -- the United States and Ghana:

1. Reacting to a reported shooting of civilians by a US soldier in Afghanistan and a call for investigations, Obama stated, “ I fully *support* [italics added] Secretary Panetta's and General Allen's *commitment* [italics added] to get the facts as quickly as possible and to hold accountable anyone responsible” (“Obama: US soldier's reported shooting rampage, 2012, p. 4). Such statement is suggestive of Tabellini's concept of (a) trust and respect for others and (b) confidence in individual self determination or institutional self determination. Obama's statement recognizes and respects the ability of the two individual public officials (i.e., Mr. Panetta and General Allen) to initiate and conduct investigations on their own volition by virtue of their positions, and presupposes that there are institutions already in place for handling such matters without any outside prompting.

2. Reacting to a reported huge payment of judgment debt to a ruling party financier, a statement was purportedly attributed to Atta-Mills of Ghana stating that he had “*directed* [italics added] the Economic and Organized Crime [Office](#) to investigate the circumstances...” (President J.E.A. Mills *orders* EOCO to investigate, 2011). Such statement is suggestive of the relative absence of Tabellini's (a) trust and respect for others and (b) confidence in individual self determination or institutional self determination. The statement fails to recognize and respect the ability of the institution created precisely to deal with such issues, and presupposes that the institution lacks the initiative to conduct investigations unless it receives external prompting *order* from above.

The two scenarios playing out at national levels of culture are symptomatic not only of the leaders themselves. In fact, they form part of the respective national and media psyche in as much as news reportage is concerned.

Hofstede (1991) associated high scores on individualism (i.e., tendency of people to look after themselves and their significant others) with economically developed countries, which are characterized by the nuclear family system; and high scores on collectivism (i.e., tendency of people to belong to groups or collectives, and to look after each other in exchange for loyalty) with less economically developed countries, which are characterized by extended family system. It is interesting to note that the seminal work of Weber (1970) suggested that among the cultural values that have been cited as facilitators of the West's economic development is individualism.

Using a case study in Europe, Glaeser, La Porta, Lopez-de-Silanes, and Schleifer (2004) observed that similar institutions function very differently in different environments, suggesting that informal institutions, such as culture play an important role. For example, Glaeser et al. noted that the judicial system, even within the same country, such as Italy differs depending upon whether one is in a southern or northern Italian court, with judges in the North expediting civil cases than judges in the South. Ichino and Giovanni (1999) also noted similar regional differences in the functioning of hospitals, schools, and public administrations.

Strong ethnic and regional identities may hinder the creation of modern citizenship, leading to endogenous result of economic underdevelopment; persistence of informal rules and social norms results in legal dualism, which undermines the credibility of modern statutory laws that are designed to encourage economic development; and social customs and norms that prevent differentiation of economic and social life and individual and aggregate capital accumulation lower the performance of indigenous enterprises ([Platteau, 2009](#)). Thus economic development has partial roots in culture.

## **IMPACT OF COLONIAL LEGACY ON ECONOMIC DEVELOPMENT OF SSA**

Colonial legacy has been described as the catch all phrase for the political structure, culture, and general polity left over by the withdrawing colonial powers for the elite indigenous ruling class, which continue to this day to impact either positively or negatively on contemporary SSA states economic and political life. The colonial style of ruling through oppression was an imposition on the African people, with no choice, consent, will, or purpose (Alemazung, 2010). It was completely at variance with the kind of democratic principles that the West now demands, through leading financial institutions, as panacea for SSA states poor economic performance.

Studies have shown links between colonial legacies and postcolonial economic development of countries of Sub-Saharan Africa. Nunn (2007) observed one reason for the lack-luster economic development can be attributed to extraction or relocation of manpower in response to labor demand in the West, and that long after the event had ended the impact still resonates in economies of SSA countries as “suboptimal equilibrium” or less than desirable performance in terms of economic development. Bertocchi and Canova (2002) noted that prolonged exploitation under colonization left considerable mark on the economic development of SSA regions. Lange (2004), using case studies observed that both direct and indirect rule by colonial administrations adversely impacted postcolonial political development and of consequence the economic development of SSA states. It is interesting to note that, under indirect rule, exploitation activities by the colonial ruler created distrust between the indigenous indirect rulers and the indigenous ruled class, a situation that negatively affected SSA states postcolonial economic and political development (Mizuno & Okazawa, 2009).

The present state of SSA states that is laden with corruption that impedes socio-economic development might have had its origins from the activities of the colonial relationships. As Mizuno and Okazawa (2009) observed in their model: There existed a colonial ruler and two indigenous groups. The colonial ruler set up a privileged ruling class from among the indigenous group, at once creating two groups of indigenous -- privileged ruling group and an unprivileged ruled group. The colonial ruler instructed the ruling group to transfer the resources of the indigenous people to the colonial ruler. Using the political power given by the colonial ruler, the

ruling group exploited the resources of the ruled group for its own advantage, as it served the interests of the colonial rulers. Thus by this arrangement, the seeds of corruption was sown and somehow institutionalized in the economy of the SSA states, which persist even till today. Harsher exploitation by the colonial ruler through the ruling group resulted in the ruled group growing distrustful of the ruling group. With the withdrawal of the colonial ruler or advent of political independence, political power and control of government became fully concentrated in the hands of the ruling group. But at this stage, the ruled group carries over its distrust of the exploitative behavior of the ruling group from the colonial era, and the ruling group has also been sifted with the fruits of corruption.

Considering that one of the indicators of culture is trust and respect for others (Tabellini, 2010), distrust breeds lack of patriotism and productivity among a social group, drying up the well of confidence in individual self determination, and possibly explaining the poor contemporary economic development of SSA countries. For, confidence in individual self determination is a major attribute of culture, and is symptomatic of an entrepreneurial environment where, individuals seek to take advantage of economic opportunities that may lead to economic development (Tabellini, 2010). Post-independence era witnessed SSA countries discovering that their economic, political and cultural systems were still under the exploitation of what became now referred to as neo-colonialism (Mwaura, 2005). It dawned on some post-independence indigenous ruling groups that SSA states economic system and political policies were indirectly formulated by the “withdrew” colonial administrators, and neo-colonialism operated in different formats in post-colonial Africa, notably through financial aids under supervision of consortiums whose interest were allied with that of the West (Nkrumah, 1975). Thus, economic and political policies that were formulated promoted colonial interests over indigenous interests, and neo-colonialism thrived because of deep brainwashing and dependency on the economic system of the West (Odetoyinbo, 1994; Mwaura, 2005).

Several experts (e.g., Amoo, 1997; Dumont, 1966; Meredith, 2005; Nugent, 2004; Rodney, 1972) have noted in the literature major post-independence problem that militates against economic development of SSA states -- ethnic divisions or tribalism. Ethnic division is one of the leading legacies of colonialism, artificially created and imposed by the colonial administrators, outside linguistic and cultural lines (Mahoso, 2010). Conventional review of cause of ethnic conflicts has pointed to the creation of state artificial borders (e.g., Taras & Ganguly 2002; Clapham, 1985). One researcher (Shillington, 1989) observed that the colonial administrators purposely emphasized ethnic differentials as a way of strengthening tribal differences and rivalries between the various groups, in order to prevent the colonies from presenting united front against the colonizers. Shillington further noted that there were not any real customary differences, but that the accentuation by the colonial administrators “invented tribalism” (p. 356).

Education was seen by the colonizers as the main avenue whereby people could be “civilized” and become part of a “superior” Western cultured being. Anyone who reached this stage became an *assimilée* for the French, or *assimilado* or *civilisado* for the Portuguese (Rodney, 1972, p. 247; Shillington, 1989, p. 357). For this reason, the French was bent on doing away with the African culture in their colonies and utilized only French-censored newspaper publications in their colonies to advance the “frenchification” agenda of Africans (Eko, 2003). The application of such policies brought about a serious interruption in the culture and whole way of life for the African people and introduced to them something foreign, for which there was and still is no guarantee that it could result in economic improvement in SSA states. Thus under such scenarios, colonial legacy certainly did impact on the economic progression of countries of SSA.

## CONCLUSION

From the discussion above, the literature is suggestive of intuitive and empirical basis that indeed culture and colonial legacy at the very least, in part explains economic growth and the poor economic performance of modern SSA states. This leads us to the more pertinent question for SSA states and leading international institutions in analyzing policy issues: how do we measure the effect of culture and colonial legacy in explaining economic growth and what part, if any, education plays for both the residents of undeveloped and developed economies.

Human capital is a well-known determinant of growth and development, and education is also a main determinant of cultural traits (Tabellini, 2010). Education enables a society to respond to the politico-economic processes. But education only becomes valuable or achieves its purpose only when it is embedded in the skills of unselfish service to society, and formal education does not really ‘teach’ much of those skills in education. Is education simply the ability to read and write and to possess formal credentials? If that were the case, then all the foreign aid with conditions for SSA states aimed at amending the economic disparity should have yielded dramatic results by now. But this kind of education that carries the hallmark of selfless service is absent because of not only the economic interest of the West (i.e., global capitalism) behind it, but also the accompliceship of formerly tyrant and selfish African leaders, now masquerading as democratically elected representatives of the people.

Thus one area where the modern SSA states and leading international institutions may look at in analyzing policy issues that are aimed at minimizing economic disparities between developed states and SSA states is in the area of education that encourages true and unselfish service to one’s society. After all, in our globalized world, “to get things done, we still need to cooperate with members of other groups carrying other cultures. Skills in cooperation across cultures are vital for our common survival.” (Hofstede, 2012).

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# **ANALYSIS OF THE EFFECT OF EXCHANGE RATE FLUCTUATIONS ON THE TURKISH TOURISM INCOMES**

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## **ABSTRACT**

*In this study, the effects of exchange rate fluctuations on Turkey's tourism revenues were examined within the scope of the multivariate co-integration model using monthly data covering the period between January 2003 to December 2011. Our research findings show that, increased exchange rate fluctuations have a negative effect on tourism revenues.*

## **INTRODUCTION**

Tourism is a socio-economic phenomenon, which starts with an economic decision about how to use leisure time and savings, and it has economic aspects such as investment, consumption, employment, exports and government revenues. Since the beginning of civilization, tourism has emerged from people's curiosity about visiting and seeing different places. Since the 1950's it has developed rapidly and has spread widely and over long distances. The economic and political effects caused by tourism, which has become a monetary and social event at the present time, have significant consequences for a nation's economy and especially its international economic and political relations.

Now, tourism is one of the income providing factors in the world economy and is becoming a large investment and development sector. Tourism is considered one of the most important service sectors which enables countries to earn gains in economic, social and cultural fields. For this reason, developed and developing countries which have tourism potential aim to raise the level of welfare in their country by emphasizing international tourism activities as a means to accelerate economic development and extend revenue to the base. For some countries, the tourism sector is the basis for their growth strategy. These countries have more foreign exchange input via export services and employment; and, therefore are able to increase their GDP. Expansion of the tax base with an increase of national income and employment will result in a significant increase in state tax revenues. Increased tax revenues will help a country's development by increasing investment in central and local governments. Tourism revenues increase national income and create a multiplier effect in a national economy. This multiplier effect makes a positive impact on the economy and supports many sectors.

Turkey, which is surrounded by sea on three sides, is a country with very high tourist potential with considerable historical and cultural heritage sites. Even though Turkey has many common touristic features with Spain, France, Italy which are leading in tourism, Turkey has remained well behind these countries in terms of tourism revenues.

Tourism in Turkey is seen as an economic activity based on using resources such as sun, sea, sand, historical and natural beauties for many years. No significant investment has been made in tourism, but it is expected that tourism will bring a solution to the main problems of the country, i.e., foreign exchange shortages and unemployment.

Turkey's tourism sector has caught the trend of growth in world tourism as a result of arrangements made after 1980 with increased investments in tourism, and it has been one of the main sectors which constitute a major source of income and employment for the country's economy. While, in 1980, Turkey had 1.2 million tourists and \$327 million in tourism revenue, in 2011 it grown to 36 million tourists and \$23 billion in tourism revenue. (TURSAB, 2012).

Security, interactions and exchange rates brought by the global economy are the most important determinants of a country's tourist arrivals and tourism revenues. effectiveness of any progress in the impact of foreign exchange rates on Turkish tourism will depend on the degree of competitiveness of Turkish tourism in the world tourism market. Corresponding to any change in the exchange rate, the increase/decrease in demand for Turkish tourism shows that Turkish tourism has world-class service quality corresponding to this demand. The competitiveness of Turkish tourism depends on features that are less substitutable than other countries' tourism. such as nature, culture, religion, health, adventure, and sport tourism. These features, provide Turkey with a competitive advantage over many countries.

In this study, the effect of the real exchange rate fluctuations on Turkey's tourism revenues will be examined within the framework of a co-integration analysis and error correction model, using monthly data covering the period from January 2003 to December 2011. For this purpose, some studies which are mentioned in the literature are examined and then the data and methods used in study are introduced and findings which were obtained the result of the application are presented. The study ends with a conclusion section where general assessments were made.

## ANALYTICAL FRAMEWORK

There are many studies in the literature examining the factors that affect tourism revenues. Garin-Munoz and ve Perez Amaral's study for Spain (2000), has found a positive correlation between tourism revenues and national income a positive correlation and a negative relationship with exchange rate flexibility. Tse (2001) found that the exchange rate affects tourism income in his study for Hong Kong. Eilat ve Einav (2004) has found that the exchange rate is an important factor which affects tourism revenues in developed countries. In our study, we investigate the observed fluctuations in the exchange rate arguments which were used in previous studies.

### Model Specification, Variable definitions and Data Sources

The variables used in this study are monthly values, covering the periods of January 2003 to December 2011. The exchange rate for 2003 = 100 based on the real effective exchange rate index. The real effective exchange rate index is calculated according to the definition of the central bank in developing countries.. An increase in the index refers to real appreciation of the Turkish lira (TL). To calculate the index, we used consumer prices as the domestic and foreign price index. Tourism revenues are expressed in millions of dollars.

$$(1) \quad income_{sa} = \theta_0 + \theta_1 Exch_{trd}_{t-1} + \theta_2 exch_{vol} + u$$

In this model  $income_{sa}$  represents tourism revenues,  $\theta_0$  represents the fixed term,  $Exch_{trd}$  represents the exchange rate,  $exch_{vol}$  represents the exchange rate fluctuation and  $u$  represents the error term. The variables

used in this study were seasonally adjusted by using the method of Tramo Seats. Compilation of data, Central Bank of the Republic of Turkey and Travel Agents Association of Turkey's statistics were used. Eviews 6 econometrics package program was used to estimate the models.

## Measuring Real Exchange Rate Volatility and Result

Many different methods have been used in the literature to model exchange rate volatility. GARCH-type methods are the most commonly used of these methods. The GARCH process fails to capture the asymmetry in the structure of variance, because the unconditional variance is defined only as a magnitudes function regardless of the signs of lagged error terms in the GARCH model. Nelson (1991) developed an exponential GARCH (EGARCH) model which models conditional variance and lagged error terms by considering both the magnitudes and signs by taking into account the asymmetry in the structure of volatility. (Takaendesa, et al., 2005:3, Choi,et al., 2009:2163, and Agung, 2009: 437). The conditional variance equation in the EGARCH model is expressed as:

$$(2) \quad \log(\sigma_t^2) = \omega + \alpha_1 \left| \frac{\varepsilon_{t-1}}{\sigma_{t-1}} \right| + \gamma_1 \frac{\varepsilon_{t-1}}{\sigma_{t-1}} + \log \beta_1 (\sigma_{t-1}^2)$$

(Takaendesa, et al., 2005:4). In this model, the  $\gamma$  parameter shows the effect of leverage.

A positive sign for this coefficient, indicates that same sized positive shocks have made more impact than negative shocks. A negative sign, means that the impact of negative shocks is larger than the impact of positive shocks. If the coefficient is equal to zero, this indicates that positive and negative shocks impacts will be equal to each other in size, and that positive and negative shocks will not impact the exchange rate uncertainty. (Brant and Jones, 2006: 474).

The real exchange rate volatility examined in this study, was estimated with using the Auto-Regressive (AR) models Ordinary Least Squares (OLS) method. In this context, AR models with different delay lengths were tested. According to the significance of the parameter criteria, the model used in the OLS model is:

$$(3) \quad \text{exch\_trd}_t = \alpha_0 + \beta_1 \text{exch\_trd}_{t-1} + \beta_2 \text{exch\_trd}_{t-2}$$

Whether or not the residuals containing autocorrelation were obtained from the EKK estimation were examined with Breusch-Godfrey LM test, and compatibility with the structure of ARCH was examined with the ARCH-LM test.

**Table 1:** Breusch-Godfrey ve ARCH-LM Test Results

	Breusch-Godfrey LM	ARCH-LM
Exch_trd	3.69* (0.02)	4.77* (0.09)

It was determined that the real exchange rate had a suitable structure with ARCH-type models in the analyzed time series.

**Table 2:** EGARCH Model Results

	Co-efficient	Probability
$\alpha_0$	108.21	0.00
$\text{exch\_trd}_{t-1}$	1.29	0.00
$\text{exch\_trd}_{t-2}$	-0.34	0.00
$\omega$	0.85	0.06
$\alpha_1$	0.52	0.01
$\gamma_1$	-0.48	0.00
$\beta_1$	0.29	0.31

When forecast results are analyzed, it is observed that  $\alpha_1$  coefficient which shows the effect of asymmetry, negative and highly significant. This situation indicates negative shocks increases the real exchange rate volatility is more than positive shocks. The model's errors estimated with EGARCH whether the effect of ARCH was tested with ARCH-LM test.

**Table 3: ARCH-LM Test Results**

	ARCH-LM
Exch_trd	0.185058 (0.66)

As a result of the test we found no ARCH affect. Applied models are said to be successful in detecting volatility clusters.

## Unit Root Test Results

In the time series analysis, the data must be static (Gujarati, 2009: 713-726). When series are static, they carry very little information related to past (Enders, 1995:239). Therefore, a stability analysis of the variables was made with an expanded Dickey and Fuller unit root test.

**Table 4: ADF Unit Root Test Results**

Variables	Level Values		1. Difference Values	
	Constant	Constant/ Trended	Constant	Constant/ Trended
income_sa	-2.02	-2.53	-7.51*	-7.82*
exch_trd	-2.14	-3.28*	-7.51*	-7.821*
* =%1	-3.49	-4.04	-3.49	-4.04
** =%5	-2.88	-3.45	-2.88	-3.45
***=%10	-2.58	-3.15	-2.58	-3.15

As a result of the analysis, the series have been tested separately using a formula that contains a constant term and a constant trend term. Generally, the series were not static in the levels of all series, but they became static by taking first differences. As a result of the unit root tests, co-integration analysis were made to determine whether or not they were static to the same degree, and thus, whether there is a long run relationship between the variables studied.

## Co-integration Results

The co-integration relationship was examined using the multivariate co-integration analysis developed by Johansen and Juselius (1990: 169-210). Co-integration is a test based on linear combinations of non-stationary variables which is static in the long term. The presence of co-integration between variables means that there is a true long-term relationship.

**Table 5: Johansen Co-integration Test Results**

$H_0$	$H_1$	Eigen Values	Trace Statistic	Critical Value %5	Max Statistics of Eigen Values	Critical Value%5
$r=0$	$r=1$	0.14	18.90*	15.49	16.35*	14.26
$r \leq 1$	$r=2$	0.023	2.54	3.84	2.54	3.84

Number of Delay was determined to be 2 in the unrestricted VAR model, according to the criteria of Likelihood Ratio (LR) and Final Prediction Error (FPE) and autocorrelation, and variable variance problems were not observed in the error terms for the length of this delay. As a result of the co-integration test, a weak co-integration was observed between the exchange rate and tourism revenues.

## Error Correction Model and Results

Because a long-term relationship between the series was determined, the causality and direction of the relationship between variables was investigated with the help of the “Granger Causality Test”. Granger (1988:199-211), has stated that when a long-term relationship between the variables is found, then they are co-integrated and the traditional Granger causality test does not apply. In this case, analysing causality between the series would be more appropriate within the scope of the Error Correction Model. Additionally, in this test approach, Engle-Granger (1987) also showed that there is a vector error correction mechanism (VECM) which corrects imbalances in the short term (Engle and Granger, 1987: 251-276).

$$\Delta income\_sa_t = c + \sum_{i=1}^m \alpha_i \Delta income\_sa_{t-i} + \sum_{i=1}^k \beta_i \Delta Exch\_trd_{t-i} + \gamma exch\_vol + v_{t-1} + \varepsilon_t$$

(4)

In this model  $income\_sa_t$  represents tourism revenues and lagged values,  $Exch\_trd_{t-i}$  is current level of exchange rate and lagged values,  $exch\_vol$  is exchange rate volatility,  $v_{t-1}$  is the lagged value of the errors which obtained from co-integration test and  $\varepsilon_t$  represent error term.

**Table : Error Correction Model Results**

Variable	Coefficient	t- ist
C	1806.915	21.54585
$income\_sa_{t-1}$	3.54600	6.1232590
$Exch\_trd_{t-1}$	-5.772309	-7.231490
$exch\_vol$	0.932156	29.65433
$v_{t-1}$	4.859736	2.141006
$R^2=0.90$ DW=2.33 Prob=0.00		

The results of the regression show that an increase in the real exchange rate, i.e., a unit increase in the index, means appreciation of TL; so, it reduces the total tourism income. This result is consistent with economic theory. In addition, positive exchange rate volatility increases tourism revenues; and, the Granger error correction model states that, at the end of a period (that is 1 month), the imbalance ratio of 4.85 %between short-term and long-term will resolve.

## CONCLUSION

In this study, the relationship between exchange rate volatility and Turkey's tourism revenues was examined. As an econometric model, firstly exchange rate volatility has been estimated with the EGARCH approach; then, the relationship between tourism revenues was investigated by including to error correction model. According to the results obtained from the model, positive volatility in the exchange rate increases tourism revenues. In addition, the increase in the real exchange rate reduces the total tourism revenue.

In recent years, Turkey's economy had a current account deficit problem and has closed this gap, to some extent, with tourism revenues. A stable exchange rate was estimated to be helpful to close the current account deficit by not allowing a decrease in tourism revenues. Last of all, tourism revenues is expected to promote economic growth with creating a multiplying effect in the national economy.

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# INTEGRATING LEAN AND GREEN SUPPLY CHAIN MANAGEMENT SYSTEMS IN MANUFACTURING

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## ABSTRACT

*Recent research suggests that the two leading supply chain management systems that target sustainability, lean supply chain management systems (LSCMS) and green supply chain management systems (GSCMS), can work synergistically when balanced throughout the entire supply chain. Yet with an increasingly complex business environment, the process of integrating both systems is an implementation issue that needs to be addressed with a view to some contextual factors that includes customer needs and other variables such as industry and market characteristics (Power 2005). This study shall, therefore, capture both the characteristics of successful implementation, and the factors determining the level of implementation in the manufacturing industry, proposed as a solution for a financially and environmentally sustainable manufacturing industry. The outcomes of the research are expected to have implications at a global level, far beyond the narrow scope of the research described in this paper.*

## INTRODUCTION

The elevating of current consumption rates facilitated the emergence of sustainability as a key element in policy and research (Faisal 2010). Public disclosure of sustainability-related information is increasingly on the agenda for many organizations (KPMG 2008) and is accelerating as policy makers increasingly support the fact that an organization's success could be measured beyond the traditional financial bottom line to include its environmental performance measures, all of which fall under the corporate jurisdiction of supply chain management (Simons and Mason 2003; Kleindorfer, Singhal, and Van Wassenhove 2005; Faisal 2010). To this end, a focus on supply chains is a step towards the broader adoption and development of sustainability, so as to extend the boundary of responsibility from the initial processing of raw materials till delivery to the ultimate customer (Faisal 2010). Accordingly, towards the end of the twentieth century and the start of the twenty-first century, two supply chain management systems have gained popularity in targeting sustainability: GSCMS and LSCMS (Reisman and Burns 2006; Bergmiller 2006). Although each system addresses different aspect of sustainability, both challenge the way resources are being used and aim at reducing waste within a supply chain (Bergmiller 2006; King and Lenox 2001). So as the future challenge is, hopefully, to develop a sustainable global economy, one that the planet can support indefinitely, integrating LSCMS and GSCMS presents the ultimate challenge for supply chain managers in the twenty first century, and is the key to gain a sustainable future (Bergmiller 2006).

## Environmental Sustainability

The 1950s and 1960s witnessed the emergence of the environmental movement (Mirvis 1994). The public environmental consciousness gained momentum, in 1962, with the publication of "Silent Spring" by Rachel Carson (1962) who warned about the agricultural use of synthetic chemical pesticides. Since then, lessons from "silent springs" have made a dramatic shift in the public's purchasing decisions which are often highly influenced by a company's environmental reputation (Lamming and Hampson 1996). The manufacturing industry appears to be at the core of environmental debate and central to the problems and solutions, given the fact that the ultimate source of environmental pollution and many environmental issues is the production process and post-consumption disposal products (Seitz and Wells 2006; Sarkis 1995).

In the face of such change, adopting a preventive approach to environmental pollution in order to protect the environment, is often not seen to be enough. Improving the business supply chain model and management thinking is also recommended to encourage green opportunities and innovations (Chen 2011). Consumers and investors are now demanding accountable and responsible business practices, and are demanding more information about how companies address environmental risks and opportunities (Vandermerwe and Oliff 1990). The concept of a *green* supply chain management system (GSCMS) has become a crucial part of business management and has been increasingly accepted and implemented by forward-thinking organizations as a systematic approach to integrate environmental concerns into the supply chain management process (Bergmiller and McCright 2009c; Zhu et al. 2010; Mollenkopf et al. 2010; Chen 2011).

A GSCMS is built on total quality principles geared toward implementing sustainable operations across the supply chain by means of improving material utilization per unit of production and replacing open-ended processes, such as resource extraction and waste disposal, with a “closed loop” industrial system that emphasizes waste reduction, resource reuse and recycling (Hart and Milstein 2003; Torielli et al. 2011; Bergmiller 2006; Carvalho, Duarte, and Machado 2011). Major waste issues addressed by a GSCMS include hazardous materials, green house gases, solid wastes, energy, and water usage (Bergmiller 2006). Thus, under the GSCMS, pollution prevention and environmental waste reduction (such as recycling) are regarded as important as other traditional operational measures such as cost, quality and responsiveness (*Cousins et al. 2008; Bergmiller 2006; Hart and Milstein 2003*). The simple logic behind this approach is that pollution is basically a poorly used resource that costs money to dispose of, and can lead to potential liability (Bergmiller 2006; Porter and Linde 1999).

## Financial Sustainability

Although protecting the environment should be a core value of any business, financial savings and improved business performance are prime motivations for any company to meet sustainable growth goals. Accordingly, sustainable strategies will fail unless they increase stakeholder value and create tangible financial gains followed by environmental and social benefits (Holliday 2001). A seemingly natural fit with financial sustainability is *lean* manufacturing, for example, which is closely connected to Toyota’s Production System established in the 1950’s and utilizes a *lean* supply chain management system (LSCMS) (Duarte, Cabrita and Machado, 2011). The term *lean* was first coined by Krafcik (1988) in his historic paper “Triumph of the Lean Production System”, where he defined *value* as any action or process that a customer would be willing to pay for (Krafcik 1988; Arlbjørn, Freytag, and De Haas 2011; Shetty, Ali, and Cummings 2010). Therefore, in the *lean* manufacturing vernacular, waste stems mainly from unnecessary intensity of time, materials, and capital necessary for meeting customer’s needs (Cudney and Elrod 2011; EPA 2003).

A *lean* supply chain management system (LSCMS) is a production practice that focuses on optimizing production flow, reducing production cost, and eliminating operational waste and non-value adding activities in every facet of the manufacturing supply chain (Larson and Greenwood 2004; Corbett and Klassen 2006; Krafcik 1988; Holweg 2007; Torielli et al. 2011; Cudney and Elrod 2011; Kuriger and Chen 2010). The flexibility, speed and precision of the *lean* system allows organizations to reduce human effort, inventory, manufacturing space and time to market to become highly responsive to customer demand while producing quality products in the most efficient and economical manner (Cudney and Elrod 2011; Shetty, Ali, and Cummings 2010). Unlike effectiveness which refers to maximizing the output value, efficiency refers to minimizing bottlenecks and non value-adding activities along the production process through a set of synergistic work practices; using fewer resources, such as raw materials and employee effort to produce products and services at the expected rate of demand (Torielli et al. 2011; Boyle and Scherrer-Rathje 2009; Power 2005).

By allowing only demanded materials to flow through the supply chain, less inventory has to be sourced, produced, transported and packaged; meaning that a LSCMS may be likely to enhance financial performance as well as deliver benefits to the environment (Friedman 2008; McDaniel, Fiksel, and McLaughlin 2000; Simons and Mason 2003; Cudney and Elrod 2011; Mollenkopf et al. 2010). The underlying mechanism is one of *extending the horizons* of analysis to achieve higher efficiency levels in converting resource inputs into outputs to improve overall business performance and give organizations sustainable competitive advantage (Lewis 2000; Taubitz 2010; Arlbjørn, Freytag, and De Haas 2011; Chiras 2010).

## Objectives and Hypotheses

Recent research into the relationship between *lean* and *green* manufacturing systems suggests the need for an integrated approach to capitalize on cost savings, product differentiation, and growth, as both systems seek to fulfill the overarching sustainability goal of doing more with less (Simons and Mason 2003; Carvalho, Duarte, and Machado 2011; Duarte, Cabrita, and Machado 2011; Yang, Hong, and Modi 2011). The purpose of this research is to present an approach that considers the dynamics between various *green* and *lean* enablers in order to help transform a supply chain into a truly sustainable entity. The aim is to establish a philosophy of continuous improvement without simply pushing particular environmental issues inherent in the manufacturing process back to a previous stage in the supply chain. For example, there is no point in eliminating transport packaging, as this may consequently result in damage to or breakage of goods in transit (Cousins et al. 2008). This cumulative reasoning leads to the following research question:

If manufacturing organizations are constantly looking for opportunities to increase efficiency and reduce environmentally damaging impacts, what are the characteristics of successful implementation, and what are the factors determining the level of implementation?

There is also an opportunity to pursue the following research questions:

- What is the extent of implementation of *lean* and *green* processes in manufacturing industry?
- Are there significant factors that impact on the decision to implement *lean* and *green* processes, such as company size or industry sector?
- Can manufacturing organizations be distinguished from one another on the basis of the extent of their implementation of *lean* and *green* policies?

Accordingly, this study seeks to explore the following hypotheses:

Hypothesis I: Manufacturers adopting an integrated approach utilizing both LSCMS and GSCMS can exhibit significantly higher levels of sustainability, in terms of improving profitability, market reputation, responsiveness to consumers as well as obtaining long-term sustainability, than manufacturers implementing only *lean* or *green* principles.

Hypothesis II: *Lean* and *green* manufacturing management systems can be considered as compatible or even synergetic initiatives; meaning that eliminating either *lean* or *green* wastes can spill over to elimination of waste in other systems and thus exploit new opportunities in implementing *lean* and *green* manufacturing best practices.

Hypothesis III: Conflicting points can occur when integrating *lean* and *green* supply chain principles.

## SIGNIFICANCE

With growing media attention, additional regulations, increased consumer awareness, and a growing consensus around the link between human activity and climate change, sustainability has seemingly become a core business strategy (Friedman 2008; Kleindorfer, Singhal, and Van Wassenhove 2005). The World Meteorological Organization released data showing that 2001 to 2011 was the warmest decade since records began in 1850, arguably due to green house gas emissions from industrial processes (AFP 2012). Manufacturing processes consume a great deal of limited resources and energy, and has also resulted in serious pollution problems (Li, Liu, and Wang 2010).

For humans to achieve a balance with nature, sustainable business practices are increasingly regarded as critical elements in supplier selection and performance evaluation (Piecyk and McKinnon 2009; Robinson and Wilcox 2008; Bergmiller 2006; Bergmiller and McCright 2009c; Li, Liu, and Wang 2010). Many researchers have recognized the interrelationship between environmental issues and supply chains in order to address climate change challenges nationally and internationally (Lee and Cheong 2011; Lamming and Hampson 1996). By improving supply chain performance, organizations are increasingly using purchasing and supply to reduce their

negative impact on the environment and increase their potential in gaining a competitive advantage (Cai et al. 2009).

Nevertheless, with an increasingly complex business environment, meeting sustainability goals by modifying a manufacturer's supply chains may provide an operating challenge (Bergmiller 2006; Faisal 2010). Research to this point, as illustrated by Markley and Davis (2007), has ignored the potential development of a competitive advantage using sustainable supply chains. While there are separate streams of developed research on LSCMS and GSCMS and the synergies involved as they are integrated, there is a significant lack of research predicting the optimum balance point to enhance an organization's ability to successfully integrate both systems. Organizations are struggling to achieve a balance and understand the various trade-offs when integrating *lean* and *green* supply chain management systems (Faisal 2010). Furthermore, there is evidence to suggest that *green* manufacturing can lower operating costs, even if limitations of financial equations that account for natural capital overlook the benefits of *green* manufacturing systems (Bergmiller 2006). Likewise, although *lean* techniques have been demonstrated to yield substantial environmental benefits due to their waste elimination potential (Torielli et al. 2011; Kuriger and Chen 2010; Meyer 2010), they are not explicitly translated into environmental performance considerations as a core objective, and so miss out on several environmental improvement opportunities (Taubitz 2010; Kuriger and Chen 2010; EPA 2003; Meyer 2010). Additional research is, therefore, needed to better understand the factors creating and reinforcing this apparent gap.

A potential improvement would be to select the elements of *lean* and *green* manufacturing that will have the greatest impact on achieving sustainable solutions and determining a means to combine all of the items in the value-adding elements found in both systems. Developing an integrated approach between LSCMS and GSCMS can hold significant potential for manufacturing industry to simultaneously realize financial and environmental sustainability goals. The similarities found in the basic models of these two supply chain management systems indicate that organizations embracing both initiatives might find a useful synergistic effect in terms of improving profitability, market reputation, responsiveness to consumers as well as obtaining long-term sustainability (Bergmiller and McCright 2009a; Yang, Hong, and Modi 2011).

## RESEARCH MODEL CONSTRUCTION

The Monczka and Handfield's (2002) three-stage supply chain management model offers a simple high level summary of supply chain activities that permit a researcher to examine the key elements and elaborate on the influence of *lean* and *green* supply chain management systems without being diverted by the fine details that exist in complex supply chains. In this context, supply chain management involves the integration of three major stages: upstream suppliers network, the enterprise and the distributive network (Monczka and Handfield 2002). This implies that a supply chain includes all activities associated with moving goods from raw materials to the end customer (Brewer and Speh 2000).

### Lean Supply Chain Paradigm

The main objective of a *lean* supply chain management system is to deliver the right materials when needed to the right location in conformity to the required specification and quantity, all of which has to be done efficiently by minimizing activities that do not add value from the customer's perspective (Carvalho, Duarte, and Machado 2011; Bergmiller 2006; Meyer 2010; Holweg 2007). Thus, the focus is essentially on optimizing the processes of a supply chain, maintaining profits, searching for simplification, reducing waste and minimizing non-value added activities (Carvalho, Duarte, and Machado 2011; Meyer 2010; Holweg 2007). Following this objective and based on Monczka and Handfield's (2002) three-stage supply chain model, a *lean* supplier network is known for its preventive maintenance, ordering flexibility and its overall efficiency in converting resource inputs into outputs (Lewis 2000). Thus, *lean* sourcing is characterized by working with key suppliers to ensure continuous improvement in technical and human capabilities (Boyle and Scherrer-Rathje 2009).

At the operational level, *lean* operations are focused on using a reduced level of input for a given level of output by eliminating waste from the system (Boyle and Scherrer-Rathje 2009). As opposed to mass manufacturing which stresses economies of scale/one-size-fits-all, the *lean* paradigm is based on a pull system in which nothing is produced by the upstream supplier until the downstream customer signals a need (Reichhart

and Holweg 2007). It is implemented by using a bundle of *lean* practices including: inventory minimization, higher resources utilization, JIT, Kanban, total quality management, defect prevention, efficiency techniques, continuous improvement and shorter lead times. The application of these practices throughout the supply chain creates flexibility in reacting to market changes and a decrease in the redundancy of materials and processing activities (Carvalho, Duarte, and Machado 2011; Boyle and Scherrer-Rathje 2009). Thus, *lean* principles, at the distributive level, call for distances on a supply chain to be as short as possible in order to react more flexibly to market changes and make the right product available to the end customer at the right time (Reichhart and Holweg 2007).

## Green Supply Chain Paradigm

Moving towards creating a *green* supply chain, all the functions which pertain to regular supply chain still apply, but with the added factor of environmental friendliness. The sourcing function, for instance, is characterized by sustainable purchases, quality control, monitoring and evaluating suppliers' environmental performance including collaboration with suppliers to eliminate packaging and implementing recycling initiatives (Carvalho, Duarte, and Machado 2011). By implementing a supplier evaluation system, organizations demonstrate their intention to avoid related environmental risks that may arise from their suppliers' environmental performance and improve the overall supply chain performance including environmental and economic performance (Seuring and Müller 2008).

Consequently, *green* operations are characterized by increased efficiency through the reduction of energy consumption, use of clean technologies, a focus on risk management, analysis of the product life cycle, enhancement of recyclability, reusability and remanufacturing possibilities and elimination of redundant materials, pollution, waste and unnecessary processes (Nunes and Bennett 2010; Bergmiller and McCright 2009c). The *green* paradigm is, therefore, based on a reverse supply chain in which the downstream distributive network aims to retrieve products back into circulation after their initial life cycles, with a focus on reduced packaging and more optimized transport efficiency (Hoek 1999).

## MANAGERIAL IMPLICATIONS

As world markets become increasingly homogenized, the growing demand for sustainable environmental and financial performance and the need for more flexible, responsive and cost-efficient business systems present a great challenge for supply chain managers. Supply chain managers can expect to undertake a broader supply chain management system that goes beyond the scope of current practices, operational activities and traditional objectives in order to remain competitive in the marketplace. Both in theory and practice, *lean* supply chains and *green* supply chains are the two supply chain management systems that have the potential to achieve both cost leadership and differentiation. In summary, the strategic challenge for a supply chain manager is to integrate *lean* and *green* practices, optimize on synergies while seeking alternatives to conflicting practices. Creating an awareness of the overlaps and tradeoffs that may occur when integrating both practices will allow for more effective managerial decision making, giving managers insights on how to achieve cross-functional alliances engaged in minimizing a holistic set of wastes and reduce confusion amongst employees in targeting the firm's dual system objectives. The aim is to achieve a greater business success by simultaneously reducing a firm's environmental impact while assuring financial success. Finally, with new legislation in many jurisdictions, and increased focus from stakeholders on corporate sustainable performance, the operational success of an integrated sustainable supply chain strategy will not only meet managers' and stakeholders' expectations, but will translate into improved overall corporate image and, hopefully, customer loyalty.

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# AN EMPIRICAL ANALYSIS OF SHAREHOLDER VALUE CREATION AS A PROXY FOR MEASURING CORPORATE PERFORMANCE

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## ABSTRACT

*Empirical research finds that Shareholder Value Creation represented by Pablo Fernandez Model (PFM) and EVA<sup>TM</sup> is a better proxy of Corporate Performance than traditional accounting measures such as NOPAT, RoA, RoC and NPAT on several parameters discussed in the paper. These models reflect the value created for the shareholders by using variables that are closer to market price. The value is added only when the final price is above the cost of capital, which is the driver of all the corporate activity even in India, which is good example of Weak form of Efficiency with a hint of Semi-Strong Efficiency.*

## INTRODUCTION

Globalisation has brought in a paradigm shift in the management of organisations and measurement of the performance. India witnessed the highest increase of corporate form of business since 1991. The number of corporate form of business organisations in India increased 10 folds from 1991 till 2004 (Bhargava, 2005). This threw a new challenge in the form of competition for capital in a fund deficient economy like India. The Board of Directors, as agents of shareholders, had to not only add value to the wealth of shareholders but also prove their mettle convincingly to them. Hence, the issue of finding suitable measure of wealth gained significance. Traditionally, the academicians and analysts depended on the Historical Accounting measures like Net Profit after Tax (NPAT), Return on investment (RoI), Return on Equity (RoE), Operating Profit after Tax (OPAT), Return on Assets (RoA), Return on Networth (RoNW), Return on Capital (RoC), Earnings Per Share (EPS), etc. The use of the above traditional accounting tools of measuring corporate performance started getting questioned on various counts. “*They can be used for past analysis but not for future decision making*” said Rappaport in 1995. Consequently, a lot of new measures that the international business community were using started to gain acceptance in India. Economic Value Added (EVA), which is a registered trademark of Stern, Stewart & Co., was one such technique that gained recognition in the Indian Corporate world, as it was present in Annual Reports of all NIFTY (National Stock Exchange Index for Fifty companies) companies for the financial year ending 31<sup>st</sup> March, 2011.

Academic research moved on to another measure of Corporate Performance by critique of certain parameters used in EVA. Models like the Pablo Fernandez Model (PFM), with Shareholder Value calculations based on market value, were propounded in the West as they were closer to reality.

With respect to the above developments, this paper seeks to ascertain the applicability and the suitability of these models to Indian Financial Markets, which, compared to the developed nations, may at best be in growing stages of maturity.

## LITERATURE REVIEW

Hawley (1886) was the one of the first to list out methods of measuring business performance. He suggested that Profit after Tax was a good method to measure corporate efficiency but can get biased due to loading of non operating incomes and expenses. He, thus, professed the concept of Net Operating Profit after Tax to be a better measure than mere Profit after Tax. Other accounting measures such as Return on Asset, Return on Net Worth,

and Return on Capital Employed, etc. were being used with reference to the concepts of profit as well as operating profit to reflect corporate performance.

The ratios and percentages were also used with these concepts like Net Profit Margin, Return on Net Worth, Return on Capital Employed, etc.

It was the economist Alfred Marshall in 1890, who first spoke about the notion of economic profit, in terms of the real profit that a company makes, when it covers, besides the various operating costs, the cost of its invested capital.

The traditional methods are criticised because they only consider cost on Debt Capital while calculating returns but do not consider cost of Share Capital - Equity & Preference- as they are a part of appropriation and are not debited to Profit & Loss Account. With corporate form of business organisation growing in number, Cost of Equity cannot be ignored (Tully, 1994).

Thus, under the traditional approach two companies that have the same ROE would be considered as equally successful, whereas under the Shareholder Value Creation (SVC) approach, the same conclusion could not be reached if these two firms had different cost of capital, in other words if their economic profit or residual income was different (Kyriazism and Anastassis, 2007).

## EVA<sup>TM</sup> - Economic Value Added

The conventional measures also concentrated on the short term objective of Profit Maximisation. This hindered the growth of the company as the decisions were all aimed at the short term goal. Stern and Stewart modified the concept of Residual Profit as professed by Alfred Marshall and propagated a new measure of corporate efficiency namely Economic Value Added (EVA) in 1991. They annually publish EVA of 1000 US based companies. EVA is defined as an excess of Operating Profit after Tax over Cost of Capital.

EVA<sup>TM</sup> or Economic Value Added is excess of Net Operating Profit after Taxes over the Cost of Capital. In equation form:

$$EVA = NOPAT - (WACC \times CE) \quad (1)$$

Where NOPAT is Net Profit after Tax, WACC is Weighted Average Cost of Capital and CE is Capital Employed. WACC is calculated as cost of Debt and Share Capital with respect to Total Debt, Total Preference Capital and Market Value of Equity Capital. The costs are weighted as per the proportion in the Capital Structure.

$$WACC = \frac{K_d(1-T)D}{V} + \frac{K_eE}{V} + \frac{K_pP}{V} \quad (2)$$

Where,

1. WACC = Weighted Average Cost of Capital;
2.  $K_d$  = Cost of Debt (Coupon Rate);
3. T = Corporate Tax Rate;
4. V = Total Debt + Total Preference Share Capital + Market Value of Equity Capital (D+MVE+P);
5. D = Total Debt Capital;
6.  $K_e$  = Cost of Equity calculated using CAPM model;
7. E = Market Value of Equity Capital;
8.  $K_p$  = Cost of Preference Capital (Coupon Dividend)
9. P = Preference Capital

Cost of Equity ( $K_e$ ) is calculated using Capital Asset Pricing Model (CAPM) given below:

$$K_e = r_f + \beta(r_m - r_f) \quad (3)$$

Where,

1.  $K_e$  = Cost of Equity;
2.  $r_f$  = Risk Free Rate of Return (using Interest Rate on 90 days T-Bills);
3.  $\beta$  = Beta Coefficient;
4.  $r_m$  = Market Return (Using NIFTY as benchmark index)

Stern & Stewart recommend 165 manipulations while calculating NOPAT & Capital Employed. Not all adopters of EVA method use all the manipulations. The adoptions are from 5 to 35 in regular course of working (Weaver, 2001). In this paper, operating profits before Interest & Deferred Tax but after Income Tax & Fringe Benefit Tax (FBT) is used as NOPAT.

## Arguments for EVA

Tham and Pareza (2004) supported the use of EVA by questioning that while choosing a project, if the managers concentrated on the Cash Flows as discounted by the cost of capital, then why the same managers ignored the cost of capital while measuring corporate performance. Chong et al (2008) found that EVA could be used to manage portfolios, as the EVA-based stock portfolios were found to be similar to the S&P 500 Index, yet produced positive alphas across subsamples, an indication that EVA contained information beneficial to increasing shareholder wealth, even in bear markets. On closer examination of the EVA-based stock portfolios, it was suggested that in times of market upswings, one should construct a portfolio based on lower EVA-ranked stocks, while switching to higher EVA-ranked stocks during market downturns.

Many studies such as Tsuji (2006), Stern and Stewart (1994), Biddle, Bowen, and Wallace (1997), Farslo, Degler, Degner (2000) have investigated EVA's correlation with excess returns, back-testing it against the underlying companies' actual wealth creation, as evidenced by subsequent stock price increases, or comparing it to market value added (MVA).

## Arguments against EVA

One major critic of the EVA is its methodology. Horngren, et al (1997) caution that more than 160 adjustments were expected to calculate EVA, which made the process cumbersome and tedious. The researchers such as Kramer and Pushner (1997) concluded that market value added was not predicted in a significant way by EVA. Latin American scientist Pablo Fernandez (2002), criticised EVA on the basis that it is a method based on the historical accounting and thus, cannot be used as a measure of value creation and corporate performance.

## Merit of Market Value Added

Market Value Added (MVA) is calculated as Market Value of Equity Shares minus the Book Value of the Equity Shares (Kramer, 1997). Various authors like Kramer, Kyriazis and Anastassis (2007), Bacidore (1997), Ignacio Vélez-Pareja (2003), Weissenrieder (2004) have noted that the corporate performance and expected corporate performance must get reflected in the company's share price. Hence, they have used MVA as a measure to reflect the corporate performance. MVA is also considered to be a good measure following the Efficient Market Hypotheses (EMH) which states that all the available information is already reflected in the market price. The stakeholders, therefore, need a measure of corporate performance that would get reflected in the Market Value of the company. The concept of Shareholder Value Creation was first introduced in United State of America. This has resulted in a stronger US economy and better business environment (Tsuji, 2006). The background of this clearer focus on the maximization of corporate value as a central goal of management in USA is (i) activation of buying and selling of management rights such as by M&A, (ii) popularization of stocks for individual investors, and (iii) avoiding bankruptcy in pension plans (Tsuji, 2006). The creation of shareholder value leads not only to the more effective management of those corporations, but also to increases in labour productivity, job opportunities, and real per capita GDP (Copeland et al.2000).

MVA is thus, market-generated number calculated by subtracting the capital invested in a firm (C) from the sum (V) of the total market value of the firm's equity and the book value of its debt. It is calculated as:

$$MVA_t = V_t - C_t \quad (4)$$

## PFM

Pablo Fernandez formulated a model in 2001, namely the Pablo Fernandez Model (PFM) where he calculates the Shareholder Value as excess of Shareholder Return (based on the market returns) over the cost of Equity. His model is as follows:

$$SVC = (r_{sh} - k_e) \times MV_t \quad (5)$$

### Where

1. Shareholder Return

$$r_{sh} = SVA \div MV_{t-1} \quad (6)$$

- Shareholder Value Added

$$SVA = \Delta MV + \sum_{t=1}^t DIV + \sum_{t=1}^t P - \sum_{t=1}^t OC - \sum_{t=1}^t Conv \quad (7)$$

Where,

$$1. \Delta MV = MV_t - MV_{t-1} \quad (8)$$

- Where  $MV_t$  = Current Market Value &;
- $MV_{t-1}$  = Market Value 1 year back;
- 2. DIV = Dividends paid during the year. Also stock dividend;
- 3. P = Other payments to shareholders during the year like discount on par values, share buybacks
- 4. OC = Outlays for capital increases like issue of new shares, GDRs, etc.
- 5. Conv = Conversion of convertible debentures, creditors, etc to share capital
- 2.  $K_e$  = Cost of Equity as calculated by CAPM model given in eq. (3) above;
- 3.  $MV_t$  = Current Equity Market Value as explained in eq. (8) above.

## RESEARCH QUESTION

Shareholder Value Creation, as measured by EVA (Stern and Stewart, 1991) and PFM (Pablo Fernandez 2001) have proved to have significant relationship with Market Value Added in developed countries like US and Europe. It has been proved by Vaidyanathan and Kumargali (2005) and Khan and Ikram (2004) that Indian Markets are different from the US and European markets in terms of Market Efficiency. Indian Markets namely NSE and BSE are good examples of Weak form of Efficiency with a little hint of Semi-Strong Efficiency. But in either case, the Indian Markets do not reflect all the publicly available information (Khan and Ikram, 2004). Hence, this research focuses on the question whether Shareholder Value Creation, as a representative of corporate performance measured by EVA and PFM, are appropriate reflections of market value added (MVA) in markets like India.

We shall, therefore, test the following null hypotheses:

**H0<sub>1</sub>** = Shareholder Value Creation as measured by EVA does not significantly predict market value added in comparison to traditional accounting measures.

**H0<sub>2</sub>** = Shareholder Value Creation as measured by PFM does not significantly predict market value added in comparison to traditional accounting measures.

## RESEARCH METHODOLOGY

### Sample

This study considers 50 NIFTY companies as on 31<sup>st</sup> March, 2009 for a period of 10 years from 1<sup>st</sup> April, 2000 to 31<sup>st</sup> March, 2010.

### Data Source

The data is collected from NSE website, Reserve bank of India website, Securities Exchange Board of India website and Capitaline database. Traditional accounting measures are taken from Capitaline database and SVC measures such as EVA and PFM are computed using the above mentioned formulae.

### Data Analysis

*Factor Analysis* and *Multiple Regression* are the statistical techniques used to analyse the data.

### Independent Variables

The following traditional accounting and SVC measures are used as independent variables:

#### 1. Traditional Accounting Measures:

Net Profit after Tax; Earnings per Share (EPS); NOPAT; Return on Capital Employed (RoCE); Profit before Interest Depreciation & Tax (PBIDT); Return on Networth (RoNW); Return on Equity (RoE);

## 2. Shareholder Value Creation Measures:

EVA<sup>TM</sup>; PFM

Factor analysis is used to collate the above independent variables into various factors. These factors are then used for further analysis.

## Dependent Variable

The dependent variable considered for the analysis is Market Value Added (MVA).

# FINDINGS AND ANALYSIS

The results of Factor Analysis are shown in Table 1 below. Four factors emerged after factor analysis.

**Table 1: Rotated component matrix<sup>a</sup>**

Particulars	Component			
	1	2	3	4
Net Profit After Tax (NPAT)	.979			
Operating Profit After Tax (OPAT)	.970			
Earnings Per Share (EPS)	.407			
Return on Net Worth (RoNW)		.993		
Return on Equity (RoE)		.993		
Profit Before Interest Depreciation and Tax (PBIDT)			.988	
Return on Capital Employed (RoCE)			.985	
Pablo Fernandez Model (PFM)				.834
Economic Value Added (EVA)				.637

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Factor 1 is representative of old school of thought where net profit and net operating profits reigned whereas Factor 2 and Factor 3 mainly represent groups showing return as compared to resources utilized. Factor 4 represents returns over cost of capital, and stands for SVC.

Multiple regression was then carried out to test the relationship with factors representing independent variables and the dependent variable, namely market value added. The results of Multiple Regression indicate a statistically significant  $R^2$  with a value of .259. The  $R^2$  value shown in Table 2 below shows that, all the factors together have a predicting power of .259 which, is an acceptable level in social science research.

**Table 2: Model summary of all 4 factors with MVA as dependent variable**

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of the Estimate
1	.509 <sup>a</sup>	.259	.253	68681.01

a. Predictors: (Constant), REGR factor score 4 for analysis 1, REGR factor score 3 for analysis 1, REGR factor score 2 for analysis 1, REGR factor score 1 for analysis 1

Further scrutiny of the coefficients in Table 3 points out that, “Factor 4”, which comprises of the Shareholder Value Creation variables, has a high and statistically significant correlation with MVA. This shows that Shareholder Value Creation Measures have a better ability to explain the Market Value Added in comparison to any other measure of Corporate Efficiency.

**Table 3: Correlation of factors**

Model	Standardized Coefficients	Sig.
	Beta	
(Constant)	.079	.000
REGR factor score 1 for analysis 1	-.007	.056
REGR factor score 2 for analysis 1	-.012	.872
REGR factor score 3 for analysis 1	.503	.780
REGR factor score 4 for analysis 1	.079	.000

Traditional factors as represented by Factors 1, 2 and 3 do not have statistically significant relationship with MVA. Factor 4 was, therefore, individually regressed with MVA to reaffirm that Shareholder Value Creation

measures have a significant  $R^2$ . Table 4 below shows the regression results of Factor 4 as independent variables and MVA as a dependent variable.

**Table 4: Regression model summary of factor 4**

Model	R	$R^2$	Adjusted $R^2$	Std. Error of the Estimate
1	.503 <sup>a</sup>	<b>.353</b>	.251	68742.18

a. Predictors: (Constant), REGR factor score 4 for analysis 1

The results in Table 4 show a  $R^2$  of .353 which can be considered a fairly high value. Hence, it can be concluded that the Shareholder Value Creation measures have a statistically significant predictability of Market Value Added. Having established thus, further analysis was carried out to ascertain which would be a better predictor of MVA between the two variables, EVA and PFM.

These two variables are, therefore, regressed independently with MVA. The results are as given below:

**Table 5: Regression model summary of PFM**

Model	R	$R^2$	Adjusted $R^2$	Std. Error of the Estimate
1	.783 <sup>a</sup>	<b>.613</b>	.612	49466.16

a. Predictors: (Constant), PFM

PFM has a statistically significant  $R^2$ . The predictability of MVA by PFM is very high which means it qualifies to be a good proxy for measuring corporate performance.

Regression model in Table 6 below demonstrates that EVA, too, has a good and significantly large  $R^2$  which means that EVA, too, is a good proxy for measuring corporate performance.

**Table 6: Regression model summary of EVA**

Model	R	$R^2$	Adjusted $R^2$	Std. Error of the Estimate
1	.135 <sup>a</sup>	<b>.418</b>	.016	78805.31

a. Predictors: (Constant), EVA

Between the two measures of SVC, PFM tends to have higher  $R^2$  that makes it a better predictor of MVA in comparison to EVA and therefore, a superior representative of corporate performance.

Thus, **H0<sub>1</sub>** that Shareholder Value Creation as measured by EVA does not significantly predict market value added in comparison to traditional accounting measures is rejected and it is proved that SVC as measured by EVA does significantly predict MVA.

Similarly, **H0<sub>2</sub>** that Shareholder Value Creation as measured by PFM does not significantly predict market value added in comparison to traditional accounting measures is rejected and it is proved that SVC as measured by PFM does significantly predict MVA.

In comparison, it is also proven that the traditional accounting measures such as RoA, RoC, NOPAT & NPAT do not show significant relationship with MVA in Indian Markets.

## CONCLUSION

It is thus, seen that Shareholder Value Creation as measured by EVA and PFM are appropriate tools to measure the corporate performance in Indian Markets as they are better predictors of MVA in comparison to traditional accounting methods.

## MANAGERIAL IMPLICATIONS

It may be noted that EVA considers Net Operating Profit after Tax and WACC of business whereas PFM considers a Shareholder Value Added; a market based return, and only considers Cost of Equity. Hence, it may be seen that PFM, being Market based variable, is more suitable for Portfolio Managers or Strategic decisions and EVA being based on historical accounting, is more relevant to company's internal assessment purposes.

Shareholder Value Creation measures like EVA are also useful for the companies to pay honorarium to its Managers (who take strategic decisions like MD, CEO, CFO, etc). This is a usual practice in the West where companies like Coca-Cola, AT&T, etc use EVA to pay managerial compensation. There are empirical studies that show that when Managerial Compensation is related to the Shareholder Value Created, the performance of the managers improve (Riceman, Cahan and Lal, 2002).

This paper, thus, makes a case for the use of PFM and EVA as measure of performance, for better portrayal of corporate results in Indian markets. The companies in India could make it a regular practice to have Shareholder Value Review as a part of their Annual Report. This could lead to more informed shareholders, suitably empowered to take strategic decisions like mergers or enhancement of managerial packages.

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# INNOVATION AND COLLABORATION IN TOURISM: FIRST EMPIRICAL EVIDENCE IN BRAZIL

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## ABSTRACT

*This article presents the first results of a study that sought to analyze the relation between collaboration and innovation in order to verify whether collaborative relationships between firms in the tourism industry are important for the development of innovations. In the specific case of this article, the research sample was composed of tourism organizations in the city of Rio de Janeiro in Brazil. This destination is particularly important because it will receive large investments during the next few years as it will be hosting two mega-events: the FIFA World Cup in 2014 and the Olympic Games in 2016. The information used to identify the contribution of collaboration to innovation came from primary sources tapped through a survey. The data thus obtained was analyzed and interpreted using descriptive analytical tools. The results evidenced that collaborative relationships between organizations in the tourism industry are important and, in practice, do indeed contribute to the development of innovations, thus corroborating theoretical suppositions. However, the analysis of relationships with educational institutions and government organizations produced results that diverged somewhat from those presented in the innovation and tourism literature.*

## INTRODUCTION

The tourism industry has been undergoing the familiar process of globalization. The increasing competition and rapid transformations experienced by tourism organizations is putting them under pressure to innovate and establish new organizational configurations such as alliances and networks. The innovation theme has thus become increasingly important in the tourism literature over the past two decades (SUNDBO, ORFILA-SINTES, SØRENSEN, 2007; HJALAGER, 2010).

Although tourism is still considered to be only a moderately innovative industry, innovation-related issues have been receiving greater attention in the creation of policies for tourism and in the development of products, firms and the world's most competitive destinations. (HALL, 2009). The evidence shows that innovation in tourism can generate competitive advantages, consumer loyalty and cost reductions, which are all fundamental for a destination's growth (VICTORINO, VERMA, PLASCHKA, DEV 2005; BUHALIS, 1999).

According to Hjalager (2010), however, many questions in the field of tourism innovation still remain to be answered. Based on her review of the state of the art research on this theme, she verified that there are few systematic and comparable studies of the level of innovative activities in tourism organizations and their impact and wider implications for countries' destinations and economies. It is clear that new quantitative and qualitative studies are needed to consolidate research on this subject (HJALAGER, 2010).

This article thus presents the first results of a study whose aim was to verify whether collaborative relationships between tourism industry firms are important for the development of innovations that contribute to firms' and the destination's competitive advantage. The study's relevance lies not only in its contribution to the theory of innovation in tourism, but also because it may lead to a better understanding of the innovation process of firms that operate in the tourism destination studied in this research. This article focuses specifically on the city of Rio de Janeiro in Brazil. This destination is particularly important because it will receive large investments during the next few years as it will be hosting two mega-events: the FIFA World Cup in 2014 and

the Olympic Games in 2016. In addition, the published literature contains no studies of innovation in tourism that investigate this destination in terms of the issues discussed in this article.

This article is divided into five sections. The theoretical references are presented after this introduction and followed by an explanation of the study's methodology. Section 3 describes and analyzes the results with the 4th presenting some final considerations and recommendations for future research.

## **THEORETICAL REFERENCES**

### **Tourism and Innovation**

The Schumpeterian theoretical framework (1934) which postulates that the main source of economic growth is constituted by new ways of combining the means of production, forms the main basis for the literature on innovation in tourism (HJALAGER, 2002; MATÍNEZ-ROS & ORFILA-SINTES, 2009; MAYER, 2009). According to Hjalager (2002, 2010), such a broad concept of innovation is appropriate for the tourism industry and should cover smaller adaptations in existing products and services, actions that differ from the usual way of doing business or that represent discontinuities in practices adopted. Thus, even though it is considered to be only a moderately innovative industry, the act of innovation is highlighted by researchers as constituting a necessary condition for the survival of firms that operate in tourism's extremely competitive and continuously changing environment (SUNDBO *et al.*, 2007).

Although a wide-ranging understanding of the forces that govern innovation in tourism has not yet been developed (HJALAGER, 2010), some findings have already been presented. Sundbo *et al.* (2007) show that size, professionalism, entrepreneurship and a varied network of relationships are important determinants of innovation in tourism. The positive influence of firm and destination size on innovation is reinforced by the studies performed by Orfila-Sintes, Crespi-Cladera & Martinez-Ros (2005), Pikkemaat & Peters (2005) and Matínez-Ros & Orfila-Sintes (2009), while the need to establish collaboration relationships is also emphasized by other authors as being fundamental for the transfer of the knowledge and resources necessary for innovation in tourism (PAVLOVICH, 2003; PIKKEMAAT & WEIERMAIR, 2007). Hjalager (2010) adds that investments in information and communication technology, that can generate rapid impacts on markets, constitute another important innovation factor in tourism. However, she considers that market demand is the main determining factor in innovation in tourism organizations.

Hjalager's (2010) classification of the types of innovation found in tourism into five categories is the most structured for analytical purposes. "Product or service innovation" consists of the development of new products or services or improvements in existing ones. "Process innovation" involves the development of technologies, or new forms of organization, that facilitate the execution of business activities. In the case of "administration innovation" the purpose is to develop or up-date the way a business, firm or partner network is organized. The "management innovation" category covers the development of new processes or technologies for the management. The last category in the classification is "institutional innovation", encompassing the development of new collaboration and regulation structures in order to redirect or increase business in certain fields of tourism.

Some authors (MAYER, 2009; HJALAGER, 2002), however, consider that other sectors linked to tourism, such as the transportation and communication industries, may in fact play a greater role in introducing innovation into this industry. This may explain why so few public policy formulators seem to recognize that tourism is an industry that can contribute to innovation and thus to enhancing a city's or country's competitiveness (HALL, 2009).

### **Innovation and Collaboration in Tourism**

Scott, Cooper & Baggio (2008) affirm that tourism, more than other economic sectors, depends on the formal and informal development of collaboration relations, partnerships and networks. Wang and Krakover

(2009) consider that this is warranted by the industry's fragmentation and complexity. Tourism firms are indeed increasingly managing the uncertainties of their environment by establishing network ties that encompass the exchange of information, construction of reliable communication channels and joint planning (TREMBLAY, 1998).

It is no accident that collaboration is considered to be an important factor in the development of innovations in the tourism industry (PIKKEMAAT & WEIERMAIR, 2007; SUNDBO *et al.*, 2007; PAVLOVICH, 2003). As Hjalager (2010) affirms, the tourism literature shows that inter-firm relationships are crucial for the transfer of information, inspirations and innovations. According to Stamboulis & Skayannis (2003), it is relationships based on trust that enable innovation processes to evolve until innovation-related investments become self-sustaining.

Indeed, evidence in the literature shows that collaboration relationships are positively correlated with tourism firms' level of innovation (PIKKEMAAT & WEIERMAIR, 2007). According to Sundbo *et al.* (2007), this is because firms, in their innovation processes, need external partners and knowledge inputs to complement their competencies. Pavlovich (2003) adds that firms' relationship networks are a critical factor for a tourist destination's development because they contribute to intense exchanges of information that permit the creation of shared knowledge between partners. These results, according to Pikkemaat & Weiermair (2007), reinforce the importance of strengthening collaboration strategies so that firms that operate in the tourism area can achieve higher levels of innovation.

However, although many authors consider that collaboration relationships are important for the development of innovations, some studies show that their use in the tourism industry is still limited (HJALAGER, 2010; PLAZA, GALVEZ-GALVEZ & GONZALEZ-FLORES, 2011). For example, collaboration relationships with universities, which are highlighted as being fundamental for the development of innovations in manufacturing industry, do not receive the same attention in the tourism industry (HJALAGER, 2010). Hjalager (2010), however, affirms that there is a great emphasis on collaborative relationships for the development of policies for tourism and that governments are powerful partners in the co-production of tourist facilities in destinations.

## METHODOLOGY

This study focused exclusively on firms that operate in Rio de Janeiro's tourism sector. Given the lack of publicly available information regarding the performance of tourism firms in Rio de Janeiro, the selection of the sample followed the indications of specialists and the sector's trade associations as to the largest firms in the destination's tourism sector, given that size, according to the literature, is a determinant of innovation. 96 of the 150 actors responded to questionnaires between November 2011 and February 2012 and the following 92 were used in this research: 37 hotels, 28 travel agencies, 13 tourism operators, 6 tourism promoting agencies, 7 trade associations and 1 governmental tourism organization. The data collection tool was pre-tested and consisted of a survey with qualitative ordinal variables and a Likert agreement scale. The data collection process in the field was conducted by trained interviewers who filled in questionnaires with the managers' responses. In addition, the research sought to assure that the interviewees understood all the questions by instructing the interviewers to provide examples so that accurate responses could be elicited. The data was stored in an Excel for Windows (Microsoft Corporation) database. The analysis and interpretation of data obtained was performed with the support of SPSS (Statistical Package for the Social Sciences) Version 20 and Excel using descriptive analysis tools such as simple and percentage frequencies. In order to refine interpretation, some of the information was cross-checked to confirm whether the perception of the importance of specific relationships for innovation was in fact reflected in practice.

## RESULTS

In accordance with the research's aims, the results presented in this section sought to verify whether the executives interviewed considered collaborative relationships with other firms in the tourism area to be important for the development of innovations. In order to gauge this, managers were requested to respond to all questions in the questionnaire related to the category with which they declared having a professional

relationship. In the case of this article, the analysis focused on the simple frequency percentages of each question as well as the cross-checking of certain questions.

Most managers agreed that their organization's relations with other tourism actor were very important for the development of innovations, as shown in Table 1. Most of the relationships investigated were formalized in the shape of contracts (Table 2) and the managers interviewed perceived the immense majority to be collaborative, generating benefits for both partners (Table 3).

**Table 1: Importance of relationships for the development of innovations**

"My company's relationships with the organizations below are <u>very important</u> for the development of innovations and/or competitive advantages in my business".	Hotels	Travel agencies	Tourism operators	Educational and research instits.	Trade associations	Destination promotion orgs.	Government orgs.
Disagree completely	0,00%	1,10%	2,20%	1,10%	1,10%	1,10%	1,10%
Disagree	1,10%	2,20%	3,30%	2,20%	3,30%	2,20%	5,40%
Neither agree/nor disagree	5,40%	4,30%	12,00%	19,60%	19,60%	15,20%	17,40%
Agree	35,90%	34,80%	37,00%	42,40%	39,10%	42,40%	37,00%
Agree completely	53,30%	52,20%	43,50%	32,60%	33,70%	38,00%	38,00%
Total respondents per question	95,70%	94,60%	97,80%	97,80%	96,70%	98,90%	98,90%

Source: derived from the research.

**Table 2: Formalization of relationships researched**

"Most of my company's relationships with the organizations below are formal".	Hotels	Travel agencies	Tourism operators	Educational and research instits.	Trade associations	Destination promotion orgs.	Government orgs.
Disagree completely	4,30%	2,20%	2,20%	7,60%	3,30%	3,30%	2,20%
Disagree	13,00%	6,50%	10,90%	13,00%	8,70%	13,00%	15,20%
Neither agree/nor disagree	7,60%	8,70%	7,60%	21,70%	16,30%	18,50%	17,40%
Agree	28,30%	29,30%	31,50%	28,30%	43,50%	31,50%	25,00%
Agree completely	39,10%	43,50%	41,30%	19,60%	25,00%	29,30%	35,90%
Total respondents per question	92,40%	90,20%	93,50%	90,20%	96,70%	95,70%	95,70%

Source: derived from the research.

**Table 3: Collaboration in the relationships researched**

"In most of my company's relationships with the organizations below there are no disproportional advantages among partners and the partnership produces benefits for both parties".	Hotels	Travel agencies	Tourism operators	Educational and research instits.	Trade associations	Destination promotion orgs.	Government orgs.
Completely disagree	1,10%	3,30%	2,20%	2,20%	3,30%	3,30%	5,40%
Disagree	5,40%	4,30%	2,20%	2,20%	3,30%	3,30%	4,30%
Neither agree/nor disagree	12,00%	10,90%	15,20%	27,20%	28,30%	25,00%	26,10%
Agree	39,10%	26,10%	37,00%	39,10%	35,90%	29,30%	33,70%
Agree completely	39,10%	43,50%	38,00%	22,80%	19,60%	30,40%	22,80%
Total respondents per question	96,70%	88,00%	94,60%	93,50%	90,20%	91,30%	92,40%

Source: derived from the research.

However, the frequency with which partners related to each other varied according to the actor category. The actors with which managers reported having more frequent relations (on a monthly or fortnightly basis) were hotels (74%), travel agencies (72%), tourism operators (63%) and destination promotion organizations (41%). On the other hand, contacts involving relationships with educational and research institutions (47%), trade associations (40%), governmental organizations (50%) occurred less frequently, or even only on an annual basis.

Regarding the types of resources that were more intensely shared in the relationships researched, informational capital occupied a special position in all reported relations, as can be seen in Table 4. Social capital was also quite sought after in relationships with travel agencies (18.5%), tourism operators (15.2%), educational and research institutions (22.8%) and destination promotion organizations (10.9%). One should also highlight the sharing of physical resources in the case of relationships with hotels (21.7%) and financial resources in relations with governmental organizations (19.6%).

**Table 4: Shared resources in the relationships researched**

"Considering your company's overall relationships with the organizations in the categories below, indicate the types of resources that are most accessed by your company in these relationships".	Hotels	Travel agencies	Tourism operators	Educational and research instits.	Trade associations	Destination promotion orgs.	Government orgs.
Social capital	13,00%	18,50%	15,20%	22,80%	15,20%	10,90%	12,00%
Informational capital	26,10%	15,20%	21,70%	19,60%	37,00%	30,40%	28,30%
Physical resources	21,70%	10,90%	10,90%	7,60%	2,20%	2,20%	3,30%
Financial resources	2,20%	7,60%	9,80%	5,40%	3,30%	9,80%	19,60%
Technological resources	4,30%	1,10%	1,10%	6,50%	2,20%	5,40%	5,40%
Total respondents per question	67,40%	53,30%	58,70%	62,00%	59,80%	58,70%	68,50%

Source: derived from the research.

Indeed, most managers informed that their organization's relationships with other actors that also operated in the tourism area generated development of innovations, as shown in Table 5.

**Table 5: Development of innovation through the relationships researched**

"Most of my company's relationships with the organizations below generate the development of innovations in my business".	Hotels	Travel agencies	Tourism operators	Educational and research instits.	Trade associations	Destination promotion orgs.	Government orgs.
Disagree completely	3,30%	2,20%	2,20%	7,60%	4,30%	4,30%	7,60%
Disagree	7,60%	9,80%	10,90%	5,40%	7,60%	6,50%	5,40%
Neither agree/nor disagree	19,60%	17,40%	22,80%	26,10%	32,60%	25,00%	31,50%
Agree	40,20%	32,60%	31,50%	40,20%	38,00%	39,10%	34,80%
Agree completely	25,00%	33,70%	23,90%	13,00%	10,90%	18,50%	13,00%
Total respondents per question	95,70%	95,70%	91,30%	92,40%	93,50%	93,50%	92,40%

Source: derived from the research.

Among the types of innovation developed through relationships established between tourism organizations, managers informed that partnerships with hotels (14.1%), travel agencies (12%) and tourism operators (8.7%) generated the most innovations. Educational and research institutions, as well as trade associations, were partners in the development of management and institutional innovations. Destination promotion organizations were considered to be the most appropriate partners for the development of institutional and logistic innovations. However, it should be highlighted that few managers answered this question. Table 6 presents the percentages of managers' responses to this question.

**Table 6: Type of innovation developed through the relationships researched**

"Considering your company's overall relationships with the organizations in the categories below, indicate what types of innovation are generally developed through these relationships".	Hotels	Travel agencies	Tourism operators	Educational and research instits.	Trade associations	Destination promotion orgs.	Government orgs.
Product and service innovation	14,10%	12,00%	8,70%	7,60%	5,40%	9,80%	5,40%
Process innovation	6,50%	6,50%	5,40%	3,30%	2,20%	3,30%	6,50%
Management innovation	1,10%	3,30%	4,30%	10,90%	8,70%	4,30%	4,30%
Logistics innovation	7,60%	9,80%	6,50%	3,30%	5,40%	10,90%	5,40%
Institutional innovations	1,10%	0,00%	1,10%	8,70%	15,20%	14,10%	29,30%
Total respondents per question	30,40%	31,50%	26,10%	33,70%	37,00%	42,40%	51,10%

Source: derived from the research.

The data presented in Tables 1 and 5 was cross-checked in order to verify whether the relationships perceived to be important by the organizations interviewed were also reported as those that generated innovations. In this analysis, performed for each actor category with which managers reported having relationships, the research analyzed especially the concentration of occurrences of "agree" and "completely agree" responses to both questions, shown in Tables 7, 8, 9, 10, 11, 12 and 13. This confirmed that relationships reported as being important with hotels, travel agencies, tourism operators and tourism promotion organizations indeed translated, in most cases, into innovations, shown by the sum of agreement percentages that were all over 55%. Educational and research institutions were a surprise, with 49.42% of the sum of agreement occurrences, indicating that, as well as being important partners, they had an average participation in the development of innovations in the relationships established. Relationships with the sector's trade associations and government organizations obtained the lowest scores in terms of the sums of agreement concentrations regarding the importance and practice of innovations, with 40.70% and 45.87% respectively.

**Table 7: Importance of the Relationship X Practice of Innovation – Partner: Hotels**

Important relationships X Relationships that generate innovations – partner: hotels	CD	D	Neither A/Nor D	A	CA	Empty	General Total
Completely Disagree (CD)	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Disagree (D)	0,00%	1,14%	0,00%	0,00%	0,00%	0,00%	1,14%
Neither agree/nor disagree	0,00%	1,14%	1,14%	2,27%	0,00%	0,00%	4,55%
Agree (A)	1,14%	0,00%	12,50%	<b>21,59%</b>	<b>1,14%</b>	0,00%	36,36%
Completely Agree (CA)	2,27%	5,68%	6,82%	<b>17,05%</b>	<b>22,73%</b>	0,00%	54,55%
Empty	0,00%	0,00%	0,00%	1,14%	2,27%	0,00%	3,41%
General Total	3,41%	7,95%	20,45%	42,05%	26,14%	0,00%	100,00%

Source: derived from the research

**Table 8: Importance of the Relationship X Practice of Innovation – Partner: Travel Ag.**

Important relationships X Relationships that generate innovations - partner: Travel Agencies	CD	D	Neither A/Nor D	A	CA	Empty	General Total
Completely Disagree (CD)	0,00%	0,00%	1,14%	0,00%	0,00%	0,00%	1,14%
Disagree (D)	0,00%	1,14%	0,00%	1,14%	0,00%	0,00%	2,27%
Neither Agree/Nor Disagree	0,00%	1,14%	3,41%	0,00%	0,00%	0,00%	4,55%
Agree (A)	1,14%	1,14%	9,09%	<b>14,77%</b>	<b>7,95%</b>	0,00%	34,09%
Completely Agree (CA)	1,14%	5,68%	3,41%	<b>17,05%</b>	<b>27,27%</b>	0,00%	54,55%
Empty	0,00%	1,14%	1,14%	1,14%	0,00%	0,00%	3,41%
General Total	2,27%	10,23%	18,18%	34,09%	35,23%	0,00%	100,00%

Source: derived from the research

**Table 9: Importance of the Relationship X Practice of Innovation– Partner: Operators**

Important relationships X Relationships that generate innovations - partner: Tourism operators	CD	D	Neither A/ Nor D	A	CA	Empty	General Total
Completely Disagree (CD)	0,00%	0,00%	1,19%	0,00%	0,00%	0,00%	1,19%
Disagree (D)	0,00%	1,19%	2,38%	0,00%	0,00%	0,00%	3,57%
Neither Agree/Nor Disagree	1,19%	4,76%	7,14%	0,00%	0,00%	0,00%	13,10%
Agree (A)	1,19%	3,57%	9,52%	<b>19,05%</b>	<b>4,76%</b>	0,00%	38,10%
Completely Agree (CA)	0,00%	2,38%	4,76%	<b>14,29%</b>	<b>21,43%</b>	0,00%	42,86%
Empty	0,00%	0,00%	0,00%	1,19%	0,00%	0,00%	1,19%
General Total	2,38%	11,90%	25,00%	34,52%	26,19%	0,00%	100,00%

Source: derived from the research.

**Table 10: Importance of the Relationship X Practice of innovation – Partner: Teaching and Research Instits.**

Important relationships X Relationships that generate innovations - partner: Educational and Research Instits.	CD	D	Neither A/Nor D	A	CA	Empty	General Total
Completely Disagree (CD)	1,18%	0,00%	0,00%	0,00%	0,00%	0,00%	1,18%
Disagree (D)	1,18%	0,00%	1,18%	0,00%	0,00%	0,00%	2,35%
Neither Agree/Nor Disagree	0,00%	1,18%	9,41%	7,06%	1,18%	0,00%	18,82%
Agree (A)	1,18%	3,53%	14,12%	<b>21,18%</b>	<b>4,71%</b>	0,00%	44,71%
Completely Agree (CA)	4,71%	1,18%	3,53%	<b>15,29%</b>	<b>8,24%</b>	0,00%	32,94%
Empty	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
General Total	8,24%	5,88%	28,24%	43,53%	14,12%	0,00%	100,00%

Source: derived from the research.

**Table 11: Importance of the Relationship X Practice of Innovation – Partner: Trade Assocs.**

Important Relationships X Relationships that generate innovation - partner: Trade Associations	CD	D	Neither A/Nor D	A	CA	Empty	General Total
Completely Disagree (CD)	0,00%	0,00%	0,00%	1,16%	0,00%	0,00%	1,16%
Disagree (D)	1,16%	0,00%	2,33%	0,00%	0,00%	0,00%	3,49%
Neither Agree/Nor Disagree	1,16%	3,49%	4,65%	10,47%	0,00%	0,00%	19,77%
Agree (A)	0,00%	3,49%	17,44%	<b>15,12%</b>	<b>3,49%</b>	0,00%	39,53%
Completely Agree (CA)	2,33%	1,16%	9,30%	<b>13,95%</b>	<b>8,14%</b>	0,00%	34,88%
Empty	0,00%	0,00%	1,16%	0,00%	0,00%	0,00%	1,16%
General Total	4,65%	8,14%	34,88%	40,70%	11,63%	0,00%	100,00%

Source: derived from the research.

**Table 12: Importance of the Relationship X Practice of Innovation – partner: Promotion Orgs.**

Important relationships X Relationships that generate innovation - partner: Destination promoters	CD	D	Nether A/Nor D	A	CA	Empty	General Total
Completely Disagree (CD)	1,16%	0,00%	0,00%	0,00%	0,00%	0,00%	1,16%
Disagree (D)	0,00%	0,00%	2,33%	0,00%	0,00%	0,00%	2,33%
Neither A/Nor Disagree	0,00%	4,65%	4,65%	5,81%	0,00%	0,00%	15,12%
Agree (A)	0,00%	2,33%	11,63%	<b>18,60%</b>	<b>9,30%</b>	0,00%	41,86%
Completely Agree (CA)	3,49%	0,00%	8,14%	<b>17,44%</b>	<b>10,47%</b>	0,00%	39,53%
Empty	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
General Total	4,65%	6,98%	26,74%	41,86%	19,77%	0,00%	100,00%

Source: derived from the research.

**Table 13: Importance of the Relationship X Practice of Innovation– Partner: Government Orgs.**

Important relationships X Relationships that generate innovation - partner: Government organizations	CD	D	Neither A/Nor D	A	CA	Empty	General Total
Disagree Completely (DC)	1,18%	0,00%	0,00%	0,00%	0,00%	0,00%	1,18%
Disagree (D)	1,18%	1,18%	3,53%	0,00%	0,00%	0,00%	5,88%
Neither Agree/Nor Disagree	0,00%	1,18%	9,41%	5,88%	0,00%	0,00%	16,47%
Agree (A)	2,35%	3,53%	15,29%	<b>12,94%</b>	<b>2,35%</b>	0,00%	36,47%
Completely Agree (CA)	3,53%	0,00%	5,88%	<b>18,82%</b>	<b>11,76%</b>	0,00%	40,00%
Empty	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
General Total	8,24%	5,88%	34,12%	37,65%	14,12%	0,00%	100,00%

Source: derived from the research.

## FINAL CONSIDERATIONS

This article sought to verify whether there is a relation between collaboration and innovation in firms that operate in the tourism area, specifically in the city of Rio de Janeiro, Brazil. An empirical study was performed of more than ninety organizations in various tourism-related markets. Preliminary analyses of the results presented in this article evidenced that the managers interviewed perceived most collaborative relationships with other organizations to be important and that these relations contributed to the development of innovations in practice, thus corroborating the literature's findings.

In addition, some other comments on the results of this research are in order. Firstly, a broad definition of innovation was offered to managers and the sample was composed of large tourism organizations which are better equipped to invest in innovation. These facts may explain why most interviewees reported a high percentage of agreement regarding the development of innovations, thus contradicting the theory that this is only a moderately innovative industry and that other sectors linked to it play a greater role in introducing innovations into this industry.

Another possible interpretation may be that, as mentioned in the literature review, the development of innovations was stimulated by market demand. Indeed, according to figures from the Brazilian Ministry of Tourism (MTUR, 2011), Rio de Janeiro has seen its touristic demand grow significantly since it was chosen to host a series of mega-events over the next few years. This, in addition to expectations of an even greater growth in demand, due to the events themselves, may be encouraging the development of innovations by destination's tourism firms.

In a confirmation of the innovation and tourism literature's findings, the results showed that relationships with educational and research institutions were perceived to be important and also achieved an average innovation score in practice. This may be explained by the fact that these relationships are significant providers of qualified social capital for the organizations researched, in contrast to the low level of qualifications that predominate in the tourism destination, which may thus be contributing to these firms' innovation process. Relationships with tourism-related government entities were identified as offering few practical results in the development of innovations, a result that also contradicted the theory. It is moreover important to highlight that the results showing that collaboration relationships with hotel, travel agencies and tourism operators were the most important for the development of innovations may have been simply reflecting the distribution of the research sample.

In sum, the results of the research contribute to the theory of tourism by corroborating the thesis that collaboration is important for the development of innovations in this industry. In addition, they also show that the largest tourism organizations in the destination researched, by developing collaborative relationships that indeed contribute to the development of innovations, are investing in their long-term competitiveness which may give them a considerable advantage, especially after the mega-events have taken place.

However, the knowledge shared in this article should be further developed by new research. The next step would be to analyze the Spearman correlation coefficient for this research's ordinal variables. In addition, in-depth interviews may provide a more accurate picture of the innovations developed in the relationships studied and enumerate best practices so that other organizations can learn from them. A survey of the main challenges faced by firms in the innovation process may provide guidelines for the formulation of public policies designed to develop the destination's tourism. Increasing the sample may allow comparisons between organizations of different sizes in order to better understand innovative behaviors. The analysis of the structural characteristics of the network researched may reveal new insights for the destination's strategic management. In sum, the theme of innovation in tourism is ripe for new investigations as the theory is still undergoing consolidation.

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# **SOCIAL ENTREPRENEURSHIP IN INDIA: AN EXPLORATORY STUDY**

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## **ABSTRACT**

*Social entrepreneurship is the process of bringing about social change on a major and more effective scale than a traditional Non-Governmental Organization (NGO). Social Entrepreneurship is an increasingly important concept in the study of voluntary and nonprofit organizations. Earlier, organizations solving social problems were often assumed to be idealistic, philanthropic and lacking business acumen or the ability to be entrepreneurial. However, as the social sector has been coming in touch with the private sector, both have begun to realize that just one approach either pure philanthropic or pure capitalist is inadequate to build sustainable institutions. Social entrepreneurship in India is emerging primarily because of what the government has not been able to do. The government is very keen on promoting social entrepreneurship – not necessarily by funding it or by advising on it or enabling it. The focus of the paper is to address the growing trends of Social Entrepreneurship in Indian and the new initiatives taken by various social entrepreneurs. In this paper, efforts are made to give information and study, mainly exploratory related to these support activities related to Social Entrepreneurship and Social Entrepreneurial ventures in India. This may have in the future empirical study.*

## **INTRODUCTION**

Social Entrepreneurship is one of the most talked subjects and area of study. Social Entrepreneurship is growing at a very high rate in India. This new evolving field has also got early venture capitalist interested in funding with many seeking out such enterprises that hold out huge potential ([www.pluggedin.com](http://www.pluggedin.com)). Social entrepreneurship has received increased recognition as being part of contemporary society. Social entrepreneurs play the role of change agents in the social sector, by adopting a mission to create and sustain social value; recognizing and rigidly pursuing new opportunities to serve that mission; engaging in a process of continuous innovation, adaptation, and learning; acting boldly without being limited by resources currently in hand; and exhibiting heightened accountability to the constituencies served and for the outcomes created. (Desai, 2001). Social Entrepreneurship is the art of creating a socially responsible business that aims to generate profit, while solving social and environmental problems. Social entrepreneurs start and run social enterprises that come with a “triple bottom line” command. Social entrepreneurship brings about social transformation well beyond solutions to the initial problems. Social enterprises are for ‘more-than-profit’, using blended value business models that combine a revenue-generating business with a social-value-generating structure or component. Social entrepreneurship can be achieved through both philanthropic and government expenditures that involve the public and private sector (Tracey and Phillips, 2007).

## **SOCIAL ENTREPRENEURSHIP**

The social entrepreneur is driven by an emotional desire to address some of the big social and economic conditions in the world. For social entrepreneurs profit-making is not the primary motive. Social entrepreneurs play an important role in the change of the economic Paradigms since they challenge and disrupt structures on all levels by offering solutions to environmental and social problem, which other s cannot do. Different authors have described social entrepreneurship in different ways. According to some authors, entrepreneurs use their knowledge and skills to accomplish social purposes along with the growth of their enterprise. Some work on the concept of “innovation” for social impact. Social entrepreneurs are mainly focused on social problems. Such entrepreneurs initiate innovation by mobilizing the resources available to build social arrangements in response to the social problem. While some believe that social entrepreneurship can work as a strong catalyst in the society. Whatever may be approach and believe, we can say one thing that social entrepreneurship leads to the transformation of the society. Some social entrepreneurs have, therefore emerged as modern heroes who take up the challenge of changing the inferior equilibrium to a superior one. Social entrepreneurs do not discourage competitors and imitators but in fact show others how to follow and are role models for them. Social wealth can be defined as the result of social value created offset by social costs incurred (Zahra et al., 2009).

Social entrepreneurship plays a dominant role in the economy of any country which cannot be substituted by any other category of institutional actor. Social entrepreneurs have to develop practical and innovative solutions, given their lack of resources and the scale of the problem they aim to address- “creating something from nothing (Baker & Nelson, 2005). Social entrepreneurship concerns individuals or organizations engaged in entrepreneurial activities with a social goal (Bosma & Levie, 2010).

Social entrepreneurs are a special breed of people who use business sense to solve social challenges. Social entrepreneurship is a kind of entrepreneurship initiative that aims at taking up a social problem for bringing about a transformation in the same. The person who takes up the challenge is called a social entrepreneur and that person uses the principle of entrepreneurship with the purpose of creating social capital and not by being profit centered ([www.managementstudyguide.com](http://www.managementstudyguide.com)). Social entrepreneurs are visionaries who see beyond the usual. They solve social problems using co-operative approaches where the result is much higher than just the sum of individual ideas. They have an impact because they collaborate globally by investing time and creativity to change policies, legislation and frameworks. Social entrepreneurs are visionary individuals with creative solutions for solving some of the world’s most perplexing social problems. These people have the ability to identify the problem, develop a way to change the system, and disseminate the ideas so that entre societies work together to raise themselves above crisis. They are ambitious, driven, resourceful, and results-oriented ([www.greenmarketing.tv](http://www.greenmarketing.tv)). A social entrepreneur is someone who recognizes a social problem and uses entrepreneurial principles to organize, create, and manage a venture to make social change. Whereas a business entrepreneur typically measures performance in profit and return, a social entrepreneur assesses success in terms of the impact he has on society. While social entrepreneurs often work through nonprofits and citizen groups, many work in the private and governmental sectors ([www.plugged.in](http://www.plugged.in)).

Social entrepreneurship can be defined as the development of innovative, mission supporting, earned income, job creating or licensing, ventures undertaken by individual social entrepreneurs, non profit organizations, or non profit in associations with for profit (Pomerantz 2003). It is evident factor that influence talent largely comes with the opportunities which are not available to certain economic and social classes. This is the characteristic of Maslow’s Need Hierarchy theory where people begin to confront large social issues only and only when their basic needs are satisfied. As more and more people are satisfied at the bottom level and move towards the top of the pyramid, i.e. self-actualization, we see more social entrepreneurs emerging in the world. We need to rethink and emerge with such strategies that would facilitate the process and more people would come up with the ideas and abet across the pyramid to create change.

## **SOCIAL ENTREPRENEURSHIP IN INDIA**

In India, Social entrepreneurship has been gaining ground in various sectors of the economy with more and more youth evincing interest in the field, including those from prestigious Indian institutes of Management (IIM) and Indian Institutes of Technology (IIT) ([www.entpracticereview.org](http://www.entpracticereview.org)). The orientation of ‘giving’ the need to fulfill one’s duty towards the society (as opposed to fulfilling individual needs) is deep rooted in Indian social values and identity (Chakraborty, 1987).

A study by Srivastava and Tandon (2002) for the Society for Participatory Research in Asia (PRIA) throws some revealing insights about the nature and magnitude of the proliferation of Non-Profit voluntary organizations in India. The survey found that:

- There are 1.2 million non-profit organizations in India, which engage nearly 20 million people as paid employees or on volunteer basis.
- However, 73.4% of these organizations were very small with one or paid employees; in contrast, only 8.5% had more than 10 paid employees.
- While 26.5% of these NPOs were religious in nature of their activities, the rest were secular bodies focusing on social development issues such as education, healthcare, community development.
- The estimated receipts of funds by these NPOs were Rs. 179bn (1999-2000). However, 80% of this was generated from local activities, community contribution and donations; among these 51% were self-generated, while 12.9% came from donations and 7.1% from loans.

In the 19<sup>th</sup> century, the then government of India had enacted two separate acts: The Societies Registration Act, 1860 and The Indian Trust Act, 1882. These two acts were aimed to regulate and to provide legal status for not-for-profit entities which existed for the benefit of the society. The enactment of these two acts shows that by that time, such organized efforts had reached a critical mass which large enough to necessitate creation legal framework to recognize their existence.

## Social Entrepreneurship Ventures in India

India is a key country in developing social entrepreneurs. Social entrepreneurs have been around since human beings started to form social. Entrepreneurs are believed to have an exceptional ability and a foresight vision to seize new opportunities (which others can't see), the intense commitment and the drive to lead and to bear the uncalculated risk. The entrepreneurs have the unique quality of creativity; they think differently and come with a new creative solution that breaks with the existing old one. They possess the perseverance to drive their creative solutions through actualization and market adoption. They have the unique quality of out of the box thinking with unique determination of bringing something new to the society. Social entrepreneurs normally start with small local efforts they often target the problems that have a local expression but a great global relevance, such as sanitation, diseases, hygiene, loans etc. Social entrepreneurs perform a similar function in the social economy, filling gaps in social needs that are left unfilled by business and the government. Social entrepreneurs should work together as a professional team work so as to build their network that would move everyone beyond their personal goal to a common goal, thus eradicating the causes of global challenges. Some of the social entrepreneurship ventures in India are as follows:

- Land Gift Movement: founder Vinoda Bhawe, caused the redistribution of more than 28,000 Km<sup>2</sup> of land to aid India's untouchables and landless.
- dhanaX: Rajesh Sinha and Siva Cotipalli, IIM Kozhikode passed out, came up with an innovative social enterprise dhanax Web Technologies Pvt. Ltd. In Bangalore. The objective was to provide easy access to the credit for the enterprising but underprivileged borrower and a profitable investment opportunity for the lender (social). dhanaX invest money specially for the poor women entrepreneurs, thus helping them in improving their small business as well as their standard of living. ([www.dhanaX.com](http://www.dhanaX.com)).
- Aravind Eye Hospital: started by Dr. Govindappa Venkataswamy and Thulasiraj D. Ravilla have nearly treated more than 2.4 million patients free of charge. ([www.aravindhospital.com](http://www.aravindhospital.com)).
- Amul: grew under the leadership of Dr. Verghese Kurien in 1950. It has established a direct linkage between milk producers and consumers by eliminating middlemen. Milk producers (farmers) control procurement, processing and marketing. The dairies are owned by the farmers, their elected representatives managed the village societies and the district union, they employed professionals to operate the dairy and manage its business. ([www.amul.com](http://www.amul.com)).
- Selco India: founded by Harish Hande, Magsaysay Award 2011 winner started this company in 1995. It is a solar electric light company which has the mission to enhance the quality of life of underserved households and livelihoods through sustainable energy solutions and services. ([www.selco-india.com](http://www.selco-india.com)).
- Ladakhi Women's Travel Company: founded by Thinlas Chorol. The aim of this company is to encourage the women of Ladakh, to show their abilities and skills, particularly in the remote areas. ([www.ladakhiwomenstravel.com](http://www.ladakhiwomenstravel.com))

- The George Foundation: started by Indian American businessmen and philanthropist Dr. Abraham George, 1995 in Bangalore, India. The foundation works towards the eradication in India, environmental health and strengthen democratic institutions and values in developing countries. ([www.tgfworld.org](http://www.tgfworld.org))
- eJeevika: founder Richa Pandey Mishra, IIT-M passed out. The foundation is addressing a very important problem in rural India by training villagers for employment. eJeevika has developed modules for security services, retail and business process outsourcing and other sectors.
- Digital Green (DG): is a national NGO that seeks to disseminate targeted agricultural information to small and marginal farmers in India through digital video.
- SKS Microfinance Limited (SKS): is a non-banking finance company, regulated by the Reserve Bank of India. Its mission is to eradicate poverty by providing financial services to the poor. ([www.indiamicrofinanace.com](http://www.indiamicrofinanace.com)).
- Barefoot College: started by Bunker Roy, is a non government organization that has been providing basic services and solutions to problems in rural communities, with the objective of making them self-sufficient and sustainable. ([www.barefootcollege.org](http://www.barefootcollege.org)).
- Global Indian Foundation: aims to lift the education standards of the tribal students and make them employable in public or private sector. ([www.globalindiafoundation.org](http://www.globalindiafoundation.org)).
- DARE: is an interactive platform for the Indian Entrepreneur and the Entrepreneurial ecosystem, for enabling entrepreneurs to start and run their own business. It identifies business opportunities and success mantras for others to follow. ([www.dare.com](http://www.dare.com)).
- CRY: Child Rights and You, is an India non-government organization that catalyses change in the lives of underprivileged children in India by restoring their rights. ([www.cry.org](http://www.cry.org)).
- Waste Ventures: founded by Parag Gupta, aims to build a model in waste management that empowers the waste collectors, gives them financial benefit and has a positive impact on the environment. ([www.wired.co.uk](http://www.wired.co.uk)).
- Self Employed Women's Association (SEWA): started by Ela Bhatt, winner of prestigious Ramon Magsaysay Award. It is the organization of poor, self-employed women workers. SEWA's expansion has taken the form of building an organization to the expansion which has affected the life of thousands of women (poor). SEWA also worked on programmes that focused on economic change besides other programmes. Few of SEWA's sister organization is given as below:
  - The SEWA Co-operative Bank: it aims at providing an integrated set of banking services which make it a multi service organization that has deviated from the general pattern of co-operative banks.
  - SEWA Academy: started in 1991 with the objective of training capacity building, action oriented research of its member, and by building strong communication channels, within the organizations as well with the outside world.
  - SEWA Research: connecting the micro and macro level, between the grassroots and the local development context at the macro level, and the government policies and the economic development process at the macro level.
  - SEWA Housing: started in 1994, with the objective of improving housing and infrastructure conditions of poor women in the informal sector.
  - SEWA Trade Facilitation Centre: started in 2003, with the objective of creating sustainable livelihood strategies for the poorest of the poor women producers.
  - SEWA Manager Ni School: started in 2005, with the goal of facilitating economic self-sustainability through building a cadre of grass root manager.
  - SEWA ICT: has enabled poor women, living in remote areas to access vital information related to their trade, livelihoods, government schemes including Panchayati Raj (local self-government), seeking and sharing expert opinions on disaster management, management of enterprise, marketing of products.
  - SEWA Nirman Construction Workers Company Ltd, its objective is to work for the infrastructure development across the country, focusing on rural development benefiting the construction industry and the entire nation at large.
  - SEWA Mahila Shahkari Mandli Ltd: it was started to help paper-picker women.
  - SEWA Kalakruti: it products include broad range of stationery items, apparels, home décor furnishings, personal accessories, bed lines and artifacts, all made by the women of the organization.
  - SEWA Bharat: it is committed to strengthening the movement of women in the informal economy by highlighting their issues at the national level and building its member organization capacity to empower them.

- SEWA Rachaita: objective was to synergize the strength of women construction workers. ([www.SEWA.com](http://www.SEWA.com)).

## CONCLUSION

Social entrepreneurship attracts attention from practitioners, academics, and increasingly from policy makers. Social entrepreneurship develops independent business activities and is active on the market in order to solve issues of employment, social coherence and local development. This paper has given an insight into the meaning of social entrepreneurship in India. It has also brought out some examples of social entrepreneurship in India. It somewhat tells us the possible reasons for a gradual shift towards social entrepreneurship and how it is the way to future. Some Indian entrepreneurs like Ela Bhatt, Bunker Roy, Parag Gupta, Rajesh Sinha, Harish Hande etc. have come forward and successfully tackled and continue to tackle some of the globe's most complex challenges in India. These social entrepreneurs aim to contribute to the well being of the human in the human community. The efforts to give information related to support activities related to social entrepreneurship and social entrepreneurship ventures in India is very well presented in this paper. This study can be further used for future empirical study.

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# **TECHNO-INNOVATIONS TO TECHNO- ENTREPRENEURSHIP THROUGH TECHNOLOGY BUSINESS INCUBATION IN INDIA: A COMPARATIVE STUDY OF SELECT CASES IN GUJARAT**

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## **ABSTRACT**

*This paper gives the Comparative Case study of Two extreme cases related to Technology Business Incubation in India: One is from Grassroots innovations and other is from the company who got support from professional Technology Business Incubation organization from top ranked Management institute in India. This paper was come out of a study with Research design: Multiple Embedded Descriptive Case Study. With the help of data analysis and findings, we could study the components of the Technology Business Incubation in the present cases with two different approaches to support Techno-innovations to Techno-entrepreneurship. This study defined some of the parameters which could be useful for formulating hypothesis for the future empirical study. This study also described the problems in this area and some suggestions were also made for the same.*

## **INTRODUCTION**

This paper gives the Comparative Case study of Two extreme cases related to Technology Business Incubation in India: One is from Grassroots innovations and other is from the company who got support from professional Technology Business Incubation organization from top ranked Management institute in India. Grassroots innovations are essentially solutions generated by people at the Grassroots levels to tide over persistent problems, the solutions to which are either not available or not affordable by a large section of the consumer masses in developing countries like India. The problem is: How to motivate Grassroots innovators to be the entrepreneurs? They lack in soft skills related to business because of their poor educational back ground. Most of the time, they have to go for the Technology Transfer rather than making themselves real entrepreneurs whereas the innovators with professional background may not face these sorts of problems. Hence, it is interesting to have comparative study of two different approaches of Technology Business Incubation in India.

Innovation is the introduction of new ideas, goods, services, and practices which are intended to be useful. The main driver for innovation is often the courage and energy to better the world. An essential element for innovation is its application in a commercially successful way. But many times innovation dies because of lack of supports. Many engineering students are doing so many innovative things but most of the time they end up as a certificate on a piece of paper as they do not find any support to commercialize their ideas. Innovations may also come from the Grassroots people without any technology background. National Innovation Foundation (NIF), Honey Bee Network, Sristi etc. have supported them in India. It works in knowledge mapping and



gathering, knowledge creation and value addition & knowledge application and dissemination (Gupta A, 2006). Important thing is: How to convert Techno – Innovation in to Techno – Entrepreneurship? Technology Innovation is important and it is difficult but Entrepreneurship is not just about Techno-innovation. Techno – Entrepreneurship is a broad concept and involves many things and not just Technology Innovation. Technology Entrepreneur is one who organizes, manages and assumes the risk of an technology based business enterprise (Nicholas S.P. & Armstrong N.E., 2003). Successful entrepreneur has to have managerial skills to utilize resource effectively, should be able to make appropriate feasibility analysis, should have skills related to Marketing, Human Resource Management, Financial Management, Manufacturing Management and Networks (Bulsara H. P. et al, 2009). Techno – Entrepreneur need to have Technical Management skills, Business management skills and motivation, then only he can be a complete successful Techno – Entrepreneur (Oakley R.P., 2003). Technology Business Incubation involves the commercialization of science and technology through newer community institutional arrangements which can be thought of as technology venturing. Technology Business Incubation can foster corporate and community collaborative efforts, while nurturing positive government-academic-business relationships. The primary drivers of technology business incubation are entrepreneurs – people who make things happen and technologies or ideas that have potential to be commercialized within a reasonable period of time (Tornatzky L.G., Batts Y., McCrea N.E., Lewis M.S. & Quittman L.M. (1996). H.K. Mittal, Advisor and Head, National Science and Technology Entrepreneurship Development Board, DST – Government of India, has shown in his presentation that incubation is required because: Innovative ideas have longer gestation period and skill set of entrepreneurship is not well developed in all innovators.

## Need and Scope of the study

From the literature review conducted, we could find that not much extensive research, particularly in Technology Business Incubation approach, had been done in the area of Techno – Entrepreneurship in the context of India; however the literature review suggested that some research had been done in this area in western countries which could guide the research in this area in Indian context. At the time of initiation of the present study, the concept of Technology Business Incubation in India was comparatively new as started by Department of Science and Technology, Government of India in 2000 only. Most of them, out of 24 in 2007-08 (when study was initiated); were started just 2-3 years back only. Hence, the management research in this area in the context of India was not much, however, Basant R. and Chandra P (2007) had done some exploratory study. Hence, the scope of the case study research was there in the area of Techno-Entrepreneurship through Technology Business Incubation in the context of India to understand the process. At that junction of time, the focus was made on understanding Technology Business Incubation process in the context of India as this concept was comparatively new in India and not much management research was conducted in this area. This could give idea about conceptual framework of Technology Business Incubation in country like India. The case study research approach was appropriate as the concept was new in the context of India and appropriate sample size for statistical study was not adequate. The case study research would help in describing the process of Technology Business Incubation in the context of India. The study was conducted with the main objective: ‘To study and describe the Technology Business Incubation (TBI) process in the context of India and to address the problems & challenges related to Technology Business Incubation’

## RESEARCH METHODOLOGY

This paper was come out of a study with Research design: Multiple Embedded Descriptive Case Study. For the comparative study, two cases were developed on two entrepreneurs: The one case was of Nature Technocrats – a business firm of Arvindbhai who was supported by GIAN (Grassroots Innovations Augmentation Network), Technology Business Incubator for Grassroots Innovations in India and the other case was of Aura Herbal Textiles Limited of Arun Baid who was supported by Centre for Innovation, Incubation and Entrepreneurship (CIIE), Indian Institute of Management, Ahmedabad. GIAN is India’s first Technology Business Incubator focusing on incubating and commercializing Grassroots innovations in India whereas CIIE supports the innovators with professional background.

Data were collected through the in-depth personal interviews in the starting by making the case format with major focus area and minor focus area. Afterwards, if required, follow up interviews were conducted

through telephone and email also. The extensive literature review was conducted to support the research which was useful at the time of analyzing data too. With the help of the literature review conducted, the conceptual framework for data analysis was constructed which acted as a pattern for the pattern matching in data analysis as suggested as a one of the technique to analyze in the case study research by Yin R. K. (2003).

## BRIEF PRESENTATION OF CASES

**Case 1 : Aura Herbal Textiles Limited** is a company dealing with Herbal dyeing of Textiles – Green Technology. This technology was patented by Arun Baid. He was born in Rajasthan in 1967, in Marwadi – community known for business orientation in India, wanted to be in business from childhood. He did his B.Com, MBA (Partial – left MBA for focusing on business) and had experience of the chemical technology due to past business of chemical recycling and was very much interested in environment His journey was not that smooth while commercializing this Green technology though he had patent. Aura Herbal Textiles Limited was certified by Global Organic Textile Standard (GOTS) for their all natural/herbal dyeing process. The company used certified organic fabrics, textiles and yarns as raw material. Dyeing, weaving and printing were done under keen supervision to maintain quality standards. Dyeing of fabrics up to 120' width was achieved. The company managed to achieve lengths of up to 1000 meters in different fabrics like voiles, poplins, twills, flannels, corduroys, denims, knits and silks. Aura Herbal Textiles Ltd had beautiful color palette of earthy shades & various prints ensuring no waste was generated. The solid was used as manure and the liquid waste helped in irrigating their farms. This firm was supported by Centre for Innovations, Incubation and Entrepreneurship (CIIE), Technology Business Incubator, Indian Institute of Management, Ahmedabad. He was supported well by his family members, mainly by his wife Sonal Baid and his father M L Baid. Arun was doing business of chemical recycling for over 18 years and earning around Rs. 8 – 10 lacs per month. So, it was not a bad business for him from earning point of view. But he realized that he was not meant for this. He wanted to do a business which might not harm society. He started thinking about something innovative which would be eco-friendly, would not harm society and considered to be ethical business. So, Aura Herbal was come out of realization. Now, the company is on the path of growth.

**Case 2: Nature Technocrats** is a case of Arvindbhai who had several Technology innovations with patents too. He was born in 1956 in Vanch village near Ahmedabad in India. He was poor in study, after 10<sup>th</sup> standard did watch repairing technical course from ITI (Industrial Training Institute) for some time and left. He also completed course on Automobile engineering, got training at Ferguson Tractor Company for 6 months. He had hands on experience of Car garage for 6 months, Diesel pump injector service centre for 6 months, instructor for Diesel Cum Mechanic Mobile Classes started out of Government scheme, a company – Al Arfaz from Saudi Arabia job related to technical maintenance. All these job experience made him work and handle the job independently. He had many innovations like Auto Air Kick Pump, Solar Water Heater, Natural Water Cooler, Auto Sprayer, Natural refrigerator, Innovative tong etc. He converted some of his innovations into products for commercial purpose with the help of GIAN (Grassroots Innovations Augmentation Network), Technology Business Incubator in India and some patented innovations were transferred to other companies with the help of GIAN. The level of satisfaction from these commercial ventures was limited.

## ANALYSIS AND FINDINGS

As mentioned in the Research Methodology, the research design was finalized as : '*Embedded Multiple – Case Design with Descriptive Case Study*' (Yin R. K., 2003). Yin R. K. (2003) suggested 5 specific techniques for analyzing the Case Study: Pattern Matching, Explanation Building, Time-series analysis, Logic Models, Cross-Case Analysis. In the present study; Pattern matching, Explanation Building and Cross – Case Analysis were used. On the basis of detailed literature review and our own study, we could derive the conceptual framework for the components of support services of Technology Business Incubation in terms of components and sub-components. For this, we mainly referred the work of Tornatzky et al (1996), McAdam et al (2006), Scott T. (2002), Peter C. Van der Sijde (2002), Wikipedia (2009) and Bollingtoft and Ulhoi (2005). The conceptual framework would act as a pattern which can be matched in the context of India to understand the Technology Business Incubation in India for our selected cases.

**Pattern matching in Case 1 and Case 2 with the Conceptual framework for Technology Business Incubation**

<i>Component of support services</i>	<i>Sub components</i>	<i>As claimed by TBI (CIIE, IIM A)</i>	<i>As perceived by Entrepreneur (Arun Baid, Aura Herbal)</i>	<i>As claimed by TBI (GLAN)</i>	<i>As perceived by Entrepreneur (Arvindbhai, NatureTechnocrats)</i>
<b>Physical Resources</b>	Machinery	Yes - Not Directly but Through Tie up	Yes – but not availed	Yes - Not Directly but Through Tie up	Yes - Not Directly but Through Tie up
	Office	Yes	Yes – but not availed	No	No
	Laboratory	Yes - Not Directly but Through Tie up	Yes – but not availed	Yes - Not Directly but Through Tie up	Yes - Not Directly but Through Tie up
	Shared Services (Secretarial, Mail, Telephone, Photocopying, Fax, Internet, Computers etc.)	Yes – Very much	Yes	Yes - Partial	Yes - Partial
<b>Human Resources</b>	Helping hiring people	Yes	Yes	Yes - Only advice	Yes - Only advice
	Full time management team	Yes – very much	Yes – very much	Yes	Yes
<b>Technology Resources</b>	Access to knowledge and technology	Yes – very much	Yes – very much	Yes – very much	Yes – very much
	Patents (IPR) & Licenses etc.	Yes – very much, full time IPR expert	Yes – very much	Yes – very much	Yes – very much
	Technical documentation	Yes – very much	Yes – very much	Yes – very much	Yes – very much
<b>Organizational Resources</b>	Consultancy	Yes	Yes	Yes – very much	Yes – very much
	Mentoring	Yes – very much	Yes – very much	Yes – very much	Yes – very much
<b>Networking</b>	Internal (other tenants of TBI, professors etc.)	Yes – very much	Yes – very much	Yes – very much	Yes – very much
	External (Other entrepreneurs, similar organization, venture capitalist etc.)	Yes – very much (IITs, MICA, DAIICT, VCs etc.)	Yes – very much	Yes – very much	Yes – very much
<b>Finance</b>	Direct (through Own fund)	Yes - but only some	Yes – but very less	Yes – small amount up to	Yes

		small expenses can be met		Rupees 1 lakh	
	Indirect (VC, Bank, Financial corporation, Investors etc.)	Yes - Very much	Yes - but some what delayed	Yes – but not effective	Yes – but not effective
<b>Training</b>	Business Management functions	Yes - very much	Yes – through mentoring	No formal training, only mentoring	No formal training, only mentoring
	Soft skills	Yes	Yes – through mentoring	No formal training, only mentoring	No formal training, only mentoring
	Technology	Yes	Yes – through mentoring	No formal training, only mentoring	No formal training, only mentoring
	Business Plan	Yes – very much	Yes – through mentoring	No formal training, only mentoring	No formal training, only mentoring
<b>Technology Transfer</b>		Yes but focus is on business venture	Yes but he did not require	Yes – very much	Yes – very much
<b>Marketing</b>		Yes – very much	Yes	Yes – very much	Yes – very much
<b>Marketing Research</b>		Yes – very much	Yes	Yes – very much	Yes – very much
<b>Finance and Accounting</b>		Yes – very much	Yes	No – but explain	No – but explain
<b>Legal and Regulatory</b>		Yes	Yes	Yes	Yes

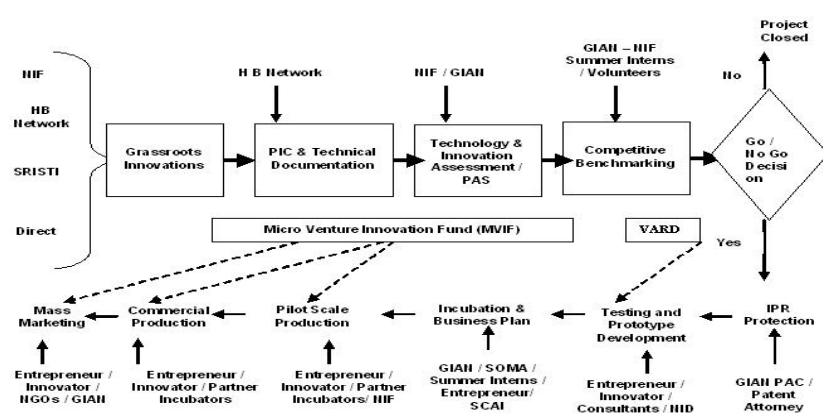
**In terms of Support:** Both CIIE and GIAN provide similar kind of physical resources support. However, GIAN does not provide office space due to limited fund and space. CIIE helps in hiring people directly and indirectly both whereas GIAN gives only advice on hiring people. CIIE has bigger management team than GIAN. GIAN has limited fund, so can not hire better people with skills at low salary. Both CIIE and GIAN give full supports in terms of access to knowledge and technology, patent and technical documentation. GIAN is having special Patent Assistance Cell (PAC). Both CIIE and GIAN give full supports in terms consultancy and continuous mentoring to their incubatees. Both have very good networking support: internal as well as external. CIIE helps directly for small expenditure of incubatees from their recurring grant from IIM A. GIAN has VARD (Value Addition Research and Development fund) and MVIF (Micro Venture Innovations Fund) to support their innovators and incubatees. They both use various schemes of Government to support their incubatees depending on specific project requirement. They both take help of Venture capitalists, Banks and financial corporations to help their incubatees but in case of GIAN, the results are not encouraging due to Grassroots innovation and low education profile of innovators with high amount of risk. CIIE has structured training programs for Business management functions, soft skills etc for their incubatees in the form of workshop. GIAN does not provide formal training to their incubatees due to limited fund and space. Both CIIE and GIAN give full supports in terms of continuous mentoring. In case of GIAN, their innovators and incubatees are wide spread so mentoring is challenging. Both CIIE and GIAN provide Technology Transfer supports. Both give full support in terms of Marketing assistance to their incubatees through their website, brochure, leaflets, exhibitions etc. GIAN's job is more challenging as they have to deal with Grassroots innovators who do not have appropriate soft skills to market their products. CIIE has full time Finance and Accounting personnel in their

management team to support incubatees. They maintain their accounts too. GIAN only explains and teach some fundamentals of finance and accounting to their innovators.

#### TBI Process at CIIE:

- Scouting for Innovation: This is mainly done through Anveshan, iAccelerator, Renewable Energy Search programs
- Selection of Innovators, IP evaluation and signing [NDA](#) (Non Disclosure Agreements)
- Service and shareholder agreement with incubatees, whichever is applicable
- Infrastructure and services to selected incubatees and initiating mentor program
- Providing access to technology and related networks
- Commercialization Activities
- Graduation of the Incubatee

#### TBI Process at GIAN:



**In terms of TBI process:** TBI process in both the cases (CIIE and GIAN) is almost similar except some of the resource supports where they differ and which was discussed in detail earlier. In scouting for innovations, CIIE is using various programs like: Anveshan, iAccelerators, Renewable Energy Search Program mainly with other resources whereas GIAN uses NIF, Honey Bee Network, SRISTI mainly. GIAN uses unique mechanism called as Shodh Yatra with the help of NIF to find out Grassroots innovations from villages and rural area.

Focus of CIIE is to create successful business venture out of innovation and not the technology transfer. They choose small number of incubatees after rigorous selection process and try to make them successful entrepreneur by creating successful corporate companies. GIAN's focus is more on technology transfer than to convert innovators in to Techno-Entrepreneurs because of low capabilities of Grassroots innovators with lower educational back ground. Focus is to make them earn out of their innovations. Hence, the technology transfer would be the better option as per the GIAN.

**Problems and challenges related to TBI:** For CIIE, major challenge is to get better innovation which can be effectively converted in to big business venture, as claimed by CIIE officials. Other wise, CIIE is well supported by IIM A and their Alumni network. In case of GIAN, Arvindbhai perceived some of the problems like: Procedural delay, Low involvement of an innovator in decision making about his own innovations, Low direct contact with experts / design agencies, Less / no fund for risky innovations, Technology Transfer mechanism was not effective, No formal training for Grassroots innovators with poor educational background etc. GIAN gave the justifications to almost all the problems perceived by Arvindbhai. Basically, GIAN supports Grassroots innovations and Grassroots innovators bring their innovations in raw form which required to be given proper marketable product shape with the help of network design institutions. Every year they receive 25000-30000 innovations and out of those, they support around 50 innovators after screening. Other problem with GIAN is that they have limited fund and small management team to support wide spread Grassroots innovators. But still the normal time for commercialization is 1 to 2 years which is normal time taken by any other TBI

centers also. Every innovators like their innovations very much but GIAN has responsibilities to convert those innovations in to marketable product. Hence, they take help of experts and design agencies. They should be able to work in unbiased manner to create marketable product out of Grassroots innovations which is really tough job. Technology Transfer mechanism at GIAN is very transparent with legal documentations in the local language. Prior consent of innovators is always taken. But the process is very much challenging as each and every technology is new and unique. The valuation of technology is very difficult. Normally through negotiation with both the parties – innovators and the other company, the technology transfer takes place. GIAN acts as a mediator between them. GIAN does valuation of the technology innovations on the basis of market references which is quite difficult and challenging. After bargaining and negotiations, they come out with appropriate agreement. GIAN has limited fund and space which does not support formal training programs. For providing formal training, they might have to design course curriculum etc. which may not be possible for GIAN with limited fund. In the past, they had tried but they could not get success as they had to deal with Grassroots innovators with very low educational background who had not taken much interest.

**Suggestions:** For CIIE, major challenge is to get better innovations which can be effectively converted in to big business venture, as claimed by CIIE officials. CIIE should go for student chapters in various Technology institutions with the help of the faculty advisors of the same institutes to foster the process of Scouting for innovations.

In case of GIAN: Government should provide some more fund for establishing the small workshop & laboratory and recurring expenses of GIAN as it is unique institution to support Grassroots innovations. Government should give fund for establishing some more nodal centers of GIAN to speed up the process of wide spread Grassroots innovations in vast country like India. GIAN and Government should come out with a mechanism to provide partial help from already established Government funded agencies like DIC ( District Industries Centers), PDTC (Prototype Development and Training Centre), RTJG (Rural Technology Institute, Gandhinagar), CED (Centre for Entrepreneurship Development) and other academic technology & management institutions like NITs (National Institutes of Technology), IITs (Indian Institutes of Technology), IIMs (Indian Institute of Management), other local institutions. They can provide help to GIAN in terms of Project support, Networking, Technology support, Mentoring, access to laboratories and workshops. For formal training to Grassroots innovators of GIAN, GIAN should tie up with EDII (Entrepreneurship Development Institute of India), CED (Centre for Entrepreneurship Development) and other management institutes. CED may be a better option as they conduct training in local languages also.

## CONCLUSION AND FUTURE SCOPE OF STUDY

With the help of data analysis and findings, we could study the components of the Technology Business Incubation in the present cases with two different approaches to support Techno-innovations to Techno-entrepreneurship. We could describe the process of GIAN and CIIE with their mechanisms of commercializing the Techno-innovations either by Techno-entrepreneurship or by Technology Transfer. This study could also describe the problems in this area and some suggestions were made for the same. As a whole, this study would be very useful and would definitely encourage other developing economies in the world to encourage the Entrepreneurship culture through Technology Business Incubation.

There is a scope of more future research in the area of Technology Business Incubation in India. Similar kind of study can be conducted in other states of India with the Case study approach. This will strengthen the concept of Techno-innovations to Techno-entrepreneurship through Technology Business Incubation in India. This will define more parameters in this field of research which would help in further future empirical research. In the present study, due to lack of sample size and non availability of any past detailed study in the area of Technology Business Incubation in India, the Case study approach was adopted. But in future, with the help of parameters related to Technology Business Incubation described in the present study, detailed statistical study will be possible. The effectiveness of Technology Business Incubation in India can be measured through statistical study by using various parameters described in the present study. Appropriate instrument can be designed by using some scales with the help of the parameters described in the present study. This study has defined some of the parameters which can be useful for formulating hypothesis for the future empirical study. For example, 'Mentoring is more useful in supporting Grassroots Innovations' can be tested empirically in

future. Like wise, many other parameters described in the present study will be useful for the future empirical study.

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# DIGITAL BOOKS IMPACT GLOBAL ENVIRONMENT-A USER PERSPECTIVE

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## ABSTRACT

*This study compares the different behavior perspectives between the users of ebooks and printed books, as the ebooks are now rapidly challenging the traditional publishing market globally. The study focuses on a range of behavioral issues about ebook adoptions. These managerial issues will not only be strategic to the publishing industry and paper industry's bottom lines, but also impact our future environment. The study finds the respondent spent slightly more time on reading printed books, while digital books have significant advantages in many aspects over the printed books. Although ebook adoption is growing rapidly, in some ways, it still lacks some of the advantages existed in printed books, e.g. there are many different and incompatible platforms for the usage of ebooks, and the consumers do not need to have the concern of copyright for printed books. The findings of this preliminary study suggest that publishers may need to more aggressively promote ebooks not only as a way to reduce the cost, but also as a way to preserve our global environment.*

## INTRODUCTION

The paper has been around for two thousands of years since the Chinese first invented it with linen and straw, it quickly outdated bamboo books. Today's paper industry relies heavily on trees for its products. It was reported that primary forest area was reduced globally by 60,000 square kilometers per year, about the size of Ireland (greenfacts.org, 2009). The paper industry and other non-lumber products consumed 1.6 billion trees, or 300 million tons of paper each year or 43 percent of the total tree consumption globally (understory.ran.org, 2008). The U.S., which contains only 5 percent of the world's population, uses 30 percent of all paper, and the forest and paper products industry generates \$200 billion dollars in sales every year, accounting for 7 percent of the total manufacturing output of the United States. About 28 percent of all wood cut in the U.S. is used for papermaking (ecology.com, 2011). Deforestation due to paper and other industries' needs has alarmingly endangered our environment and the nature (Parsons, 2012).

Ebooks that do not use paper are emerging from an almost zero ten years ago, to today's total sales of \$969.9 million US\$ in 2011 and has grasped 16.55% of the total sales of books (mediabistro.com, 2012). The emergence of ebooks [and all other digital forms, i.e. newspaper, magazines, etc] is challenging the traditional way of publishing and reading, the academic research in this area is still quite limited due to this emerging nature of ebooks. This study, in an empirical setting, examines from the book readers' points of views and their preferences, in order to provide some managerial insights of this digital publishing market: what consumers prefer and how they make purchasing decisions. The focus is mainly on the issues of the digital publishing and printed publishing. In addition, this study attempts through an empirical exploration to investigate if there were any differences resulted from the consumers' viewpoints between ebooks and printed books, centering on products and their qualities, price (including promotions), deliveries and usability. The study hoped to find, if any, the impacts of the emerging ebooks on the publishing industry, on book readers and their reading behavior, either professors or students, on our society and environment.

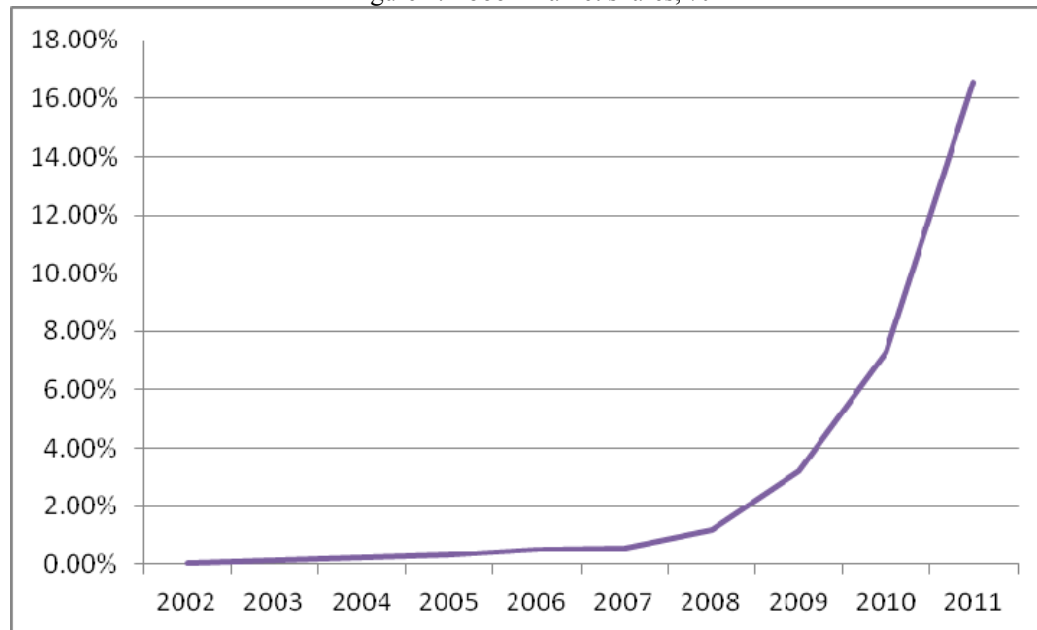
## REVIEW OF LITERATURE

In the recent years, the traditional printed publishing industry is facing an emerging challenge from digital publishing, quite resembling the competition between filmed cameras and digital cameras, even though



the digital publishing represents only a small fraction of the total publishing industry's sales at the moment. However, some of the printed publishing, i.e. newspapers, have experienced a sharp decline recently. Figure 1 presents the ebook market share in the past ten years.

Figure 1. Ebook market shares, %



Source: [http://www.mediabistro.com/ebooknewser/aap-reports-ebook-sales-up-72-in-december\\_b20563](http://www.mediabistro.com/ebooknewser/aap-reports-ebook-sales-up-72-in-december_b20563), 2012

While the revenues in digital publishing are growing rapidly, the total sales amount is still far below that of printed publishing. Some of the printed publishing, i.e. newspapers, have experienced a sharp decline recently. Contrary to traditional printed publishing, the digital publishing market needs both reading gadgets and ebooks. As far as the selection of digital gadgets, consumers have quite a number to choose from, from tiny gadgets, such as iTunes, Blackberry, iPod touch, and iPhones, to specially manufactured ebook readers, i.e. Amazon's Kindles, Sony's eReaders, Barnes and Noble's Nooks, Samsung's Galaxy, etc, to generic tablets like Apple's iPad, netbooks and laptops, and desktop computers. There are no universal standards for the ebooks, just like with printed books which have a variety of type settings. For many people, the problem with ebooks is that they come loaded with just many limits. Ebooks bought today from Amazon.com, for example, can be read mostly on Amazon's Kindle. Some restrictions on the use of ebooks are likely to remain a fact of life for some time to come. Because of this, some potential ebook customers shy away from jumping on the band wagons of ebooks. In addition, there is no single technology standard for ebooks, even though the front runners like Amazon tend to dominate in the nascent market. Many publishers are concerned about incompatibility of these gadgets, and wonder that gadget will eventually become dominant, since it will have profound impacts if they select wrong formats. Some developers believe that there is a limit to people's appetite for new digital media. The dominant operating systems are currently either Apple's or Android of Google, with Apple's system is in a dominant position in the tablet category as the first three day sales of new iPad totaled 3 million (Warner, 2011, Graham, 2012).

To make the situation more complicated, often digital gadget makers, publishers, and book retailers disagree with one another so it is difficult to develop new business models for profit-cost sharing. Dominant players often pressure others to go along with their terms. Amazon has tussled with publishers recently over ebook prices, but a new pricing model that is emerging could improve Amazon's profit margin on ebooks for any e-readers. Publishers will set prices for many ebooks, with retailers such as Amazon and Apple taking 30% of the revenue. This pricing model guarantees a profit on every sale. Amazon's previous policy of discounting new ebook best sellers at \$9.99 typically resulted in losses, since it paid more than \$9.99 for those books. What's more, Amazon is years ahead of Apple in building relations with the publishing industry, being one of the

biggest print-book retailers in the nation. Amazon now offers more than 450,000 ebooks, and has access to more than 1.8 million free out-of-copyright titles. Apple has said it will start with 60,000 titles from five of the largest publishing houses. A new approach proposed by Apple intends to let every player in the distribution channel to collect a fee or commission. Apple's app stores enable the company to collect commission on every book or magazine sold, and the stores generated over \$1.1 billion in eighteen months to February 2011. Apple is now requiring publishers that conduct sales of content—which includes books as well subscriptions—to offer a way to do so within apps, which will be handled by the iTunes billing system. The policy, which the company says isn't new, was cited in Apple's rejection of a Sony Corp. app for reading ebooks earlier this week. To sell more of its Kindle e-readers, Amazon offered many titles below cost, including best sellers at \$9.99. Publishers disliked the strategy, fearing it would make it harder for them to sell hard covers at higher prices. When Apple entered the fray, it offered publishers the ability to set their own prices. Under the Apple arrangement, known as "agency pricing," publishers received 70% of the retail price and Apple took a 30% commission. But Apple also insisted that publishers couldn't sell more cheaply to any of its rivals. The publishers then were able to impose the same model on Amazon (Trachtenberg, 2010a; Fowler & Trachtenberg, 2010; Kane and Vascellaro, 2011; Checkler, et al, 2011; Catan and Trachtenberg, 2012).

Barnes & Noble Inc. has stepped onto the nascent digital-book battleground with Amazon.com Inc. and Sony Corp., saying it would launch its own ebookstore with bestsellers priced at \$9.99, in line with its rivals. It would offer more than 700,000 titles, including more than 500,000 public domain books from Google Inc., and that it expects to be able to offer more than one million titles by July 2010. Book formats supported by the new Barnes & Noble ebookstore include those that can be viewed on Apple Inc.'s iPhone and iPod Touch, BlackBerry smartphones and most Windows and Mac computers. However, titles bought through Barnes & Noble's ebookstore are not compatible with Sony's Reader or Amazon.com's Kindle ebook reader, the two dominant e-readers in the U.S. market. The largest booker retailer declined to share the readers' information with publishers (Rich and Stone, 2010; Trachtenberg, 2010b; Bilton, 2011; Greenfield, 2012).

Despite the complications in the publishing market, both resellers and publishers want to provide their customers with an alternative of ebooks. In addition to bring about new titles in a digital format, they republish old titles by big-name authors. These approaches further enable the demand growth of ebooks (Kane and Fowler, 2010).

Printed books and magazines on the other hand are in the low technology, but the screens won't go blank, nor would they be transacted virus, and they have been around for thousands of years. However, they are heavy and expensive. For example, college students pay \$700 to \$900 a semester in addition to the already high expenses in tuition and other fees (Foderaro, 2010).

## METHODOLOGY

With the focal questions in mind, this research studied the viewpoints of consumers with regards to how they view ebooks as compared to the traditional printed books, the books include all books, magazines, newspapers, and other related. A survey was developed to investigate the issues related to the subject of this study, in the consumer preferences on products and their quality, price and promotion, deliveries. The following variables were based on literature reviews.

### Variable Selection and Survey Questionnaire

Stemmed from literature review, the following two sets of variables affect how and where consumers make their purchase decisions:

1. *easy to obtain*
2. *low cost of possession of the reading materials*
3. *easy to read*
4. *attractive prices for possessing contents*
5. *easiness to carry around*
6. *weights*

7. *easy to share with others*
8. *need of special reading instruments, i.e. kindle, eReader, iPad, Galaxy, Nooks, etc.*
9. *free delivery or delivery incentives*
10. *compatibility in the formats*
11. *concern with copyright*

These variables were served as cores in a survey questionnaire designed to collect the consumers' opinions, paired both in digital books and printed books. The questionnaire also included the background information of the respondents.

## Sample, Data Collection, and Measurements

Due to the exploratory nature of this empirical study, the questionnaires were distributed to college students and some professors in a large university campus in the northeast for a convenient sampling since these respondents tended to browse on the websites and download digital books, therefore, would provide some meaningful insights to the publishing industry and book readers. The respondents were asked to evaluate the selected variables in a five point Likert scale, with 5=strongly prefer, 4=prefer, 3=neutral, 2 not prefer, and 1=strongly not prefer. The Wilcoxon signed-rank test is applied. The Wilcoxon signed-rank test is a non-parametric statistical hypothesis test used when comparing two related samples, matched samples, or repeated measurements on a single sample to assess whether their population mean ranks differ (i.e. it's a paired difference test). If the data really were sampled from a population with the hypothetical mean, researchers would expect  $W$  to be near zero. If  $W$  (the sum of signed ranks) is far from zero, the  $P$  value will be small. The  $P$  value answers this question: Assuming that researchers randomly sample  $N$  values from a population with the hypothetical median, what is the chance that  $W$  will be as far from zero (or further) than the researchers observed? The null hypothesis will be rejected if  $P$  value is less than 5% that will indicate there is statistically significance in the views of respondents between ebooks and printed books.

## Hypotheses and Test of Hypotheses

The hypotheses for this research were to find if there were significant differences from the consumers' viewpoints between ebooks and printed books. The hypotheses for this study state:

The hypotheses for this research were to find if there were significant differences from the consumers' viewpoints between electronic books and printed books. The hypotheses for this study state:

*Hypothesis: There is no significant difference from the consumers' standpoint between e-books and printed books.*

Alternatively, there is significant difference from the consumers' standpoint between e-books and printed books (Conover, 1980; Hamburg, 1977). In this study, a 5% significance level for the Kruskal Wallis test was selected to determine whether to accept or reject the null hypothesis. The null should be rejected if the significance level is less than or equal to 5% in any one criterion.

## RESULTS

Over 600 respondents were surveyed at a college campus in the eastern U.S., with 226 completed responded for analyses, representing 37.67 percent of the total surveyed. Table 1 presents the general background information of the respondents. All the respondents had experience in downloading digital articles and/or books from websites. Table 2 presents online activities related to ebooks, digital newspapers, digital magazines, and gadgets of ereaders.

**Table 1. Backgrounds of the Respondents**

Demographic issues	Groups	Valid %
1. Age	<18	0.9

	18-35	97.3
	>35	1.8
2. gender	Male	58.4
	Female	41.6
3. Family annual income	<\$30k	22.3
	\$30-50k	16.1
	\$50-75k	23.7
	>\$75k	37.9
4. Education	high school	12.4
	College	80.0
	graduate	7.6
	Total	100

Source: original

**Table 2. Issues Related to Reading**

	Response	Valid %
6a. have you ever read any book, newspaper, and magazine on computer or on any digital gadget?	Yes	90.3
	No	9.7
6b. do you have any e-readers, i.e. Amazon's Kindle, iPad, Nook, Sony's e-readers, or any other brand?	Yes	21.7
	No	78.3
7a. each week, how many hours on average do you spend on reading printed books, newspapers, magazines, including textbooks		6.52
7b. each week, how many hours on average do you spend on reading digital forms of books, newspapers, and magazines, including textbooks		6.42

Source: original

Table 3 presents Wilcoxon Test results. Significant differences are found in ten of the eleven variables.

**Table 3. Wilcoxon Test and P value**

	Wilcoxon W	Z	P (2-tailed)
<i>1. easy to obtain</i>	<b>46494</b>	<b>-3.507</b>	<b>0.000</b>
<i>2. low cost of possession of the reading materials</i>	<b>42866</b>	<b>-5.965</b>	<b>0.000</b>
<i>3. easy to read</i>	<b>45341</b>	<b>-4.262</b>	<b>0.000</b>
<i>4. attractive prices for possessing contents</i>	<b>45586</b>	<b>-3.550</b>	<b>0.000</b>
<i>5. easiness to carry around</i>	<b>39293</b>	<b>-8.898</b>	<b>0.000</b>
<i>6. weights</i>	<b>48565</b>	<b>-1.994</b>	<b>0.046</b>
<i>7. easy to share with others</i>	<b>44048</b>	<b>-5.183</b>	<b>0.000</b>
<i>8. need of special reading instruments, i.e. kindle, Nooks, etc.</i>	<b>47787</b>	<b>-2.355</b>	<b>0.019</b>
<i>9. free delivery or delivery incentives</i>	<b>47933</b>	<b>-2.152</b>	<b>0.031</b>
<i>10. compatibility in the formats</i>	48651	-1.703	0.089
<i>11. concern with copyright</i>	49146	-1.315	0.189

\* Significance level is 2-tailed.

## MANAGERIAL IMPLICATIONS AND RECOMMENDATIONS

Wilcoxon test results reject the null hypotheses; therefore, the study concludes that there are statistically significant differences from the consumers' viewpoints between electronic books and printed books, when the significance levels are less than 5% in the nine out of the total eleven variables. These variables are: 1. easy to obtain; 2. low cost of possession of the reading materials; 3. easy to read; 4. attractive prices for possessing contents; 5. easiness to carry around; 6. weights; 7. easy to share with others; 8. need of special reading instruments, i.e. kindle, Nooks, etc.; 9. free delivery or delivery incentives

This study accepts four hypotheses in the variables of 1. each week, how many hours on average do you spend on reading printed vs. digital forms; 2. how do you prefer each of the following ways of reading? printed newspaper articles vs. electronic newspaper articles; 15. compatibility in the formats; 16. concern with copyright there are no statistically significance preferences between digital books and printed books. This may suggest, from the consumers' viewpoints, it is less important for publishing industry focusing on this issue.

The adoption of ebooks has emerged as a great challenge to the printed book, not only because of its advantages, but also it helps make our environment greener. Publishers, book retailers, professors, students, and all readers should move to adaptation of ebooks in the future to protect our environment.

## **LIMITATIONS AND FUTURE RESEARCH**

The academic research that focuses on ebooks is limited, and it may take some years before significant research publications are available. As a preliminary and exploratory research, this study may only provide some limited glimpses of the fundamental aspects of ebooks about the publishing industry, our reading behavior, our society, and our environment.

More in depth research work is needed in the future. Do consumers really need reading gadgets, or rather than generic tablet computers? Some of the respondents commented consumers might not need to spend much money on buying specially designed digital reading gadgets, such as Amazon's Kindles. Others commented that the sizes of gadgets could be a factor for purchasing decision: 10" of tablet computer like iPad2, vs. 5" of other eReaders, and/or battery life. These technological issues should also be addressed in the future.

Since this research, as it surveyed only college students, staffs and professors, and the use of a small convenient sampling, cautions must be made in trying to generalize the outcomes of the research.

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# ECONOMIC RECESSION AND INDIAN REAL ESTATE - HOPES AND IMPLICATIONS

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## ABSTRACT

*Indian real estate has been witnessing golden era with property boom spreading in all directions and it is touching new heights. The Industry experts feel that Indian real estate has huge demand and potential in almost every sector ---- especially commercial, residential, and retail. However, Indian real estate could not remain unaffected from the impacts and implications of global recession. This is evident from the fall in demand of all types of property and, marked decline in construction activities. It was believed that Asian economies like China and India would not only remain insulated but also play a major role in moderating the global slowdown. However, the 'decoupling theory' has proved wrong. The world –wide economic slowdown has definitely impacting the real estate sector - both across the world and India as well.*

## INTRODUCTION

Economic slowdowns are regular occurrences around the world. Last two centuries witnessed many slowdowns manifested in banking panics, stock market crashes, currency crisis, bursting of the real estate bubble. In such situations, the supply of money out spaces the demand evaporating the liquidity. The main cause of this financial disaster is unregulated capitalism leading to suboptimal outcome. Unregulated markets adversely affect the macro economic variables resulting in instability of local currency as well as equity and increased uncertainty. This is detrimental to the business confidence and over all economic activities.

Indian Real Estate was a sunrise sector in 2006 passing through a golden era for Indian real estate. It was fascinating to know that the value of commercial property of Delhi and Mumbai is at par with New York and Paris and London. Multinationals have been desperate to invest here. It was moral boosting to hear about the number of mergers, acquisitions and joint ventures taking place with important role of Indian companies in them. In most of them, Indian partners were the initiators. The globalization and liberalization had trickled down an otherwise closed Indian economy. The impact was revolutionary on social, economic, and cultural fabric of India, a country known in the world as tradition bound and always resisting to change. Indian real estate is expected to increase from \$12 billion to \$ 90 billions by 2015. The demand for housing was expected to increase to 80 millions with expectation to add new jobs to the value of 4 millions by 2015. Investments in the real estate segment are expected to yield 13-16 per cent return. (IBEF 2007). It was expected that it would increase to become top most real estate markets in the world.

After survival through the recession of 2008, it is striking back more forcefully and confidently with corrected prices and improved product variety. Indian economy has been mostly insulated from global downturns, showing a degree of stability. India's consumption-driven model is also more people-friendly than other development strategies. (Bandhopadhyaya, Arindam, Basu, Sanjay, Baid.2008, April 01)). There was no direct exposure of India to the US subprime credit market but it did triggered negative sentiments in India. The Bombay Stock Exchange Sensex fell 3.35% or 469 points on September 15. The worst affected was the realty index which dropped 7.6% on the same day. (N.K. Sehgal, 2008).

India has not seen a boom and bust cycle of the kind experienced in developed countries. However no liberalized economy can remain unaffected by external factors. (Subramaniam S. & D.Jayraj.2006 October, Nitin A Garg of Garg 2006). It is only after liberalization that the Indian economy has been witnessing several cyclical movements. Economic cycles do impact real estate and there is a relationship between real estate and financial markets (Born and Pyhrr 1994, Mueller 1995). In real estate, most common cycles are considered to be of 8-10 years (Laposa 1995) and there are evidences of such 15 different real estate cycles (Pyhrr and Roulac 1996).

It was realized that the boom/bust of 1920–34 exhibited many similarities to the boom/bust of 1980–93. Both periods were initiated by an unusually high period of inflation and rapidly rising rents. (Ronald W. Kaiser 1997)

The ripple effect of US financial crisis acted as a double edged sword for India. Firstly, banks, financial institutions, MNC pruned staff. Secondly, the affluent NRI community began to have second thought about purchasing property in India. More so demand for luxury flats declined because of job scenario. Developers finding it difficult to sell high-end apartments began to move towards lower income segments. (Sarthak 2008, City Group Research 2007)

Studies revealed importance of government in moderating boom-bust cycle (Hoyt1993). It was realized that internal policy can be planned in such a way that it minimizes affect from external factors. (Nitin A. Garg of Garg 2006)

It was analyzed that uncertainties can arise for real estate managers in economic growth, political and social development within and outside country (Geert Dewulf and Pity Van der Schaaf, 2004). To overcome the pitfalls scenario building could be used as an important technique to study future property development, investment and management decision (John Ratcliff, 1Jan 1999).In 2006 FHWA office of Real Estate services, Virginia developed four most important predetermined elements ----- possible, probable, preferred, present, strategy.

To overcome the fall in supply, real estate companies explored new investment opportunities. Builders of residential property took to developing commercial space. For example, Raheja moved into constructing special economic zones, Omaxe took to modernizing and maintaining airstrips. DLF, Unitech and Omaxe bidding for road projects being offered by the National Highways Authority of India. Unitech made a foray into telecom.

The second trend was to move abroad to market real estate companies' products, raise funds, source raw materials and launch projects like the one by Sobha Developers opened an office in China and Dubai. Parsvnath Builders has a subsidiary in Singapore. Puravankara Projects too has started operations in Sri Lanka, UAE to build super luxury villas on the outskirts of capital Colombo.

Real estate market in India has been on a high for last decade and as per simple law of gravity or law of economics what goes up must come down. Though market is slowing down but the situation is not one of crashing market because this relatively slower rate of correction is a sign of maturing market (Mangalam 2008) In the long run, given that the Indian growth story is likely to continue, real estate prices will certainly increase. However, they will not see a meteoric rise as they did earlier. The market will eventually consolidate. It will be a more stable market (Prabhakar Sinha, 2008)

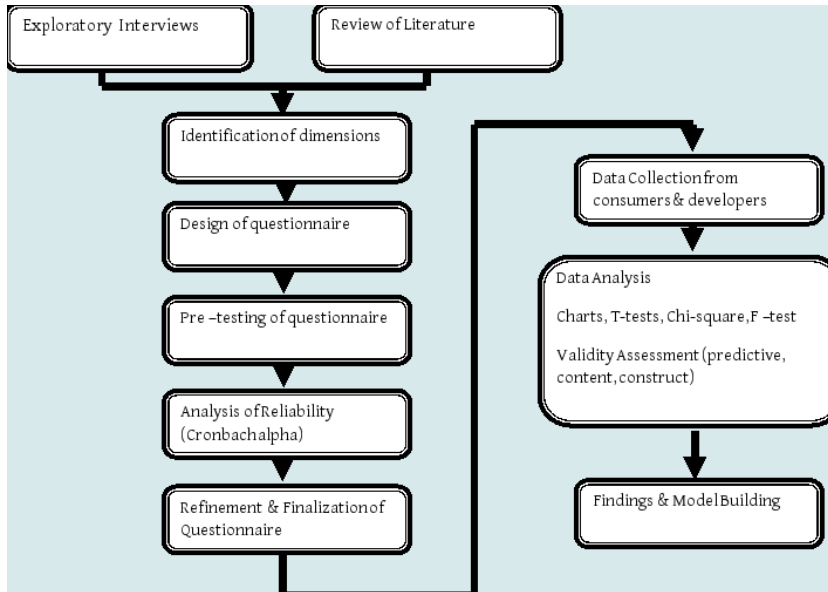
Henceforth, the slowdown is unlikely to last beyond the next 2-3 years. In the long term , strong demand for real estate in India will remain intact and will see us through another real estate cycle once the market finds its own level by responding to these short –to mid –term global and domestic factors (Cushman & Wakefield Report 2009).

## Objectives of the Research

- To study the most likely impact of economic recession on Real Estate sector of India.
- To study the future of real estate sector of India.



- To study the effectiveness of steps taken by government to boost the Real Estate sector of India. Questionnaire development involves the stages shown in the following chart:



**Fig. 1: Questionnaire Development**

## Hypotheses

**Null Hypothesis 1:** There is no significant variance between impacts of economic recession on real estate of India reflected in terms of various factors.

**Null Hypothesis 2:** There is no significant variance between the future of real estate of India in three times period (1-2years, 2-3years, 3-4 years) reflected in terms of decline, growth and stability.

**Null Hypothesis 3:** There is no difference of opinion between consumers and developers regarding methods adopted to handle the harmful impact of economic recession on real estate of India according to developers.

**Null Hypothesis 4:** There is no difference of opinion between consumers and developers regarding methods adopted to handle the harmful impact of economic recession on real estate of India according to consumers.

**Null Hypothesis 5:** There is no association of income with the steps followed by government to handle harmful impact of economic recession on real estate.

**Null Hypothesis 6:** There is no association of occupation with the steps followed by government to handle harmful impact of economic recession on real estate.

**Null Hypothesis 7:** There is no association of education with the steps followed by government to handle harmful impact of economic recession on real estate.

**Null Hypothesis 8:** There is no association of gender with the steps followed by government to handle harmful impact of economic recession on real estate.

**Table 1: Summary of Hypotheses Testing**

Hypothesis	Significant/Not Significant	Statistical Test
NH 1	Significant	F-test
NH 2	Significant	F-test

NH 3	Significant	One Sample T-test
NH 4	Significant	One Sample T-test
NH 5	Significant association between income and reduction in price of steel and cement and changes in price for purchase of property.	Chi-Square
NH 6	Not significant	Chi-Square
NH 7	Not Significant	Chi-Square
NH 8	Not Significant	Chi-Square

## Model Building

The role of government is very important in strategic decision making in real estate. During the period of growth, stability and boom, government of a country assumes different roles. On the basis of findings the model has taken two major dimensions namely *strategies and scenarios* (Geert Dewulf and Pity van der Schaaf 2004). Strategies dimension has three variants: *growth, stable, decline* and scenario have been developed for *1-2 years, 2-3 years, and 3-4 years* starting with economic recession 2008. Future has been developed for the various factors mentioned in the model.

It was realized that *role of government* was pro-active and very strongly needed to support and improve the condition of real estate in initial 1-2 years after recession in 2008, when government was playing the role of an *initiator (I)*. By next year that is around 2009 end and beginning of 2010 situation began to stabilize and not so strong role of Government was needed. Here, the Government played the role of *controller (C)*. After March 2010 the situation improved a lot and the real estate market showed sign of strong survival and growth changing the role of government to be of a *moderator (M)*. This phenomenon is indicated with the help of changing shades of blue color. The model is being named as *ICM Real Estate Model (Initiator Controller Moderator Model)*.

Strategies adopted reveal that for initial 1-2 years there will be growth in sales promotions (g) to attract consumers to buy property. Competition (e) is expected to stabilize in initial 1-2 years. The remaining demand for real estate (a), price of property (b), profit of builders and developers (c), launch of new products will decline (d), rate of home loans (f) will decline.

In 2-3 years competition (e) will grow as situation improves, demand for property (a), launch of new products will decline (d), rate of home loans (f) will stabilize and price of property b), and profit of builders will decline (c).

In coming 3-4 years sales promotion (g) methods will decline because of increase in demand, price of property (b) and profit of builders will stabilize (c), and demand for property (a), launch of new products (d), rate of home loans (f) and competition will increase (e).

- a) Demand for real estate
- b) Price of property
- c) Profit of builders and developers
- d) Launch of new projects
- e) Competition
- f) Rate of home loans
- g) Sales promotions

## Strategic Implications

This work emphasizes the studies done in the past and checks its validity against Indian real estate. There have been boom and bust cycles in the past in Indian real estate also but not to the extent as experienced in the west. Indeed government has a very important role in controlling the recession in real estate, which is second largest contributor to GDP. Only commitment can win the support of consumers and developers alike which is very important in the tough time of recession. Studies reveal that in spite of economic recession demand for lower income group is still robust. There is a lot of potential to study the scope of new age construction like Green




Construction, fire safety, earthquake resistance housing, etc. and use them effectively during recession. The present research reveals that though the picture of Indian real estate is not so rosy but it is temporary and the prospects for future are good. A long overdue adjustment in real estate market is needed. In the long term, strong demand for real estate in India will remain intact. With the economy showing signs of revival, the real estate sector will once again take a giant leap forward.

## Scenario

**Fig. 2 : ICM Modal of Real Estate**

		1-2	2-3	3-4 Years
Strategies	Grow	g	e	a e d f d
	Stable	e	a f d	b c c
	Decline	a b c d f	c b	g

	Government as INITIATOR
	Government as CONTROLLER
	Government as MODERATOR

## CONCLUSIONS AND SUGGESTIONS

The Economic Slowdown Has Been The Offshoot Of Poor Under Writing Standards And Weak Regulatory Mechanism, Particularly In The Mortgage Lending. Consequent Outburst Of The Housing Bubble And Resultant Financial Mayhem Grippd The Major Economies Around The Globe. The Resultant Sub Optimal Outcome Had Far Reaching Effects On Production And Unemployment, Particularly In Construction And Real Estate.

Following lessons and suggestions are worth noting:

- Sound credit policies should not be violated while sanctioning housing loans.
- There is a need to set up a centralized Real Estate Regulatory Authority in line with existing authorities such as SEBI, IRDA, TRAI and RBI.
- Fiscal stimulus package should be implemented for key areas such as housing to overcome the crisis

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# THE USE OF FINANCIAL RATIOS TO PREDICT BANKRUPTCY: A STUDY OF THE BOARD OF DIRECTORS ON CORPORATE PERFORMANCE

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## ABSTRACT

*Financial ratios have predominantly been used in bankruptcy models to predict business failures. This study is a new approach to predict corporate failures that combined the accuracy of the traditional ratio-based bankruptcy (BK) model such as the Altman Z-Score Bankruptcy Model with a bankruptcy model that built upon the characteristics of the Board of Directors (BOD). The Altman 1993 revised four-variable BK model for non-manufacturing companies was retested on a selected group of publicly traded financial institutions to confirm the ratio-based model validity and accuracy in bankruptcy prediction. A BOD BK Model was developed and validated using the companies that the Altman model could not classify (Zone of Ignorance (ZOI), gray area) or misclassified (MIS). The BOD BK model used variables that were related to the board composition (size, tenure, CEO/Chair duality and external/internal directors' ratio) and board members' characteristics (experience, age and Groupthink). Shifting the focus of bankruptcy prediction from using just financial ratios and moving towards the inclusion of variables from the BOD offers a better understanding of non-financial variables influencing organizational performance. This study shows that a non-ratio based BOD BK Model was able to improve Altman's Year 1 accuracy between twenty and fifty percent.*

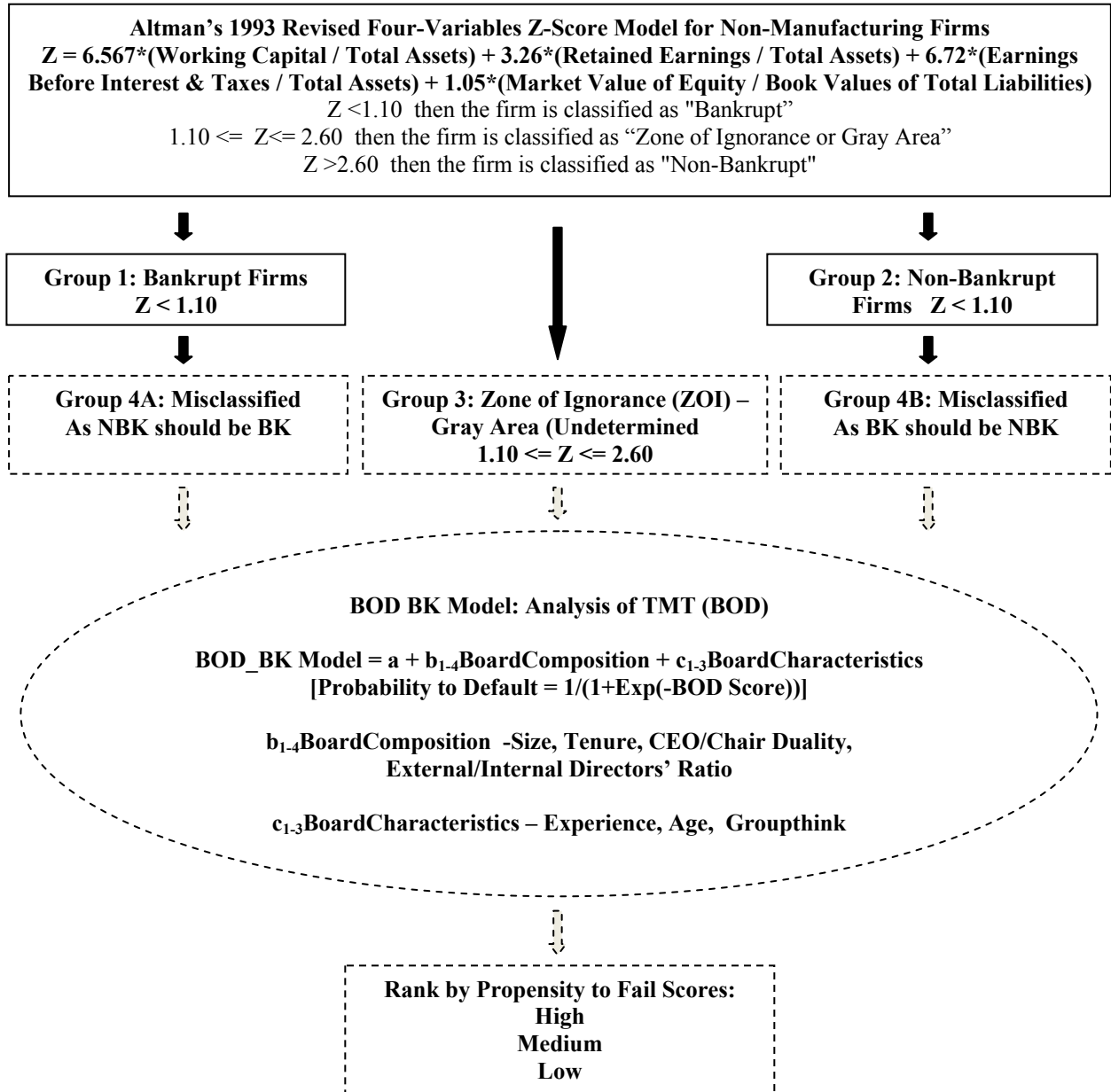
## INTRODUCTION

Corporate America today is besieged by ethical misconducts and corruptions of disproportionate levels. Successful companies depend on their ability to attract, hire, and retain leaders of the highest caliber, qualities that include not just intellectual capital but also morality, ethics, and integrity (Kanungo & Mendonca, 2001; Porrini et al., 2008). The BOD BK model is an alternative method of bankruptcy prediction advocated by this study. The study began by retesting and confirming the validity and accuracy of the Altman 1993 four-variable bankruptcy model on a chosen sample of companies and then using the companies that the Altman model could not identify (those in the zone of ignorance) as well as the misclassified (errors) and subsequently developed a BOD BK model to see if the new model could identify accurately more bankruptcies thereby enhancing the overall bankruptcy prediction rate.

The BOD composition was measured in terms of board size (Alonso, Palenzuela & Merino, 2006; Bosner, 2007; Koufopoulos et al., 2008), tenure (Carson, Mosley, & Boyar, 2004; Huang, Lin, Lee, & Chen, 2007; Koufopoulos et al., 2008), CEO/Chairman duality (Callaghan, 2005; Fox, 1996; Puffer & Weintrop, 1995) and external versus internal directors' ratio (Bulan, Sanyal, & Yan, 2008; Carson et al., 2004; Jackson, 2005). BOD characteristics will be measured in terms of board members' experience, age (Davis, 1979; McEnrue, 1988; Nicholson & Kiel, 2004; Wolf, 2007), and Groupthink (poor decision-making associated with high level of consensus that is often characterized by lack of disagreement) (Janis, 1972; Koufopoulos et al., 2008; Paulus, 1998; Steinberg, 2009). The additional analysis of the TMT leadership is an attempt to breach the gap between the vast inadequacies of using solely financial ratio-based predictive models to forecast corporate bankruptcy, which has been shown to be drastically unsatisfying as evidenced by the colossal global collapse of the financial systems in the fall of 2008.

This research advocated an alternative approach from using financial ratios to predict corporate failures. Examination of the BOD served to actively surface, amplify, and clarify potential weakness of the firm. While there is no recovery from moral bankruptcy, measuring morality in terms of corporate governance may be possible. Figure 1 is the conceptual framework of this research.

**Figure 1. The Conceptual Framework of the Research**



## LITERATURE REVIEW

The literature review expanded on previous work done on bankruptcy prediction in the banking and financial industry by including TMT (BOD) literature in addition to ratio-based bankruptcy models such as the Altman (1993) revised four-variable bankruptcy model for non-manufacturing firms. BOD variables investigated were board size, tenure, CEO/Chairman duality, internal directors versus external directors' ratio, experience, age, and Groupthink; all of which could have been the catalysts or precursors to financial distress or eventually

bankruptcy of the firm. Corporate governance alone, as a contributor to financial distress, has never been proven, but, when coupled with the long history of quantitative bankruptcy model such as the Altman model, could provide a new solution to predicting bankruptcy in the future. The format of the literature review of quantitative bankruptcy models is based on the article by Jess Levins (1997). The review of bankruptcy models is followed by the review of various statistical methodologies, which are in themselves representatives of how these models were developed and evolved, that is, from univariate (Fitzpatrick, 1934), regression (Meyer & Pifer, 1970), to neural networks (Coats & Fant, 1992). The review of BOD or TMT impact on the performance of organizations covers more than two decades of literature in the area of leadership and management sciences (Janis, 1972; Callaway & Esser, 1984; Puffer & Weintrop, 1995; Koufopoulos et al., 2008).

Bankruptcy models provide a quantitative means of evaluating a firm's financial positions in terms of losses, profits, and risks (Morris, 1998; Mossman et al., 1998). History has shown a strong relationship between a firm's age and the firm's failure rate. Over 50% of all the failures occur within the first 5 years of a firm's formation, and approximately 30% fail within the first 3 years (Gaskill, Van Auken & Manning, 1993; Levins, 1997). Financial ratios are indicators of the financial health of companies. Ratios are standardized measurements for comparison between firms; they can also identify trends (good and bad) and are important predictors of bankruptcy. The use of financial ratios in bankruptcy prediction is prevalent. Every ratio plays an important role in the interpretation of a certain financial state of the company. Some ratios are preferred over other ratios. No ratio can be substituted because each ratio represents a distinct and separate performance of the firm (Holmen, 1988; Poston & Harmon, 1994). Ratios are frequently used in bankruptcy prediction because they are consistent measurements (calculated by standard formulae and sourced from standardized financial statements). Ratios are easily obtainable, especially for publicly traded companies, and last but not least they are numerical measurements, thereby readily made for statistical analysis and model building. Ratios alone, however, are not adequate in assessing the complete health of an organization. Ratios are good for pointing out areas that need to be examined. The usefulness and consistency of financial ratios across enterprises and industries have to be looked at differently and carefully. Strategic use of ratios is to understand that they are meant to identify troublesome areas as well as areas of strong performance in an organization.

The latter part of the literature review examined the relationship between an organizational TMT and its performance. This research studied the TMT of the companies identified in the Zone of Ignorance as well as those that were misclassified by the Altman (1993) four-variable BK model. The objective was to evaluate the board composition and characteristics of these companies and develop a BOD BK Model to rank the firm's propensity to fail. The desired outcome is to offer an alternative bankruptcy model, in the form of a scorecard using non-ratio based variables, thereby offer an enhancement to the Altman model in predicting corporate failure. The board composition and characteristics were chosen as independent predictive variables because they ultimately speak to board governance that has direct impact on the firm's financial performance (Bosner, 2007). Literature pertaining to board composition (independence and impartiality) and characteristics (competency) are as follows: Size and tenure (Abidin et al., 2009; Alonso et al., 2006; Bosner, 2007; Bulan et al., Carson et al., 2004; Fox, 1996; Huang et al., 2007; Koufopoulos et al., 2008; Maharaj, 2007; Sarabia et al., 2006); CEO/Chairman duality (Brockmann et al., 2004; Callaghan, 2005); external versus internal directors' ratio (Anderson & Reeb, 2004; De La Rosa, 2006; Fox, 1996; Jackson, 2005; Puffer & Weintrop, 1995; Sharfman & Toll, 2008; Sundaramurthy et al., 2007); experience and age (Nicholson & Kiel, 2004; Wolf, 2007) and Groupthink (Callaway & Esser, 1984; Janis, 1972; Kanungo & Mendonca, 2001; Schoemaker & Day, 2008; Soros, 2008; Steinbreg, 2009).

## METHODOLOGY

Even though several years have passed since the large corporate scandals from 2001 to 2008 (Enron to AIG), corporate governance continues to remain an area of concern and focus in the global economy, and especially in corporate failures. From an investor perspective, corporate governance can be viewed as a risk factor—a risk that is shared among many financial stakeholders, including shareholders, creditors, and even employees. Increasingly, the debate on corporate governance extends beyond a company's own shareholders to include other stakeholders such as creditors, employees, customers, the local community, and government regulators. Governance risks are relevant for all types of corporate entities in all jurisdictions. These risks can be measured because they often manifest themselves in ways such as leadership of the company. The BOD



scorecard idea stems from a similar scorecard by Standard & Poor's, the GAMMA Scores (Standard & Poor's, 2008), which was developed to assess global governance and management accountability.

Top management team of a company plays an important role in the governance of the firm (Kiel & Nicholson, 2005; Norburn & Birley, 1988). The board represents the ultimate TMT, and thus its functions can be used as a construct to measure governance. Below are examples of how TMT effectiveness can be measured:

1. Governance, Accountability, Management, Metrics, and Analysis (GAMMA) Score: developed by Standard & Poor's in 2008 to measure global governance.
2. Corporate Governance Quotient (CGQ): developed by Institutional Shareholder Services (ISS) in 2008 (Daines, Gow & Larcker, 2010).
3. Groupthink Index: developed by Glaser in 1993.
4. Groupthink Assessment Inventory: developed by Montanari & Moorhead in 1989.

## DATA ANALYSIS & RESULTS

Table 1 is a summary of the results of the validity and accuracy tests. The study used 35 failed and 35 non-failed financial institutions from the period of 2006 to 2010. Financial data for the companies were collected and organized into one, two and three years prior to the firms filing for bankruptcy. The sample was then split into two groups where 18 firms were used for testing the validity of the Altman model leaving 17 for the accuracy test. The Altman Z-scores tests resulted in two groups of companies (the undetermined and the misclassified) for the development of the BOD BK model. These undetermined and misclassified companies represent the deficiency of the Altman model. A new kind of BK model was built using these companies (undetermined and misclassified) based on non-ratio based variables that are derived from characteristics of the BOD. The purpose of this research is to bolster the accuracy of the Altman BK model by a non-ratio based model such as the new BOD BK model. The additional leadership evaluation complemented the Altman model thereby offering an improved framework to predict corporate failure in the future. The significance of this study lies in its ability to explore a new approach to corporate BK prediction other than using financial ratios alone.

**Table 1. Summary of the Altman BK Model Validity and Accuracy Test Results**

	Validity Rate		Accuracy Rate	
	BK	NBK	BK	NBK
Year 1	62.50%	0.00%	62.50%	25.00%
Year 2	33.33%	0.00%	75.00%	0.00%
Year 3	25.00%	0.00%	80.00%	20.00%

Table 2 is the resultant of the BOD BK model derived from logistic regression analysis:

**Table 2. The BOD BK Model**

Parameter	DF	Estimate	Error	Chi-Square	Pr > Chisq	BOD Model Equation	Variable Effect and Result
Intercept	1	-29.1904	462.3	0.004	0.9497	-29.1904 * Intercept +	More=Better , Lower Score Reduces the likelihood of BK
Size	1	-4.4813	12.7243	0.124	0.7247	-4.4813 * Size +	More=Better , Lower Score Reduces the likelihood of BK
Tenure	1	-1.7251	8.2753	0.0435	0.8349	-1.7251 * Tenure +	More=Better , Lower Score Reduces the likelihood of BK
CEOChair	1	-16.7954	82.9784	0.041	0.8396	-16.7954 * CEOChair +	More=Better , Lower Score Reduces the likelihood of BK
Diversity	1	-22.0803	510.8	0.0019	0.9655	-22.0803 * Diversity +	More=Better , Lower Score Reduces the likelihood of BK
Experience	1	-72.6076	163.8	0.1966	0.6575	-72.6076 * Experience +	More=Better , Lower Score Reduces the likelihood of BK
Age	1	2.402	10.1082	0.0565	0.8122	2.402 * Age +	More=Worse , Higher Score Increases the likelihood of BK
Groupthink	1	13.1156	172.2	0.0058	0.9393	13.1156 * Groupthink +	More=Worse , Higher Score Increases the likelihood of BK

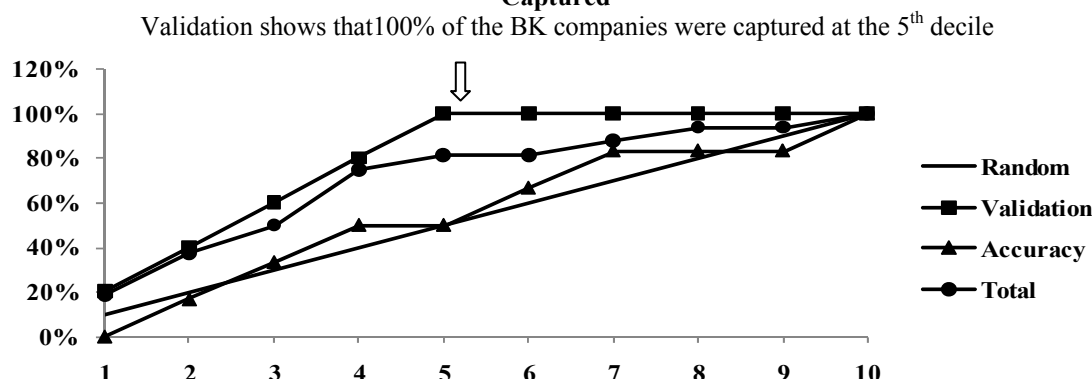
[Probability to Default =  $1/(1+\text{Exp}(-\text{BOD Score}))$ ]

Positive coefficient implies more of that variable increases the propensity to fail; therefore less of that variable is good. Negative coefficient implies more of that variable decreases the propensity to fail; therefore more of that variable is good.

## CONCLUSIONS AND FUTURE RESEARCH

The conclusion of this study is that the Altman BK Model is valid and accurate and in addition, the BOD BK Model is predictive and can be used to augment the Altman model in bankruptcy prediction. The BOD BK Model focused on non-ratio based variables such as independence, impartiality, and competency of the board. The BOD research offers an alternative method to predict business failure and thus advanced our understanding in the literature of bankruptcy prediction. Figure 2 is the graphical representation of the BOD BK Model.

**Figure 2. Gains Chart of the BOD Bankruptcy Model: Cumulative Percentage of BK Companies Captured**



The Gains Chart (Figure 2) showed that in the BOD research, the model was able to identify 60% of the bankrupt banks in the top three deciles and 100% by the 5th deciles. The straight diagonal line represents random selection, the coin-toss scenario where one has the 50-50 chance of picking the bankrupt bank correctly. The recommend application of the model is to classify banks that scored within the top three deciles as “Highly Likely to Fail.” The warning for failure can then be categorized as “High,” “Medium,” or “Low” based on the BOD BK model score (Table 3). Recommendation for usage of the BOD BK Model is as follows:

- Deciles 1-3: High Likelihood to Fail or High Propensity to Fail – Red
- Deciles 4-6: Medium Likelihood to Fail or Medium Propensity to Fail – Amber
- Deciles 7-10: Low Likelihood to Fail or Low Propensity to Fail – Green

**Table 3. The BOD BK Model Ranking Results**

	Decile	BK% Random	BK% Validation	BK% Accuracy	BK% Total	YR1	BK Captured YR2	YR3
High	1	10.00%	20.00%	0.00%	18.75%	1		1
High	2	20.00%	40.00%	16.67%	37.50%	1	1	
High	3	30.00%	60.00%	33.33%	50.00%		1	1
Medium	4	40.00%	80.00%	50.00%	75.00%	1		1
Medium	5	50.00%	100.00%	50.00%	81.25%		2	
Medium	6	60.00%	100.00%	66.67%	81.25%			
Low	7	70.00%	100.00%	83.33%	87.50%			
Low	8	80.00%	100.00%	83.33%	93.75%			
Low	9	90.00%	100.00%	83.33%	93.75%			
Low	10	100.00%	100.00%	100.00%	100.00%			
Total						3	4	3

Development sample size = 20 (10 BK & 10 NBK)

Validation sample size=12 (6 BK & 6 NBK)

Total sample size = 32 (16 BK & 16 NBK)

Financial statements for a 3-year period were collected for both bankrupt and non-bankrupt banks. These years were chosen because previous studies have shown that the Altman model is most predictive in the two years prior to bankruptcy (Deakin, 1972; Poston & Harmon, 1994). The validity and accuracy tests from this study showed that that Altman’s model was predictive only in the first year prior to bankruptcy filing. The new BOD BK Model from this research was able to identify more BK from the Altman ZOI and misclassified groups of banks, therefore improving the prediction of bankruptcy. Table 1 summarized the results from the Altman validity and accuracy tests. Table 4 summarized the results from the BOD BK Model development and validation. The BOD BK Model is a non-ratio based model and thus not hampered by the problem of declining ratios. The overall accuracy of the BOD BK model was 33% but the model was able to identify accurately 60%

and 33% of the BK in the high propensity group in development and validation respectively (Table 4). At the 5th percentile, the BOD BK model was able to classify 100% and 50% of the BK in development and validation respectively (Table 3). Tables 5 and 6 are summaries of the improvements in BK prediction from the BOD BK Model.

**Table 4. Summary of the BOD BK Model Development and Validation Results**

	Development Result		Validation Result	
BK correctly identified by BOD Model in the High Group:	6	60.00%	2	33.33%
BK correctly identified by BOD Model in the Medium Group:	4	40.00%	2	33.33%
BK correctly identified by BOD Model in the Low Group:	0	0.00%	2	33.33%
Total	10	33.33%	6	33.33%

**Table 5. Total Percentage Lift of Year 1 BK from BOD BK Model Total**

	18	17	35	BOD BK Improvement %		
	Validity/BOD Rate	Accuracy/BOD Rate	Total BK	BK%	Improve %	
Year 1						
Altman BK	5	5	10	28.57%	5/10	
BOD BK	2	3	5	14.29%	50%	*
Year 2						
Altman BK	2	3	5	14.29%	8/5	
BOD BK	6	2	8	22.86%	160%	
Year 3						
Altman BK	1	4	5	14.29%	3/5	
BOD BK	2	1	3	8.57%	60%	
Year 3						
Altman BK	8	12	20	57.14%	16/20	
BOD BK	10	6	16	45.71%	80%	

\* BOD BK Model identified 5 more BK in Year 1, a 50% increase in YR1 BK prediction

**Table 6. Total Percentage Lift of Year 1 BK from BOD BK Model High Propensity**

	18	17	35	BOD BK Improvement %		
	Validity/BOD Rate	Accuracy/BOD Rate	Total BK	BK%	Improve %	
Year 1						
Altman BK	5	5	10	28.57%	2/10	
BOD BK	1	1	2	5.71%	20%	*
Year 2						
Altman BK	2	3	5	14.29%	3/5	
BOD BK	1	2	3	8.57%	60%	
Year 3						
Altman BK	1	4	5	14.29%	0/5	
BOD BK	0	0	0	0.00%	0%	
Year 3						
Altman BK	8	12	20	57.14%	5/20	
BOD BK	2	3	5	14.29%	25%	

\* BOD BK Model identified 2 more BK in Year 1, a 20% increase in YR1 BK prediction

This is when we aligned Year 1 BK in the High according to the BK BOD Model

The 2008 global financial meltdown is the impetus for alternative views on this topic. What we need is not more regulations but adherence to corporate governance that we already have in place i.e., the 2002 Sarbanes-Oxley Act (SOX). The BOD research from this study investigated only a handful of the board characteristics. There are many more board characteristics, often mentioned in the annual reports under Item 10, Directors and Executive Officers and Corporate Governance.

This study was restricted to publicly-traded financial institutions. A study of privately held financial institutions may yield different results. Another suggestion would be to develop a one model approach to bankruptcy prediction incorporating financial ratios as well as BOD characteristics such as those in the BOD BK model of this study. A different set of financial ratios and BOD variables and even macro-economic statistics such as unemployment and interest rates could be analyzed to see if they lend more predictability than what has been covered in this study.

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# THE IMPACT OF INNOVATION CAPACITY ON THE COST PERFORMANCE OF CAPITAL PROJECTS

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## ABSTRACT

*Few studies explore and quantify the relationships between innovation capacity and the cost performance of capital projects. This study of 108 capital projects, however, shows that the relationships between innovation capacity and cost performance of capital projects are indeed significant. Multivariate robust regression analyses show that the interaction of Technology Management (TM) with Research and Development (R&D) has the highest effect on our project-cost performance data. Overall, our optimal model explains 34.60% of the variation in the cost performance of capital projects.*

## INTRODUCTION

A central tenet of the study of innovation management is to identify the critical determinants of innovation performance. Of course, extensive research in the innovation management field examines and identifies a wide variety of measures that describe innovation performance and the inputs that affect the performance (e.g., De Clercq et al., 2011; Ficarek et al., 2008; Gerald et al., 2008; Jassawalla and Sashittal, 2002; Lichtenthaler and Lichtenthaler, 2009; Miller and Friesen, 1982).

Despite the panoply of research in the innovation literature, relatively few studies explore innovation from a project perspective. Although several published studies examine the relationships between innovation and project performance (e.g., Danneels, 2002; Oke et al., 2008; Tatikonda and Rosenthal, 2000a; Tatikonda and Rosenthal, 2000b), these studies primarily focus on NPD and R&D projects. Few investigate the effect of innovation on capital projects. (The capital projects industry includes both the delivery and the maintenance of facilities (e.g., commercial and institutional, industrial, residential buildings, transportation, energy, water and sewage, and communication systems). Our focus is on the delivery process of capital projects.) Therefore, there appears to be a lack of research that explores and quantify the relationships between innovation capacity and cost performance of capital projects.

The first objective of this study, therefore, is to explore and assess the relationships between innovation capacity and the cost performance of capital projects. The second objective is to quantify systematically the effects of innovation capacity on the cost performance of capital project. Both objectives help stakeholders better measure the impact of improved innovation capacity on capital projects' cost performance.

The rest of the paper is organized as follows. Section 2 reviews related studies, Section 3 presents the research question and methodology, and Section 4 describes the sample collection, the statistical test, and model-building. Section 5 presents the discussions and conclusions. Section 6 describes the research implications. Section 7 describes the research limitations and direction for further research.

## LITERATURE REVIEW

Innovation has been an essential source of competitive advantage since the beginning of the Industrial Revolution (Prajogo and Ahmed, 2006), and existing research (e.g., Adner and Kapoor, 2010; Cooper et al., 2004; Damanpour et al., 2009; De Clercq, 2011; Parast, 2010; Prajogo and Ahmed, 2006; Sampson, 2007;

Veldhuizen et al., 2006) demonstrates a wide range of benefits for corporations that are successful in innovation (e.g., increases in operation efficiency, sales, profitability, and market share). Not surprisingly, numerous researchers and practitioners (e.g., Abbey and Dickson, 1983; Amabile et al., 1996; Brown and Karagozoglu, 1989; Chen et al., 2005; Hitt et al., 1996; King et al., 2003; Rice et al., 2002; Sampson, 2007; Teng et al., 2002; Zhou and Wu, 2010) conduct extensive studies to examine and identify the key determinants of success in innovation.

For example, Scott and Bruce (1994) use structural equation analysis to examine the determinants of innovation behavior. Based on data from 172 engineers, scientists, and technicians employed in a large, centralized R&D facility of a major U.S. industrial corporation, they conclude that leadership, individual problem-solving style, and work group relations affect the innovation climate. Likewise, based on an intensive review of literature in innovation, Glynn (1996) concludes that intelligence operates both through individual agents and institutionalized systems to affect organizational innovation. He then develops a framework for relating individual and organizational intelligence to innovation.

Nobel and Birkinshaw (1998) use a series of ANOVAs to examine the patterns of communication and control in international R&D operations. Based on a sample of 110 international R&D units from 15 multinational corporations, they identify three types of R&D unit roles (local adaptor, international adaptor, and international creator) affecting innovation. Balkin et al. (2000) examine CEO pay in 90 high-technology firms using hierarchical regression analysis and conclude that CEO short-term compensation is related to innovation as measured by number of patents and R&D spending.

Additionally, Tsai (2001) examines 24 business units in a petrochemical company and 36 business units in a food-manufacturing company using hierarchical regressions and concludes that the interaction between the absorptive capacity of knowledge and the network that provides access to new knowledge significantly affects innovation and performance in business units.

Rao and Drazin (2002) use a combined method of regression analysis and probit estimates to test the effects of recruitment of talent on innovation. Based on data from 588 mutual fund families between 1986 and 1994, they conclude that characteristics such as the number of recruits, experience, organizational age, and external connections have stronger effects on product innovation.

Subsequent work by Greve (2003) examines 185 shipbuilding firms from 1971 to 1996 using linear regression analysis. The study concludes that problematic and slack search drive organizational search through R&D (innovation) activities. Subramaniam and Youndt (2005) use regression analysis to test how aspects of intellectual capital influence various innovative capabilities in organizations. Based on longitudinal multiple-informant data from 93 organizations, Greve (2003) finds that human, organizational, and social capital and their interrelationships selectively influence incremental and radical innovative capabilities.

De Dreu (2006) uses regression analysis to evaluate 21 teams in an international postal service organization. He concludes that teams are more innovative when the level of task conflict is moderate instead of low or high. Likewise, using a sample of 211,636 patents from 1,644 corporations during the period 1985–1996, Miller et al. (2007) employ negative binomial regressions to conclude that the use of interdivisional knowledge positively affects the impact of an invention on subsequent technological developments.

Recently, George et al. (2008) further use negative binomial regressions to analyze the relationship between depth of technological capabilities and technology impact. Based on data from 128 biotechnology firms over a 20-year period, they conclude that depth is necessary but not sufficient for high-impact innovation. Latham and Braun (2009) conclude that firms with more slack resources and higher levels of managerial ownership innovate less when company performance declines. The study uses regressions based on the R&D investments of 327 unprofitable, publicly traded software firms during the wake of the U.S. technology downturn (2000–2001).

More recently, using data from CEOs at 705 corporations in various industries, Alexiev et al. (2010) performs hierarchical regression analysis to examine how top management teams employ advice to modify strategies and pursue exploratory innovation. Their tests show that both external and internal advice-seeking



significantly affect a firm's exploratory innovation. Vaccaro et al. (2011a) use hierarchical regression analyses to examine top managers at 151 corporations in various industries. The study shows that leadership behaviors significantly contribute to management innovation.

Despite the panoply of studies that use a wide variety of measures to describe innovation outcomes and the input characteristics that affect those outcomes as well as firm performance (e.g., Adner and Kapoor, 2010; Balachandra and Friar, 1997; Cooper et al., 2004; Kessler and Chakrabarti, 1996; Kickul and Gundry, 2001; Li and Atuahene-Gima, 2001; Meyer and Goes, 1988; Utterback, 1971; Vaccaro et al., 2011b), most studies focus on firms engaged in innovation (e.g., Adner and Kapoor, 2010; Baba, 1989; Damanpour et al., 2009; Kickul and Gundry, 2001; Nohria and Gulati, 1996; Sampson, 2007; Utterback, 1971; Veldhuizen et al., 2006); relatively few studies explore projects engaged in innovation.

Although several published studies report the relationships between innovation and project performance (e.g., Ahn et al., 2010; Balachandra and Friar, 1997; Danneels, 2002; Oke et al., 2008; Tatikonda and Rosenthal, 2000a; Tatikonda and Rosenthal, 2000b; Sundström and Zika-Viktorsson, 2009), these studies primarily focus on NPD and R&D projects. Relatively little research investigates innovation's effect on capital projects—despite the fact that capital projects contribute significant growth to the economy (Chen, 2011; Mallick and Mahalik, 2010). Consequently, there appears to be a lack of research that explores the relationships between innovation capacity and cost performance of capital projects. Likewise, little research quantifies systematically the effects of innovation capacity on the cost performance of capital projects.

## RESEARCH QUESTION AND METHODOLOGY

The preceding section critiques existing studies of innovation and project performance. Now the question is: *How does innovation capacity affect the cost performance of capital projects?*

The methodology to answer this research question is threefold. In the first stage, after developing a test hypothesis that uncovers useful relationships between innovation capacity and cost performance of capital projects, we use the Anderson-Darling (AD) test to verify normality, followed by the Pearson's correlation and Spearman's correlation tests, respectively, when the data is normally and abnormally distributed. Variables and their corresponding measures used to measure the cost performance and innovation capacity of projects of the hypothesis are based on an extensive review of the innovation and project management literature along with consultation with several experienced researchers and practitioners.

In the second stage, multivariate robust regression analysis is used for model building based on the useful relationships found in the hypothesis test. Use of robust regression analysis not only dampens the influence of outlying observations but also ensures that the forecasts and estimation of the model are unbiased when the normality of the residuals is violated (Neter et al., 1996; Salama, 2005).

In the third stage, we employ the White test (White 1980) and the plot of the residuals versus fitted values (Littell and Freund, 2000) to examine heteroskedasticity and model-specification error, and thus, determine the optimal model.

## RESEARCH RESULTS

### The Data

Of the 500 members of Taiwan's Chinese National Association of General Contractors (CNAGC) that we randomly selected and invited to participate in this research, 108 companies participated—a 21.6 % response rate (CNAGC has over 1,000 members). Of the 108 firms, 19 have less than US\$5 million in revenue; 25 have US\$5 million–US\$15 million in revenue; 34 have US\$15 million–US\$25 million; and 30 have more than US\$25 million in revenue.

The 108 capital projects fall into three categories: buildings (59 projects), transportation facilities (21 projects), and industrial facilities (28 projects). Project managers average between one and 26 years of experience; 30 participants had fewer than five years of experience; 51 had between five and 10 years; 33 had between 10 and 20 years; and seven participants had over 20 years of experience.

Surveys collected the data. Prior to the data collection, several experienced researchers and a panel of experts from CNAGC critiqued the questionnaire for structure, readability, clarity, and completeness. These researchers and experts also appraised the extent to which the indicators sufficiently addressed the subject area (Dillman, 1978). Based on the feedback from these researchers and experts, the survey instrument was then modified to strengthen its validity.

The final version of the survey questionnaire comprises two sections. The first section, composed of open-ended questions, gathers detailed background information such as annual revenue; project type; project cost including contract price, budget, contract price for project changes, and actual cost; and the project schedule including the contract schedule, scheduled time, contract schedule for project change, and actual schedule.

The second section gathers data for the project innovation variables and measures that data using scales that are based on a synthesis of literature from the project management, innovation management, group effectiveness, and organizational theory fields. Section two consists of multiple-choice questions in which respondents indicate on a 10-point scale the extent to which certain project variables likely affected the innovation and project performance. Because of space limitations, complete survey questionnaires are not presented here but are available from the authors on request.

## Statistical Tests and Results

The hypothesis that innovation capacity can affect the cost performance of a capital project needs to be verified statistically. Based on previous research (e.g., Adams et al., 2006; Bessant and Francis, 1997; Cooper et al., 2004; Prajogo and Ahmed, 2006), this study selected two composite innovation variables to measure project innovation capacity for the purpose of verification, including *Technology Management (TM)*, and *Research and Development (R&D)*.

Measures of the composite variables are based on a detailed examination of literature in innovation management; consultation with several experienced researchers; and consultation with a panel of experts from CNAGC. If not otherwise indicated, all measures use a scale in which 1 is “strongly disagree” and 10 is “strongly agree.” High scores suggest good performance; low scores indicate poor performance.

Specifically, *TM* ( $\alpha = .948$ ) is measured according to a four-item scale (Table 2) based on Hayes and Wheelwright (1984), Prajogo and Ahmed (2006), and Urban and von Hippel (1988). The four items are “Our company is on the leading edge of new project practices and technologies in the industry,” “We always evaluate the potential of using new project practices and technologies,” “We obtain project technological capabilities in advance of needs,” and “We are continuously thinking of the next generation of project technology.”

*R&D* ( $\alpha = .955$ ) is measured according to a five-item scale (Table 2) based on Adams et al. (2006), Bessant and Francis (1997), Cooper et al. (2004), Prajogo and Ahmed (2006), and Prajogo and Sohal (2006). The five items are “Our teams that develop new project solutions/techniques are well educated and confident,” “Our company provides adequate physical resources (e.g., buildings, computer equipment) for developing new project solutions/techniques,” “Research and development plays an important part in our business strategy,” “Our company provides adequate financial resources for developing new project solutions/techniques,” and “Our company provides adequate tools and systems for developing new project solutions/techniques.”

*Cost Performance (CP)* is measured according to one-item scale based on Anbari (2004), where *CP* is equal to (revised estimated cost)/(actual cost), where the revised estimated cost of a project includes the estimated cost of scope changes of that project. As our research is built on the proposition that project innovation capacity affects the cost performance of the project, we test the following hypothesis:

Hypothesis 1: The variable performance of *TM* and *R&D* of project innovation capacity insignificantly affect the cost performance of capital projects.

Table 1 presents means, standard deviations, Anderson-Darling statistics, and Spearman's correlation matrix of the sample data of the variables. (For comparison purpose, percentile ranks categorize project cost performance on a 10-point scale based on the computed values of *CP* from the 108 sample projects.) Correlation is significant when the probability value is smaller than 0.05 threshold values. The Anderson-Darling values of the variables *CP*, *TM*, *R&D*, and *TM*× *R&D* (the interaction of *TM* and *R&D*) are 2.146, 2.269, 2.139, and 0.838, respectively, all with associated *p*-values of <0.01, suggesting a significant distribution abnormality that justifies Spearman's correlation test.

**Table 1: Descriptive statistics, Anderson-Darling statistics, and Spearman's correlation matrix for all variables**

Variables	Anderson-Darling Statistics	Means	S.D.	1	2	3	4
1. <i>CP</i>	2.146**	5.519	2.943	1.000			
2. <i>TM</i>	2.269**	6.713	1.428	0.594**	1.000		
3. <i>R&amp;D</i>	2.139**	6.759	1.484	0.553**	0.929**	1.000	
4. <i>TM</i> × <i>R&amp;D</i>	0.838*	46.907	18.872	0.592**	0.975**	0.971**	1.000

\**P* < 0.05 and \*\**P* < 0.01.

As the table shows, the Spearman correlation coefficients of *TM* and *R&D* are 0.594 and 0.553 with *p*-values of <0.01. We therefore reject the null hypothesis, implying that *TM* and *R&D* significantly affect the cost performance of capital projects. Specifically, the better a capital project's *TM* performs, the more likely that project's *CP* performs better and likewise, *R&D*.

In particular, the Spearman correlation coefficients of *TM*×*R&D* is 0.592 and with *p*-values of <0.01 (as also shown in the table). This suggests a significant interaction effect of *TM* and *R&D* on *CP*, confirming that the hypothesis test's result is conclusive.

## Model Development

The hypothesis test reveals significant correlations between *CP* and each of *TM*, *R&D*, and *TM*×*R&D*. Based on this test result, this study further quantifies the effects of *TM*, *R&D*, and *TM*×*R&D* on the cost performance of capital projects.

Table 2 summarizes the robust regression results using a maximum R-square improvement procedure for modeling the effects of *TM*, *R&D*, and *TM*×*R&D* on *CP*. As seen in the table, the optimal quantitative *CP* model at step 1 (Model 1) is the one with the *TM*×*R&D* variable, where 34.17% of the variation in the project-cost performance data is explained. At step 2, the optimal *CP* model (Model 2) is composed of *TM*×*R&D* and *TM*, capable of explaining 34.57% of the variation in the project-cost performance data, which is 0.4% more than that of Model 1. The optimal model at steps 3 (Model 3) is composed of (*TM*×*R&D*, *TM*, *C&D*). Model 3 explains 34.60% of the variation in the project-cost performance data, and it is 0.4% more than that of Model 2.

**Table 2: Quantitative effects of *TM*, *R&D*, and *TM*×*R&D* on *CP* and respective White tests created with robust regression analysis using a maximum R-square improvement**

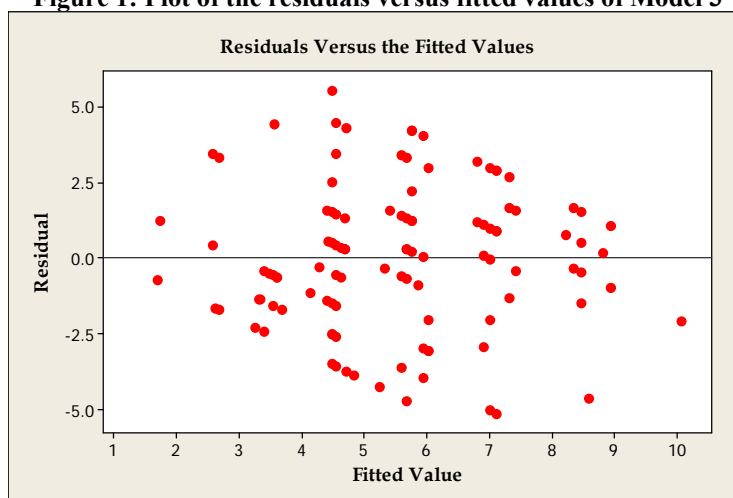
Dependent variable: <i>CP</i>						
Variables	Model 1		Model 2		Model 3	
	Coefficient	Chi-Square	Coefficient	Chi-Square	Coefficient	Chi-Square
Step 1						
Intercept	0.9774	2.19	-1.0443	0.6725	-0.6003	0.8611*
<i>TM</i> × <i>R&amp;D</i>	0.0969	54.88**	0.0527	0.3392	0.0636	0.4152
Step 2						
<i>TM</i>			0.6107	0.4018	0.5908	0.4278
Step 3						

<i>R</i> & <i>D</i>			0.06	0.8388*
$R^2$	0.3417	0.3457	0.3460	
Changes of $R^2$		0.0040	0.0003	
The White test	8.65**	9.98	12.70	

\* $P < 0.05$  and \*\* $P < 0.01$ .

As also shown in the table, the White test of Model 3 is 12.70 with a  $p$ -value of  $>0.05$ , suggesting that no existence of heteroskedasticity in the model. Furthermore, as seen in Figure 1, the plot of the residuals versus predicted values of Model 3 reveals that no pattern exists in the plots, suggesting that specification errors are not present in the model. As a result, this study chooses Model 3 as the optimal *CP* model.

**Figure 1: Plot of the residuals versus fitted values of Model 3**



## RESEARCH IMPLICATIONS

Although the panoply of research in the innovation-management field describes innovation performance and the inputs that affect the performance (e.g., Cowan and Jonard, 2009; Ettlie and Reza, 1992; Kessler and Chakrabarti, 1996; Leiponen, 2008; Meyer and Goes, 1988; Sammarra and Biggiero, 2008), relatively little research explores innovation from a project perspective. Despite several published studies that report the relationships between innovation and project performance (e.g., Danneels, 2002; Oke et al., 2008; Tatikonda and Rosenthal, 2000a; Tatikonda and Rosenthal, 2000b), these studies principally concentrate on NPD and R&D projects.

Our findings reported here regarding the effect of innovation performance on capital projects are consistent with prior studies based on NPD and R&D projects (e.g., Ahn et al., 2010; Oke et al., 2008; Tatikonda and Rosenthal, 2000a; Sundström and Zika-Viktorsson, 2009). Specifically, the present research extends the state of knowledge concerning the effect of innovation capacity on the cost performance of capital projects. This extension is a direct contribution to the literature of both innovation- and project- management fields.

Our findings also demonstrate that innovation capacity explains 34.60% of the variation in the cost performance of capital projects. An important managerial implication of the findings is that innovation capacity is capable of affecting 34.60% of capital projects' cost performance that project managers should encourage the development of innovation capacity throughout the capital projects.

In particular, the combined Anderson-Darling statistics, Spearman's correlation test, and multivariate robust regression analysis appear to be robust with straightforward application. As such, both international

practitioners and researchers could apply the proposed method to broader analyses of innovation- and project-performance. This is a direct benefit to international audiences.

## CONCLUSIONS

The result of the research hypothesis test shows that *TM* and *R&D* positively affect the cost performance of capital projects. An additional test shows that the interaction of *TM* and *R&D* positively affects the cost performance of capital projects, suggesting that our test result reported here regarding *TM* and *R&D* is conclusive.

This study further quantifies the effects of *TM*, *R&D*, and *TM*×*R&D* by performing robust regression analyses using a maximum R-squared improvement procedure to develop optimal innovation-effect models that are based on capacity variables. The optimal quantitative *CP* model implies that as the innovation-capacity performance of a capital project improves, the project's cost performance improves by 34.60%.

In conclusion, this study examines and quantifies the relationship between the innovation capacity and cost performance at the project level, and it offers management a practical way to measure the impact of innovation capacity on cost performance of capital projects.

## RESEARCH LIMITATIONS AND DIRECTION FOR FURTHER RESEARCH

Whilst numerous models (e.g., Brown and Karagozoglu, 1989; Gambardella and McGahan, 2010; Miller and Friesen, 1982; Scott and Bruce, 1994) developed for organizational innovation embody technological and human aspects, one group of scholars (e.g., Claver et al., 1998; Jassawalla and Sashittal, 2002; Prajogo and Ahmed, 2006) highlight the need to integrate technological aspects with human aspects when modeling innovation performance. In fact, the vast body of literature in innovation management underlines the importance of such integration.

This study examines the relationships between innovation capacity and cost performance of capital projects, and does not account for the aspects of human issues concerning leadership, team-building, communication management, and productive culture, defined as innovation stimulants. Future research should investigate the triangle relationships between innovation factors (stimulants and capacity) and the performance of capital projects, providing management a total picture of how innovation capacity, innovation stimulants, and their interactions affect the performance of capital projects.

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# UNDERSTANDING THE LINKAGES BETWEEN PERCEIVED CORPORATE CITIZENSHIP AND ORGANIZATIONAL COMMITMENT

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## ABSTRACT

*This work establishes a research model based on social identity theory, which examines the moderating role of organizational trust on the relationship between corporate citizenship and organizational commitment. In the model, organizational commitment is positively affected by organizational trust and four dimensions of perceived corporate citizenship, including economic, legal, ethical, and discretionary citizenship. The model paths are hypothesized to be moderated by organizational trust. Empirical testing using a survey of personnel from several large firms confirms most of our hypothesized effects. Theoretical and managerial implications of our findings are discussed.*

Most previous research tends to emphasize the influence of corporate citizenship on instrumental or utilitarian factors such as business performance or a consumer's purchase (e.g., Becker-Olsen, Cudmore and Hill, 2006). For instance, Siegel and Vitaliano (2007) emphasizes about how the activity of corporate citizenship should be integrated into a firm's differentiation strategies to make sales profits. Organizational commitment that represents employees' psychological attachment to the organization has been often ignored in corporate citizenship. It is thus necessary in this study to examine the relationship between corporate citizenship and organizational commitment so as to complement previous research in the area of corporate social responsibility.

## THEORY AND HYPOTHESES DEVELOPMENT

Being a high-profile notion that has strategic significance to business firms, corporate citizenship represents a firm's activities and status related to its perceived societal and stakeholder obligations. Corporate citizenship often occurs when a firm engages in activities that advance a social agenda beyond that merely required by law (Siegel and Vitaliano, 2007). Some researchers have studied the degree to which corporate citizenship is applied in firms, while others have tried to measure the relation between social performance (i.e., corporate citizenship) and employer attractiveness (Backhaus, Stone and Heiner, 2002). Corporate citizenship in this study consists of four dimensions refined from previous literature in terms of employees as stakeholders: (1) economic citizenship; (2) legal citizenship; (3) ethical citizenship, and; (4) discretionary citizenship.

The first and foremost social responsibility of business is economic in nature, because the business organization is the basic economic unit in our society (Carroll, 1979). Previous research provides evidence of job incentives and career development to improved corporate citizenship, including the observation that more socially responsible firms are more likely to win identification of potential and current employees and that they may therefore benefit from larger applicant pools and the subsequently strengthened employees' commitment towards the firms. Consequently, the first hypothesis is derived as below.

*H1: Perceived economic citizenship is positively associated with organizational commitment.*

Just as society has sanctioned the economic system by allowing business to assume the productive role, as a partial fulfillment of the “social contract,” it has also laid down the ground rules, the regulations, and law, under which business is anticipated to operate (Carroll, 1979). Society’s members expect a business to fulfill its mission within the framework of legal requirements (Carroll, 1979), and thus employees’ organizational commitment can be well fostered under circumstances of fulfilled legal citizenship by their organization. Given that individuals attempt to establish or enhance their self-concept for organizational commitment positively through the comparison of the characteristics of themselves and the organization they belong to with other individuals (Brammer et al., 2007), social identity theory hypothesizes that individuals’ self-concept is enhanced when they associate themselves with the organization that has a legitimate reputation, leading to the positive association between perceived legal citizenship and organizational commitment. Thus, the hypothesis is developed as below.

*H2: Perceived legal citizenship is positively associated with organizational commitment.*

Ethical corporate responsibilities of firms represent behaviors and activities that are not necessarily codified into law, but nevertheless are anticipated of business by society’s members including firms’ employees (Carroll, 1979). Ethical responsibility taken by firms refers to them being honest in their relationship with, for example, their own employees (De los Salmones et al., 2005), and thus the employees are likely to reciprocate with their strong organizational commitment. A recent study provides partial support for this perspective by confirming different significant influences of ethical climate types on organizational commitment (Kim and Miller, 2008). Based on the above rationale, the hypothesis is provided as follows.

*H3: Perceived ethical citizenship is positively associated with organizational commitment.*

Discretionary corporate responsibilities are those about which society has no clear-cut message for business and they are left to individual judgment and choice (Carroll, 1979). Traditionally, even if the firm does not participate in the above kinds of actions, it is not considered unethical per se (Carroll, 1979). However, with the increasing expectations about a corporate’s social responsibilities by society’s members, firms trying these actions are likely to help strengthen their members’ commitment towards the organization. Research evidence shows that employees and the public in general are concerned highly about the values of the firm and inter alia its socially responsible behavior beyond the requirement by law (Brammer and Millington, 2003). A survey found that more than half of UK employees care very much about the social and environmental responsibilities of the organization they work for (Dawkins, 2004), supporting the substantial weight of perceived discretionary citizenship in influencing employees’ organizational commitment.

*H4: Perceived discretionary citizenship is positively associated with organizational commitment.*

Organizational trust (i.e., trust in an organization) involves employees’ willingness to be vulnerable to their organization’s actions or policies. This willingness can be rendered only when an organization clearly communicates its actions or policies with its employees through formal and informal channels (Tan and Lim, 2009). Characterized by a strong belief in and acceptance of the organization’s values, a willingness to exert considerable effort on behalf of the organization, and a strong desire to maintain membership in the organization (Tan and Tan, 2000), employees’ organizational commitment is likely boosted when they have confidence that the organization will perform an action that is beneficial or at least not detrimental to them. In research of workers in a juvenile detention center, organizational trust was found to be a major predictor of their organizational commitment. In other words, if employees believe in the trustworthiness of their organization, this belief reinforces their commitment towards the organization (Burke and Stets, 1999), suggesting the positive relationship between organizational trust and organizational commitment.

*H5: Organizational trust is positively associated with organizational commitment.*

The moderating role of organizational trust exists, because when an employee experiences various events at work, the employee assesses the trustworthiness, and accordingly, thinks about the organization held accountable for the events (Choi, 2008; Tan and Tan, 2000). Although all of the above four kinds of citizenship have always simultaneously existed for business organizations, the history of business suggests an early

emphasis first on the economic and legal aspects and a later concern for the ethical and discretionary aspects (Carroll, 1979). Given both economic and legal citizenship are considered more fundamental and compulsory to any organization than ethical and discretionary citizenship in social responsibility categories (Maignan and Ferrell, 2000), organizational trust positively moderates the relationship between economic citizenship and organizational commitment and between legal citizenship and organizational commitment. Thus, the following two hypotheses can be stated as below.

*H6: Organizational trust moderates the relationship between perceived economic citizenship and organizational commitment.*

*H7: Organizational trust moderates the relationship between perceived legal citizenship and organizational commitment.*

When employees possess low organizational trust (regarding its actions and policies), they will bother less about ethical and discretionary citizenship performed by their firm (because they think those things that take great voluntary effort are unlikely done by their untrustworthy firm), leading to weaker organizational commitment than that of the employees with high organizational trust. Collectively, the last two hypotheses are thus derived as below.

*H8: Organizational trust moderates the relationship between perceived ethical citizenship and organizational commitment.*

*H9: Organizational trust moderates the relationship between perceived discretionary citizenship and organizational commitment.*

## METHODS

### Subjects and Procedures

The research hypotheses described above were empirically tested using a survey of personnel from twelve large firms of an industrial zone in central Taiwan. Of the 500 questionnaires distributed to the subjects, 429 usable questionnaires were collected for a response rate of 85.80%. The constructs in this study are measured using 5-point Likert scales drawn and modified from existing literature. Few steps are employed in choosing measurement items.

### Data Analysis

CFA analysis was performed on all items corresponding to the six constructs measured in Liker-type scales. Although the goodness of fit index (GFI) was slightly lower than the recommended value of 0.9, the root mean square residual (RMR) was smaller than 0.05, the root mean square error of approximation (RMSEA) was smaller than 0.08, and the comparative fit index (CFI), the non-normed fit index (NNFI), and the normed fit index (NFI) all exceeded 0.90. These figures suggest that the hypothesized CFA model in this study fits well within the empirical data.

Three criteria recommended by Fornell and Larcker (1981) were applied to confirm the convergent validity in this study. To begin with, as evident from the t-statistics in CFA, all factor loadings were statistically significant at  $p < 0.001$ , satisfying the first requirement of the convergent validity of constructs (Anderson and Gerbing, 1988). The average variance extracted (AVE) for each construct exceeded 0.50, supporting that the overall hypothesized items capture sufficient variance in the underlying construct than that attributable to measurement error (Fornell and Larcker, 1981). Last, the reliabilities for each construct exceeded 0.70, satisfying the general requirement of reliability for research instruments. Discriminant validity was tested by chi-square difference tests. Overall, the test results herein showed that the research instruments used for measuring the constructs of interest in this study are statistically adequate.

### Hypotheses Testing

In the second stage this study performs a hierarchical regression analysis to reflect the proposed associations in our hypotheses. Step 1 includes three control variables such as gender, education (high school or below vs. Bachelor or above) and job position (managers vs. non-managers) in a regression model. These variables are considered control variables using the application of dummy variables in this study so as to reduce experimental errors and to avoid making improper inferences. The model in this step reveals only 3.4% of the explained variance in organizational commitment. Step 2 adds five proposed antecedents of this study into a model, revealing 67.5% of the explained variance in organizational commitment. To begin with, four major dimensions of corporate citizenship, including perceived economic, legal, ethical and discretionary citizenship, all had significant effects on organizational commitment (H1-H4 are supported) with standardized coefficients of 0.16, 0.14, 0.25, and 0.23, respectively, at the 0.01 significant level. Organizational trust had a significant effect on organizational commitment (H5 is supported) with a standardized coefficient of 0.19 at the 0.01 significant level. Step 3 examines the interaction effects of organizational trust and perceived corporate citizenship. Specifically, the interaction of organizational trust and perceived economic citizenship is insignificant (H6 is thus not supported), while the interaction of organizational trust and perceived legal citizenship is positively significant (H7 is supported) with the standardized coefficient of 0.09 at the 0.05 significant level. This empirical result suggests that the relationship between perceived legal citizenship and organizational commitment is moderated by organizational trust. Accordingly, the interaction of organizational trust and perceived ethical citizenship is significant (H8 is supported) with the standardized coefficient of -0.11 at the 0.05 significant level, whereas the interaction of organizational trust and perceived discretionary citizenship is insignificant (H9 is not supported). This empirical result suggests that the relationship between perceived ethical citizenship and organizational commitment is moderated by organizational trust.

## **DISCUSSION**

### **Implications for Research**

One of the empirical findings of this study indicates the positive relationship between four dimensions of corporate citizenship and organizational commitment, further complementing some previous research that empirically considers corporate citizenship as purely a construct (e.g., Brammer et al., 2007). This finding makes the study an important bridge between corporate citizenship and organizational commitment, because many previous research studies link corporate citizenship to certain positive outcomes only related to customers' or financial profits (e.g., Becker-Olsen et al., 2006).

A unique finding that has not been found in any previous research is that organizational trust has both main and moderating effects in the formation of organizational commitment. The finding of this study is an extraordinary contribution for showing a new direction for future research to explore some other perceptual moderators similar to organizational trust in better understanding their potential impacts on organizational commitment.

### **Implications for Practice**

The test results show that organizational commitment can be directly improved by strengthening individuals' perceived corporate citizenship, suggesting "a tree is known by its fruit." In other words, organizational commitment cannot be arbitrarily obtained, but rather it can be achieved after employees observe in depth their firm's actions in different perspectives (e.g., legal and ethical ones). The multiple-track perspective (i.e., four dimensions of corporate citizenship) is quite different from traditional literature that purely focuses on job offers or workplace conditions in affecting organizational commitment without recognizing the necessity of firms' social responsibilities.

Regarding the moderating effects herein, this study empirically confirms that the relationship between perceived legal citizenship and organizational commitment is stronger among employees with low organizational trust than among employees with high organizational trust. Management should know that employees are very sensitive to any confusion about legitimate activities when they possess low organizational trust. Once management has detected employees' low trust in the organization, management should further fortify organizational commitment by transcribing business activities and verifying such activities as legitimate to the

employees. This study empirically confirms that the relationship between perceived ethical citizenship and organizational commitment is stronger among employees with high organizational trust than among employees with low organizational trust. Management should know that employees are very sensitive to any inconsonance about ethical business practices when they possess high organizational trust.

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# ASSESSING THE RELATIONSHIP BETWEEN IT-MEDIATED SOCIAL CAPITAL AND SOCIAL SUPPORT

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## ABSTRACT

*This study proposes a model based on social capital theory. In the proposed model, social support is indirectly influenced by social capital and need for affiliation via the mediation of sense of group (which includes perceived membership, mutual influence, and immersion). Empirical testing of this model, by investigating working professionals in online social networking communities, confirms the applicability of social capital and need for affiliation among virtual groups. Last, managerial implications and limitations of the research are provided.*

## INTRODUCTION

Online social support plays a critical role in a virtual group, which is inherently regarded as an innovative form of a social network linking people, organizations, and knowledge (Wellman et al., 2001). A virtual group is a set of social relationships forged through repeated contacts within the boundary of cyberspace (Fernback & Thompson, 1995) and can be defined as “a group of people with common interests or goals, interacting predominantly in cyberspace” (Koh & Kim, 2003). Social support that involves online social affiliations by linking people or institutions together should not be studied in isolation, but rather be integrated into social networking based on a group in which they obtain such social support through sense of group (e.g., Cobb, 1976; Wellman et al., 2001). Sense of group represents members’ feeling of relationship to the group or their knowledge about belonging to a collective that includes others (e.g., Koh & Kim, 2003). Sense of group can be viewed as members’ perception of similarity to other members and an acknowledged interdependence with each other (Sarason, 1974).

## RESEARCH MODEL AND HYPOTHESES

A key driver for sense of group in virtual communities is social capital, referring to the features of social groups that facilitate social networking and coordination among network members (Putnam, 1995). The concept of social capital has captured the attention of sociologists (e.g., Coleman, 1988; Putnam, 1995) and organizational theorists (e.g., Nahapiet & Ghoshal, 1998) as a way of understanding why people in social groups provide social support to each other, even when there is no legal obligation or expectations of personal gains from doing so. Based on social capital theory above, this study first proposes the pivotal assumptions in which social capital strengthens the sense of group in virtual communities and consequently boosts social support in a group. Building upon these pivotal assumptions, this study further extends to the positive effect of the social need for affiliation on the sense of group. Previous literature indicates that both social capital and the needs for affiliation (i.e., social orientation of a group) are critical in a collectivist group (e.g., online Facebook groups) (Tiessen, 1997).



Drawing upon previous research on sense of virtual community (Koh & Kim, 2003), this study proposes three different dimensions of sense of group: (1) perceived membership—people perceive feelings of belonging to their group, (2) mutual influence—people have reciprocal influence on each other in the group, and (3) immersion—people feel the state of flow in the participation of group activities. Given the three dimensions, this study's sense of group is defined as group members' feelings of perceived membership, mutual influence, and immersion toward their group, which reflect respectively the affective, cognitive, and behavioral aspects of group members (Koh & Kim, 2003; Vieno, Santinello, Pastore, & Perkins, 2007). An Internet group developed to encouraging connections between people in different locations is capable of fostering an online sense of group and increasing the availability of social support through information sharing, guidance, and the friendships developed with others of the group (Obst & Stafurik, 2010). A sense of online group provides a means to create social support by reducing physical and social barriers for people with a disability to access information (Guo, Bricout, & Huang, 2005).

Previous empirical research illustrates that social support partially mediates the relationship between psychological sense of community and care-giver satisfaction and fully mediates the relationship between psychological sense of community and care-giver stress (Cowman & Ferrari, 2004). Similarly, another study indicates that the relationship of sense of community and collectivism to depressive symptoms is mediated through social supports (Moscardino, Scrimin, Capello, & Altoe, 2010). Collectively, these findings suggest that sense of group is an influential factor that drives social support in the group (Cowman & Ferrari, 2004). People reporting a stronger sense of perceived membership, mutual influence, and immersion (i.e., sense of community) by revealing a greater endorsement of collectivistic values are seen to have higher levels of social support from family, friends, and significant others in a social circle group (Moscardino et al., 2010; Vieno et al., 2007). For that reason, working professionals with a strong sense of group in their virtual group are likely to feel that they belong in and are meaningfully a part of a larger collectivity (Omoto & Snyder, 2002), consequently fostering social support in the group. Based on the above rationales, the first hypothesis is derived as below.

H1: Sense of group is positively related to social support.

Social capital is defined as people's social networks and mutual trust that they can draw upon in order to solve common problems (Xu, 2010). Social capital is highly related to sense of group (or sense of community) (Mancini, Martin, & Bowen, 2003; Pooley, Cohen, & Pike, 2005). Previous research indicates that social capital is very important for improving group social participation (e.g., perceived membership and influence) (Xu, 2010). For that reason, various dimensions of social capital (social interaction, trust, shared language) are related to sense of group even though their weights of influencing such sense of group may vary from dimension to dimension (Liu & Besser, 2003). Based on previous research on social capital (e.g., Lin, 2010b, 2011), this study proposes that three dimensions of social capital (social interaction, trust, and shared language) have positive effects on sense of group. Specifically, social capital is a product of social learning interactions in two fields as below (Falk & Kilpatrick, 1999; Falk & Harrison, 1998).

First, working professionals with strong social capital can effectively accumulate knowledge of their social group—who I am in the group, who others are, what we have in common, and how much mutual trust we have (Sobels, Curtis, & Lockie, 2001). For example, previous literature defines social capital in terms of the efficiency and effectiveness of group activity (Putnam, 1993, 1995), suggesting that the features of social group, such as social networks (e.g., social interaction), trust, and shared norm, can improve the efficiency of society by facilitating coordinated actions. These features also enable people to act together more effectively to pursue shared group objectives and cohesiveness (Onyx & Bullen, 2000; Putnam, 1993, 1995; Sobels et al., 2001), thus enhancing sense of group. It is also found that trust can be contagious and is more effective in producing intimacy among group members (McMillan, 1996), thus increasing their sense of group.

Second, group members with strong social capital develop a quality shared understanding of socially collective identities (e.g., shared language) (Sobels et al., 2001), further strengthening their sense of group. Social capital has been identified as a promoter of group change through its influence on the group learning process (Sobels et al., 2001) to boost the sense of group. For example, the sense of group that is fostered through communication and learning can be stronger when there is mutual trust (e.g., Falkand & Kilpatrick, 1999). A group that is perceived to be trustworthy facilitates increased participation (i.e., increased sense of group) (Sobels et al., 2001). Given that social networks arise within existing social capital (Sobels et al., 2001), working

professionals are likely to have a strong sense of group when they often obtain social interaction and shared topics to chat about. To sum up, social capital such as social interaction, trust, and shared language is implicit for group members in enhancing sense of group and its members' cooperative behavior (Carroll, Rosson, Convertino, & Ganoë, 2006). Based on the above justification and previous literature support, the hypotheses about social capital can be summarized as below.

H2: Social interaction is positively related to sense of group.

H3: Trust is positively related to sense of group.

H4: Shared language is positively related to sense of group.

Need for affiliation represents a fundamental need reflecting people's desire to draw near and enjoyably engage in working activities with others (McClelland, 1985; Murray, 1938). Previous literature indicates that employees' motives such as need for affiliation have been shown to influence their various choices, including job choice (e.g., Judge & Bretz, 1992), friend choice (Brendgen, Vitaro, & Bukowski, 2000), organizational attractiveness (e.g., Turban & Keon, 1993), and group choice for collective activities (e.g., Eby & Dobbins, 1997). For that reason, need for affiliation can be characterized as people's adherence and loyalty to a friend, group, or organization, consequently facilitating the development of the sense of a group (Burroughs & Eby, 1998), which is explained in detail from three dimensional aspects (perceived membership, mutual influence, and immersion) as below.

First, Davidson, Cotter, and Stovall (1991) reported a significant relationship between psychological sense of family membership and need for affiliation in a family setting. Previous research found that need for affiliation is positively related to group collectivism (Hui & Villareal, 1989), illustrating group members often desire their membership due to a need for affiliation (Eby & Dobbins, 1997). In business organizations, people with a strong need for affiliation are more likely to value their group experiences in virtual communities than those without a need for affiliation, and thus their perceived membership is often stronger.

Second, when people in a virtual group desire to draw near and enjoyably engage in activities with others (i.e., need for affiliation), they welcome people's mutual concern (e.g., comments or opinions) in the group to meet or satisfy their need for affiliation (Schaubroeck, Lam, & Cha, 2007) and thus the mutual influence on each other grows strongly. Previous research examining the relationship between need for affiliation and the use of strategies indicates that those who have a strong need for affiliation use friendliness more frequently to influence others (Iyer & Krishnan, 2002). The phenomenon suggests a group's need for affiliation is likely to facilitate mutual influence among group members.

Third, immersion is a state of flow of those group members who value their relationship with group others (e.g., reflected by a high need for affiliation), because immersion is the holistic sensation of total involvement with the group (e.g., Csikszentmihalyi, 1975; Koh & Kim, 2003). In summary of the above rationales and justifications, a hypothesis can be derived as below.

H5: Need for affiliation is positively related to sense of group.

## METHOD

### Subjects

The population of working professionals was chosen for the survey of this study since they represent one of the largest user groups of social networking IT in a global market. Facebook was selected as our target social networking IT of interest, because it is the most well-known virtual community in Taiwan and effectively facilitates online social networking for obtaining social support in a virtual group. Usable questionnaires from 135 groups were returned. In our sample, a total of 342 participants are male (50.67%), a total of 323 participants are from traditional industries (47.85%), and a total of 464 participants have a bachelor's degree or higher (94.22%). The constructs in this study are measured using 5-point Likert scales drawn and modified from existing literature (Cutrona & Suhr, 1994; Hill, 1987; Koh & Kim, 2003; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998).

## Data Analysis

To confirm the mediation effects of sense of group between social support and its determinants, this study conducted group-level analyses through two steps. CFA analysis was done on all items corresponding to the eight constructs of this study. The goodness-of-fit of the hypothesized CFA model was assessed by applying a variety of fit metrics. The figures of CFI, GFI, NFI, and NNFI were all larger than 0.9. The RMR was smaller than 0.05, and the RMSEA was smaller than 0.08. These figures suggest that the CFA model hypothesized in this study fits the empirical data well.

Three primary criteria (Fornell & Larcker, 1981) were used to examine the convergent validity of the empirical data herein. To begin with, as evident from the t-statistics in CFA, all factor loadings were statistically significant at  $p < 0.001$ , which represented the first requirement to assure convergent validity of the construct. Second, the average variance extracted (AVE) for all constructs exceeded 0.50, showing that the overall hypothesized items capture sufficient variance in the underlying construct than that attributable to measurement error. Lastly, the reliabilities for each construct are all larger than 0.70, meeting the general requirement of reliability for research instruments. Overall, the survey data of this study meet all three criteria required to empirically support convergent validity.

Discriminate validity was assessed by chi-square difference tests. The advantage of using this technique is its simultaneous pair-wise comparisons for the constructs based on the Bonferroni method. Controlling for the experiment-wise error rate by setting the overall significance level to 0.001, the Bonferroni method indicated that the critical value of the chi-square difference should be 17.09. The chi-square difference statistics for all pairs of constructs in this study exceeded 17.09, thus confirming discriminate validity of our data.

## Group-Level Path Analysis for Construct Relationships

Group-level data were analyzed by the technique of path analysis to test our hypotheses. Note that path analysis is employed instead of structural equation modeling (SEM), because SEM requires more than 200 sample subjects to obtain stable test results (Hatcher, 1994). Previous literature indicates that, under some unstable sample conditions, it may be even necessary to have a sample of even 400 to 800 (Fabrigar, Porter, & Norris, 2010). The test results from path analysis reveal that twelve out of fifteen paths are significant. We conducted post-hoc analyses to confirm whether our exogenous factors have direct effects on social support without going through our mediator (i.e., sense of group).

## Results

The test results can be subsequently described in accordance with our hypotheses. First, social support is positively influenced by all three dimensions of sense of group (i.e., perceived membership, mutual influence, and immersion), suggesting H1 is fully supported. Second, all three dimensions of sense of group are positively influenced by social interaction, suggesting H2 is fully supported. Third, although trust is positively influenced by two dimensions of sense of group (i.e., perceived membership and mutual influence), it is not affected by the third dimension of sense of group (i.e., immersion). Thus, H3 is only partially supported. Fourth, shared language is positively influenced by one dimension of sense of group (i.e., perceived membership), but it is not affected by the second and third dimensions of sense of group (i.e., mutual influence and immersion). Hence, H4 is only partially supported. Lastly, all three dimensions of sense of group (i.e., perceived membership, mutual influence, and immersion) are positively influenced by need for affiliation, thus suggesting H5 is fully supported.

## DISCUSSION

The findings of this study are an important complementary to previous research that mostly focused on direct relationship between social capital and social support without taking sense of group into account (e.g., Beaudoin & Tao, 2007; Croninger & Lee, 2001; James, 2000; Kim & Schneider, 2005). Web-based social support groups are widely used and powerful in practice, but little is known how they can function effectively (Winzelberg, Classen, Alpers, Roberts, Koopman, Adams, Ernst, Dev, & Taylor, 2003). The positive effect of sense of a group

(perceived membership, mutual influence, and immersion) on social support suggests that sense of group can be taken as monitoring instruments for management to examine whether social support in a group is available or not. This is important, because theoretically social support is expected to help employees cope with the negative effects of unfavorable factors such as stressors (e.g., Bliese & Britt, 2001). In addition, the positive effect of social interaction on sense of group suggests that sense of group can be appropriately developed and maintained through online social interaction. Previous literature underlining the importance of social interaction states that the social process of developing a shared understanding through interaction is the natural way for people to learn about their group (e.g., Kreijns, Kirschner, & Jochems, 2003).

Given that social interaction represents a reciprocal process in which people effectively initiate and respond to social stimuli presented by their group peers, management promoting sense of group among working professionals should reward mutual engagement of participants in an online coordinated effort to solve the problem together (e.g., Kreijns et al., 2003). The positive effect of shared language only on one dimension of sense of group (i.e., perceived membership) indicates that perceived membership can be effectively improved by similar experiences, beliefs, verbal communication, and norms (i.e., shared language) (e.g., Wiersema & Bantel, 1992). Therefore, management should establish a common conceptual framework or terminologies to form shared language for addressing or dealing with group issues. In that case, perceived membership can be further boosted.

Finally, the positive effect of need for affiliation on all three dimensions of sense of group indicates that members' perception of sense of group is substantially determined by their social motives such as need for affiliation (e.g., Kingston, Mitchell, Florin, & Stevenson, 1999). While Davidson, Cotter, and Stovall (1991) reported a significant relationship between need for affiliation and psychological sense of community in a family setting, this study complements their research by presenting that such a relationship similarly exists in social contexts beyond a family setting. Due to the benefit of a need for affiliation to increase social support, managers should stir up people's need for affiliation by encouraging online social activities (e.g., group blogs or group games). Managers should convey to employees that the group is committed to them and accepts them as welcomed members, which would help facilitate their need for affiliation (e.g., Armeli, Eisenberger, Fasolo, & Lynch, 1998). Employees with a high need for affiliation can be appropriate candidates for virtual group work since they are more likely to keep a strong sense of group and eventually practice social support.

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# ESTIMATING DESTINATION SWITCHING AND MARKET SHARE BY MARKOV CHAINS

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## ABSTRACT

*This study predicted international tourist flows among three Asian countries and the USA, and provided a path for gauging the switching patterns of tourists from one country to another. The destination loyalty (hard core component) and future market share for the year 2009 and 2010 were estimated.*

## INTRODUCTION

The Markov chain model (Markov 1971), named after Andrey Markov, is a random process where all information about the future is contained in the present state (i.e. one does not need to examine the past to determine the future). Markov models are some of the most powerful tools available to engineers and scientists for analyzing complex systems. It is a way of analyzing the current movement of some variable in an effort to forecast the future movement of that same variable.

There are several applications of the Markov Chain Model in different industries. Tang et al (1994) estimated the transition probability of Markov chains in market forecasting and Moon (1999) applied it to information management. Recently, Zimmermann et al. (2009) used it to see farm structural change and Zhijun et al. (2009) used it to forecast the amount of energy consumption. Although the use of Markov chains has been extensive in describing phenomena in various physical, biological, and social science studies (Gilbert, Peterson and Lime, 1972), its application in the area of hospitality and tourism is limited.

However, these studies, have not tested the model as a potentially new methodology for forecasting the future tourist flows and market shares among selected countries. No study has shown the definite level of destination loyalty (hardcore components) of each country and destination switching patterns in international tourist markets. Mckercher and Guillet (2010) emphasized that there is some form of loyalty for an international destination because overall arrivals from mature markets are largely stable. This study explored these tasks and tried to estimate the future market shares of selected countries. By employing the Markov Chain Model, this study predicts international tourist flows among three Asian countries and the USA, and provided a path for gauging the switching patterns of tourists from one country to another. The goals of this study can be summarized as follows.

1. To employ and test the Markov Chain Model as a new methodology for forecasting the future tourist flows and potential market shares among selected countries.
2. To find destination loyalty (hard core component) and tourist destination switching patterns of selected countries for the years 2009 and 2010.
3. To estimate the future market share of three Asian countries and the USA for the years 2009 and 2010.

## DATA AND METHODS

### Data



Three countries (China, Japan, and Korea) that generate and attract international tourists in Asia and the USA were included in this study. The USA was included because it is one of the major countries sending a significant number of tourists to China, Japan, and Korea. The USA is also one of the most important destinations for those Asian countries (See Table 1 for more detail). Data used in this study were obtained from the World Tourism Organization Tourism Statistics, Tourism Policy and International Tourism in OECD, ITA office of Travel & Tourism Industries (<http://tinet.ita.doc.go>), The Ministry of Public Security of the People's Republic of China (<http://mps.gov.cn16/index.html/>), KNTA (Korea National Tourism Organization), and CNTA (China National Tourism Administration).

Identifying destination patterns and forecasting the market share of the international tourist flows in these countries are the major objectives of this study. Table 1 shows the market share of international tourist arrivals in these countries for three years covering 2006-2008. As Table 1 shows, China shares 43.8 percent of the tourism market in the subject countries. The USA shares 21.0 percent of the market, Japan shares 17.9 percent of the market, and Korea shares 17.3 percent of the market.

**Table 1.** Market Share of International Tourists' Arrivals (2006-2008)

Table 1. Market share of international tourist arrivals (2006-2008).

	To Korea			To Japan			To China			To USA		
From	2006	2007	2008	2006	2007	2008	2006	2007	2008	2006	2007	2008
Korea				2,117,325	2,600,801	2,382,548	3,922,017	4,776,752	3,960,392	757,721	806,175	759,394
Japan	2,338,921	2,235,963	2,378,102				3,748,882	3,977,479	3,446,117	3,672,584	3,531,489	3,249,578
China	896,969	1,068,425	1,167,891	811,675	942,439	1,000,416				457,728	539,824	632,317
USA	555,704	587,324	610,083	816,727	815,882	768,345	1,710,292	1,901,200	2,581,910			
Total	3,791,594	3,891,712	4,156,076	3,745,727	4,359,122	4,151,309	9,381,191	10,655,431	9,988,419	4,888,033	4,877,488	4,641,289
Total (2006–2008)			11,839,382			12,256,158			30,025,041			14,406,810
			17.3%			17.9%			43.8%			21.0%
Grand total of arrivals to the four countries for the three years, 2006–2008												68,527,391

Source: Adapted from the ITA, WTO Tourism Statistics *Tourism Policy and International Tourism in OECD Countries*, KNTA, CNTA.

Table 1 also shows that the market shares have changed over the periods. USA's market share has declined over the selected periods and China's market share showed a gradual increase. The changing patterns in the flow of tourists suggest that from at least a marketing standpoint, it would be helpful to find a means to reasonably forecast future market shares.

The table also shows the number of tourist increases/decreases for each country by yearly time-lags (from 2006 to 2007 and from 2007 to 2008). The time lag for a period is every year starting from the year 2006. From this point, the study then forecasts tourist flows for 2007 and 2008. Note that actual international tourist flows for 2006, 2007, and 2008 are given. Forecasting accuracy is based on a comparison of projected flows to actual flows for each of the years. In this way, the forecast results for the periods 2006, 2007, and 2008 provide the basis to assess the effectiveness of the Markov forecasting process.

## Matrix of transition probabilities

In order to identify the Markov process on international tourist flows, it is necessary to develop the transition probabilities that can forecast the likelihood of tourists moving from one country to another. Two categories of tourists are identified: a *switching* component, and a *hardcore* component. Tourists falling under the switching group are those that have switched countries during the period while the hardcore tourists are ones who have stayed put in one destination. With this, it is necessary to compute transition probabilities for the four countries. Transition probabilities are defined as the probability that a certain country will retain its tourists. To determine the probability factor, tourists retained for the period are divided by the number of tourists at the beginning of the period.

For the transition matrix, assume a finite set  $S = \{1, \dots, m\}$  of states. Assign to each pair  $(i, j) \in S^2$  of states a real number  $p_{ij}$  such that the properties (1 and 2)

$$P_{ij} \geq 0 \quad \forall (i, j) \in S^2 \quad (1)$$

$$\sum_{j \in S} p_{ij} = 1 \quad \forall i \in S \quad (2)$$

are satisfied and define the transition matrix IP by

$$IP = \begin{pmatrix} p_{11} & p_{12} & \cdots & p_{1m} \\ p_{21} & p_{22} & \cdots & p_{2m} \\ \vdots & \vdots & \ddots & \vdots \\ p_{m1} & p_{m2} & \cdots & p_{mm} \end{pmatrix}$$

Let  $(X_n)_{n \in \mathbb{N}_0}$  be a sequence of random variables with values in  $S$ . Here,  $n$  denotes the time when the state  $X_n$  occurs. The sequence  $(X_n)_{n \in \mathbb{N}_0}$  is called a homogeneous Markov chain with a discrete time, state space  $S$  and transition matrix IP, if for every  $n \in \mathbb{N}_0$  the condition.

$$P[X_{n+1}=j \mid X_0=i_0, \dots, X_n=i_n] = P[X_{n+1}=j \mid X_n=i_n] = P_{ijn} \quad (3)$$

is satisfied for all  $(i_0, \dots, i_n) \in S^{n+2}$ , for which  $P[X_0=i_0, \dots, X_n=i_n] > 0$

The first identity in (3), which is also called the "Markov property", defines the "memory" or "order" of the chain. In this case, the order equals one since the transition probabilities are entirely determined by the preceding state. The restriction to order-one chains is no serious limitation since processes with arbitrary finite memory  $s$  can be interpreted as order-one Markov chains on the product space  $S^s$ . The second identity in (3) is called a homogeneity condition. It assures that the transition probabilities do not vary with time  $n$ .

It is necessary to show gains (inflow) and losses (outflow) among the countries in order to complete the transition matrix. It is possible to observe not only the net gains or losses for any of the four countries but also the interrelationships among the gains and losses of tourists for each country. From the data developed, the next step is to convert the tourists that switch countries so that all gains and losses take the form of transition probabilities.

Several advantages accrue to each country through utilizing the data shown in the matrix. It can assist each country in analyzing its promotional efforts in terms of the effect they have on the gain or loss of its market share. This data can forecast the rate at which a country will gain or lose its market share in the future and can also show the possibility of some market equilibrium in the future.

## First-order and higher-order Markov analysis

The Markov process can be of different orders. The first-order considers only the country choices made during the current period for determining the probabilities of choice in the next period. A second-order Markov analysis assumes that choices for a specific country in the coming period depend upon the country choices made by tourists during the last two periods. Similarly, a third-order Markov process looks back to customer preferences over the past three periods in order to forecast the next period's behaviour.

To specify an initial distribution, denote by  $D_s$  the set of discrete distributions on  $S$ ,

$$D_s = \{P = (P_i)_{i \in S} : P_i \geq 0, \sum_{i \in S} p_i = 1\},$$

where it represents distributions as row vectors.  $P_0 = (P_{0i})_{i \in S} \in D_s$  is the *initial distribution* of the chain  $(X_n)_{n \in \mathbb{N}_0}$  if  $P[X_0=i] = P_{0i}$  for all states  $i \in S$ .

Now consider the so-called  $n$ -th order transition probabilities  $p_{ij}^{(n)} = P[X_{m+n}=j | X_m=i], n \in \mathbb{N}$ , which are computed by summing over all possible intermediate states, that is, over all paths of length  $n+1$  with initial state  $i$  and final state  $j$ :

$$p_{ij}^{(n)} = \sum_{(i_1, \dots, i_{n-1}) \in S^{n-1}} p[X_{m+n} = j | X_m = i, X_{m+1} = i_1, \dots, X_{m+n-1} = i_{n-1}]$$

$$= \sum_{(i_1, \dots, i_{n-1}) \in S^{n-1}} p_{ii_1} + \prod_{j=1}^{n-2} p_{i_j i_{j+1}} + p_{i_{n-1} j},$$

whence the matrix  $(P_{ij}^{(n)})_{(i,j) \in S^2}$  equals the  $n$ 'th power  $IP^n$  of the transition matrix  $IP$ . It is further defined that  $P_{ij}^{(0)} := \delta_{ij}$  so that  $IP^0$  equals the identity matrix  $I_m$ . Given the distribution  $P_0$  of  $X_0$ , the distribution of  $X_n$  thus calculates to  $P_0 IP^n$ ,  $n \in \mathbb{N}_0$ .

Mednick (1975) used a first-order Markov Chain Model to analyze the spatial travel characteristics of USA visitors travelling through the province of Ontario by automobile. A later study by Uysal, Marsinko, and Barrett (1995) also used a first order Markov Chain Model to analyze trip type switching and market share for a given trip type. Their findings show that using first-order assumptions for forecasting purposes are valid. The data indicates that tourists' choices of countries follow a fairly stable pattern. In fact, the matrix of transition probabilities remains stable or very close to it over a period of time. Since the first-order Markov analysis has proven to be a reliable forecaster of future country choices of international tourists, this study tries to test the analysis for the last two time periods (from 2006 to 2007 and from 2007 to 2008). Based upon the performance of the analysis, this study attempts to forecast the international tourist flows for 2009 and 2010 by using the first-order Markov.

## Future probable market shares

Future probable market shares for the next period (period two) are calculated by multiplying the original matrix of transition probabilities by the original market shares (period one). Similarly, multiplication of the original matrix of transition probabilities by period two market shares gives the results for period three. All remaining future probable market shares are calculated in a similar manner. An alternative method is to raise the original matrix of transition probabilities to the desired power and multiplying by the original market shares.

# RESULTS AND DISCUSSION

## Markov chain model testing

The performance of the model was evaluated by comparing forecasted probable market share and actual market share. The model performed well even though it has little forecasting error. For period two, year 2007, this analysis predicted that China's share would be 47.1%, the USA 21.4%, Japan 20.1%, and Korea 11.5% of the total market in the four countries. The actual total market shares of the countries are as follows: China 44.8%, USA 20.5% Japan 18.3%, and Korea 16.4%. This analysis shows some forecasting errors. For example, this analysis overestimated (2.3%) the future market share of China, overestimated (0.8%) that of the USA, overestimated (1.73%) that of Japan, and underestimated (-4.9%) that of Korea.

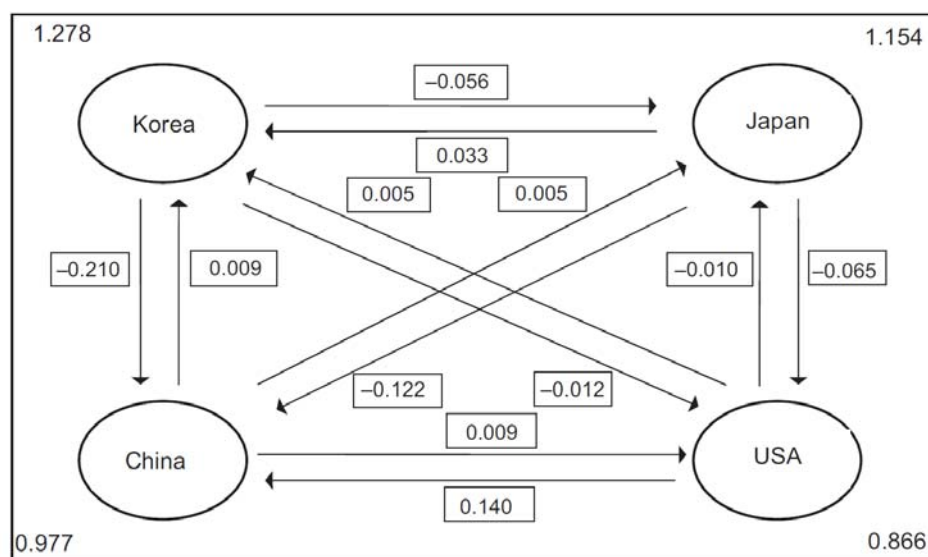
For period two (2008), this analysis predicted Korea's share at 17.6%, Japan 20.3%, China 45.4%, and the USA 16.8% of the total market in the four countries. The actual total market shares of the countries are as follows: Korea 14.2%, Japan 19.0%, China 45.6%, and the USA 21.2%. This analysis shows some forecasting errors. For example, this analysis overestimated (3.4%) the future market share of Korea, overestimated (1.3%) that of Japan, underestimated (-0.3%) that of China, and underestimated (-4.5%) that of the USA.

## Destination switching patterns

First, Figure 1 shows a pattern of destination (countries) switching by international tourists. Inward arrows indicate increases while outward arrows represent loses. Transition probabilities can forecast the likelihood of tourists moving from one country to another. The numbers show an increase or decrease in the likelihood of switching as opposed to straight probabilities. The negative numbers show a decrease in the likelihood of switching. It is insightful to explain the figure in greater detail.

For Korea, tourists who travelled to the country during 2008 have a 5.6% decrease in the likelihood of switching to Japan as a destination for the next year. In the same manner, the tourists have a 1.2% decrease in the likelihood of switching to the USA, and a 21.0% decrease in likelihood of switching to China for the same period. For Japan, tourists who travelled to the country during 2008 have a 3.3% increase in likelihood of switching to Korea, 6.5% decrease in likelihood of switching to the USA, and a 12.2% decrease in likelihood of switching to China as a destination for the next year. For the USA, tourists who travelled to the country during 2008 have a 1% decrease in likelihood of switching to Japan, 0.5% increase in likelihood of switching to Korea, and a 14% decrease in likelihood of switching to China as a destination country for the next year. For China, tourists who travelled to the country during 2008 have a 0.9% increase in likelihood of switching to Korea, a 0.5% increase in likelihood of switching to Japan, and a 0.9% increase in likelihood of switching to the USA as a destination country for the next year.

Secondly, Figure 1 also provides very important information, on the “hard core component”. The hard core component states the probability that the tourists who travelled to a certain country will not switch to other countries as destinations for the next year.



**Figure 1.** Destination (Country) Switching by International Tourists

Interestingly enough, Korea and Japan gained destination loyalty of about 27.8% and 15.4%, respectively, but China and the USA lost their destination loyalty about 2.3% and 13.4%, respectively. The hardcore component of Korea (1.278) is mainly due to not switching to Japan (-0.056), to China (-0.210), and to the USA (-0.012). The hardcore component of Japan (1.154) is mainly due to not switching to China (-0.122), and to the USA (-0.065), but switching to Korea (0.033). The hardcore component of the China (0.977) is due mainly to switching to Korea (0.009), Japan (0.005), and to the USA (0.009). The hardcore component of the USA (0.866) is mainly due to switching to China (0.140), to Korea (0.005), but not switching to Japan (-0.010).

## Forecasting future market shares

Based upon testing the model for the previous two periods above, this study uses the transition probabilities for the second period in order to predict the probable market share of each country for 2009 and 2010. Table 2 shows the procedure of forecasting future market shares and Table 3 shows the outcomes of the predicted market shares for international tourist flows developed by using the Markov Chain model. This study predicts that Korea will occupy 19.3% of the tourist market of the four countries in 2009. Japan shares 21.1 % of the tourist market, China shares 42.2%, and the rest of the market (17.4%) may be shared by the USA. Nevertheless, in 2010 the market share pattern will change. Compared to 2009, Korea and Japan will increase their market shares, but the USA's share will decrease (from 17.4% to 13.8%). Korea will increase its market shares from 19.3% to 25.8% and Japan will increase its market share from 21.1% to 23.4%.

**Table 2.** Forecasting 2009, 2010 International Tourism Market Share

TRANSITION PROBABILITIES					Beginning of Period One  Market Share  <i>Year 2008</i>	Ending of Period One  Probable Market Share  <i>Year 2009</i>
Country	Korea	Japan	China	USA		
Korea	<b>1.278</b>	0.033	0.009	0.005	<b>0.142</b>	<b>0.193</b>
Japan	(0.056)	<b>1.154</b>	0.005	(0.010)	<b>0.190</b>	<b>0.211</b>
China	(0.210)	(0.122)	<b>0.977</b>	0.140	<b>0.456</b>	<b>0.422</b>
USA	(0.012)	(0.065)	0.009	<b>0.866</b>	<b>0.212</b>	<b>0.174</b>
Total	1.000	1.000	1.000	1.000	<b>1.000</b>	<b>1.000</b>
					x	=
TRANSITION PROBABILITIES					Beginning of Period Two Probable  Market Share  <i>Year 2009</i>	Ending of Period Two Probable Market Share  <i>Year 2010</i>
Country	Korea	Japan	China	USA		
Korea	<b>1.278</b>	0.033	0.009	0.005	<b>0.193</b>	<b>0.258</b>
Japan	(0.056)	<b>1.154</b>	0.005	(0.010)	<b>0.211</b>	<b>0.234</b>
China	(0.210)	(0.122)	<b>0.977</b>	0.140	<b>0.422</b>	<b>0.371</b>
USA	(0.012)	(0.065)	0.009	<b>0.866</b>	<b>0.174</b>	<b>0.138</b>
Total	1.000	1.000	1.000	1.000	<b>1.000</b>	<b>1.000</b>

**Table 3.** Summary of the Forecasting Market Share of International Tourist Flow by Markov Analysis (2009 and 2010)

Country	Beginning of Period One Probable Market Share Year 2008	Ending of Period One Probable Market Share Year 2009	Ending of Period Two Probable Market Share Year 2010
Korea	0.142 (14.2%)	0.193 (19.3%)	0.258 (25.8%)
Japan	0.190 (19.0%)	0.211 (21.1%)	0.234 (23.4%)
China	0.456 (45.6%)	0.422 (42.2%)	0.371 (37.1%)
USA	0.212 (21.2%)	0.174 (17.4%)	0.138 (13.8%)
Total	1.000	1.000	1.000

## CONCLUSION

The increasing presence of competition among tourism destinations seems to suggest that finding alternate approaches to analyzing the potential and current market share is essential for the growth and survival of the industry (Uysal et al 1995). This study empirically tested the Markov chain as a new methodology for forecasting the future tourist flows and potential market shares among selected countries. Upon this empirical testing it is safe to accept that the Markov analysis is a way of forecasting the future movement of international tourists. This method can be used as a marketing research tool for examining and forecasting the flows of tourists from the standpoint of their loyalty to one destination and their switching patterns to other destinations.

The outputs of this study are useful information to many interest groups such as government policy makers, travel companies, airline companies, and researchers. Since international tourists switch their destinations over time, analyzing the switching patterns of tourists will be of help in developing appropriate national policies and marketing strategies. The predicted market share of each country for 2009 and 2010 and the hardcore component of each country are very necessary information for developing destination marketing strategies. The Markov model presented in this study can also be used as a useful tool available to tourism scientists for studying complex systems of international tourist flows and destination switching patterns. This new application of the Markov Chain Model to tourism has an implication for future scientific decision making, both methodological and practical.

Future studies are needed in more countries and in different regions, such as the OECD countries or the top four (both inbound and outbound) international tourism countries. This model also can be applied to specific business operations such as finding customers switching patterns in hotels or restaurants. In these cases we are able to use more specific data such as daily or monthly series, which enriches the accuracy of the forecasting and thus usefulness for daily business operations. The future is unknown, but can be revealed by a closer analysis of present states because in accordance with the Markov Chain Model, the future depends on the transition from the present situation.

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# **GLOBAL VAT: A REFUNDABLE COST OF DOING INTERNATIONAL BUSINESS (AN EXPLORATORY STUDY OF AWARENESS AND EXPERIENCES OF EXPORTERS FROM GUJARAT STATE OF INDIA)**

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## **ABSTRACT**

*The costs of doing business internationally are many. Economizing on such costs is essential to be globally competitive. In this context, a rather overlooked area of cost reduction is the refund of global VAT incurred abroad on business expenses. A large number of exporters across the world do not claim such refunds either due to ignorance or because of legal and complex procedures involved in applying for such refunds. In this regard, this paper presents an exploratory attempt to understand the awareness and experiences on global VAT refunds from the exporters of Gujarat State of India vis-à-vis aims at creating awareness amongst the exporting community for availing such legitimate refunds and sets out an agenda for future detailed research on this hitherto unexplored subject.*

## **INTRODUCTION**

In the global competitive environment it is necessary for every firm to cut its cost of production, logistics and marketing to become competitive and successful in the international business. In fact for international business - competitiveness is a crux of success, where every single penny saved matters a lot and adds to an exporter's global competitiveness. One such area that needs to be looked into is refund of VAT from the business expenses incurred abroad by the international businessmen. It is true that many of the exporters all around the world often do not claim such refunds either because of their sheer ignorance of such refunds or they hesitate to do so considering the legal provisions pertaining to VAT refunds which are rather complicated and vary largely from country to country. Thus, a large number of companies engaged in international business do not claim such VAT refunds from the foreign authorities either because of complicated time consuming processes or simply because of their ignorance of such system (Chugan, 2006, 2008; FITA, 2004). This study makes an exploratory attempt to understand the awareness and experiences of the exporters from the Gujarat State of India vis-à-vis to create awareness of such VAT claim system enabling the exporters to avail of such facility and claim their legitimate dues from the foreign governments.

## **What is VAT?**

Value Added Tax (VAT) is a consumption tax which is levied on goods and services in many countries around the world. In its simplest form it is a transaction tax borne by the ultimate consumer and was never intended to be a cost on business. It is a tax, which is normally charged by businesses at different stages of production process and then subsequently recovered by the next person in the chain until it is ultimately charged to the final consumer. In principle therefore, VAT should not be a cost to any business. However, the reality is that, for many businesses, VAT is a cost of production and marketing until it is recovered back from the taxation authorities. As per (OECD, 2006) VAT is levied on the "value added" to goods and services as they pass through each stage of the production process. However, it should be borne in mind that VAT systems are designed to tax



final consumption and as such, in most cases it is only consumers who should actually bear that tax burden. Indeed the tax is levied, ultimately, on consumption and not on intermediate transactions between firms, as tax charged on these purchases is, in principle, fully deductible. This feature gives the tax its main characteristic of neutrality in the value chain and towards international trade. According to Pillai (2005) the greatness of VAT is that it is the most modern and scientific method for collection of taxes. In recent times, it has also been extended to services in almost all VAT operating countries. An outstanding feature of VAT is its focus on the real tax base, which is value addition by the payer.

The national tax systems in many countries, such as the member countries of EU, Canada, Japan, Australia, etc. permit VAT refund to most non-resident business activities – both product and service the world over. In general, VAT not related to travel and entertainment, however, calls for registrations with the VAT authorities in order to get refunds and in some cases the registration is also required prior to business transactions.

## **The Size of the Legitimate VAT Refunds**

Depending upon the size of business, cost reduction through this route may vary between as little as a few hundred or thousand Euros/Dollars, in case of export promotion tour or participation in trade fairs, to several million Euros/Dollars for MNCs for large projects. Not only in India and in many other developing countries, but also in US, Germany and in several other developed countries, many exporters even do not know that they are entitled to reclaim VAT on some specific business expenses such as the travel expenses, service fees, trade fairs/exhibitions, conference related expenses, etc. This is supported by a research that many U.S. companies that export, aren't aware that the VAT levied on their sales and marketing expenditures overseas is often recoverable and results show that companies fail to recover 80% to 90% of their VAT expenditure, amounting to millions of dollars (Managing Export, 2002). According to the American Express VAT refunds are typically 2% to 6% of a client's international business travel-related spending. For example a large corporation that incurs \$ 6 Million in international spending could save approximately \$ 1, 80, 000 of that cost through participating in VAT reclaim (Boehmer, 2005).

It is interesting to note that with substantial funds locked in VAT refunds, as high as 25% in EU, this particular cost of international business remains unexploited and businesses knowingly or unknowingly have been simply booking VAT expenses as costs of marketing and ignoring the real potential of making savings by recovering VAT frequently from the authorities (Chugan, 2006). According to Graham and Russell (2005) it is also true of the businesses—particularly new enterprises—that make large purchases relative to current sales where refunds can be substantial. In many countries, VAT refund levels exceed 40 per cent of gross VAT collections. Forty per cent of the survey respondents repay a third or more of gross VAT collections in refunds. Countries with refund levels below 20 percent are mostly in Africa, Asia, and Latin America.

## **Global VAT Coverage**

In the category of indirect taxation, VAT has now assumed much more significance than ever before. According to Cnossen (1991), VAT has now become the most important indirect tax in both developed and developing world. It has been considered 'the most significant event in the evolution of tax structure in the last half of this century. Ebrill, et al (2001) while evaluating the IMF experience described it 'seemingly irresistible' VAT as a 'breathhtaking' tax development. According to Riswold (2004) over 100 countries had employed VAT, and nearly 75 per cent of these were implemented in the period 1991 to 2001. In the words of Daniel (2005) real-world evidence indicates that the value-added tax, levied on the "value added" to goods and services as they pass through each stage of the production process, is a money machine for big government. America, however, is still one of the few nations without a VAT, but there is a growing pressure to impose the levy. In simple terms, a VAT is a type of national sales tax. However, instead of being collected at the cash register, it is imposed on the "value added" at each stage of production. Graham and Russel (2005) stated that during the past two decades, the IMF's Fiscal Affairs Department (FAD) had provided substantial technical assistance in implementing and improving VAT systems in developing and transitional countries. The VAT was now a key component of the tax system in over 130 countries at different stages of economic development, raising about 25 per cent of the

world's tax revenue. According to Borselli (2011), the VAT generates significant revenue (more than one fifth of the world total tax revenue, including social contributions) has been introduced in about 140 countries.

## Difficulties in VAT Claim

In theory, VAT refunds should be paid promptly following receipt by the tax authority of a VAT return giving rise to an excess credit. That is the practice in most developed countries, where refunds are generally paid within four weeks of a refund claim being made. The situation is different in developing and transitional countries, where it often takes several months, and even some times more than a year to process refund claims. In export oriented countries, such practices can seriously undermine the competitiveness of the export sector (Graham and Russel, 2005). Although the advocates of VAT have long recognized, of course, that the VAT, like any other tax is vulnerable to evasion and fraud, but stress distinctive features of the VAT that may make it less vulnerable than other form of taxation. Over the last few years, however, there has been a marked increase in concern with the losses of VAT revenue through evasion and fraud. This is especially so in the European Union, where the abolition of internal EU frontiers at the end of 1992 opened up the new areas of vulnerability (Michel and Smith, 2007). Therefore, the procedures for the VAT refunds are not so simple; the claims are to be filed with the local tax authorities which are normally in local languages. Graham and Russel (2005) stated that the experience with VAT implementation in many countries shows that refunding of credits has been the “Achilles heel” of the VAT. It has been a source of tension between tax authorities and the business sector and, in some countries, has led to complex administrative measures that have significantly undermined the functioning of the VAT system. According to OECD (2010) survey a significant of business (nearly 21%) were unable to recover foreign VAT refunds, citing a range of reasons, many of which were a direct result of tax authorities policies or procedures.

The fraudulent claims in general is the main reason cited by the taxation authorities as the major reason for the prevailing complex VAT refund system and delaying payment of refunds. Fraud claims in general are thus very common and the instances may be found in literature (Ainsworth, 2006; Bird, 1993; Borselli, 2011; Tait, 1988). Tait (1988) citing an example of the Netherlands states that 44 per cent of all VAT refunds were found in the form of false claims for the tax paid at the previous stage. The European Commission (2004) had reported losses from the fraud claims to the 10% of net VAT receipt in some of the member states. According to Borselli (2011) the European Union VAT system has become vulnerable to organized fraud schemes...within the EU-27; organized VAT refund is estimated to amount to between €20 billion and €30 billion a year. The EU institutions and Member States have put forward several measures to tackle this problem, although some of these have placed a disproportionate burden on business. Following documents are normally needed for VAT claims (Chugan, 2008):

- **Original Records:** VAT refunding authorities require original documents for filing claims such as - original invoices (not merely credit card slips or copies of invoices), original import documents, etc.
- **Application form(s)** signed by the fully authorized signatory (only required by some countries).
- **Proof of registration as a corporate taxpayer** (for US companies this is form IRS 6166)
- **Power of attorney** granting authority to process VAT recovery claim.

## AWARENESS AND EXPERIENCES OF EXPORTERS

As is evident from the above literature that VAT is the most important indirect tax both in developed and developing countries world over which is refundable to the enterprises engaged in the international business on many heads. However, either because of unawareness or because of complicated, time consuming and cumbersome procedures many companies world over do not go for such legitimate refunds from the foreign tax authorities and book such expenses to the cost of production and marketing (Chugan 2008). An attempt has been made in this paper to find the facts from exporters of the Gujarat State of India to ascertain their awareness of Global VAT refund vis-à-vis to analyze their experience of such refunds.

## Research Methodology and Data

Based on the convenience sampling, primary data with the help of questionnaire were collected from the 42 manufacturer exporters based in Ahmedabad, Ankleshwar, Gandhinagar, Mehsana, Morbi, Vadodara, Valsad, Vapi, Rajkot, Surat and Tapi. All the firms belonged to the category of manufacturer and exporter none of them was an exclusive trader or merchant exporter. These units are the regular exporters to different parts of the world. Units were personally visited and questionnaires were filled up in presence of the respondents. In few cases telephonic interviews were also taken. The research instrument, i.e. the questionnaire, was pre-tested in a pilot study involving five exporters and the necessary modifications based upon the feedback were incorporated in the final questionnaire.

## FINDINGS

### Frequency of Foreign Business Travels

All the executives (100%) who responded to the questionnaire confirmed that they were travelling abroad for business tours regularly, implying that they had been incurring expenses to generate export business for their companies. As shown in the table 1, over 45% had travelled abroad more than four times in a year for such business trips. It may also be observed from the table 2 that in addition to EU, United Kingdom, US, South Africa they have been visiting the other parts of the world also.

**Table 1**

	Frequency of foreign business tour per year	Nos.	Percentage
1	Yearly Once	7	16.67
2	Yearly Twice	9	21.43
3	Yearly Thrice	7	16.67
4	>4 Yearly	19	45.24
5	Total	42	100.00

**Table 2**

	Major areas of travel abroad for business tour	Nos.	Percentage
	EU	19	45.24
	US	17	40.48
	S AFRICA	13	30.95
	UK	11	26.19
	OTHERS	26	61.90

### Awareness and Claims of Global VAT Refunds

According to Federation of International Trade Associations (FITA, 2004) a lot of companies don't seem to know this – and as per some estimates, US companies are currently reclaiming only 20 per cent of the more than \$1 billion they are paying in VAT in Europe, whereas German companies are giving away an estimated \$1.2 billion in unclaimed European VAT refunds. Similarly, as per Taxback International (Chugan, 2008), in a report by the European Commission, it was found that 80% of companies do not reclaim VAT expenses that they are legally entitled. Thus, unawareness is one of the most important reasons for no claim. It may also be seen from the table 3 that 25 respondents i.e. 59.52% admitted that they were not aware of global VAT refunds and remaining 17 respondents i.e. 40.48 per cent were aware of such refunds. Further, it is found (table 4) that even amongst these 17 only 3 respondents had applied for the VAT refunds. It means that even amongst those who were aware, a large number i.e. 82.36 per cent had not even applied for VAT refunds.

**Table 3**

	Are you aware of VAT refund incurred on business expenses	Nos.	Percentage
1	Yes	17	40.48
2	No	25	59.52
3	Total	42	100.00

**Table 4**

	Do you apply for VAT refund on business expenses	Nos.	Percentage
	Yes	3	17.64
	No	14	82.36
	Total	17	100.00

### VAT Claim Experiences

It may be observed from table 5, that when asked about the difficulties or problems they had faced (from 3 units who had applied for VAT) or if they were aware of (from 14 units who were aware of VAT refunds system but had not applied) while applying for the VAT refunds or their main hesitation for applying such VAT refunds, over 88% respondents recalled for the legal provisions the main reason for the same. Another 41.18% said the processing time was too long. One respondent cited the language and three respondents i.e. about 17.64% said that the tracking system of VAT refund was difficult.

**Table 5**

	What type of problems you are aware of that are being faced by the exporters in VAT refund process (Responses from the 17 units who were aware of global VAT refunds)	Nos. out of 17 units	Percentage
1	Language	1	05.88
2	Legal provisions	15	88.23
3	Processing time	7	41.18
4	Refund tracking	3	17.64
	Total	NA	NA

These refunds, however, can be obtained without going through the hassles and complexities of the VAT refund system and that too without spending much money and time if the services of VAT recovery agencies are outsourced rather than to give up such claims (Chugan, 2006, 2008). It is however, possible only if the exporters are aware of such VAT recovery agencies. 30 out of 42 units accounting for 71.43% were not aware of such agencies. In addition to VAT recovery for their clients, VAT recovery agencies also provide a number of related services (as listed in table 6) to their clients. Twelve respondents i.e. 28.57 % were aware of VAT recovery agencies (Table 6). But out of the 3 respondents who had applied for VAT refunds (Table 7) only two found it more convenient to go through the VAT recovery agency and one preferred to go directly. Hence, it is observed from the table 7 that out of the 3 respondents one was in favour of direct VAT refund claim, whereas the remaining two preferred to take help of VAT recovery agencies. This means that even those who knew about the VAT recovery agencies were not fully aware about their activities or services provided to their clients.

**Table 6**

	Nature of services being provided by VAT recovery agencies	Nos. Out of 12 units who were aware of VAT recovery agencies	Percentage
1	Quantifies opportunity	1	08.33
2	Identifies invoices	2	16.67
3	Invoice retrieval	3	25.00
4	Missing invoices	2	16.67
5	Processes	3	25.00
6	Liaisoning	1	08.33
7	Tracking	0	00.00
8	Any other	0	00.00
	No. units who had availed Services of VAT recovery agencies	02	16.67
	Aware of VAT recovery Agencies	12 out of 42	28.57

**Table 7**

	Which mode you found more convenient	Nos.	Percentage
1	Direct	1	25.00
2	Recovery agencies	2	75.00
	Total	3	100.00

## Importance of VAT Refunds

According to an OECD (2010) study over 80.2% businesses incur expenditure in foreign countries and almost all of them (i.e. 95.5%) do so in more than one country. Of those, 94.7% incur VAT on such foreign expenditure. The results of this survey (table 8), however, reveal that all the respondents, i.e. 100% had incurred expenses on foreign business tours. Five respondents i.e. 11.91% were spending a huge amount of more than Rs. 50 lacs. Another ten firms, accounting for 23.81% were also found spending very large amount in the range of Rs. 26 to 50 lacs. It is, thus, found that 30 out of 42 i.e. 71.43 firms were spending quite a substantial amount of over Rs. 10 lacs.

**Table 8**

	Yearly expenses on foreign business tour yearly	Nos.	Percentage	Estimated average yearly expenses
1	< Rs. 10 lacs	12	28.57	Rs. 5x12=60 lacs
2	Rs. 10-25 lacs	15	35.71	Rs.17.5x15=262 lacs
3	Rs. 26-50 lacs	10	23.81	Rs. 38x10=380 lacs
4	>Rs. 50 lacs	5	11.91	Rs. 75x5=370 lacs
	Total	42	100.00	Rs. 1072.50 lacs

The amount was spent on the heads like hotel accommodation, food bills, travels, fees for training and expenses on meetings/seminars/conferences, sales promotion activities such as participation on trade fairs, exhibitions, advertisements in local media and the fees paid to the consultants on which the VAT was paid. Although only three firms out of the forty two were claiming VAT refunds, almost every unit which responded to this question (four units did not respond) considered the VAT refund important for becoming competitive in the global business (table 9). Amongst the thirty eight responses eleven units i.e. 28.95 stated such refund extremely important while another 22, i.e. 57.89 % considered it is important. Only one unit i.e. 2.63 % found it not important.

**Table 9**

	How much you find importance of VAT refund towards being competitive in global business	Nos. Out of 38 responses	Percentage
1	Not at all important	0	0.00
2	Not important	1	2.63
3	Somewhat important	4	10.53
4	Important	22	57.89
5	Extremely important	11	28.95
	Total	38	100.00

## Future of VAT Refund Claims in International Business

If exporters are able to get their VAT refund, definitely it will improve their competitiveness in global markets and this may be an inspiring factor for companies to go global on larger scale. Twenty one respondents, i.e. 70% agreed and five respondents, i.e. 16.67 strongly agreed that the global VAT refunds if availed will be helpful in attracting companies to go for global business in future (Table 10).

**Table 10**

	Will global VAT refund scheme be helpful in attracting companies for global business in future?	Nos.	Percentage
1	Strongly disagree	0	0.00
2	Disagree	1	3.33
3	Neither agree nor disagree	3	10.00
4	Agree	21	70.00
5	Strongly agree	5	16.67
	Total	30	100.00

**Table 11**

	Will you be interested for claiming VAT refund in future?	Nos.	Percentage
	Definitely not	1	2.38
	Probably not	0	0.00
	Unsure	4	9.52
	Probably	7	16.67
	Definitely	30	71.43
	Total	42	100.00

One of the objectives of this study was also to educate the exporters about the global VAT refunds as many of them were even not aware of such refunds. After giving them information on VAT refunds, when they were asked about their future refunds (table 11), 30 respondents i.e. 71.43% definitely agreed to file claims for their forthcoming foreign travel expenses. Seven respondents i.e. 16.67% were also willing to file such claims. Therefore, it may be presumed that over 88% respondents will now be claiming VAT refunds for their future business travel abroad.

## MANAGERIAL/POLICY IMPLICATIONS

From the data on expenses on foreign business travel (table 8) it may be seen that that thirty seven units incur expenses up to Rs.50 lacs and five units even above Rs.50 lacs. While working with simple averages it

may be estimated, that these units altogether have been spending over Rs. 1072 lacs per annum. This of course is a conservative estimate and the actual amount could be more as most of these units are small and medium sized entrepreneurs and there is no MNC in the sample. Nevertheless, with an average VAT refund of 20%, varying in the range of 15 to 25 percent (Chugan, 2008, table III) it is estimated that their legitimate dues account for over Rs. 21 lacs per annum. Considering that most of the units of the study are of small or medium sized, this amount appears to be significant and if recovered from the foreign authorities, is a good source of cost reduction to become competitive in global markets. International managers are therefore, required to understand the entire system of VAT refund so that their legitimate dues are not lost just for the want of their ignorance or hesitation to claim such refunds and pass on these benefits to buyers and quote competitive prices. Further, there is a need for greater degree of reconciliation amongst the tax authorities in different countries to establish easy claim procedure which should be more explicit and speedier. Further, there is a strong need for creating the awareness of VAT refund and educating the exporting community. The export promotion bodies in different countries and industry associations with close coordination with the VAT recovery agencies can play a very important role in this regard.

## **Limitation of Study**

This exploratory study is based upon the responses of 42 exporting units out of which only 3 were claiming the VAT refunds. Moreover, these units are based only in the Gujarat State of India and therefore, do not represent the entire country. Although, the results of the study appears to be in line with the literature (Graham & Russell, 2005; FITA, 2004; Boehmer, 2005; Ainsworth, 2006; OECD, 2010; Borselli, 2011) considering the very small size of sample and limited geographical spread, results need a cautious interpretation for generalization. It is, therefore, necessary to go for full research project on this hitherto unexplored subject with much wider geographical coverage, a larger sample size and a more detailed questionnaire and statistical analysis.

## **CONCLUSION**

The findings of this study does not deviate from the very limited work that has been done in this area and it is found that the unawareness, complexities associated with VAT refund, and its legal technicalities are the main reasons for most of the exporters not claiming the VAT refunds. It is revealed that most of exporters were not aware about the global VAT refund system and the barriers thereof and in fact some of them came to know about such refunds for the first time as a result of this study. During the personal interviews these respondents were also briefed about the VAT recovery system and were provided with the some details on rules & regulations and were given contacts of select VAT recovery agencies. The study highlights the importance of VAT refunds as a source of cost reduction in international business to become globally competitive and emphasizes the need for managers to understand this crucial subject and avail of their legitimate dues from the foreign authorities. Therefore, there is an urgent need to spread this knowledge amongst the exporting community which may be done by organizing various seminars and workshops by the leading industry associations, export promotion institutions and VAT Recovery Agencies.

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# THE IMPACT OF THE EURO ZONE CRISIS ON AUSTRALIA AND CHINA

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## ABSTRACT

*As the EU celebrated its decade of existence in 2011 few could have predicted the soon deepened financial crisis with several of the European Sovereignty states. The discussion did reach the level of whether the Euro would be dissolved hence the breaking up of the Euro zone. The usually Euro positive the Economist warns that “unless Germany and the ECB move quickly, the single Currency’s collapse is looming” (The Economist 2011).*

*Since the introduction of Euro, the Euro zone has built the currency into a stable and reliable currency. However it was a crisis that was waiting to happen since a number of EU member states, including Greece and Italy, were able to circumvent the Maastricht rules and mask their deficit and debt levels through the use of complex currency and credit derivatives structures. The high level of debt and the increasing and unsustainable yield on the bonds owned by these governments has been the trigger of crisis. The 2009 trade deficits for Italy, Spain, Greece, and Portugal were estimated to be \$42.96 billion, \$75.31bn and \$35.97bn, and \$25.6bn respectively, while Germany’s trade surplus was \$188.6bn. The impact of the Euro zone crisis has created significant discomfort with interest rates and distortions in the financial community. The fear with the Euro zone crisis is that with major bail out projected and government austerity expected to affect the economy in negative terms, the economies in the PIIGS states will decline and consumption will decrease. Being the largest trading partner of EU, China’s export is therefore anticipated to be declining. This anticipated decline will weaken China’s demand for resources from Australia. Further, China is possession of about 30 percent of US government bonds, therefore the Euro zone has been looking at China for bail outs. Although China expressed earlier its desire to help to stabilize the Euro through the European Central Bank, China has told Merkel that Europe must ‘do its homework’ on the crisis before getting any help from else where. Since China already hold plenty of euro-denominated securities (around a quarter of its \$3.2 trillion asset pile), making further Euro zone debt less attractive. There’s an argument that Beijing will be much more interested in buying up actual physical assets in Europe. Already ‘bargains’ have been picked up by Chinese organisations in Europe. It is clear that the Euro zone crisis will have an impact on China. What is not exactly clear is the exact impact.*

## INTRODUCTION

For more than 18 months the global economy has witnessed unprecedented economic crisis besides encouraging a dismal economic outlook could be the cause of the break-up of the Euro zone single currency arrangement barely 10 years into its existence. The brunt of this crisis has been felt by the Portugal, Ireland, Italy, Greece and Spain (PIIGS) uncertainty as a result of the Euro zone crisis. Some claim these debt difficulties are limited to the PIIGS countries though other members of the Euro zone are not immune from this contagion. Provoked by sovereign debt worries effecting Portugal, Ireland, and Spain with greater devastation and impact with Greece which has highlighted the viability of the Euro zone has shifted to the emphasis of threatening the integrity and cohesion of the Euro zone as an entity.

The trigger to these crises has been the high levels of public debt and the increasing and unsustainable yield on the bonds owned by these governments. These bond markets provide these governments financing and re-financing of government debt and government expenditure. What has most spooked the bond markets and the loans provided to the PIIGS countries has been their forecast future low economic growth and therefore their inability to service these debts and meet debt repayment thus producing sovereign debt.



The markets, and especially the bond markets, kept punishing the different Euro zone government efforts to find funding for covering government expenditure. The rate spread sent clear messages to the Euro zone government that they were seen as a high default risk factor. In the meantime the European Union leadership fumbled through the different options of solutions though what became clear was not an inability to rectify the problem but different national interests which was making finding a common solution impossible to reach. Germany above all remains adamant that the ECB and the Euro zone members must not bear the burden for the bad behaviour of member states that have been undisciplined with their economic management. There is a wait and see, possibly with a Greek exit from the Euro zone, and not resort to ECB or member state bailout.

## **A crisis waiting to happen – Background to the Euro zone crisis**

Much of the difficulties today are based on decisions dating back to the Maastricht Accord in 1991. What was seen as an epic step for European integration, the Maastricht Accord codified a road map for greater European integration and most especially a common currency under the banner of the Economic and Monetary Union (EMU). The Maastricht Criteria which would become the agreed upon pre-requisites for the EMU and specifically for the single currency, was influenced by the German Bundesbank anti-inflationary approach which gave less regard to the inequities of the two and three speed economies which existed in the eligible member states. Member states would have targets in relation to budget deficits, public debt, inflation levels, interest rates and currency stability. The criteria however gave no importance to levels of economic growth, unemployment levels and other less inflationary based criteria. There were no allowances for fiscal homogenisation, economic growth, national income and related criteria. In many respects the crisis of the Euro zone in 2010-11 is a by product of this scheme.

Alongside the skewed nature of the Maastricht criteria, which would then become an established economic discipline package once the Euro was introduced in 2000 under the name of the Stability Growth Pact, member states would be embarrassed into submission if they did not abide by the conditions and even the threat of sanctions and fines. The most alarming aspect of the new Euro zone make up was the inability for member states with lower performing economies to have escape valves as many had used in their flexible depreciating or appreciating currency. This had helped economies to recover from momentary speculation, loss of competition and declining trade to mend their ways. This under the new Euro zone arrangements was no longer possible with all countries abiding by a new ECB interest rate discipline and equally a common currency where currency fluctuations were no longer possible. This was for Ireland, Portugal, Spain, Greece and Italy the kiss of death!

## **The Euro zone crisis and economic consequences**

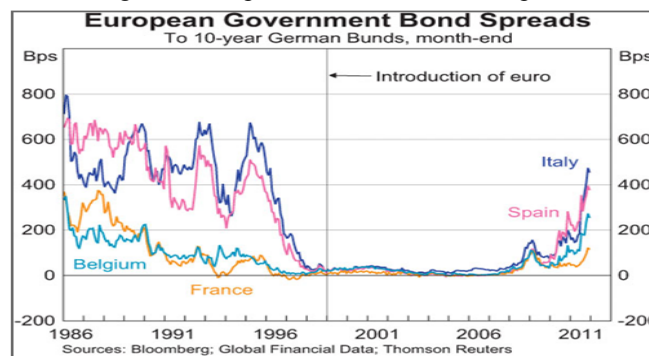
As the Euro zone celebrated its decade of existence in 2011 few could have predicted the events that would dominate the latter period of 2011 in which the PIIGS countries would be subjected to bond market spikes making government borrowing so expensive that it would force them into default. Throughout the decade and after the loss of value against the US\$, the Euro managed to become stabilised and function in all intents and purposes as a serious and credible currency.

While the stronger positioning of the weaker Euro zone states through a stable and reliable currency, improving its loan situation was both welcomed and appreciated, there were equally more serious debilitating effects on these economies. Not only were there perceived inflationary effects, denied by the ECB, the weaker Euro zone member states suffered from a loss of competitive trade positioning. Prior to the arrival of the single currency, these member states, would at times recklessly, devalue their currency to regain their competitive edge, as was practiced frequently during the 1980s and 1990s. Now under the discipline of a single currency, this was no longer possible. The effects were noticed in the 2000s as business was lost to competitors, where nations such as China ate into the commercial fabric of these countries, witnessing industrial decline, unemployment and lower levels of exports. Leaders of the economies such as Silvio Berlusconi for Italy began to express concern about the Euro as many directed their anger at the Lira-Euro translation and the inability of the Central Bank to intervene in monetary management of the currency. These economies started haemorrhaging and the once attractiveness of the single currency started to wear thin.

## **The Euro and its first decade of existence**

The consequences of witnessing countries in the Euro zone either struggle to meet their debt or in the worst scenario not meet their debt and default has shown it has gone beyond the viability of these economies or even the viability of the Euro zone. Recession is expected in many Euro zone countries and this will mean high levels of unemployment, lower levels of investment, smaller government budgets and ultimately a decline in consumption. Less consumption means less demand imports and then we see the spread of the recession and economic decline.

Figure 1 European Government Bond Spreads



Source: Bloomberg

Given the nature of this crisis on the finance and credit industry, means that there will be less credit availability as banks will have their capita tied up in debt that cannot be repaid. Banks will apply restrictive policies and reduce their interbank loans as was witnessed during the global financial crisis in 2007-08. Even far off and less impacted markets like South Korea and Australia will not be able to escape from its impact.

It has been re-affirmed by numerous world leaders such as Obama "The biggest headwind the American economy is facing right now is uncertainty about Europe" (Middle East 2011) and Chinese leader Bao that the impact is global and it cuts across the developed and developing world simultaneously. IMF's chief managing director, Le Garde has also stated that the global economy is in danger similar to the Great Depression (Wall Street Journal, 2012). The OECD has itself issued these warnings in no uncertain terms:

*"Such turbulence in Europe, with the massive wealth destruction, bankruptcies and a collapse in confidence in European integration and cooperation, would most likely result in a deep depression in both the exiting and remaining euro area countries, as well as in the world economy" (Dawson 2011).*

The European difficulties have even cast doubt on Obama's re-election as one media outlet titled: "Euro casts a shadow on Obama's re-election" (Cooper and Lowrey 2011). The US have implored the European leaders to move quickly to aid the defaulting countries as its impact was being felt in the US as it was in other economies. In an equally concerning scenario many China observers have declared that China would also be a victim of a "hard landing" meaning that its high economic growth would suffer (Wall Street Journal, p. 11). In trade terms the message coming from the US Department of Commerce could not be any clearer:

*"Trade is the primary channel through which the U.S. economy is hit. The euro zone is the United States' third largest export destination, accounting for 15 percent of total U.S. exports. But the U.S. economy is relatively closed and euro zone exports accounted for only 2.1 percent of total U.S. economic activity in the second quarter" (Dawson 2011).*

There are many countries which are not directly tied to the Euro zone and therefore their proximity to this economic concern appears to be tempered. But as the connections become noted it takes little to realise that a decline in Chinese exports to Europe will ultimately have its impact on all segments of the Chinese economy and even economies such as Australia will find that the demand for Iron Ore and Coal will be reduced and in cyclical fashion even the spared Australian economy will ultimately become a victim as have the other global economies. The Wall Street Journal noted that manufacturing activity declined in China for the first time in three years (Winning & Brereton-Fukui 2011).

The Euro zone threatened downgrade was the ultimate in pessimism as every member state, including Germany and France were put on watch. This was further bad news on bad news and the spirit of concern spread across all three of the ratings agency. One media outlet explained:

*'Six Euro zone countries could have their credit rating downgraded in the next few weeks amid uncertainty over how the financial crisis will be resolved. Belgium, Spain, Slovenia, Italy, Ireland and Cyprus are all facing possible downgrades by ratings agency Fitch. But France's status is not under threat, despite reports that it was on a hit list of countries that would be downgraded' (Daily Mail 2011).*

Very few positive tidings are in stall for the Euro. The usually Euro positive The Economist warns that "Unless Germany and the ECB move quickly, the single currency's collapse is looming" (The Economist 2011). The effects on the global economy as warned by The Economist are however more credible. They state:

*'The panic engulfing Europe's banks is no less alarming. Their access to wholesale funding markets has dried up, and the interbank market is increasingly stressed, as banks refuse to lend to each other. Firms are pulling deposits from peripheral countries' banks. This backdoor run is forcing banks to sell assets and squeeze lending; the credit crunch could be deeper than the one Europe suffered after Lehman brothers collapsed' (The Economist, 2011 p. 11).*

It is these effects which are being seen as flow on effects to distant markets in such as Asia, Australia and South Korea specifically.

## THE EURO ZONE CRISIS AND AUSTRALIA

Australia has over the last four years defied all economic doomsday predictions of impending economic decline and recession. After the US sub-prime provoked global financial crisis caused economic recession throughout most of the developed world, against many predictions Australia continued to grow economically. Though it was not able to replicate the more than 3 percent growth of the decade prior to 2007, it maintained growth at more than 2 percent – one of the few western developed economies to register a significant economic growth. Unemployment did not seriously increase and there were mostly positive indicators quite different from other developed nations.

The impact of the Euro zone crisis has created significant discomfort with interest rates and distortions in the financial community. This has seen Australian Bank ANZ departed from the Reserve bank's directives which was significant on the working of a stable banking system (Gluyas 2011). Despite the fact Australian economy has been performing well due to its rich reserve of minerals, iron ore, coal copper which have all been in strong demand by China; Australian government has a very low debt level; Australia's four big banks have been hit with a ratings downgrade from AA to AA-.

Reserve bank deputy Rick Battellino was unashamedly confident that the impact of the Euro zone crisis would be limited. He clearly projected:

*'Australia, like other countries, will be affected by the events in Europe, but its strong government finances, healthy banking sector and relatively limited direct trade and financial exposures to Europe make it one of the countries best placed to weather the situation. Australia is also fortunate to be subject, simultaneously, to a resources boom that is resulting in unprecedented investment and therefore helping to sustain economic activity (Battellino 2011).'*

The reasons for Australia maintaining good growth are many but at the same time tied to factors which might be different with the Euro zone crisis. Australian banks had been structured with a stronger regulatory environment making risky schemes less available. Moreover Australian banks, while partially involved in the sub-prime credit scenario, remained substantially liquidity free and the Australian government at the time ensured that customer savings in banks would be guaranteed by the government through the banks. Most importantly the Australian government to the surprise of many responded audaciously and with speed to provide strong stimulus packages to keep as much of the production process ticking along. In the view of many (example Access Economics) this was the key reason why Australia's economy withstood the global recession and even registered modest economic growth. Other economists have speculated that the banking crisis in Europe will inevitably impact the availability of credit in Australia including mortgages and therefore affect the housing

market which is central to Australia's strong performance. Only days after discussing possible effects on Australia, Australia's top four banks received downgrades from S&P. According to one source:

*'Australia's big four banks have been hit with a ratings downgrade from AA to AA-. The revisions by Standard and Poor's come as ratings agencies tighten their definition of risk after the collapse of Lehman Brothers more than three years ago. Earlier this week, Standard & Poor's cut the ratings of 15 banks in Europe and the United States due to the revised criteria. These downgrades had been flagged but it is more evidence that banks are operating in a very risky and uncertain world (Ryan 2011).'*

The Euro zone crisis has also created significant discomfort with interest rates and distortions in the financial community. Recently Australia's ANZ bank, declared it was no longer respecting central directives of the Reserve Bank as the factors affecting Australian banking such as the Euro zone debt crisis were not being reflected in the decisions and philosophy of the Australian Reserve Bank (Gluyas 2011). This is a significant departure by a major bank on the workings of a stable banking system.

**Table 1. Australian-located Bank Claims on Euro Area Countries**

<b>Table 1: Australian-located Bank Claims on Euro Area Countries(a)</b>					
Ultimate risk basis, as at 30 June 2011					
	<b>Banks</b>	<b>Public sector</b>	<b>Private sector</b>	<b>Total</b>	
	\$billion	\$billion	\$billion	\$billion	Per cent of assets
<b>Euro area</b>	<b>66.2</b>	<b>4.1</b>	<b>16.9</b>	<b>87.2</b>	<b>2.7</b>
<i>of which:</i>					
Greece, Ireland, Italy, Portugal and Spain	2.2	0.7	3.3	6.1	0.2
France, Germany and the Netherlands	59.2	3.0	12.4	74.6	2.3
(a) Australian-owned banks and subsidiaries and branches of foreign-owned banks; exposures include those to foreign-owned banks booked in Australia.					
Source: APRA					

The fallout of the European sovereign debt crisis is both direct and indirect. Recently the French BNP Paribas, one of oldest banks to operate in Australia over 130 years ago, was forced to "wind[ing] back its exposure to syndicated loans in Australia as part of a global retreat by European banks as they shore-up their capital position" (Uren 2011). While concern about Australia's banks and economy being held to ransom by the European debt crisis has set in the upbeat view of the Australian economic fundamentals has been a point of relief. In a recent survey of leading companies in Australia, CEOs offered were more concerned that the government need to play a more leading role than the fear of the Euro zone crisis. Gail Kelly from the Westpac stated:

*"Despite the fallout from global economic volatility, Australia has one of the strongest economies of any developed nation. To take full advantage of our competitive position, we need to move beyond short-term politics to long term policy on issues of national significance" (Durie 2011).*

The other key factor in this strong economic performance was that Australia's minerals, iron ore, coal, copper remained in strong demand and especially from China. This maintained a strong export led growth which paralleled the strong stimulus package. Of course Australia's globally envious low to zero government debt became compromised and modest levels of government debt were accrued. Effect on commodity is clearly the great question asked. Is this unique situation liable to be repeated for Australia in the current Euro zone crisis? As China was in possession of approximately 30 percent of US government bonds, of a US government 100 percent government debt to GDP, it was assumed that China might play a role in the bailout of the Euro zone countries. This futile speculation was quickly put to rest by the Chinese government indicating it had economic problems of its own and the world should not be looking at it to resolve European problems.

The fear with the Euro zone crisis is that with major bail out projected and government austerity expected to affect the economy in negative terms, the economies in the PIIGS states will decline and consumption will decrease. As such these economies will experience high levels of unemployment and even

recession. This means ultimately that demand for Chinese products will decline and as such demand for resources and primary products from countries like Australia may well feel the effects.

**Table 2: Share of Merchandise Exports going to Euro Area**

<b>Table 2: Share of Merchandise Exports going to Euro Area (2010)</b>	
	<b>%</b>
United Kingdom	49
Sweden	39
India	15
China	15
United States	14
East Asia*	11
Japan	8
Canada	5
Australia	4

\* Excluding re-exports from Hong Kong and Singapore and oil exports from Singapore  
Source: ABS; CEIC; Eurostat; IMF; ONS; RBA; Thomson Reuters

However Australia's ability to maintain a positive redress to its economy this time will be harder even if China does not witness a significant economic decline. The reason is that Australia will not be able to engage in the same level of economic stimulus it did in 2009. Moreover the government has politically committed to a surplus budget by 2013 which reality that in the face of a series of economic global downturns, Australian resistance will eventually be worn down.

## THE EURO ZONE CRISIS AND CHINA

The euro debt crisis in 2008-2009 has affected China; however it is less severe than some other countries. EU is China's largest trading partner. In the following three areas the Euro zone crisis has impacted on China. First, the crisis between 2008-2009 has caused less demand in goods and services which lead to decrease of China's export during that period. Nevertheless, by Oct 2010, the trade has already increased by 20.2% (21cn.com). Secondly, out of the total of 2.4 trillion of China's foreign currency reserve, about 25% (600billion) is in euro currency (Ifeng.Com, 2010). China has lost about 350 million due to the devaluation of the currency (finance.ifeng.com). It anticipated that euro may continue to devalue this year for another 10% (Ifeng.Com, 2010). However, this may have limited affect on China's economic development as much of China's foreign currency reserve is invested on the currency market for the purpose of return. In another word, the foreign currency reserve is China's access cash. Therefore, should euro devalue by another 10%, the impact may be long-term rather than short-term if euro stays at the low level of value. Thirdly, it will put further pressure China to increase the value of its currency. This will lead to further reduction of its export which is not desirable. In 2011, the trade between EU and China was 17.3% in imports and 8.9 percent in export (Wto.Org, 2011). This makes the EU – China trade relationship a dependable relationship of each other.

However, the impact of long term EU crisis will be very seriously if the high trade dependency on China indirect trade with the EU via China are taken into account. The reason for it is that the crisis may cause a demand decline in the EU market that reduces Chinese export to the EU. As a domino effect, the low Chinese export and the sluggish EU economies. In order to understand the effects of Euro zone crisis on China comprehensively, we will look at the three above areas

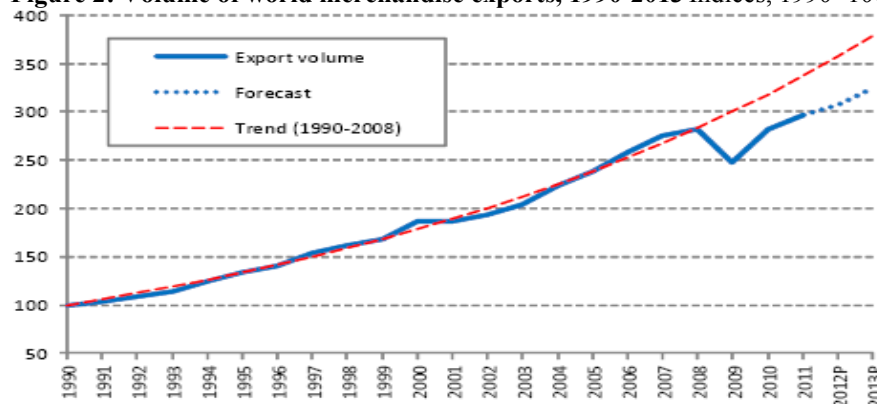
### The Euro zone crisis and the international trade between China and EU

China currently ranks number one in its trade with EU in the following areas: Other semi-manufactures, Machinery and transport equipment, Office and telecommunication equipment, Electronic data processing and office equipment, Telecommunications equipment, Integrated circuits and electronic components - Other machinery, Non electrical machinery, Electrical machinery, Textiles, Clothing, Other manufactures, Personal and household goods (Wto.Org, 2011).

EU has become China's largest trading partner since 2005. Since then China's trade with EU has been consistently around 15% remaining the position of the largest trading partner. Trade has been affected more severely during the 2008-2009 GFC period, in 2008, trade decreased to a level that was lower than 2007. This was especially reflected in the area of Euro imports. This is clearly impacted by the downturn of the Euro economic growth. It has improved after 2009 and 2010 (MOFCOM, 2012).

As it indicates in figure 2 below that the world trade has suffered a drastic down turn since 2008-2009, world trade expanded in 2011 by 5.0%, a sharp deceleration from the 2010 rebound of 13.8%, and growth will slow further still to 3.7% in 2012 (Wto, 2012) as projected by economist of WTO. This may also induce nationalism and trade protection especially among those countries which suffers more server declines. From the balance of payment argument, protectionism is a sound argument.

**Figure 2: Volume of world merchandise exports, 1990-2013 Indices, 1990=100**



Source: WTO Secretariat.

As each other's most important trading partners and strategic partners in a comprehensive way, China certainly sees its role to save the euro in the interests of China. On different occasions, Chinese leaders have repeatedly expressed their strong commitment to supporting European financial stabilization, including continuing to buy the bonds of the countries at the centre of the sovereign debt crisis and increasing investments in the Euro zone. This has greatly increased confidence in the euro (Xiao, 2011). In its most positive view, China sees "Crisis" both as challenges and opportunities which is reflected in the Chinese language. It is believed by the Chinese government that the Euro zone governments and the rest of the world to use the current crisis as an opportunity to deepen economic integration and currency union. In doing this, globalization, which represents the best hope of raising living standards in all nations, can be safeguarded (Xiao, 2011).

The trade volumes with major EU member nations had increased moderately during the crisis period. The negative trend of trade may come in the year 2012 if the crisis continues in the Euro zone that will affect the global market demand seriously. Due to the possible downsizing demand of global economy, the global economic growth in 2012 has been predicted lower than expected from 3.8 percent to 2.5 percent in the World Bank as well as from 4.0 percent to 3.3 percent in IMF. (The World Bank, 2012; IMF, 2012) The long lasting crisis can impact not only on the advanced markets such as USA and Japan, but also on emerging markets such as China negatively. Particularly, the trade dependency of China on the EU accounted for c.a. 20 percent in 2011. If the market demand of the EU decreases, Chinese export to the EU will also decline. It is clear that the EU zone crisis affects the global trade environment gloomy in coming years.

## The Euro zone crisis and the financial market in China

The actual investment figures of China's investment holding are not openly available in the general public domain. It is somewhat classified as 'state secrete' still by the government. Nevertheless, China's foreign debt investment has been limited to two of the most stable sources: the US treasury debt and the Euro bond. Its investment principle is for long-term and diversified. It is recognised that the Euro market is one of the most important portion in the past, currently and in the future (Li, 2010).



The importance of Euro currency to the world trade is it represents 20% of the total trading currency (Li, 2010). Therefore its existence and stability may impact on world trade and currency stability. It is analysed that its continuous devaluation is caused by: 1. The Euro debt crisis; 2. The possibility that US has been purchasing gold in large quantities in order to re-possess assets to reduce its financial risks. This has occurred because: 1. The US dollars are still the dominating international trading currency; 2. The US economy is slightly better than the general economic condition in Europe; 3. EU has more complicated problems than the US; 4. US treasury bonds and other forms of debt still has more advantage over EU due to its relatively perceived stability; 5. The US debt ratio compared with some of the EU members' is far better.

As the Euro zone crisis started with the Greek sovereign debt in May, 2010, the Chinese government started with sound discussions on the topic of assisting EU and possibly some of its members such as Greece and Italy (Bbcnews, 2012). The question is whether China still views its holding of debt as an investment or duty of the international community. The Greek's default in 2012 hit the financial market very negatively. The worst possible scenario was that major European investors such as Germany, France, and the UK pulling out their capital from other financial market in order to subsidize their colossal loss in the South European countries such as Portugal, Italy, Spain, and Greece as well as Ireland. This scenario could impact on China's export further. Owing to the possible serious impacts on the national economy, the Chinese financial watchdog and the Ministry of Finance have carefully monitored actions of European major investors under the Euro zone crisis period.

## CONCLUSION

What is clear in this current Euro zone crisis is that it has the potential of creating a global downturn which will spare few countries. The current context indicates that the world economy has not sunk to this point as yet. While some continents have been swept into economic crisis it has neither become global or a definitive depression. In this context, both Australia and China, for their own unique and idiosyncratic motives have not been subjected to the same degree to this downturn or flow on effect from the Euro zone sovereign debt crisis. In both cases however both economies feel the effects of the crisis but in specifically segmented sectors of their economies. In the case of Australia the greatest fear is that of the banking and credit sectors and the effects on borrowing and availability of credit while this does not really apply to China. The Chinese economy is certainly concerned with the decline in trade and exports which have been an important factor of China's economic growth in its trade with EU, the largest trading partner. However this fear may be less server to its economic growth should China manages its domestic economy well.

In addition both economies have reserves they can call on to cushion the more immediate effects of the financial crisis. Both countries expect some form of downturn. The sovereign debt ratio of the two nations is lower than the average of OECD member nations. However, they both carried out a vast capital investment as a rescue package for boosting domestic economies during the global financial crisis 2008. It means that the two governments may be reluctant to exercise the same economic policy tools if they have to deal with other possible global financial crisis caused by the Euro zone crisis.

On the other hand both countries and their respective governments conduct themselves in such a way as to indicate they are not expecting significant economic effects on their respective economies. Indications are that there is some degree of confidence that they will be proven correct. Despite such a positive outlook, the two nations may face economic challenges if the EU zone crisis continues in the long term and the market demand declines due to their industrial and trade structure as well as domino effects in the global markets. Different from Australia, China will continue to look at the Euro zone for its investment purpose as it is a comparatively stable market. In the longer term, China should expect improved returns from its Euro investment. Nonetheless, the time period of the return may be extended due to the crisis.

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# **TO P OR NOT TO P: AN INTERNAL MARKETING AND BRANDING PERSPECTIVE IN A SERVICE ENVIRONMENT**

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## **ABSTRACT**

*Employees of car rental companies are their most important asset. They require special attention to ensure their loyalty and commitment to deliver service excellence to customers. The brand's image depends on the role employees' play in delivering the service (Papazolomou & Vrontis, 2006:39). This research aimed to provide guidance to South African car rental companies to improve their respective brand awareness, enabling them to expand customer bases whilst retaining existing customers. The influence of the seven internal marketing mix elements (product, price, place, promotion, people, processes and physical evidence) on South African car rental customers' perception of brand awareness was investigated using structural equation modelling. The findings displayed the importance of internal processes in car rental companies.*

## **INTRODUCTION**

Employees of car rental companies are their most important asset. They require special attention to ensure their loyalty and commitment to deliver service excellence to customers. The brand's image depends on the role employees' play in delivering the service (Papazolomou & Vrontis, 2006:39). This research aimed to provide guidance to South African car rental companies to improve their respective brand awareness, enabling them to expand customer bases whilst retaining existing customers. The influence of the seven internal marketing mix elements (product, price, place, promotion, people, processes and physical evidence) on South African car rental customers' perception of brand awareness was investigated using structural equation modelling.

## **LITERATURE REVIEW**

Services marketing management is about servicing and caring about people (Kasper, van Helsdingen & Gabbott, 2006:9). Organisations across all industries recognise that services are becoming an important factor in all their business dealings to obtain a competitive advantage. Internal marketing views the employee as an internal customer, jobs as internal products and holds the view that all employees in an organisation serve both a customer and a supplier even in the event where one or both of these are internal colleagues (Zeithaml, Bitner & Gremler, 2006:4). The goal of internal marketing is to establish, implement and manage a customer-focused service culture, strategy and relationships, which should result in higher levels of service quality (Boshoff & Du Plessis, 2009:15). In order to achieve the goal of internal marketing, service organisations need to recognise that marketing strategies should not only be aimed at external customers, but should also be implemented internally and achieve better internal communication. Therefore, the internal marketing mix have to be of central importance in service organisations as each element represents cues that customers rely on in judging quality and

overall awareness of the brand (Mudie & Pirrie, 2006:6). The internal marketing mix elements that were used in this research include product, price, promotion, place, people, processes and physical evidence.

Brand awareness refers to the strength of a brand's presence in the customer's mind. Awareness is measured according to the different ways in which customers remember a brand, ranging from recognition (exposure to the brand) to recall (what can be recalled about the brand) to first in the mind (the brand appearing first in the mind) and finally to dominant (the only brand recalled) (Aaker, 2004:10). Brand awareness is created by increasing the familiarity of the brand through repeated exposure and strong associations with the relevant cues enabling the customer to recall the brand effectively. Brand associations are divided into three major categories, these being attributes, benefits and attitudes (Keller, 2009:139). Brand associations are categorised into attributes, which for the purpose of this study, refer to the trustworthiness of the vehicles, benefits and perceived quality, translating into the overall evaluation of the service customers receive, and the attitude, which refers to the customer's loyalty towards the brand (Kapferer, 2005:149).

Car rental companies need to implement internal marketing programmes that include at least some of the internal marketing mix elements to ensure employees deliver service excellence to customers thereby improving the awareness of their brand amongst external customers. Since employees of car rental companies create the customer's perceptions and awareness of the brand during the service encounter, it is important that they are exposed to internal marketing programmes. If the programmes are implemented effectively, customers have a satisfied experience and positive brand awareness is created. Furthermore, the homogeneity and heightened competition in the car rental industry are forcing car rental companies to consider the connection between internal marketing and brand awareness to achieve competitive differentiation. Avis, First Car Rental and Hertz are international car rental companies in South Africa that were willing to participate in the research. Due to the number of employees, the number of branches and the sizes of their fleets, Avis (large), First Car Rental (medium) and Hertz (small) could be seen as a representative sample of the total population of car rental companies.

## **PROBLEM STATEMENT**

The research problem is that the importance of brand awareness in a services industry, specifically the car rental industry, should be emphasised, therefore this research aims to determine the influence of the internal product, price, promotion, place, people, processes and physical evidence on brand awareness of car rental companies in South Africa, as perceived by external customers.

## **RESEARCH OBJECTIVES**

The primary research objective is to determine the perceived influence of the different elements of internal marketing on the brand awareness of selected car rental companies in South Africa.

The secondary research objectives are: To examine the theory relating to the Ps of services internal marketing and brand awareness.

- To determine whether there is a difference between the perceived influences of the different elements of internal marketing on brand awareness of selected car rental companies in South Africa.
- To determine which elements of internal marketing have the largest influence on brand awareness of selected car rental companies in South Africa.
- To develop an integrated framework for car rental companies that will improve their internal marketing efforts and thereby enhance their brand awareness amongst their customers.

The influence of the seven internal marketing mix elements on the brand awareness derived from the research objectives has been formulated in hypotheses that could be tested among customers.

## **RESEARCH METHODOLOGY**

Empirical research was used to test the objectives of the research. A quantitative process was used to seek data that could be expressed in numbers and statistically analysed (Zikmund & Babin, 2010:92). As recommended by Solomon, Marshall and Stuart (2006:113), this research included a descriptive survey design to gather the necessary data from a large sample size.

The sampling unit included customers of Avis, First Car Rental and Hertz over a period of three months, from November 2010 to January 2011. The sampling element represented was customers at Avis, First Car Rental and Hertz at OR Tambo, Port Elizabeth, Durban, Cape Town, George, Lanseria, Bloemfontein, East London, Kimberley and Nelspruit airports and branches in Johannesburg, Cape Town, Durban, Port Elizabeth, Bloemfontein, Kimberley, George, Nelspruit and East London. The selected sampling size was 5 600 customers who were sent the questionnaire. The required sampling size to perform structural equation modelling was 375-750 respondents and the actual sample size was 581 respondents.

Probability sampling in the form of directly proportional stratified sampling was used in terms of selecting only customers of the three car rental companies, not including employees. The purpose of this study was to determine the effect of internal marketing on the brand awareness perceived by customers, therefore, only customers were selected. The 80-20 rule was applied, as customers of the car rental companies rented vehicles regularly during the period of observation (Russell & Purcell, 2009:175).

The data collection was conducted by means of a survey. The questionnaire included a demographic section, a section on the seven internal marketing mix elements and a third section on brand awareness, namely brand recognition and brand recall (trustworthiness, overall evaluation and loyalty). Respondents also had to indicate the current situation as well as how they would perceive an ideal situation. A five point Likert scale, ranging from 'strongly disagree' to 'strongly agree', was used.

The data analysis consisted of conducting descriptive statistics, such as the frequency distributions and means in order to summarise the sample data. Structural equation modelling (SEM) was the statistical technique used for the empirical investigation because SEMs are well recognised as the most important statistical method to evaluate a series of simultaneous hypotheses about the impacts of latent variables and manifest variables on other variables, and take the measurement errors into account (Lee, 2007:1). Hair, Black, Babin and Anderson (2010:634) describe SEM as a multivariate statistical technique for building and testing statistical models, sometimes called causal models. The hypothesised relationships were tested by evaluating the point and interval estimates of the parameters provided during the SEM procedure. This allows the researcher to reject or accept hypotheses based on the results.

## FINDINGS

Descriptive statistics, namely frequency and percentage provide information on the demographics of respondents. The majority of respondents were in the age category 56 years or older (22%;  $n = 122$ ), followed by respondents between the ages 36 and 40 years (15.9%,  $n = 88$ ). Only 11 (2.0%) of the respondents were between 18 and 25 years old. The majority of respondents were male (69.4%,  $n = 385$ ), while females were represented by 170 (30.6%). The highest number of respondents were white (66.7%,  $n = 370$ ), followed by blacks (24.3%,  $n = 130$ ). The lowest number of respondents, 4 (0.7%) were "other", who referred to Middle Eastern, next were coloureds with 16 (2.9%) respondents.

The majority of respondents hired vehicles most often from Avis with 225 (40.5%) respondents and First Car Rental with 207 (37.3%) respondents. Most respondents use car rental for business travel as indicated by 343 (61.8%) respondents, while 212 (38.2%) respondents indicated that they use car rental for leisure purposes. The survey was done covering both business months and the December holiday season, but still the majority of customers 316 (56.9%) travelled for business purposes.

The mean scores and standard deviations of the airports and cities most frequently used were also determined. OR Tambo had the highest mean, 2.5 indicating that on average the most respondents rented cars from it. The second most popular airport was Cape Town with a mean score of 2.38, and Durban followed with a mean score of 1.73. Johannesburg was the city from which most cars were rented, mean score 2.12, followed by Cape Town with 1.86 and Durban with 1.76. The standard deviations of OR Tambo, Cape Town and Durban Airports, and

similarly the cities of Johannesburg, Cape Town and Durban had the highest standard deviations. By implication the larger the standard deviation, the more spread out the values around the mean. Therefore, the high values of these three airports and cities indicated a higher variability

## STRUCTURAL EQUATION MODELLING RESULTS

Hair et al. (2010:672) indicated that for a sample size larger than 250, as in the case of this study, the  $\chi^2$  normally resulted in insignificant  $p$ -values, even with a good fit. Therefore, more emphasis was placed on the other goodness-of-fit indices. Generally accepted values are as follows: Normed Chi-square ( $\chi^2/df$ ):  $< 3$ ; RMSEA: between 0.05 and 0.08; CFI:  $> 0.9$ ; TLI:  $> 0.9$ ; and SRMR:  $< 0.05$ . Three of the values, namely CFI, TLI and SRMR for all constructs were within the stipulated norms and showed a goodness-of-fit.

The endogenous constructs were also tested to determine their goodness-of-fit. The values indicated that there was a moderate goodness-of-fit. Recognition and trustworthiness especially did not provide a good fit, but since the TLI value for both was close to 0.9, it was still acceptable to maintain the constructs for further analysis.

In order to improve the goodness-of-fit of the final structural model the researcher also examined the paths between the constructs. The traditional marketing mix elements had no significant paths with any of the endogenous constructs. Interestingly, no paths were found between the endogenous constructs and place. One possible reason could be that the four traditional Ps, namely product, price, promotion and place are more important in a product market environment, while marketing mix elements, such as process has a more important role to play in a services environment, like the car rental industry.

To improve the fitness of the model, the traditional marketing mix elements, namely product, price, promotion and place, which seemed to be insignificant, were omitted for further analysis. After omission of the traditional four marketing mix elements, the goodness-of-fit of the exogenous latent variables had clearly improved. According to the criteria stated by Hair et al. (2010:672), the RMSEA (0.056) in the refined data was still within the parameter of the recommended  $< 0.07$  value. The CFI and TLI improved to be closer to the recommended 0.9 level (0.096 and 0.896 respectively), and the SRMR value of 0.056 was very close to the recommended 0.05 value.

The SEM results indicated a standard scaled Chi-square measure of 2877.632. The normed Chi-square ( $\chi^2/df$ ) for the hypothesised SEM model was 2.359. Since the normed Chi-square was within the recommended value of 3 or less as recommended by Hair et al. (2010:672), it can be concluded that the data had a reasonable fit with the model. As can be seen from the results above, the RMSEA equalling 0.055 indicated a good fit for the model as it was well within the recommended value of less than 0.07. The CFI (0.865) and TLI (0.860) were very close to the recommended 0.9 level and were regarded as indications of a satisfactory model fit. Although the SRMR was slightly above the 0.05 recommended value at 0.086, the goodness-of-fit of the model still proved to be satisfactory.

The estimated parameters of hypothesised relationships were not all positive and therefore indicated that not all independent variables had a positive influence on and a positive relationship with the dependent variables. The positive estimated parameters, namely brand recognition and physical evidence (0.014), trustworthiness and process (0.001), overall evaluation and process (0.033) and loyalty and process (0.043) indicated that the customers of car rental companies regarded these factors as satisfactory when they were utilising the services of the car rental company.

## FINDINGS

The fact that people (employees) had a negative influence on brand recognition, trustworthiness, overall evaluation and loyalty was an interesting finding, since the literature states that employees played a significant role in creating a positive customer experience, especially in a services industry. This means that car rental companies have to focus more on employees to ensure that they are correctly trained and equipped to deliver a positive service experience. Based on the findings of the research, the hypotheses were accepted.

## EQUIVALENCE TESTING

In this study, a comparison was made between the status quo (current situation) and ideal situation as perceived by customers of car rental companies. The fit of the status quo model yielded a fairly well-fitting model as indicated by the RMSEA = 0.053; CFI = 0.879; TLI = 0.869 and SRMR = 0.064. These results supported the validity of the status quo model. The ideal situation model tested even better with RMSEA = 0.045; CFI = 0.906; TLI = 0.897 and SRMR = 0.058. The results also supported the validity of the ideal model.

Although the results of the SEM testing indicated small differences between the two models, the differences certainly justified further testing. The normed Chi-square ( $\chi^2/df$ ) is 2.12, which was within the required parameters of  $< 3$ . The contribution of each group, namely status quo and ideal situation was 1089.167 (status quo) and 917.840 (ideal situation). The model demonstrated a good fit, suggesting that a unidimensional congeneric measurement model is plausible across all measurement occasions, and that additional tests may proceed.

The results of the structural functional testing indicated that there were no significant differences between the status quo and the ideal situation. This was an indication that perceptions of respondents were the same for the status quo and the ideal situation. Therefore, functional equivalence was demonstrated. In the last step the goodness-of-fit indices of the configural invariance, also called the Becker model, and the path coefficients or Byrne model were considered (Vandenberg & Lance, 2000:20).

The normed Chi-square ( $\chi^2/df$ ) for the configural invariance was 2.075, which was within the required parameters of  $< 3$ . The contribution of the status quo group was 2611.954 and the ideal situation group was 2240.558. The normed Chi-square ( $\chi^2/df$ ) for the path coefficients was 2.085, which was within the required parameters of  $< 3$ . The contribution of the status quo group was 2643.279 and the ideal situation group was 2290.889. The RMSEA, CFI, TLI and SRMR values were also close to the required parameters as was evident in Table 12. Since the goodness-of-fit indices indicated a reasonable fit, it further confirmed functional equivalence. Therefore, the developed SEM model can be applied in both the status quo as well as the ideal situation.

The results of the equivalence testing demonstrated that the developed SEM model was well-fitted to be used by car rental companies as guideline in their current situation. The model indicates to car rental companies which internal marketing elements have the most influence to create positive brand awareness amongst their customers. In order to strive towards a perfect and ideal car rental company, the same model can be used. Therefore, if car rental companies use the model as guideline to improve their internal marketing programmes, they should experience a positive attitude of existing customers towards their brand.

## MANAGERIAL IMPLICATIONS FOR CAR RENTAL COMPANIES

Although Avis, First Car Rental and Hertz have training programmes, employee benefits and incentive schemes in place, it is critically important to revise these programmes and schemes on a regular basis to ensure they are still relevant to employees' needs. Refresher courses are required to refresh employees' memories, and further education should be supported to allow employees improving on their job levels. Management should be visible to employees, and opportunities where employees can interact with the top management of the car rental company should be created. It is encouraging for employees to have a role model in the organization, and by regular interaction with role models, motivation to improve job performance is established. Car rental companies should also not make promises to employees that they cannot keep and not be dishonest. New procedures or changes within the organization have to be communicated to employees to allay any possible fears and uncertainty that could increase stress and demotivation.

Due to the nature of business of car rental companies, the various branches and some employees not being office bound, new electronic technology should receive specific attention, since mobile connections, such as cellphones and wikis would allow employees to remain connected to the organisation. Through the intranet, a

social network can be established and personal profiles can be shared to allow fellow employees to meet one another. It is however important that prior to deploying these networks, a policy is defined which clearly describes the purpose of the social network.

Car rental companies should continuously motivate their employees to empower them. Incentive schemes are another manner in which employees can be motivated to empower themselves and showing initiatives in assisting customers. These schemes do not have to be attached to a monetary value, but awards such as employee-of-the-month are an effective scheme to motivate employees. To enhance career development, bursary schemes could be introduced. Open discussions are encouraged because talking about values creates bonding with others and committing to a meaningful common purpose. In delivering the service, processes must be effective, especially when customers reserve vehicles, pick them up and return vehicles. However, to provide a satisfying experience to the external customer in delivering the service or product, the internal process has to be reliable and must have integrity. Car rental companies should review their internal process from time to time and make improvements where required.

## SUGGESTIONS FOR FUTURE RESEARCH

Future research regarding the topic of the research can be extended to include employees of car rental companies and comparative studies can be conducted between employees and customers. The research can also be extended to other services industries, such as the banking or insurance industries, and comparisons between those studies and this study can be drawn. The model and measuring instrument of this study can be applied to other industries, for example, the tourism and hospital industries could perhaps benefit. It is also possible that other constructs, not included in this study, can have an influence on the brand awareness of car rental companies' customers. It is observed that structural equation models, such as the one used in this study, suffer from the shortcoming that data can never confirm a model; it can only fail to disconfirm it. Thus, it is possible that other models with different constructs could possibly also fit the data collected, and therefore the internal marketing mix elements and brand awareness of car rental companies' customers need further empirical testing.

## CONCLUSION

Car rental companies function in a very competitive industry and therefore they should recognise the importance of the brand awareness they are creating with customers. They should be aware of the fact that the organisations' efforts to attract and retain customers are influenced by their internal marketing programmes. Furthermore, they have to realise that the seven marketing mix elements have an influence on the perceptions of the brand awareness of their customers. Thus car rental companies need to consider the importance of internal marketing in attracting and maintaining talented and knowledgeable employees. Internal marketing influences the excellence and consistency of service delivery provided by employees and experienced by customers, which ultimately results in positive brand awareness. Successful implementation of internal marketing programmes further ensures relationships being built with customers resulting in trust being established between the car rental company and its customers. A relationship of trust ultimately creates loyalty towards the car rental company, which leads to positive brand recognition and recall. Car rental companies that succeed in sustaining positive and strong brand awareness, experience economic growth and competitiveness.

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# TECHNOLOGY FORESIGHT ON EMERGING TECHNOLOGIES: IMPLICATIONS FOR A NATIONAL INNOVATION INITIATIVE

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## ABSTRACT

*Prospective studies about emerging technologies and their implications indicate critical choices ranging from global to national level, even to the individual firm or institution. Emerging technologies based on biotechnology, nanotechnology and information and communication technologies (ICT) have been shaping the future of some industries and transforming many others. In many cases, these technologies will determine the development and restructuring of industries as never before. Specially designed for enabling better plans and future decisions, technology foresight (TF) methods are used to foresee adoption or diffusion of innovations, mapping out commercially viable roadmaps for technological development. Technology foresight (TF) methods include several tools, often involving participatory mechanisms, as follows: (i) technology monitoring, technology watch, technology alerts (gathering and interpreting information); (ii) technology forecasting (anticipating the pace of technological changes); (iii) technology roadmapping (visual representation of preconized advances in technologies and markets, in order to define strategic targets and action plans for short, middle and long terms). This paper is concerned with a new innovation policy instrument adopted in Brazil, named National Innovation Initiative (NII), articulated by government, universities, R&D institutions, and private firms. It presents and discusses an integrated methodological approach for a TF study, specially designed for the purpose of this Brazilian innovation policy instrument, concerning three emerging technologies – nanotechnology, biotechnology and information and communication technologies (ICT).*

## INTRODUCTION

Emerging technologies based on biotechnology, nanotechnology and information and communication technologies (ICT) have been shaping the future of some industries and transforming many others. In many cases, these technologies will determine the development and restructuring of industries as never before. These changes, in turn, will promote debates and revisions of current regulatory frameworks and business corporate models towards a vision for a sustainable future. From the perspective of mapping the global future through innovation based on emergent technologies, this paper presents and discusses an integrated methodological approach for technology foresight studies, specially designed for the purpose of a Brazilian innovation policy instrument, concerning three emerging technologies – nanotechnology, biotechnology and information and communication technologies (ICT).

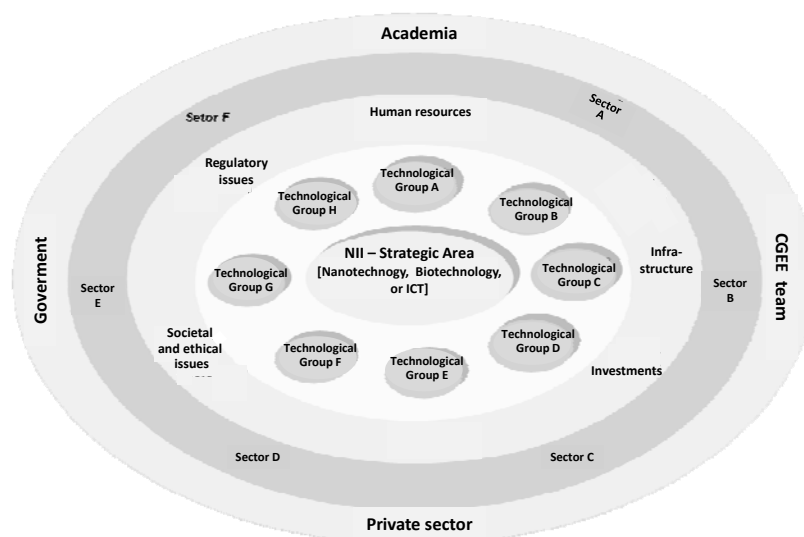
Technology foresight (TF) methods have being used to foresee adoption or diffusion of innovations, mapping out commercially viable roadmaps for technological development. Besides, governments can use national foresight studies to assess the course and impact of technological change and their implications for an

effective public policy. From the perspective of employing technology foresight tools to prospect advances of emerging technologies, we considered for the purpose of the research, from which this paper was originated, those methods involving participatory mechanisms, as follows: (i) Delphi technique; and (ii) technology roadmapping, preconizing advances in technologies and markets, in order to define plans and strategic targets for short, middle and long terms.

This paper is concerned with a new innovation policy instrument adopted in Brazil, named National Innovation Initiative (NII), articulated by government, universities, R&D institutions, and private firms. We present the conceptual model developed for forecasting the mentioned emergent technological areas and for building the respective future visions towards sustainable development (2025 horizon). The effectiveness of the prospective studies was directly linked to a methodological design established from an adequate precise definition of the questions to be answered, and the careful choice of participants and experts involved, from the three spheres: government, academia and private sector. From this perspective, the methodology encompassed: (i) definition of technological topics to be studied in each strategic area, based on a detailed analysis of previous studies; (ii) a survey focusing on general questions about the development of each strategic area in Brazil, (iii) a collective building of future vision, including the design of technological and strategic roadmaps, indicating the most promising applications and strategic opportunities for the country; and (iv) formulation of the NII's Strategic Agenda, according to six dimensions: human resources, physical infrastructure, investments, regulatory and ethical issues, and commercialization challenges.

Within the context of the National Innovation Initiative (NII) Project, a prospective study was developed for each strategic area, with the general objective of providing the bases for a structured agenda. This agenda comprised strategic guidelines and a set of short-, medium- and long-term supporting actions tied to the development of topics associated to each technological group, as depicted in Figure 1. More specifically, each prospective study (nanotechnology, biotechnology or ICT) aimed at: (i) analyzing, for each emerging technology (nanotechnology, biotechnology or ICT) relevant documents on national innovation policies and strategies, as well as national and international reports on market, regulatory and other aspects; (ii) building a future vision about the development of the technological topics associated to each strategic area in Brazil, starting with the design and analyses of technological and strategic roadmaps, thus allowing for the identification of the most promising applications and the priorities for supporting actions; (iii) defining a current outlook in Brazil concerning the three strategic areas. This should consider the six dimensions of analysis: human resources, infrastructure, legal, investments, market and ethical aspects, and societal acceptance of the new technologies (Table 1); (iv) developing and validating guidelines and actions proposals that will constitute the NII Agenda for each strategic area.

Figure 1 shows the scope of prospective studies on emerging technologies for the Brazilian NII Project



**Figure 1: Scope of Prospective Studies on Emerging Technologies for the Brazilian NII Project**

It comprises technological groups, defined for each strategic area (nanotechnology, biotechnology, and ICT), six dimensions of analysis (according to the NII common framework), the sectors most impacted by the development of emergent technologies, and major innovation mobilizing agents - government, academia and private sector.

As follows, Table 1 describes the six analytical dimensions considered.

**Table 1: Analytical dimensions for building the Agenda for National Innovation Initiative**

<b>Dimension</b>	<b>Description</b>
Human resources	Actions to promote education and competence building for the development of S,T&I in the NII strategic areas.
Infrastructure	Actions to consolidate and expand the physical infrastructure in public and private institutions focusing on the development of R,D&I in industry; to support greater interaction among businesses and S,T&I centers; and to stimulate creation of new technology-based firms.
Investments	Actions to mobilize the various financing mechanisms in order to: (i) provide new firms adequate sources of financing, including non-reimbursable options and venture capital/private equity; (ii) to evaluate the use and application of fiscal incentives to industrial renewal, innovation and international trade.
Legal/Regulatory issues	Actions to enhance legal and regulatory aspects that have direct impact on the industrial development, in order to expedite competitive entry of new technology-based products and processes in the home and international markets.
Societal and ethical issues	Actions focusing on the ethical and socio-cultural aspects related to the use of the new technologies in products, services and processes, and their societal acceptance.
Market issues	Actions focusing on the elements essential to the competitive insertion of Brazilian firms innovations in the home and international markets, on the productive chains, on entry barriers reduction and other relevant marketing aspects.

## THEORETICAL BACKGROUND

The theoretical background encompasses the following themes: (i) technology, knowledge creation and technology planning; and (ii) technology foresight and two selected prospective tools, namely Delphi technique and technological roadmapping. A critical analysis of many published definitions of technology (e.g. Floyd 1997, Whipp 1991, Steele 1989) indicates a number of factors that characterize technology, which can be considered as a specific type of knowledge. The characteristics which distinguish technology from more general knowledge types are that it is 'action-oriented' and focuses on the 'know-how' of the organization (Phaal et al, 2000; 2004).

In the business context, technology has been considered as resource for moving firm's operations or as a driver for generating new businesses. Resource-based views of the firm (Grant, 1991), such as core competences (Hamel and Prahalad, 1994) and capability approaches (Teece et al., 1997) have considerable links to technology. Regardless of the conceptual approach for technology employed, a key objective of technology management is to ensure that technological resources will be linked to market requirements. From this perspective, Phaal et al. (2000; 2004) consider temporal aspects as crucial for technology planning, both in terms of internal cycles within the firm (e.g. strategy, budgeting, planning and new product development cycles), as well as external factors (e.g. competitor activity, changes in the market, and technological developments, government support and regulatory rules, among others factors). With special attention to these issues, they developed a framework based upon the previous work by Andreasen and Hein (1987). This framework brings together knowledge and resource-based concepts and focuses on technology planning area in three 'levels':

- 'Business level': the organization and innovation networks, business portfolio, marketing, strategic planning and financial functions required to create value to the business into the future (Mintzberg, 1994);
- 'Product level': the manufacturing and operations functions, product and service portfolio and platforms, together with innovation and new product development processes (Twiss, 1986; Kline, 1991);
- 'Technology level': the technology, engineering and science skills and platforms of the organization, together with technology management processes (i.e. identification, selection, acquisition, exploitation and protection of technology, Gregory, 1995).

Effective alignment of technology with business objectives requires effective mechanisms for knowledge flow between the levels, in terms of 'pull' to ensure that business and market requirements are understood at the product and technology levels, and also 'push' to ensure that technological capabilities are understood at the product and business levels. Effective technology management requires an appropriate balance between 'market/product pull' and 'product/technology push'.

Knowledge concepts (e.g. explicit knowledge and tacit knowledge), patterns of creating knowledge as conceived by Nonaka and Takeuchi (1995), and organizational learning approaches (Argyris and Schön, 1978; 1996; March, 1991; Kim, 1993; Easterby-Smith et al., 2000) are particularly important for effective technology management processes, together with 'dimensions' of knowledge, such as 'know-why', 'know-what', 'know-how', 'know-who' and 'know-when' (Chai et al., 1999), which are reflected in the framework proposed by Phaal et al (2000; 2004).

Various types of mechanisms can support knowledge flows and learning across levels, including multidisciplinary teams, staff mobility, communication systems, business processes and management tools. Examples of such tools include technology foresight, including technology roadmapping and Delphi technique, together with portfolio approaches (e.g. Cooper et al., 1997) and technology valuation methods (e.g. Hartmann, 1998). As a matter of fact, one firm can only appropriate value of its technological assets and realize the potential competitive advantage if the knowledge that flows between the levels (business, product, and technology) are efficient and effective, creating a technological capability (Grant, 1991). Particularly, technology foresight has received growing attention among those involved in the shaping and implementation of science, technology and innovation (S,T&I) policies. Although evaluative analyses of foresight exercises have supplied evidence on relevant benefits, they also point to challenges in translating foresight results into actions which should be implemented by the government agencies, S&T institutions, universities and private firms. This issue will be further discussed in this paper.

The second part of the theoretical background refers to technology foresight, focusing, later, on two selected tools: (i) Delphi technique; and (ii) technology roadmap. According to a recent literature review on technology foresight (TF), carried out by Miles, from Manchester Institute of Innovation Research (UK), "the concept of 'technology foresight' took off in the 1990s, as European, and then other, countries sought new policy tools to deal with problems in their science, technology and innovation systems. Large-scale exercises drew in numerous stakeholders as sources of knowledge and influence, and the prominence of these exercises led to 'foresight' being used much more widely to describe futures activities of many kinds" (Miles, 2010, p. 1448).

Since then, new TF tools and techniques have been developed, promoting an unprecedented diffusion of forecasting, planning and participatory approaches to long-term issues. In consequence, prospective approaches are being more officially acceptable and legitimate than in the past (Miles, 2010).

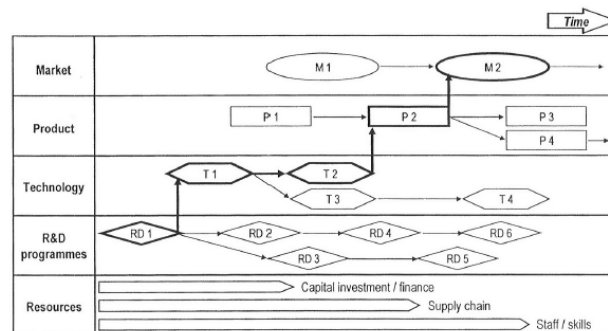
Technology foresight has been defined as a structured approach for setting priorities for science and technology (S&T) resource allocation (Keenan et al., 2003), but also as a dialogue process that support Martin and Irvine's five Cs, as follows: (i) concentration on the long term horizons, (ii) improved coordination among the stakeholders' visions, intentions, and actions, (iii) consensus on research areas that seem particularly promising, (iv) more intensive communication, and (v) commitment to the implementation of S,T&I policies (Martin and Irvine, 1989). Although much of the foresight literature has been concerned with the shaping of S,T&I policies, foresight has also been defined as 'a purposefully organized process bringing together expectations of diverse actors about a technology, to formulate strategic views about the future that take into account broad social and economic developments' (Webster, 2002, p 12).

The aim of technological foresight is to search for a shared vision of the most important demands and promising fields of research in the future and establish priorities, but also to articulate diverse actors around the problematic of an uncertain future and its complexity constraints, as well as life quality and society improvement. We selected two technology forecasting tools to be applied in the context of the Brazilian 'National Innovation Initiative' project: (i) Delphi technique; and (ii) technological roadmapping.

The Delphi technique is defined as a structuralized method of indirect and anonymous interaction between specialists by means of questionnaires, disposal of data statistics and control the feedback of the

information generated by the consulted specialists. (Adler and Ziglio, 1996). Its application in technology planning processes allows surpassing the undesirable effect and the difficulties in the mutual social relations, while preserving the positive aspects of opinion and knowledge diversity. More detailed descriptions on Delphi technique applications in several contexts can be found in the works of Helmer (1977); Dietz (1987); Woudenberg (1991); Rowe et al. (1991); Adler and Ziglio (1996); and Héraud et al. (1997).

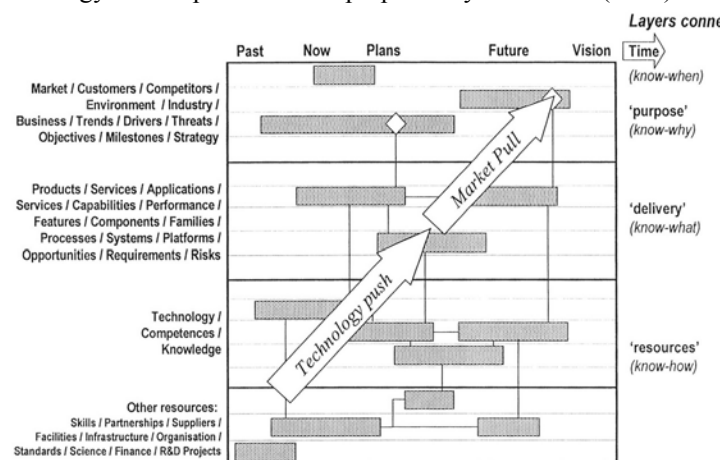
Motorola introduced technology roadmapping for over twenty years ago as a tool to support its processes of technology management and development of new products (Willyard and McClees, 1987). Over time, however, the application of the method was spread among many companies, so that today it is used even in the formulation of public R,D&I and sectorial development policies. The broad use of technology maps is due mainly to its flexibility in use, both in terms of map architecture and its construction process itself. Figure 2 shows the structure of a typical roadmap adapted from the original proposed by European Industrial Research Association (Eirma, 1997).



**Figure 2: Generic representation of a technology roadmap**

Source: Phaal et al, 2004.

This generic schema illustrates, in a didactic and visual format, the linkages between technology, product or service, and market is used to indicate the market and business drivers, while the lower layer(s) indicate technology development, and even the resources and political support mechanisms, that are required to deliver the layer(s) above. The construction of technology roadmaps enables various actors to apprehend organizational knowledge about strategic issues, as well as capture signs of change from the external technological and market environments. The building process also allows to systematize this knowledge under the aspects of ‘know-why’, ‘know-what’, ‘know-how’ and ‘know-when’, later helping to identifying bottlenecks and critical areas of decision-making along the trajectories drawn on maps in technology. Figure 3 shows a generalized technology roadmap architecture proposed by Phaal et al (2004).



**Figure 3: Generalized technology roadmap architecture**

Source: Phaal et al, 2004.

Besides integrating the two approaches of innovation ('technology push' and 'market pull'), this framework indicates the mentioned aspects of 'know-why', 'know-what', 'know-how' and 'know-when', as conceived by (Chai et al., 1999). A detailed theoretical and practical aspects of this TF can be found in works by Barker and Schmidt (1995); Groenveld (1997); Kappel (1998; 2001); Phaal et al. (2000; 2004); Albright and Kappel (2003) and Winebrake (2004).

## METHODOLOGY

In this section, we present a brief description of the methodology adopted in NII Project, and specifics issues of the application context, covering by the strategic areas considered, namely nanotechnology, biotechnology and ICT (emergent technologies shaping the future of several industrial and services sectors in a sustainable way). Complementarily to theoretical background, we present conceptual approaches selected for the construction of strategic and technological maps are described, as well as its graphical representation. For the analysis of impacts and limitations on future development of selected 'technological groups' (see Figure 1) concerning each strategic area in Brazil, research tools were designed and applied during the TF workshops focused on the development of sectors based on these emergent technologies.

For the purpose of construction of the technology roadmaps for NII (Biotechnology, Nanotechnology and ICT), it becomes crucial to focus the concept of innovation. According to the OECD, in Oslo Manual (OECD, 2005), "technological innovation of product or process" covers: (i) introduction of a new product or qualitative change in existing product; (ii) innovation of process that is new to an industry; (iii) opening a new market; (iv) development of new sources of supply of raw materials and other inputs; (v) changes in industrial organization. A technological innovation of product or process is considered implemented when it has been introduced on the market (product innovation) or used in the production process (process innovation). Technological innovations of product or process involve a series of scientific activities, technological, organizational, financial and commercial. The innovative firm is one that introduced technologically new or substantially improved products or processes within a reference period.

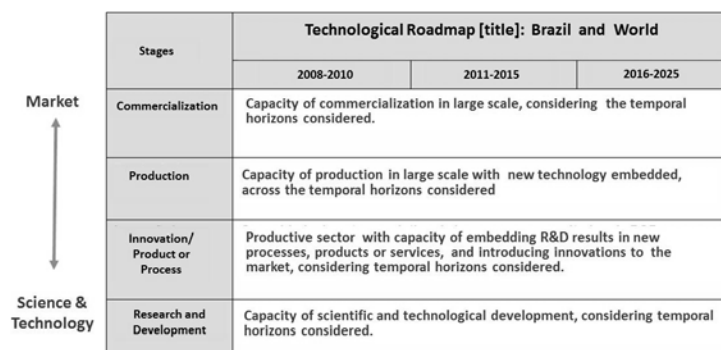
The research methodology proposed for the collective construction of the 'Strategic Area's Vision of a Sustainable Future': 2025 horizon' (considering biotechnology, nanotechnology or ICT as enablers or drivers) comprises the following steps: (i) definition of the topics to be analyzed, after a critical review of previous reports on each strategic area published by Centre for Management and Strategic Studies (CGEE), and also of international references; (ii) structured query, based on Delphi technique, regarding the market and regulatory drivers of business affected by technological advances on these three strategic areas (See Figure 1); (iii) collective construction of vision of the future (2025 horizon), comprising the design of technological roadmaps of portfolios of each strategic area (two maps – one for world state-of-art and the second for Brazilian potential developments, (iv) proposal of actions to be included in the NII Agenda (nanotechnology, biotechnology and ICT), according to the six dimensions, shown in Table 1.

In particular, for the construction of technology roadmaps, the conceptual model proposed by Phaal et al. (2000; 2004) was used to guide the design of the maps shown schematically in Figures 4 and 5. The construction of these roadmaps was conducted through workshops with invited members of industry, academy and government - main actors directly involved in the National Innovation Initiative Project, coordinated by Center for Management and Strategic Studies (CGEE).

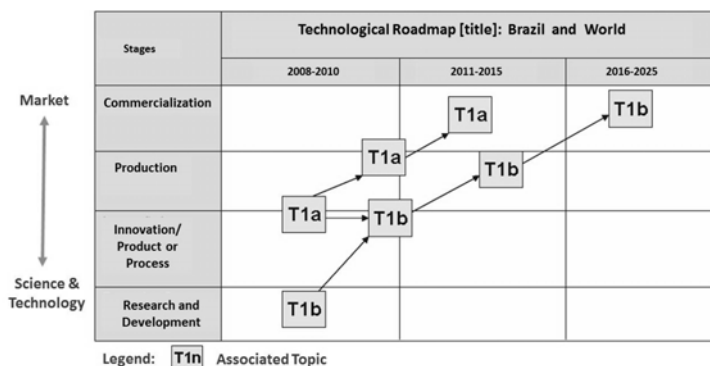
Generally, the construction of the maps begins with a workshop directed to the upper layers of Figure 2, which are associated to 'market and products/services' dimensions ('market-pull'). After this, the map is completed with another workshop focusing the lower layers of the map ('technology-push'), seeking to identify the technologies and support actions required to support the development of new processes, products and markets. Note that one of the basic assumptions for the construction of technology maps of prospective studies—object of the INI projects – is the adoption of the 'technology-push' approach, to the detriment of the 'market-pull approach', usually adopted in this type of prospective exercise. In the case of roadmapping the development of emerging technologies, due to their disruptive characteristic, it is proposed to adopt the 'technology-push' approach, combining, though, the two workshops in a single event, with the participation of representatives of industry, government, and academia. It would be incongruous to start from the 'market-pull' method, because of the

difficulty of predicting markets for technologies that have not been tested yet in innovation/deployment stages onwards. Figure 4 illustrates a customized technology roadmap adopted in the confection of the support material for the workshops. It is worth mentioning that, in the design phase of the methodology, a few adjustments had to be made on the generic model of Figure 3, in order to meet some relevant aspects of the specific context of the NII Project.

The technological map (Brazil or world), with the respective topics associated with the applications of emerging technologies in a particular industry, is presented in Figure 5. The associated topics are listed in this Figure with alphanumerical references. Its market and technological trajectories were designed during the prospective exercise, according to the developments expected to occur over time (2025 horizon).



**Figure 4: Conceptual Model for Technology Roadmapping in the Context of NII Project in Brazil**



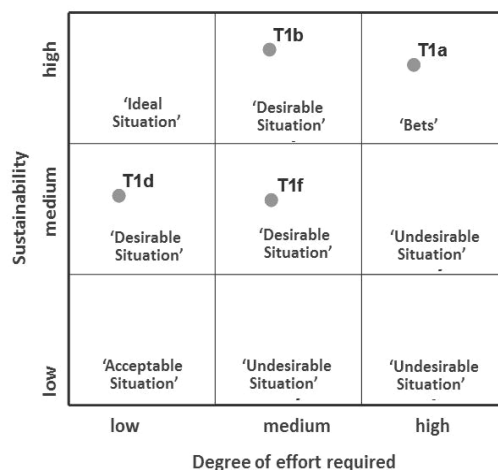
**Figure 5: Schematic Representation of a Technology Roadmap customized for NII Project**

The prospective exercise included, in the Brazilian technological roadmaps, the identification of decision points, which require actions to support the achievement of the vision of the future represented by trajectories of the topics under discussion. The conceptual framework adopted for the construction of the technological roadmaps, as mentioned earlier, was based on referential approach developed by the Centre for Technology Management, University of Cambridge, England. The steps concerning the analysis of social and economic impacts of technologies and the construction of the strategic research development and innovation portfolio (RD&I) are based on the model of assessment of sustainability of technologies, proposed by Almeida (2006). This model is adopted by Petróleo Brasileiro SA (Petrobras), particularly by its R,D&I function, and has already been used in prospective studies published by CGEE, e.g. Technological Roadmap of Green Chemistry in Brazil: 2030 (CGEE, 2010).

The strategic portfolio represents graphically the synthesis of the results of the strategic analysis of technologies and must be constructed plotting the technologies examined, according to two axes: (i) sustainability, resulting from the evaluation of the social and economic impacts of each technology; and (ii) degree of effort required for the materialization of respective technological trajectories, considering the efforts

necessary for human resources capacitation; consolidation of physical infrastructure; investments; setting/reviewing regulations regarding clean production feasibility and competitive and sustainable marketing/distribution. The graphical representation can be seen in Figure 6.

Thus, for each dimension of analysis and temporal horizon, a set of actions have been proposed to support the trajectories of topics preconized in the Brazilian technology roadmaps. These actions were directly linked to the decision points marked in respective roadmaps, according to the six dimensions shown in Table 1. Finally, it is important mentioned that the effectiveness of a prospective study is directly linked to a methodological design with a precise delimitation of the questions to be answered, a systematization of processes, a careful choice of participants and specialists involved and an evaluation of the process (by milestone), that allows course corrections with a view to their improvement as a whole.



**Figure 6: Generic representation of strategic R,D&I portfolio**

## RESULTS

The technological roadmaps and the S,T&I strategic portfolios developed for the themes (in the of nanotechnology), industrial and services sectors (biotechnology) and mobilizing applications (ICT) allowed the identification of the most promising innovation opportunities, according to two criteria: (i) sustainability, calculated from the economic, social and environmental impacts resulting from future applications, and (ii) degree of effort required to achieve the position defined in the technological roadmap for Brazil, and which should reflect the existence of barriers, uncertainties, and technological and commercial risks.

From this structured process of analysis it was possible to spot applications considered strategic for the country in four different levels: (a) 'bets', related to topics having high sustainability but requiring intense effort, in most cases due to their embryonic stage; (b) 'ideal situation', related to topics having high sustainability and requiring less effort, on a comparative basis; (c) 'desirable situation', when topics have high sustainability but their development would require an average degree of effort; and (d) 'acceptable situation', related to topics having average sustainability and requiring an average degree of effort, on a comparative basis, in most cases through partnerships and international cooperation.

It is important to note that the three prospective studies resulted from a collective endeavor, involving about 180 participants, representing academic institutions, R&D centers, industries and government agencies that were related to the different fields in the focused technological areas. Based on the results of these studies, and with the commitment of all participants, the 'Strategic Agenda' for the implementation of the NNI concerning the three areas - nanotechnology, biotechnology, and ICT – was developed.

The methodological approach adopted in the studies required multiple reciprocal relationships during the prospective workshops, especially in the occasion of identification of supporting actions required in each of



the six dimensions (see Table 1) to achieve the desired position defined in respective technological roadmaps (regarding Brazil). For each dimension (e. g. legal/regulatory issues), representatives of academia, industry, and government had to consider their individual (and institutional) traditional functions and also ‘the roles of others’, since we employed the technique of cross-fertilization of ideas.

## CONCLUSIONS

This work aimed to present a common methodology for building the future vision (2025 horizon) and for formulating a Strategic Agenda concerning Brazilian NII Project (nanotechnology, biotechnology and ICT as enabler or drivers). The methodology, based upon two selected TF methods, encompassed an application of Delphi technique, for filling up the upper layers of respective technological roadmaps, and technology roadmapping *per se*, developed in workshops carried out for each focus area (that corresponded to the three emergent technologies).

Considering the high quality outcomes from these prospective workshops, we can say that the conceptual model adopted in TF exercises was appropriate for the intended purposes: to foresee emergent technological areas, through technology roadmapping and use of Delphi technique, prioritize R&D efforts in these areas in Brazil in a systemic way, with the support of strategic technological portfolios (Figure 6), and to build the respective future visions towards sustainable development (2025 horizon). The effectiveness of these prospective studies confirmed that it is crucial a proper methodological design established from a precise definition of the questions to be answered, and the careful choice of participants and experts involved, from the three spheres: government, academia and private sector. Noteworthy are the following differentials of the methodological design in relation to current practice of TF studies concerning emergent technologies, more precisely:

- Linking of direct supporting actions that are part of their strategic agendas for implementation of the National Innovation Initiative with the trajectories of technological and market related topics, in the horizons established;
- Inclusion of social and environmental criteria in assessing the impacts of technology in focus and building strategic portfolios (sustainability versus degree of effort );
- Construction of technological roadmaps in one single workshop event (by strategic area), enhanced by the employment of the technique of cross-fertilization of ideas.

The main findings of the three prospective studies reinforced that there are certain sector- and technology-specific patterns of innovation that need to be taken into account in public policies and corporate strategies aligned to a vision for a sustainable future. It was assumed that the evolution of these sectors based on the diffusion of emergent technologies would have a great impact on the achievement of the vision for a sustainable future in 2025.

The TF exercises developed during the workshops have produced several important insights that are useful for developing public policy programs intended to stimulate and support innovations concerning biotechnology, nanotechnology, green chemistry, and ICT prospects. They could help companies to establish their corporate strategies, and also academic institutions to define their R&D orientation. The ‘technology roadmaps’ and ‘strategic technology portfolios’ highlighted how a sustainable future can be supported or driven by emergent technologies, considering social, economic, and political forces, and providing decision-makers with relevant information to their future strategic choices.

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# **RUSSIAN PRACTICE OF FINANCIAL MANAGEMENT OF THE ENTERPRISE**

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## **ABSTRACT**

*The primary goal of the enterprise in modern economic conditions improve management and increase market value by creating economic and innovative mechanisms to adapt the company to change the external environment, its economic growth, the introduction of advanced technologies and quality products, create another key competitive advantages. Basic economic conditions for the continuous increase of investment resources in developing new products, technologies and control systems that combine to form an innovative environment in the growth process. Research on ways to effectively manage business growth of its market value in terms of investment and quality cost, it seems urgent problems of the economy critical to economic growth in national and overall market scale. There has been a gap between economic theory (economic models of quality) and practice (quality management). Basic economic concepts and models used at decision-making by economic subjects, as a rule, are based on interrelation of quantitative and financial (price) variables, whereas quality is usually considered ceteris paribus (invariable).*

## **INTRODUCTION**

The main components of a company's market value illustrate the new and the traditional approaches to building components in the market value of a company. The traditional view implies investment with the use of assets and profit. The new approach includes optimization of capital structure, DFL, disinvestment, innovation, intellectual capital, asset restructuring. Scientists rarely take into consideration the following questions:

- Does the task of optimizing the DFL and the company's borrowing level define contents of economic models?
- How does DFL influence investment appeal of projects and risks?
- What are features of the optimization the company's borrowing policy?
- Methods of analyzing economic efficiency of the company's activity.

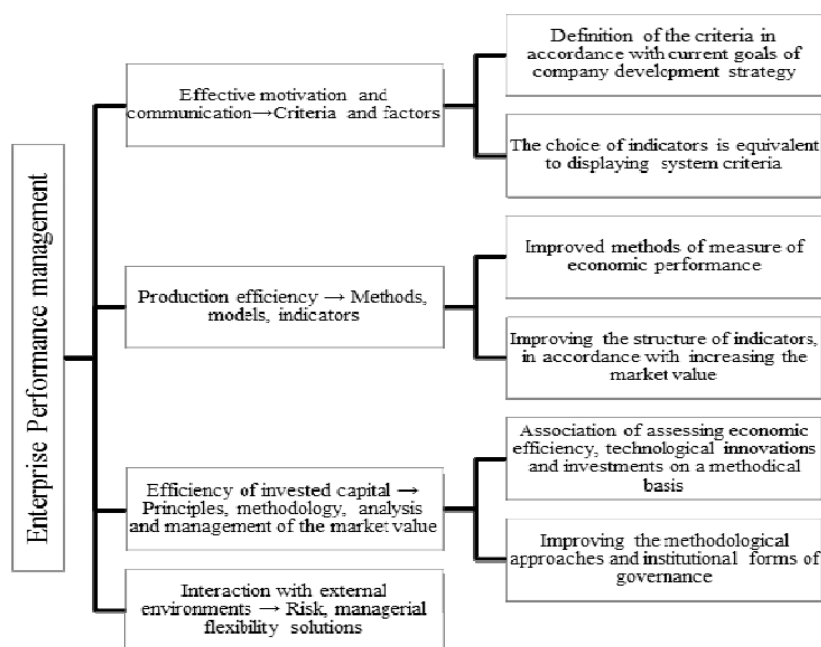
The article research served both the interest of the organization performance, which was to measure how profitable the company's supply chain was, and the interest of science, namely to produce knowledge about new ways of looking into supply value based management and quality cost management. Many authors [Stewart 1991, Young and O'Bryne 2001, Stephens and Bartunek 1997; Milunovich and Tsuei 1996, Jackson 1996, Mayfield 1997, O'Bryne 1996, Biddle and etc. 1999, Martin and Petty 2000, Feltham et al. 2004, D.J.Obrycki and R.Problems of the economic theory are not generally considered in such a «coordinate system». However, necessity of such approach is becoming more and more obvious.

## **ECONOMIC EFFICIENCY AND MANAGEMENT OF ENTERPRISE'S INVESTMENT**

Now the enterprise is treated as an investment and financial system. And its operation is based on the basic concepts of management (production, investment, innovation and financial). Regarding the economic criteria for effectiveness of enterprise management, the role of the fundamental factors of cost-efficiency is the investments

over time (temporary price), price of capital and resources, as well as the result of investment activity in the form of added economic value (profit).

To actualize efficiency of asset management company on the basis of the cost approach make such as the development of information technologies; the rapidly changing situation of the stock market; growing process of mergers and acquisitions; agency problem (handover management managers); «commercialization» or practical implementation of intangible assets and intellectual property rights that results in the need to assess their market value and asset management. Insufficiently investigated the relationship between the interests of owners, managers and other parties. There is no single point of view, whether the market value of enterprises synthesis of economic efficiency of enterprises, which reflects the requirements of the stakeholders to the choice of strategy for the management and development. There are restrictions on the practical application of the value of the concept in the management of the adapted management methodology and mechanisms for the formation of the market value of enterprises that are available for management of the enterprises in conditions of innovative development and environmental variability (fig.1).



**Fig.1. Structure of economic efficiency in terms of innovative development on the VBM approach**

When analyzing the market value of the principles and methods of economic analysis of the costs and benefits (models and criteria for investment analysis; analysis of the cost (DCF, discounted cash flows method)); analysis of uncertainty and risks (methods of mathematical economics, economic theory options, margin). Table 1 provides a comparative analysis of two main approaches (Iakovleva E. 2011)

**Table 1. Comparison of methods of valuation: DCF model and EVA**

Collation	EVA	DCF
The cash flow	Only part of the future cash flows that are «add» in the enterprise market value	The all cash flow forecast for a long period of time
To determine the current value of enterprise market value and monitoring her change	Close links current and long-term indicators	Evaluate at any given time, but it does not monitor
View all previously generated assets	Taking into account all the invested assets	Does not take account of past activities

Specify the factors influencing the economic efficiency of enterprises. Evaluation of economic efficiency from economic and innovation are the numerous scientific controversies. To date, no systematic look at managing a collection of factors in the market value of the enterprise, its formation and dynamics. In the table 2 shows that

investing in innovation model EVA (Stewart 1991), to create a market value in the observed period shall be the ratio (where ROI-return on invested capital), which is a measure of performance (O'Byrne 1996). Similar terms (or) must be observed for DCF (Yin 2003). Economic efficiency and optimal management of enterprise available assets is determined by many factors, however, innovative development of the enterprise makes a difference in the approaches and methods for assessing its effectiveness, which has specific requirements for the measurement of activity which are not reflected in the traditional approaches. Hence, the market value of the company is part of an overall assessment of economic efficiency, feature and determining factor which led to the development of the innovation process, dramatically changing all internal and external conditions. For the management of the market value of enterprises need to identify new methods, criteria for assessing the efficiency of asset allocation (for example, the economic value added - EVA).

**Table 2. Criteria for evaluating the effectiveness of management of the market value of enterprises**

Methods	Creating value	To stabilize value (equilibrium)	Damage (loss) value
DCF	IRR, MIRR, ROI > WACC	IRR, MIRR, ROI = WACC	IRR, MIRR, ROI < WACC
EVA	EVA > 0, CFROI > $k_m$	EVA = 0, CFROI = $k_m$	EVA < 0, CFROI < $k_m$

As you can see from the table 2 DCF method ignores information financial reporting on existing assets and a significant portion of the cash flows that are not completed during the projection is reflected in the form of so-called extended value (according to the principle of residual income). Indicator EVA less susceptible to these effects, because it is based on real investment, economic profit forecast of cash flow, adding value. A key feature of the EVA is a combination of new requirements for assessing the efficiency and standard reporting enables adjustment of the financial indicators, including capital, to reflect the typical character, repeatability and exceptional speculative effects (Mayfield 1997).

## OPTIMIZATION MODELS FOR BORROWING FINANCIAL LEVERAGE EFFECT

As it is known, the return on equity (ROE) for a company which uses external (borrowed) sources of financing is determined by the formula (1) (Damodaran 2002):

$$ROE = ROA + (ROA - \bar{X}) * \frac{D}{A - D} = X + (X - \bar{X}) * \frac{Y}{A - Y} \quad (1)$$

« $ROA = X$ » is profitability of the company's assets (profit/assets);  $\bar{X}$  is the norm for profitability of assets or the cost of credit on a perfect competitive market – a market (risk-free) interest rate; « $D = Y$ » is the value of the company's borrowed capital (D); A is the value of the assets. The denominator is the company's equity capital (E) ( $E = A - D = A - Y$ ). The financial leverage effect (DFL) (Damodaran 2002), which is the second item on the right side of the formula, can be both positive and negative for the company, depending on the value of the return on assets (ROA). In principle, the positive value of the financial leverage effect should be considered as a positive trend in the financial position of the company, because the effect (DFL) increases the return on equity (ROE) of the company. When the financial leverage has a negative effect (DFL), the trend is opposite, which can be partially offset by a decreased value of the borrowed capital (D). The possibility for the company to optimize the financial leverage effect (DFL) is of great practical importance in terms of financial planning and borrowing policy. To identify the value of the borrowed capital (D) which would ensure the maximum financial leverage effect (DFL) is to find the best financial plan. However, this is not possible in the concept of MM based on the theory of a perfect competitive market, absence of risks and risk-free interest rate.

Optimization of the financial leverage effect is usually considered on the basis of the so-called «practical approach», which involves resignation from the concept of MM. Then the interest rate is not risk-free, because it depends on the amount of borrowings (D). The bigger the value of borrowing D is, the greater the repayment risk (credit risk) and the risk component of the interest rate which reflects it are. It is commonly assumed that the interest rate is increasing function of the amount of credit  $\bar{X}(Y)$  or  $\bar{X}(D)$  when  $Y = D$ , which is continuous and twice differentiable with the decreasing rate of growth. In this case, the financial leverage effect (DFL) is a nonlinear function, with a maximum of  $DFL = (X - \bar{X}(Y)) * \frac{Y}{A - Y}$ . It is obvious that this relation

should reflect the well-known neoclassical principle of «the diminishing ultimate performance», but its argumentation in analytical form does not exist. Such an approach to optimizing the DFL is practical, cannot have rigorous argumentation and is individual for each company. Therefore, the determination of the optimal DFL is difficult due to the non-linearity and uncertainty of function  $\bar{X}(Y)$ . We shall take the possibility for optimizing the DFL in terms of the concept of MM. The DFL effect on the company's performance must be studied with a constant value «A» in order to exclude investment activity. Otherwise, if you change the value «A», the performance analysis will reflect the investment activity effectiveness, but not the capital structure influence. The DFL in the formula (1) is defined by two parameters («X» and «Y»), with non-linear relationship between them. In principle, the DFL is useful for the company, although increased borrowings lead to increased financial risks. The company's rational policy in terms of borrowing and improved capital structure is to retain the achieved DFL value provided the DFL meets the company's regulatory requirements or criteria for the optimal financial and economic position of the company or its improvement through impact on the key parameters. This approach uses the microeconomic principle of marginal analysis according to which in each period the achieved values of the key parameters are regarded as constants and variable values are incremental values of the parameters, which, unlike the parameters themselves, can have any character, positive (increase) or negative (reduction).

To optimize the company's borrowing policy, certain limitations reflecting the logic and contents of the economic processes in the company must be taken into account, as well as resulting from accepted and objectively existing resource or regulatory limitations. The limitations can be set both on the relationship between optimizing variables and separately on variables. The economic policy of the company is expressed by the requirement of non-negativity of the DFL change once the parameters «X» and «Y» are changed. The mathematical expression of this condition is non-negativity of the total DFL differential (2):

$$dDFL = DFL'_X \Delta X + DFL'_Y \Delta Y \geq 0 \quad (2)$$

Where  $\Delta X, \Delta Y$  – increment (algebraic) «X» and «Y»;  $DFL'_X, DFL'_Y$  – the first derivative of the DFL on the «X» and «Y» respectively.

The application of this principle (1) determines the linear relationship of the DFL change to the conditions for new variables  $\Delta X$  and  $\Delta Y$  and algebraic expression  $DFL'_X, DFL'_Y$  conversion (2) received:

$$(A - Y) * Y * \Delta X + (X - \bar{X}) * A * \Delta Y \geq 0 \text{ or } \Delta Y \geq -\frac{(A - Y) * Y}{(X - \bar{X}) * A} * \Delta X \quad (3)$$

Since receiving  $\Delta X = \Delta(X - \bar{X}), \Delta Y = -\Delta(A - Y)$

$$\text{And after conversion a further condition is: } \frac{Y}{A} \geq \frac{\Delta(A - Y)}{\Delta(X - \bar{X})} \quad (4)$$

The condition implies that the elasticity of the company's equity ( $E=A-Y$ ) in terms of the assets profitability must not exceed the company's borrowed D. To maintain the DFL on the fixed level, the changes  $\Delta X, \Delta Y$  should be linearly connected (3).

Linearization of the variables' interconnection occurs under the above condition. The connection between the variables  $\Delta X$  and  $\Delta Y$  is also set on the basis of the company's bankruptcy resistance. It is expressed through the maximum acceptable proportion of the borrowed capital to assets, which is not more than half. The company's assets (sources) in their aggregated form have three components: (D), profit (NP),  $Y = E$ . Provided the assets are fixed, the following condition is correct:

$$Y + \Delta Y \leq (\Delta X + X) * A + E \text{ or } \Delta Y \leq (\Delta X + X) * A + E - Y \quad (5)$$

The left side of the equation must be nonnegative, because the company's own capital sources must always be bigger than its borrowings. The limitation which sets the connection between the variables  $\Delta X$  and  $\Delta Y$  is also the required amount of profit to be made by the company. Under the condition of the asset permanence, which has been accepted above, the following equation is correct  $E + (X + \Delta X) * A + Y + \Delta Y \geq A$ . Once the assets are fixed and no investments are made in the company, «surplus» profit may be used to pay dividends. The company's profit is the product of assets profitability by the value of assets ( $X * A$ ).

Given that,  $E + X * A + Y = A$  by definition, we obtain  $\Delta Y \geq -A * \Delta X$  (6)



Change of D also has a natural limitation. Reduction of any value cannot exceed the value itself, and its increase cannot exceed the value of assets:  $-Y \leq \Delta Y \leq A - Y$  (7)

The restrictions for the return on assets are determined by the demand of the standard return on any investments, which are investments in its assets, so:  $X + \Delta X \geq \bar{X}$  or  $\Delta X \geq \bar{X} - X$  (8)

Essentially, there are no upper restrictions for the return on the company's assets; the bigger they are the better it is. However, investments may be made not only to expand the assets (in the case we consider they cannot be made since the assets are fixed), but also to reduce production costs. With a fixed value of assets the company's expansion and profit growth due to increased sales becomes impossible. But profits can be increased due to the reduced production costs which will also entail the increased return on assets. It is clear that costs can be reduced, but the value of costs themselves is limited by the nature of this factor. Negative economy is impossible (it is impossible to save more than spend).

The upper restriction for «X» is determined by production costs «C», which are not included in the parameters defining the DFL:  $\Delta X \leq C$  (9)

The target function is maximizing the net cash flow:  $(X + \Delta X) * A - (Y + \Delta Y) * \bar{X} \rightarrow \max$

It is expected that loans are at market interest rates. Maximizing net cash flow represents the market value of the company for a period of time. After graduation from the target function constant, we get:

$$\Delta X * A - \Delta Y * \bar{X} \rightarrow \max \quad (10)$$

Thus, the task of optimizing the DFL and the company's borrowing level is determined by the following conditions:  $\Delta X * A - \Delta Y * \bar{X} \rightarrow \max$  (10) the objective function, when you restrict:

$$\Delta Y \geq -\frac{(A - Y) * Y}{(X - \bar{X}) * A} * \Delta X \quad (\text{as in formula 3}); \Delta Y \leq (\Delta X + X) * A + E - Y \quad (\text{as in formula 5});$$

$$\Delta Y \geq -A * \Delta X \quad (\text{as in formula 6}).$$

Then  $-Y \leq \Delta Y \leq A - Y$  (as in formula 7) and  $\Delta X \geq \bar{X} - X$  (as in formula 8),  $\Delta X \leq C$  (as in formula 9) can be achieved with linear programming or any other suitable method. Consider an example. In the original set: situations (table 3):

**Table 3. Optimizing the DFL and borrowing enterprise level**

Indicator	Designation	unit of measure	Value	Note
Assets	A	monetary unit	1	Fixed
Profitability assets	X	share of monetary unit	0.15	Set
Percentage of the borrowed funds (D)	Y	share of monetary unit	0.3	Set
Regulatory returns on profit	$\bar{X}$	share of monetary unit	0.1	Norm
Net income (profit)	NI=A*X	share of monetary unit	0.15	Calculated value
Maximum possible profitability	C	share of monetary unit	0.8	External restrictions

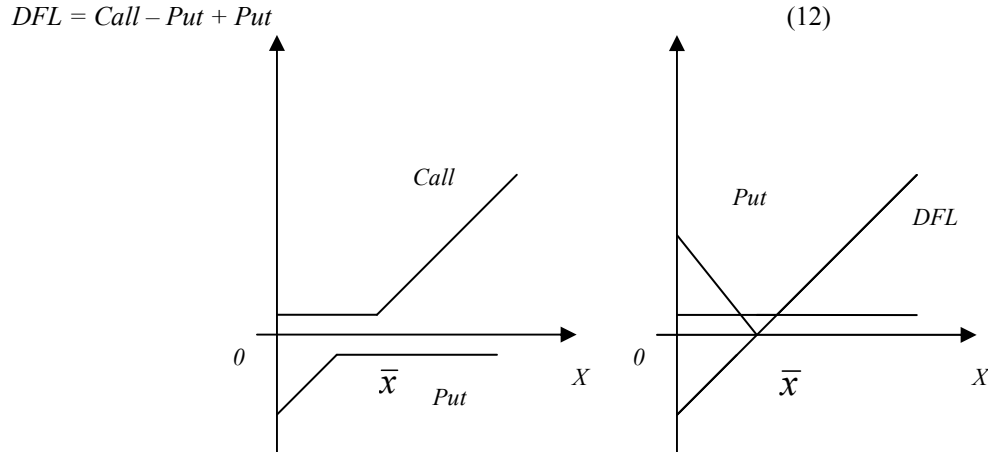
Assets comprise D = Y = 0.3 arrived NI = A\*X = 1 \* 0.15 = 0.15, E = 0.55, C = 0.8. All the signs were used.

Optimal solutions for optimizing the DFL in table conditions:  $\Delta X = 0.8, \Delta Y = -0.3$  the optimal value of the objective function, while limiting 0.83 monetary units. Limited «C» is not associated with the other parameters and may vary depending on external conditions. The value of C = 0.5, optimum DFL value for table condition is as follows  $\Delta X = 0.8, \Delta Y = -0.3$ ; optimal value of the target function with these limitations is 0.53 monetary units. The results are understandable. The profitability of the company's assets above normative within the existing restrictions should proceed under rule «for lowest price, borrow more» till DFL is maximum.

With a fixed price of borrowing at the market interest rate (in this case  $\bar{X} = 0.1$ ) the rule is even easier: «borrow more». However, to implement the resulting solution is difficult, because the return on the company's assets does not control the parameter and indicator reflecting the performance. In real conditions profitability of the company's assets is uncertain. When fixed asset profitability depends on sales and return on assets subject to the company's operating risk and is a random value on the nature of the allocation, certain assumptions can be made. Depending on the value of «X» the management of the borrowing «Y» may be taken by the governing. The right solution is expressed with the following rules:

$$\begin{aligned} \text{If } X > \bar{X} &\rightarrow Y > 0 \rightarrow DFL > 0 \\ X < \bar{X} &\rightarrow Y = 0 \rightarrow DFL = 0 \end{aligned} \quad (11)$$

The represented rule is the so-called «*embedded option*» for the company. It's easy to see that the model of this rule is a «*call*» option in «*short position*» (purchase of an option) with the strike price equal to standard return  $\bar{X}$ , because if the return on the company's assets is below standard, borrowings are meaningless (option is useless), but in the opposite case, while the return on assets and borrowings increase, the price of the company's option in the form of DFL grows and its market value increases. As it is known, the model of an economic mechanism can be formed with the use of options and other available tools. So, the DFL model for the company is a combination of «*Call*» and «*Put*» options according to the rule: *Buy «Call» and sell «Put» or (Call- Put)*. The area of the DFL negative values can be hedged by the company with the acquisition of the Put option, which results in the positional chart of the Call option reflecting correctly the rule of borrowings:



**Fig.2 Management of financial risk on the basis of stock options**

Thus, out of two tools – the company's DFL and Put option – a rule of taking a decision about the company's borrowings can be created (10), which is modeled with the use of the Call option. With regard to the possible solutions of the management, let us suppose that there can be only two options: « $Y=0$ » and « $Y = 0.5 \cdot A$ » – maximum limit on the amount of borrowings on the grounds of bankruptcy inadmissibility ( $A = 1, Y = 0.5$ ).

Any decision to be made is characterized with the value of losses which are defined by the following simple rule: «*Loss*» = «*Decision taken*» – «*Right decision*».

If the decision is correct, losses are zero. The values of losses with uncertain return parameter « $X$ » in the circumstances accepted earlier are shown in table 4.

**Table 4. Values of losses**

Decision management	$0 < X < \bar{X}$	$C > X > \bar{X}$
$Y=0$	Losses =0	Losses (**) = $-\frac{1}{2}(C - \bar{X})$
$Y=0,5$	Losses (*) = $-\frac{1}{2}\bar{X}$	Losses=0

The losses are defined numerically by replacing the value of a random variable  $X$  in the table spacing averages calculated by the formula:

$$\text{Losses (*)} = \frac{1}{\bar{X}} * \int_0^{\bar{X}} (X - \bar{X}) dX - 0 = -\frac{\bar{X}}{2} \text{ and } \text{Losses (**)} = 0 - \frac{1}{C - \bar{X}} * \int_{\bar{X}}^C (X - \bar{X}) dX = -\frac{C - \bar{X}}{2} \quad (13)$$

For the earlier example ( $\bar{X} = 0.1, C = 0.8$ ) calculated by the formula losses are brought to the table for a decision. To find the optimal strategy of the company's borrowings in the conditions of uncertainty arising from operational risks, one can also use the methods of finding solutions in the situation of competition and accommodated interests of the parties. In the present case, the «*party*» is the nature, which creates uncertainty. At that the methods of solutions to the pair games with zero amount can be used (when one party wins, the other loses). Let us introduce two variables based on the number of potential control decisions for management:

$z_1$  corresponding to the decision «Y=0» and  $z_2$  which corresponds to the decision «Y=0.5» provided  $z_1 + z_2 = 1$ ,  $1 \geq z_1, z_2 \geq 0$  both variable positives reflect the relative frequency or likelihood of the management's control decisions. The expected value of losses (mathematical expectation) with the first «*State of nature*» is equal to  $V_1 = z_1 * 0 + z_2 * (-0.05) = (1 - z_1) * (-0.05) = -0.05 + 0.05 * z_1$  with the second «*State of nature*» is equal to  $V_2 = z_1 * (-0.35) + z_2 * 0 = z_1 * (-0.35)$ . The lowest expected losses will be at the point of intersection of lines reflecting the value of losses with the value  $z_1 = 0.125$ . The appropriate value is  $z_2 = 0.875$ . This result is not much different from the previously obtained and solution 2 prevails.

## CONCLUSIONS

The proposed instrument should provide for effective asset management system, generating, and ensure that management decisions aimed at maximizing the market value of enterprises, in terms of resource capabilities, high uncertainty of the innovation process and the probabilistic nature of the forecast parameters. VBM approach transforms traditional views on the effectiveness, cost effectiveness indicators, economic activity of the enterprise: from relative performance (productivity, profitability) to market valuation. Realization of VBM approach requires the development and rationale underlying the principle of the market value of the enterprise: «converting business result in value enterprises», i.e. «result-formation or gains enterprises». Problems of quality economy are traditionally of interest. They provoke attention of scientists and experts when developing quality management systems. Progress in the field of economics is more modest, than, in the fields of quality management, methods of valuation and analysis of quality, optimum quality achievement. Methods of economic and financial management with regard to quality problems still remain exotic although in other areas they are successfully developing (and applied).

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# ASSESSING THE CAUSES AND EFFECTS OF LABOUR MIGRATION BETWEEN ZIMBABWE AND SOUTH AFRICA

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## ABSTRACT

*This qualitative study sought to examine the causes and effects of labour migration from Zimbabwe to South Africa. The study uses primary data collected through interviews, group discussions and observations from a sample of 104 immigrants and 64 deportees. Data was analysed using Atlas ti under major themes of reasons for migration, employment, remittances, views of deportees and attitudes towards immigrants. Major drivers of migration identified include unemployment, deteriorating economy, political persecution, illusion of better employment opportunities, commodification of South African Products and the media. The study concludes that protective mechanisms and policies are necessary to diffuse social tensions created by imbalances in the labour markets of both countries.*

## INTRODUCTION

By February 2012 South African immigration authorities had deported nearly 15,000 Zimbabweans (an average of 650 deportees a week) since January 2011. The International Organisation of Migrants (IOM) indicated that they had assisted 12,708 deportees with transport to travel to their homes by February 2012. Of that number, 10,990 were males while 1,718 were females. These deportees are mainly those illegal immigrants that for one reason or another failed to regularise their status during the window opened by government in 2010 and others who continue to migrate illegally to South Africa.

Common cultures and languages of people living on different sides of the border between Zimbabwe and South Africa are associated with migratory tendencies that exist. Boahen, (1985) and Chamberlain (1999) traced this to the partitioning of Africa at the historical Berlin Conference in 1885. This Conference created geographical boundaries which ignored the common ancestry, cultures, languages and other facets of the African people dating back many years.

In 1998 there were reported attacks by local South Africans on foreigners whom they accused of stealing limited job opportunities from locals (Mnyaka, 1998). Many South Africans have stereotyped immigrants as illegal, poor, job snatchers bent on plundering South African resources at the expense of locals (Mnyaka, 1998). These accusations which are the source of tensions between locals and foreigners tend to ignore the other positive contributions of immigrants (Nyamnjoh, 2002). South African authorities have responded to illegal migration through deportations of illegal immigrants some of whom have worked for many years in that country.

The recent exodus of over a million Zimbabweans to South Africa, the 2009 xenophobic attacks on foreigners in South Africa and the subsequent deportations of illegal immigrants by the South African government necessitates an inquiry that will lead to an understanding of causes and impacts of these events (Sibanda, 2011).

The major objectives of this paper are;

1. To assess the causes for migration from Zimbabwe to South Africa,
2. To investigate the effects of Zimbabwean migrants on the South African labour market and,
3. To investigate the social and economic effects of migration in South Africa.

The major questions answered in this research include;

- a) What are the reasons for the migration between the two countries?
- b) What is the effect of migration on the labour market?
- c) What are the implications regarding, remittances, xenophobia and attitudes towards Zimbabwe?

Until recently, the continuous economic expansion in South Africa has resulted in a serious brain drain that almost paralysed the Zimbabwean economy. Labour migration to South Africa caused a shortage of highly skilled labour in Zimbabwe. On the other hand, South African employers were suddenly overwhelmed with highly skilled, experienced but desperate job seekers they could not fully absorb. This unexpected increase in labour supply caused a depression in wages and increased both unemployment and underemployment. Subsequently, this development created unnecessary tension between migrants and locals resulting in some Zimbabweans migrating to the United Kingdom only to face similar situations.

In the neoclassical model it is proposed that migration is a consequence of high labour supply in the country of origin and high labour demand in the country of destination (Massey et al., 2005). According to Cohen (2004) people make decisions to migrate in response to existing socio-economic pressures, desired livelihoods, lifestyles, resources, and needs. Van Wijk (2007) argues that migration is driven by a combination of survival and improvement motives. The survival motive forces people to migrate while the improvement motive gives people a choice to do so. By assumption migration will occur when expected results based on income differentials show a positive net return (Poeze, 2010).

## **THE HISTORY BEHIND MIGRATION BETWEEN ZIMBABWE AND SOUTH AFRICA**

### **The colonial labour markets of Zimbabwe and South Africa**

In the late 1950s when unemployment in urban areas of Rhodesia (now Zimbabwe) was increasing, black foreign immigrants from Malawi Mozambique and Zambia became scapegoats for both the state and unemployed local Africans (Mpofu, 2010). The treatment of foreigners in southern Rhodesia did not however deter the movement of Rhodesian nationals to South Africa (Mungoshi, 1970). The success of those who migrated inspired young people to migrate Johannesburg as well. According to Mpofu (2010), on one hand promises of greener pastures and better salaries in the gold mines lured the movement of people from Rhodesia to South Africa. On the other hand, the illusion of better conditions beyond the borders encouraged migrations from countries like Malawi and Mozambique to Rhodesia.

According to Musiker and Musiker (1999), the discovery of gold in 1886 in Witwatersrand was another pull factor that lured both native and non native South Africans to Johannesburg. The increased migration of labour from many countries in southern Africa to the mines of South Africa led to an unprecedented growth of the South African economy (ibid). The growth of the Johannesburg in particular attracted migrants from most of southern Africa leading to the establishment of trains that carried migrant labour to the gold mines of Johannesburg (Mnyaka, 1998). Most of the migrant labour was hired on contracts that favoured the employer thereby leading to more than proportionate profits in gold mining and almost a permanent migrant population in Johannesburg (Harington et al., 2004).

### **Post independence migration push & pull factors**

A number of post independence policies by the Zimbabwean government set the stage for the development of a host of migration push factors. The first of such policies was the post-war reconstruction programme which saw infrastructural expansion and the development of labour through education and broad based skills building (GoZ, 1990). The second policy was mass education of people in a situation of less than proportionate industrial expansion leading to the creation of highly skilled labour that could not be readily absorbed by industry. Third, in October 1990, acting on the recommendations of the International Monetary Fund (IMF) and the World Bank (WB), the Zimbabwean government implemented the five-year Economic Structural Adjustment Programme (ESAP) in response to the brewing economic problems (GoZ, 1991). Subsequently, in 1998, the government launched the second stage of its economic structural adjustment programme, the Zimbabwe Programme for Economic and Social Transformation (ZIMPREST) (GoZ, 1998). These reforms caused massive unemployment

and social stress that forced especially the young people to look for opportunities in neighbouring countries of Botswana and South Africa.

A culmination of poor and failed economic policies of the 1980s including unplanned budgetary expenditures on the war veterans compensation and involvement in the Democratic Republic of Congo war triggered an economic contraction and hyper inflation rates of 11 000% by June 2007 (Sibanda, 2011). Furthermore, in 2000, the government launched the fast track land reform programme (FTLRP) which resulted in the eviction of thousands of white farmers from productive agricultural land leading to a decline in agricultural productivity and severe unemployment. These developments caused the mass exodus of skilled labour culminating in the worst brain drain ever witnessed in independent Zimbabwe. Fontein (2009) called the massive relocation of Zimbabweans to South Africa “*the human tsunami from the north*”.

Among the migration pull factors was the positive economic growth experienced in South Africa after independence in 1994 and decision by the FIFA to award South Africa the rights to host the FIFA world cup in 2010. Furthermore in 2009 the governments of Zimbabwe and South Africa agreed to remove visa requirements for Zimbabweans travelling into South Africa replacing these visas with ninety-day passes and permits that allowed Zimbabweans to seek employment in South Africa. Also, Zimbabweans who were already in South Africa illegally were granted amnesty to regularise their stay within 18 months or face deportation. Last but not least, in 2010 the South African government went on a massive recruitment of Zimbabwean trained mathematics and science teachers who were already poorly paid in comparison to their South African counterparts.

## METHODOLOGY

### Data sources and data collection tools

The research started with an extensive review of literature to obtain critical information on migration from Zimbabwe to South Africa, data sources and data collection techniques. The research uses secondary data on deportations collected the International Organisation of Migrants (IOM) and the Zimbabwe Republic Police (ZRP). In addition the study uses primary data gathered through a combination of questionnaire surveys, group discussions, informal interviews and observations. A questionnaire was used to collect data from 104 migrant workers and 64 deportees. Questions asked focused on reasons for migration, spending patterns and attitudes of South Africans towards foreigners among other issues. Electronic mail (email) interviews were also used to collect data from immigrants with the assistance of four South African-based research assistants. Using Skype video conferencing six focus group discussions (FDGs) were organised and used to gather data from South Africans. Two FDGs each were conducted at the National Institute for Crime Prevention and Reintegration of Offenders (NICRO) and the universities of Fort Hare and Witwatersrand all in South Africa.

### Sampling

The research is based on a total sample of 168 respondents comprising of 104 immigrants and 64 deportees. The immigrants were identified through the four South African based research assistants and the deportees were interviewed at the Beitbridge boarder soon after clearance by immigration officials and the police. Fieldwork was done in one week and approximately 9 deported individuals were interviewed a day. Purposive sampling was used to identify 120 individuals interviewed by email resulting in a response rate of about 40%. The email addresses of potential respondents were obtained at random from migrants known to the researcher, the research assistants and colleagues at the National University of Science and Technology. A total of 104 migrants responded to the questionnaire; 48 via email and 56 through interviews. Participants in the six FDGs were identified by the research assistants from local South Africans in the three institutions mentioned above.

### Data Analysis

Qualitative data collected through interviews, FDGs and secondary sources was compiled, entered and analysed using Atlas ti. Before data entry transcriptions were done which were then coded by major themes and sub themes. These themes included (1) reasons for migration (2) employment and economic issues (3) earnings and

remittances (4) the views of deportees and (5) perceptions and attitudes towards immigrants. This helped identify common threads in the data thereby making it easy to interpret the various responses. Microsoft Excel was also used for graphs and figures.

## RESULTS & DISCUSSION

### Demographics

Eighty-three percent of the respondents were male. Sixty one percent of the respondents were between the ages of 20 and 35 and 39% between the ages of 36 and 50. Of all the respondents 22% and 61% had acquired tertiary (college) and secondary education respectively while the rest had primary education. Of the deportees 38% were female while 62% were male. The majority of the respondents were based in the Gauteng province in South Africa. Most of the respondents were from the Matebeleland region of Zimbabwe in line with traditional migratory patterns.

### Drivers of migration

Ninety three percent of the respondents said they migrated in search of gainful employment in South Africa implying that they were unemployed in Zimbabwe. The second major driver expressed by 87% of the respondents was the deteriorating economic situation that affected the country since the mid 1990s. After 2000 most (41%) people migrated in fear of political persecution. Forty seven percent left the country to join family members who had already relocated to South Africa (Table 1). Eleven percent of the respondents highlighted that they left to join the bandwagon that was tracking down to Johannesburg.

**Table 1: Major reasons for migration**

<b>Major migration drivers</b>	Lack of employment opportunities	Deteriorating economic situation	Political persecution	Join family members	Following the bandwagon
<b>Percent (%)</b>	93	87	41	47	11

Some respondents indicated that they migrated seeking education opportunities and in pursuit of historical ties in South Africa. The latter includes those who had maintained inter-generational links with relatives in South Africa as evidenced by one respondent who said that people of his ethnic origin can never be considered Zimbabwean.

Among the pull factors was the lucrative labour market opportunities portrayed in various media with a large audience in parts of Zimbabwe. These media include newspapers like the 'Sunday Times, Mail and Guardian', magazines such as 'Drum, You, Bona' and the South African Broadcasting Cooperation (SABC). Both the international and South African media portray Zimbabwe as a country with limited employment opportunities, hunger stricken and a pariah state. In recent years there has also been aggressive commodification of South African products among consumers in Zimbabwe and this has played a significant role as a migratory pull factor to South Africa.

### Employment and economic issues

This study also sought to investigate economic and social issues of concern to Zimbabwean immigrants in South Africa, particularly those related to employment status, job satisfaction, accommodation and general well-being. The results show that most immigrants were employed in various capacities in the food and beverages, agriculture, construction, manufacturing and education sectors (Table 2).

**Table 2: Employment patterns of migrant labour in South Africa**

<b>Economic sectors</b>	Food and beverages	Construction	Agriculture	Manufacturing	Education	Other
<b>Percent (%)</b>	26	16	26	15	8	3



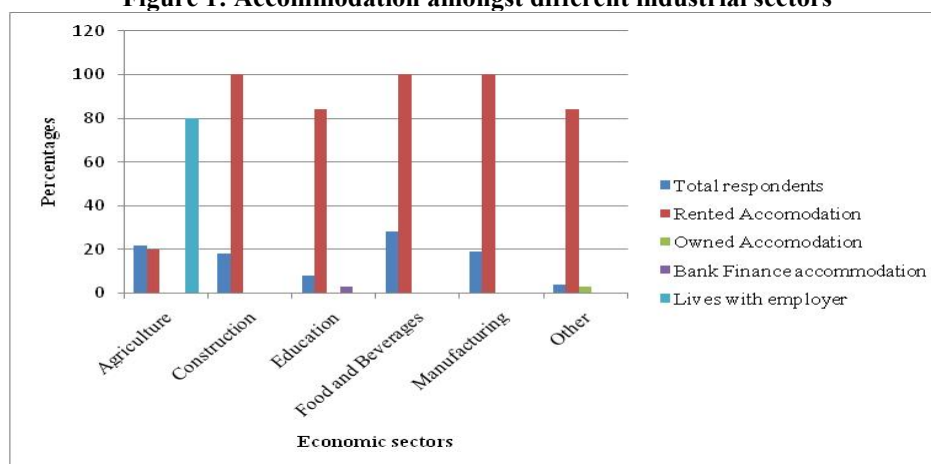
Approximately five percent of the migrants stated that they were employed in senior managerial positions as bank managers, senior accountants and directors. About ninety seven percent of those in senior managerial positions expressed satisfaction with their remuneration and job security in comparison to similar working conditions in Zimbabwe. The prevalence job security in the education sector was intricately linked to the institutional support teachers and other professionals received in comparison to other immigrants. Although most migrants lamented lack of job security in the food and beverages, construction, agriculture and manufacturing sectors of South Africa, respondents said this challenge was over-ridden by numerous employment opportunities available in this sector in South Africa compared to Zimbabwe.

Respondents indicated that employers in the agriculture, construction, food and beverages and manufacturing sectors are aware of the desperate economic situation of most Zimbabwean job seekers and they capitalised on this by paying low wages and subsequently earning abnormal profits. On the contrary, the general view from the group discussions which comprised of South Africans was that, Zimbabweans were poor, desperate and had little appreciation for the value of money hence, their acceptance of low wages. Observations showed that this aspect of saving on labour costs by employing immigrants in preference of locals was source of tension between locals and foreigners.

One of the most outstanding social issues discussed was that of accommodation. Ninety eight percent of the respondents including those in senior managerial positions live in rented accommodation (Figure 1). Anecdotal evidence shows that due to the serious shortage of decent accommodation most migrants live in shacks popularly known as '*imikhukhu*' for which they pay rentals that are not commensurate with the living conditions and quality of the shelter. The other 2% mainly managers and some teachers owned house financed through mortgages.

Observations showed that immigrants play a major role as consumers of South African products which they send to their families back home. Due to the economic competitiveness of South African producers some immigrants specialise in the buying of South African products for resale in Zimbabwe where prices of local products are unaffordable to most households. Subsequently, these existing trade opportunities have further precipitated other opportunities for transporters popularly known as "*omalayitsha*" who are now earning a living solely from transporting various assortments of goods between Zimbabwe and South Africa.

**Figure 1: Accommodation amongst different industrial sectors**



## Earnings and remittances

Most respondents said that they used their earnings on the purchase of basic commodities, education, health, rentals and remittances. Hierarchically expenditure on education was ranked first followed by health, remittances and migration facilitation; mentioned respectively by 91%, 71%, 64% and 33% of the respondents. Remittances were used in the procurement of basic commodities and financing the education and health of children back

home. On the contrary other respondents preferred to educate their children in South Africa arguing that there are already better employment opportunities than in Zimbabwe. Thus, most of those in management positions and teachers had already moved families from Zimbabwe to South Africa.

**Table 3: Remittance patterns by sector**

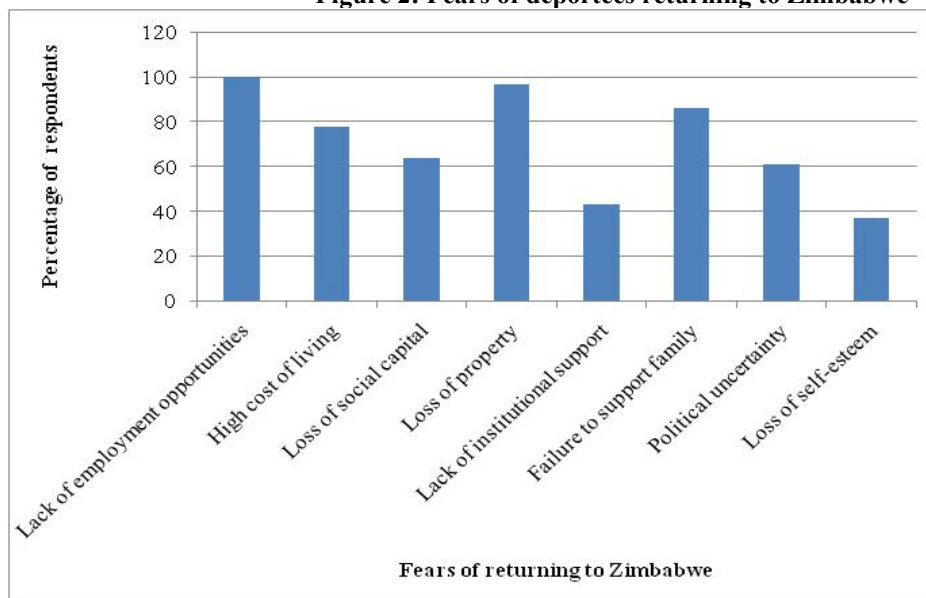
<b>Economic sectors</b>	Food and beverages	Construction	Agriculture	Manufacturing	Education	Other
<b>Percent (%)</b>	87	76	91	65	45	46

The results showed that respondents in the agricultural (93%) food and beverages (81%) sectors have not relocated their families hence are still obliged to remit earnings back home. Ninety one percent of the immigrant in the agricultural sector compared to 45% in the education remitted income to Zimbabwe (Table 3). Controversially though, most of the educated elites tend to dissociate themselves from the welfare of the cultural extended family preferring instead to preoccupy themselves more with their immediate nuclear family hence the results show that those migrants with less education and working in the lowly paying jobs in agriculture, construction and the food and beverages sector are sending remittances for the welfare of family members back home.

## The views of deported immigrants

This study also sought to highlight the predicament of Zimbabwean deportees from South Africa. The results indicate hopelessness and fear of returning to Zimbabwe among the deportees. Most of these deportees indicated that during their stay in South Africa they had accumulated property as well as social capital which they had lost due to the deportations. Now that they were forcibly made to return to Zimbabwe they were not going to be able to support their families and they felt embarrassed to return home almost empty handed. Due lack of institutional support of deportees in Zimbabwe coupled with political uncertainty most respondents with minimum formal education would not be able to get by.

**Figure 2: Fears of deportees returning to Zimbabwe**



Most of the deportees were those working in agriculture (83%), construction (76%), food and beverages (89%) and manufacturing sectors. the pronounced in the food, construction and manufacturing (74%) sectors (Figure 2). Given the opportunity most deportees indicated that they would return to South Africa despite the risk of being deported again. Some respondents said they would rather bribe their way into South to avoid and facing an uncertain social, economic and political future in Zimbabwe. Informal discussions showed that some of these deportees had actually been deported before.

## Perceptions and attitudes towards immigrants

In this section we discuss the perceptions and attitudes of South Africans towards immigrants and perceptions and attitudes of Zimbabwean immigrants towards their native country. Nineteen percent comprising both immigrants and deportees were disgruntled about their country particularly lack of opportunities for a better life. Sixty seven percent however expressed cordial attitudes towards Zimbabwe and stated that they had migrated to South Africa in search of employment and better livelihood. Those respondents who were born and bred in border towns viewed migration to South Africa as given since some of the towns in Zimbabwe were so remote and inaccessible compared to cities like Polokwane, Pretoria and Johannesburg. However, 88% of the respondents said that they had been victims of xenophobic abuse in South Africa. Twenty-three percent said that they had been forced to change their identity to escape xenophobia and discrimination.

Informal discussions with South Africans in the neighbouring border town of Musina and others in Polokwane, Pretoria and Johannesburg expressed bitterness that Zimbabwean immigrants were taking away their opportunities for employment. As bona fide South Africans they could not settle for lower wages that were a result of an influx of desperate immigrants. Zimbabweans especially were viewed as poor although intelligent and highly skilled thereby threatening employment opportunities intended for South Africans. One respondent in a focus group discussion in Witwatersrand argued that due to better skills amongst Zimbabwean immigrants, South Africans were now forced to spend more on education so that they can effectively compete in the labour market.

## CONCLUSION

In conclusion factors driving migration from Zimbabwe to South Africa include on one hand push factors such as unemployment, the deteriorating economy, political persecution and uncertainty, pursuit of family reunion, the migration band wagon and historical ties. On the other hand, migration to South Africa is also driven by the illusion of better employment opportunities in that country, commodification of South African products in Zimbabwe and influence of both the South African and international media that portray Zimbabwe as a pariah state. There is no doubt that all these push and pull factors are intricately linked to the position of South Africa as an economic and political power house in the southern African region.

On a positive note the migration of Zimbabweans to South Africa contributes economically through the labour and the goods and services market. However, the negative effects of migration include depression of wages in the South African labour market and structural unemployment especially among local South Africans. These negative effects have resulted in unnecessary social tensions including xenophobia not only against Zimbabweans but nationals of countries as well. Furthermore deportations of Zimbabwean immigrants from South Africa result in an uncertain future and disruption of livelihoods dependent on remittances in Zimbabwe. Finally, protective mechanisms and policies by both the Zimbabwean and South African Government are necessary to diffuse social tensions created by imbalances in the labour market of both countries.

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# COMPARATIVE STUDY OF COMPETITIVE INTELLIGENCE PRACTICES BETWEEN TWO RETAIL BANKS IN BRAZIL AND SOUTH AFRICA

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## ABSTRACT

*Using competitive intelligence (CI) can help developing countries to increase their competitiveness. This paper compares the CI activities between two retail banks in Brazil and South Africa. An e-mail survey in a sample of 2550 employees in a retail bank in Brazil and 847 employees in a retail bank in South Africa was carried out in which CI practices were measured. Respondents in both countries were not very effective to conduct effective CI analysis. Respondents from Brazil consider information on operational risks as the most important while for South African respondents the most important information was on changing regulatory requirements. Although there is a culture of competitiveness in both organizations, it is recommended that if they want to compete effectively in the global economy, they should create CI awareness by organizing CI training sessions for employees.*

## INTRODUCTION

With the increased volatility of the business environment, companies rely on early detection of environmental changes so that they may respond with appropriate counter measures. Since countries and companies require time to adapt to the changing environment they should have the ability to anticipate changes and imagine the consequences of alternative responses to those changes. Competitive intelligence (CI) is a strategic tool to facilitate the identification of potential opportunities and threats. Because CI improves decision-making, it helps a company to meet or exceed its objectives and business goals.

According to Waheeduzzaman (2002) the ultimate goal of competitiveness is to improve the standard of living or real income of the citizens of a country. Since companies actually compete in the global economy, many authors are of the opinion that when studying competitiveness, the focus should be on companies. The economic success of a country depends on its capacity to apply activities which create a competitive advantage, its ability to create an environment of transformation and progress, and its capacity to innovate (Canongia, 2006). CI has long been recognised as a strategic management tool that could enhance competitiveness. This perception of CI as a strategic tool is not exclusive to developed countries. CI is expected to play a key developmental role in developing countries as well. The need to enhance companies' and by extension, countries' competitiveness has grown rapidly. CI is essential, and will increasingly be a challenge in the years to come, especially for emerging economies (Canongia, 2006).

## PROBLEM INVESTIGATED

Little research has been done on the application of CI in developing countries (Dou, n.d.; Dou, Dou & Manullang, 2005; Du Toit, 2003) and the purpose of this paper is to compare the current situation with regard to CI processes between two retail banks in Brazil and South Africa. CI is always influenced by country-specific environmental factors and a questionnaire survey was conducted to compare CI activities in the two organizations.

Research questions:

- Why is CI important for organizations in developing countries?
- What is the level of importance attached to CI in the two organizations?
- What information on the external environment is important for the organizations to get a competitive advantage?
- What CI techniques do the organizations use to analyse information?

## CI

De Pelsmacker, Muller, Viviers, Saayman, Cuyvers, and Jegers (2005) stated that “CI is actionable recommendations arising from a systematic process involving planning, gathering, analysing and disseminating information on the external environment for opportunities, or developments that have the potential to affect a company’s or country’s competitive situation”. Calof and Skinner’s (1999) view is closely related; they state that “at its most basic description, intelligence is analysed information”.

CI is also defined as “the transformation of raw information regarding the competitive external environment into intelligence to support business decisions” (Hughes, 2005). In 2006 Fouche stated that “competitive intelligence focuses predominantly on qualitative research based on a well-developed process and relying also on a human source network”. These definitions revealed CI to be a tool that transforms information into actionable intelligence that, if used in strategic decision-making, could enhance an organization’s competitiveness. For the purpose of this research, CI will be defined as an ongoing, systematic evaluation of the external environment for opportunities, threats and developments that could have an impact on the organization and influence proactive decision-making. CI is the process of developing actionable foresight regarding competitive dynamics and non-market factors that can be used to enhance competitive advantage.

CI is concerned with the techniques used to select and filter information from a variety of sources, to interpret and analyse it, to communicate it to the right people and to use it effectively (Xu, Liao, Li & Song, 2011). Competitive dynamics refers to the evolution of a company’s industry and the moves and countermoves of competitors, suppliers, customers, alliance partners and potential competitors (Shih, Liu.& Hsu, 2010). Non-market factors such as government regulation, tariffs and the culture of a country impact competitive dynamics but are not suppliers of products or services to the industry (Prescot, 1999). CI uses legally and ethically public sources to assess the strengths and weaknesses of a company’s competitors.

## CI in Developing Countries

CI management is a well-established function in organizations in developed countries, because managers realize that if they do not monitor the actions and activities of their competitors, their strategic plans will fail. However, organizations in developing countries continue to be surprised by undesirable changes in the environment and it appears that the advances in managing intelligence are as yet largely unknown in these countries (Nasri, 2011).

Kahaner (1996) states that CI has become the 'latest weapon in the world war of economics', in which many emerging economies view CI as a way to win economic wars against larger, more industrialized countries. By using their wits instead of weapons, these countries are able to turn raw information into usable intelligence to further their economic status (Calof & Smith, 2010). According to Calof and Skinner (1999) a country will under-perform without an appropriate CI infrastructure and he quotes Prescott and Gibbons by stating that “the key question is not whether governments should play a role in a company’s CI efforts but what should be the purposes and methods used by government.” Countries such as France, Sweden, Japan and Canada have recognized the value of government and industry working jointly in the development of an intelligence culture (Calof & Skinner, 1999). Hawkins (2004) and Nasri (2011) emphasize that companies in developing countries should use formal processes of collecting, analyzing and disseminating intelligence to successfully compete in the global economy.

The new paradigm in development economics is based on self-analysis, self-reliance and self-renewal, which would seem to necessitate a development-orientated intelligence policy in a country. Currently most developing countries are weakly integrated with the global economy. For organizations to compete globally they

are facing many challenges since consumers use the Internet to compare products and prices and they need to stay ahead of their competitors (Huggins, 2010). If this situation is to change, major infrastructural investment in information systems and services, as well as technical training, is required. Utilizing CI will enable organizations in developing countries to gain a greater market share and to compete successfully against international competitors (Pellissier & Kruger, 2011).

## **CI in Brazil**

The focus of this paper is the comparison between CI practices of a Brazilian and a South African retail bank. Substantial political changes in Brazil since 1990 have led to greater information exchange and the Brazilian society has been evolving into a knowledge society dealing with political changes, globalization, new technologies, hyper competition and new global competitors, such as China (Davis, 2007). Brazil is among the world's fastest-growing economies and the 9<sup>th</sup> largest economy in the world (Datamonitor, 2009). Like South Africa is seen as the gateway to Africa, Brazil is the gateway to South America (Libis, 2005). Brazil offers limited infrastructure to businesses and has limited energy resources but the government is trying to establish a positive business environment that stimulates business growth (Libis, 2005). Prior to 1995 the oppressive government was a barrier to information sharing among businesses and Brazil does not have a CI culture (Libis, 2005) but CI plays an increasing important role in Brazil. Large firms and international companies with head offices outside Brazil apply CI practices.

A country's environment supports or threatens economic growth through its policies. A country like Brazil manages its competitive environment by relying on assets (land, people and natural resources) but is not necessarily competitive (Garelli, 2003). The Brazilian government and Brazilian companies have realized competing in a global economy requires a strong vision of what exists outside the country's borders. As a result, CI is becoming more accepted both as a profession and as an important business function. CI was introduced in Brazil in the mid 1990s as an initiative of the National Institute of Technology. A CI interest group, the Competitive Intelligence Society of Brazil (ABRAIC) was established and is sponsored by the government and industry. The growing market for CI created the development of consulting activities. Various CI tools were developed (for example a national database of science competencies) (Dou, n.d.).

## **CI in South Africa**

The business environment is highly complex in South Africa because of factors such as the country's unique history, diversity, geography, political and institutional landscape. Companies tend to be less dynamic and more resistant to change, compared to companies in developed countries. South Africa faces new socio-economic challenges and research capacity needs to be developed in the context of the global economy. Before 1994 South Africa was isolated from the rest of the world as a result of the apartheid regime and this inhibited competitiveness (Viviers & Muller, 2004). The use of CI before 1994 has mostly negative connotations since South African intelligence activities were mostly pursued by state institutions. Within a short period of time after the democratic elections in South Africa in April 1994, the international market opened up. Many industries were deregulated and privatized and there was a large construction boom due to the 2010 Soccer World Cup. To survive many South African companies needed to extensively globalize their business activities to exploit country differences and worldwide markets. This prompted companies to become more sensitive to external environments which includes monitoring political/legal, economic, technological, socio-cultural and industry forces such as competitors, customers and suppliers. Currently South Africa as a net exporter of strategic minerals and the 'gateway' to Africa has an internal environment ideally suited to the use of CI by companies to gain the competitive edge in a developing domestic economy and a challenging external environment. CI is therefore enjoying increased prominence in South Africa.

South Africa's lack of global competitiveness, according to various competitiveness indices (Blanke, 2007; IMD, 2008), has over the past few years become a contentious issue with the main focus on the inability of the country to escape its competitiveness trap. Competitiveness concerns factors such as skills, higher education and training, efficient markets, the ability to harness the benefits of existing technologies and business sophistication (Blanke, 2007). One of the most prominent indices include the IMD's (IMD, 2008) World

Competitiveness Yearbook, which analyzes and ranks the ability of nations to create and maintain an environment that sustains the competitiveness of enterprises. Countries that consistently rank high in these indices are the US, Switzerland, Denmark, Sweden, Germany, Finland and Singapore (Blanke, 2007). Common denominators of these leading countries are quality education and high spending on research and development (Blanke, 2007). In contrast to leading competitors, South Africa not only fails to improve its competitive position but its competitiveness is actually deteriorating.

Although CI is a relatively new concept in South Africa, the competitive environment of South African companies is vast, competitors are numerous and technological advances staggering. With the recognition that competitive challenges and risks will increase significantly in the future, there is an increasing need to monitor the competitive landscape continuously to remain competitive. Most companies recognize the need to improve the quality and integration of their CI, but may seem unsure of how to adopt more effective, integrated and systematic approaches to CI. *Multinational companies in South Africa face unique challenges as far as CI are concerned* (Viviers, Muller & Du Toit, 2005). Many multinational corporations have their African head offices in South Africa and have to provide strategic level intelligence to their boards of directors concerning their African operations (Odendaal, 2004). Research by Viviers, Saayman, Calof and Muller (2002) found that the largest companies in South Africa have adopted CI in a comprehensive manner, including designing and setting up structures and appointing a dedicated CI staff. These are, however, few and limited to the largest companies in South Africa or local subsidiaries of multinationals based elsewhere. Research by Du Toit (2003) found that only 26% of manufacturing organizations have CI units, but that 76% of the organizations have a CI system. An interesting observation about the CI practices of South African companies is that the more companies rely on exports and interaction with the international market, the more they are inclined to adopt CI and the greater their understanding of the role and benefits of CI as a strategic business tool (Viviers & Muller, 2004).

## EMPIRICAL SURVEY OF CI PRACTICES

### Research methodology

In spite of an increasing interest in CI in both countries, the state of CI in Brazil and South Africa remains fragmented for decision makers who need reliable information to deploy innovative policies for economic development. The banking market in Brazil is dynamic and competitive despite involvement of the state with foreign banks gaining more presence. Modernization of the financial system in 1988 has led to the creation of multipurpose banks and foreign participation in the commercial banking system (Datamonitor, 2009). Brazil has the largest financial system in South America and the banking industry is diversified and competitive. The 200 public and private commercial banks have adopted international best practices (Datamonitor, 2009). The top ten retail banks in Brazil are ABN AMRO, Banco do Brasil, Bradesco, HSBC, Itaú CEF, Safra, Santander, Unibanco and Votorantim (Datamonitor, 2009). Since 1990 the South African banking industry has gone through substantial changes. New bank legislation has been introduced and foreign banks have entered the domestic market (Heppes & Du Toit, 2009). South African retail banks operate in a very dynamic and complex competitive environment and the five major banking groups (ABSA, FirstRand, Investec, Nedbank and Standard) control 89.4 per cent of total banking assets in South Africa. About 200 public and private commercial banks have adopted international best practices (Datamonitor, 2009).

The question is to what extent these differences in economic structure in general and banking activities in particular will have an impact on CI practices in retail bank activities in Brazil and South Africa. The purpose of the empirical survey was to investigate the current situation with regard to CI practices in a retail bank in Brazil and a retail bank in South Africa. The research question guided the design of the research in terms of what data were needed to answer the question, where the data were, how data were to be collected and how they were to be analyzed. The study follows a quantitative research methodology. Employees in the two retail banks were asked about their practices of competitive intelligence. The measuring instrument was a questionnaire which was compiled which was compiled to cover the theoretical constructs of competitive intelligence. The questionnaire was divided into three sections. Section A focused on biographical data, Section B on the competitive environment and Section C on CI practices. The questionnaire used in this study is based on three questionnaires used in other empirical CI surveys (Heppes & Du Toit (2009), Pellissier and Kruger (2011) and Du Toit and Strauss (2010)).



Of the sample frame of 110 000 employees in Brazil and 31 000 employees in South Africa a total of 2550 employees in Brazil and 847 employees in South Africa were randomly drawn by computer from the two retail bank's employee databases to form the sample of this study. The questionnaire was e-mailed to the whole sample with a cover letter explaining the purpose of the research and its legitimacy. The data collection took place over a period of two months and during this period, several reminders were sent to the participants on a weekly basis. Of the sample of 2550 employees in Brazil, 615 employees (24.1%) returned completed questionnaires and of the sample of 847 employees in South Africa, 346 respondents (40.85%) returned completed questionnaires. The credibility of the research was measured by the Cronbach Alpha Coefficient and an overall coefficient of 78, 5% was calculated for the results obtained. This is considered to be in the range of scores considered as being reliable.

## Findings

**Biographical data.** In Brazil the gender of the respondents was mostly female (54%) while in South Africa the majority of the respondents were male (69.5%). The length of employment differs between the two countries since the majority of the respondents in Brazil (58%) have been employed by their current employer ten years or more while the majority of the respondents in South Africa (47.5%) have worked for their current employer for less than five years. In Brazil 61.1% (376) of the respondents were on top management level with 38.9% (239) on middle management level while in South Africa 68.8% (238) of the respondents were on top management level with 31.2% (108) on middle management level. This implies that more concern for CI in the South African organization lies with top management.

**Strategy to manage competitors.** In trying to establish whether there was a strategy in place to manage the competitive environment, 94,1% (579) of the respondents in Brazil and 89% (308) of the respondents in South Africa answered in the affirmative. It is interesting to note that 64% (394) of respondents in Brazil and 70% (242) of respondents in South Africa indicated that CI was always a key-component of company strategy and is used as input to the organization's annual strategic plan. This means that both organizations are competitor oriented and understand the significance of having a strategy in place to deal with competition. Such a strategy may encourage innovation and alliance with customers, which would lead to a competitive advantage. Prescott (1999) and Calof and Smith (2010) concurs with the above and affirms that having a strategy in place would have a positive impact on the strategic direction of an organization.

**Competitive situation.** According to Table 1 both organizations appear to be in control of changes in the business environment with respondents in Brazil coping slightly better with changes.

**Table 1: Coping with changes in business environment**

	Brazil		South Africa	
	Frequency	Percentage	Frequency	Percentage
Above average (i.e. they cope very well).	299	48.6	143	41.2
Average (i.e. they cope)	316	51.4	203	58.8
<b>Total</b>	615	100	346	100

This correlates with Kahaner (1996) who stated that organizations that are alert of changes in the environment will be least surprised and negatively affected when there are changes in their business environment. In assessing the perceived level of competition 64% (394) of the respondents in Brazil and 59.8% (207) of the respondents in South Africa are of the opinion that it is very intense while 36% (221) of the respondents in Brazil and 40.2% (139) of the respondents in South Africa believe that competition is intense. None of the respondents claimed that competition is not intense.

**Information needs.** Respondents were requested to indicate the frequency in which they require information on key elements of the competitive environment in which banks operate (see Table 2). The actual number of responses is shown in brackets below the percentage value.

**Table 2: Information needs**

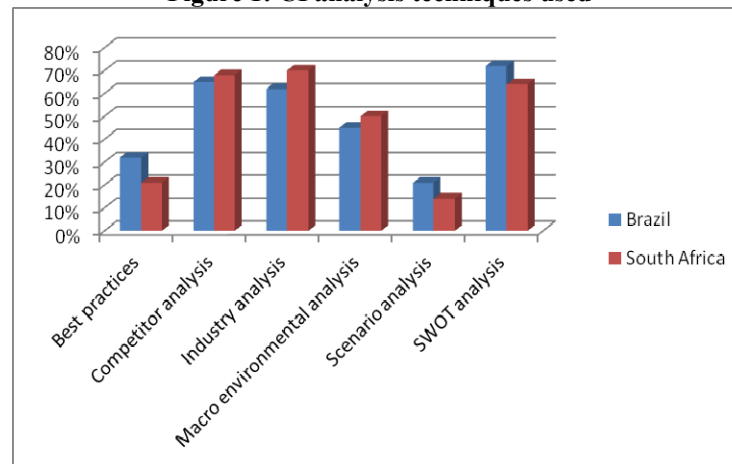
Information	Brazil				South Africa			
	Daily	Weekly	Monthly	Never	Daily	Weekly	Monthly	Never
Changing accounting/tax requirements	8% (49)	58% (356)	17% (105)	17% (105)	6% (21)	26% (90)	44% (152)	2% (83)
Changing legal/regulatory requirements	2% (12)	18% (111)	45% (277)	35% (216)	9% (31)	34% (118)	57% (197)	0% (0)
Local competitors	25% (154)	58% (356)	17% (105)	0% (0)	31% (107)	42% (145)	27% (94)	0% (0)
Foreign competitors	17% (105)	33% (203)	50% (307)	0% (0)	21% (73)	35% (121)	44% (152)	0% (0)
Interest rates	33% (203)	8% (49)	59% (363)	0% (0)	32% (111)	25% (87)	43% (148)	0% (0)
Inflation	17% (105)	0% (0)	83% (510)	0% (0)	10% (35)	14% (48)	76% (263)	0% (0)
Technological innovation	17% (105)	25% (154)	50% (307)	8% (49)	8% (28)	17% (59)	72% (249)	3% (10)
Leadership development	8% (49)	0% (0)	33% (203)	59% (363)	3% (10)	19% (66)	57% (197)	2% (73)
Skills availability	8% (49)	17% (105)	75% (461)	0% (0)	12% (42)	24% (83)	64% (221)	0% (0)
Operational risks e.g. industry fraud	28% (172)	31% (191)	41% (252)	0% (0)	5% (17)	7% (24)	73% (253)	1% (52)

On average respondents in both countries required updates to all listed classes of information on a monthly basis. Information types for which updates were required less frequently were those with a longer term implications for the organization, while those information types for which updates were required more frequently were those which require response from the organization as/when they occur. The South African bank requires information on changing regulatory requirements more frequently than their Brazilian colleagues while information on operational risks is required more frequently in Brazil. This supports the finding by Pellissier and Kruger (2011) that South African organizations are cognizant of new government information legislation that impacts their organization. Information on skills development is important for both organizations.

**CI analytical techniques used.** A set of five questions sought to establish the techniques used to analyze information by the two organizations. According to Figure 1 the three most popular techniques used by the respondents are SWOT analysis, competitor analysis and industry analysis. Surprisingly best practices and scenario analysis are seldom used. A SWOT analysis is an important technique for both organizations since it may provide a comparison between the organization and their competitors.

Overall, there appears to be a lack of the used of sophisticated techniques such as scenario analysis and best practices by both organizations. The Brazilian organization mostly used SWOT analysis while the most popular technique used by the South African organization is industry analysis. This correlates with the finding by Viviers et al. (2002) that South African organizations spend too much time collecting information and too little time on adding value to information by analyzing it.

**Figure 1: CI analysis techniques used**



## CONCLUSION AND RECOMMENDATIONS

Using data from a CI survey sent to a retail bank in Brazil and a retail bank in South Africa the author has tried to establish whether there are significant differences between CI activities in retail banks in these two countries. To a certain extent the CI practices of the Brazilian and South African retail banks are highly comparable. Both organizations are competitor oriented and understand the significance of having a strategy in place to deal with competition while both seldom use sophisticated analysis techniques to analyze the information. Within both retail banks there are definite elements of CI and therefore the proposal is to develop the existing capabilities further in accordance with best practices. However, there are some remarkable and significant differences. The length of employment differs and more respondents in South Africa are on top management level. Respondents in the bank in Brazil cope slightly better with changes in the external environment. Information on the changing regulatory environment is more important for the South African organization with information on operational risks more important for the Brazilian organization.

An obvious limitation of the study is that it utilised a sample of employees in one company in Brazil and one company in South Africa. The findings therefore cannot be generalized beyond the sample that took part in the survey. More comprehensive research is still needed to clarify all the underlying dimensions of competitive intelligence to enhance understanding of these issues. This is an exploratory study aimed at determining the application of competitive intelligence in two retail banks in Brazil and South Africa. These limitations leave scope for further empirical research.

As Brazil and South Africa become more integrated into the global economy it stands to reason that the global economy will have more of an impact on the countries' economy. To this end it has become more crucial to monitor global events and trends and it is very important for both organizations to develop an integrated CI culture. CI analyzes not just the environment but competitors and markets as well. Therefore understanding the

direction that competitors are moving to in the future is key to be able to counteract them timeously for both organizations. Keeping abreast of domestic and international market trends and their potential impact on the organization is vital. Trend tracking needs to monitor the impact of not only product changes but also organizational changes such as future mergers and dissolutions. It is also recommended that both organizations should enhance a CI culture by creating CI awareness among employees and provide CI training sessions for new employees.

It is concluded that the purpose of CI is to collect information about competitors to provide benchmarks, avoid surprises and identify opportunities. The case for CI to play a role in developing countries is strong, but not much literature is available on the application of CI in these countries. As discussed in this paper, the two retail banks in Brazil and South Africa are already carrying out CI practices and the importance as well as the recognition of CI as a strategic instrument will inevitably increase in these two countries in the coming decade. In the light of the importance of CI in developing countries the hope is expressed that companies in Brazil and South Africa will realize that CI is not only a system to improve the decision making in companies and regions but that it is an important lever to facilitate the industrial development and innovation in developing countries.

## AREAS FOR FUTURE RESEARCH

In both organizations the opportunity exists to take the current CI capabilities from predominantly defensive (avoiding surprises) and passive intelligence (benchmarking) to offensive intelligence with a primary goal of identifying opportunities. Areas for future research in both organizations should focus on a stakeholder analysis to determine the key intelligence users. Critical success factors for CI need to be identified. This includes issues such as senior management involvement, a focus on what is important to the organizations, the maintenance of ethical standards and the development of expertise in analysis and communication.

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# **BALANCING RESEARCH AND DEVELOPMENT (R&D) EXPENSES WITH CUSTOMER INNOVATION DEMANDS**

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## **ABSTRACT**

*This paper focuses on the role of shaping and identifying customer priorities and preferences in the innovation process. Its implications to management are in the subject area of innovation management from the perspective of marketing strategy and new product development. This work is relevant due to the increasing limitations on organizational resources, specifically research and development (R&D), coupled with uncertainty around customer innovation priorities. It is argued that customer input plays a major role in sustained innovation management. This paper reviews three theoretical relationships (diffusion of innovation theory, knowledge management, and systems theory), and compares and contrasts case findings where customer input was adequate and where customer input was sub-par, and discusses the relative outcomes. Finally, a framework is presented that modifies the common innovation process phases to explicitly include customers in the innovation process. Ultimately, the paper argues for co-creation between the innovator and the customer in an effort to minimize wasted R&D expenditures in the innovation process.*

## **INTRODUCTION**

The purpose of this conceptual paper is to illustrate the relationships between innovation management, and marketing strategy and new product development. Many firms have recently experienced more target uncertainty and more technical uncertainty with regard to customers' future innovation requirements. This uncertainty is due in part to the speed at which highly technical innovations have been introduced, coupled with the recent economic struggles, which have caused consumers to behave in a cost-conscious, critical manner. This innovation ambiguity has the ability to reduce the innovators' incentives to make major research and development (R&D) investments, thus negatively affecting the amount of new innovations being offered. The proposed research question is: How can businesses obtain a clearer prospectus of the innovation targets in which its customers are mostly interested and likely to adopt?

The general answer to this question lies in acknowledging the role that the customer plays in the innovation process, and identifying strategies that will motivate the consumer to maximize his value in the innovation process. This paper argues that businesses must do a better job at shaping the customers' requirements in order to continue the advancement of innovation technology in their respective industries. Innovation costs are typically baked into the price of an innovation, thus innovation is ultimately funded by the customer. When innovations are funded by the customer, developed, and diffused, but not adopted by the customer, that innovation cost becomes an opportunity cost for the business. This opportunity cost reflects R&D dollars that could have been spent on another successful innovation instead of the failed innovation. As customers become more cost-conscious, businesses have to become creative at minimizing their production costs. One way to do this is to minimize the costs of failed R&D projects. It is argued that more consumer input into the innovation process will assist in accomplishing this goal.

Consumer input is a major role in the process of sustained innovation management. Much of the literature on innovation management focuses on the roles played by different members within the firm (champion, judge, inventor, etc) during the innovation process (Hering & Phillips, 2005; IBM, 2004; Maidique, 1980; Marham & Aiman-Smith, 2001). This paper focuses on the role of external members in the innovation process: the customers. It begins by reviewing three theoretical relationships (diffusion of innovation theory, knowledge management, and systems theory) found within the subject areas of this topic and argument. It compares and contrasts case findings where customer input was adequate and where customer input was sub-par, and discusses the relative outcomes. Finally, it presents a framework, which is developed from the theory and practical evidence, that modifies the common innovation process phases (idea generation, idea capture, idea evaluation, idea development, product launch, product distribution, product sustainment) to explicitly include customers in the innovation process.

## **THEORETICAL BACKGROUND**

### **Diffusion of innovation theory**

Roger's diffusion of innovation theory explains innovation diffusion as the spread of an abstract idea within a social system in the form of a transfer from a source to an adopter (Wejnert, 2002). This theory emphasizes the transactional nature of the diffusion of innovation in that as a precursor for successful diffusion, the innovator has to develop a desirable innovation, *and* an end-user must be willing to adopt it. The relevant constructs of the diffusion of innovation theory to this topic include an identification of the main elements of the diffusion model and the characteristics of adoptability. Both of these constructs contribute to the theoretical foundation of end-user motivational drivers to innovation adoption.

Rogers (1976) describes the four main elements of the classical diffusion model as the innovation itself, communication of the innovation, the time it takes for diffusion, and the social system associated with the diffusion. Each of these elements has a distinct role in the diffusion of innovation. Of these four elements, the communication element has the greatest relationship with diffusion from the perspective of including the end-user in the innovation process, because it has a significant impact on the end-users' decision to adopt or not to adopt (Rogers, 1976).

Communication can be carried out as a process or as a one-time activity (Rogers, 1976). When communication is viewed as a single milestone, the organization loses any ability to capitalize on new criteria that may be uncovered at some point after the initial communication. Therefore, communication should instead be viewed as a process. During this communication process, the organization has the ability to communicate, evaluate feedback, and re-communicate a different message if necessary. When communication is viewed as a process, it also expands the boundaries of the communication to include communication between members of the organization, communication between the organization and adopters, or communication between adopters.

Greenhalgh, Robert, Macfarlane, Bate, and Kyriakidou (2004) identify eleven innovation behaviors that influence the adoptability and assimilation of an innovation by an end-user as relative advantage, compatibility, complexity, trialability, observability, reinvention, fuzzy boundary, risk, task issues, knowledge required to use it, and augmentation/support. Relative advantage refers to some advantage that the innovation has over an alternative innovation. Compatibility refers to how the innovation relates to the norms and values of the end-user. The more complex an innovation appears to the end-user, the less likely the end-user is to adopt the innovation. Trialability and observability refer to the ability for the end-user to evaluate and observe the innovation through experimentation. An end-user is more likely to adopt an innovation if he has the ability to witness its abilities first-hand in advance of adoption. Task issues are associated with how relevant the innovation is to the needed objective of the end-user. Reinvention has to do with end-users' ability to reconfigure the innovation to suit a different need than which was originally conceived. This reconfiguration is made possible by the fuzzy boundary behavior, which implies that the innovation has a hard core, but a soft, reconfigurable peripheral. The knowledge required to use the innovation is negatively related to the adoptability of the innovation by the end-user, which is opposite of the relationship between the augmentation and support provided by the innovation and its relative adoptability.



## Knowledge Management

The second major theoretical foundation associated with this paper's topic is knowledge management. One focus of the study of knowledge management is an understanding of how and why knowledge is created, shared, and transferred between the firm and the customer. Relative to this paper's topic, knowledge management theories can provide insight into the issue of shaping and understanding innovation demands of customers. When focusing on identifying the innovation needs of end-users, the main focus of knowledge management is on acquiring data and information versus creating knowledge itself (Nissen, 1999). Hall and Paradice (2005) present a framework that examines the role of learning-oriented knowledge management from the standpoint of the inquiring organization. Its framework consists of proactive information acquisition, problem definition, reactive information acquisition, review of existing knowledge, definition of desired state, action determination, selection of action, and implementation. While this framework identifies explicit considerations that an organization should undergo in identifying innovation requirements of end-users, the organization must still develop a strategy to navigate through the steps of this framework. Below are five constructs of knowledge management that can provide information on strategies used to understand the innovation demands of end-users. They include creativity, improvisation, trust, social capital, and absorptive capacity.

Creativity is a central construct to understanding these relationships. Creativity is a necessary ingredient at the very first stage of the innovation process. It is measured in the area of knowledge creation by assessing its novelty and its usefulness (Amabile, Barsade, Mueller, & Staw, 2005; Burroughs, Dahl, Moreau, Chattopadhyay, & Gorn, 2011). Akgun, Byrne, Lynn and Keskin (2007) describe improvisation as the process of simultaneously planning and executing. The relevance of improvisation to knowledge management is focused on the actors' abilities to learn and re-learn. From the angle of defining innovation demands, improvisation between the organization and the end-user positively affects the success of innovation (Akgun et al., 2007). When interpersonal trust exists, knowledge is created and exchanged more freely because of higher cooperation between the actors (Renzl, 2008). Relative to defining the innovation demands of end-users, the existence of trust has a similar effect in that it becomes a conduit for knowledge creation between the organization and the end-user.

Social capital focuses on tapping sources that are external to the organization in order to obtain new knowledge. Anand, Glick and Manz (2002, p. 88) define social capital as "the knowledge and information that organizations can access using their employees, formal and informal ties with outsiders such as customers, partner organizations, connected employees of other organizations, and so on." Blyler and Coff (2003) define social capital as benefits that are received merely by being included as a part of a particular social network. The existence of social capital between the organization and its customers will aid the corporation in minimizing its R&D expenses by providing conditions necessary for the exchange of valuable knowledge about innovation demands (Blyler & Coff, 2003).

While creativity, improvisation, trust, and social capital focused on how knowledge is acquired and shared, the concept of absorptive capacity focuses on how knowledge is utilized. Zahra and George (2002) use absorptive capacity to distinguish between an organization's potential and realized capacity. They argue that an organization's realized absorptive capacity can be viewed by its innovative output, but a focus on potential absorptive capacity enhances the organization's strategic flexibility to adapt to changing environments and creates competitive advantages (Zahra & George, 2002).

## Systems Theory

Systems theory is the third major theoretical foundation associated with this paper's topic. The majority of the seminal work developed on systems theory includes those from Ludwig von Bertalanffy, Ross Ashby, and Peter Senge. This paper will focus on open systems and the learning organization as they relate to determining the innovation demands of customers. The concept of open systems implies that systems are open to their environment. According to Boulding (1956), the fact that a system is open, versus closed, to its environment is the aspect that brings life to a system. Von Bertalanffy (1950) characterizes the open system as a living system

that is self-maintained by the strategic consumption and disposal of materials as it interacts with its environment. From the viewpoint of this paper's topic, an open system would enable an organization to continuously learn more about the innovation expectations from its customers.

A learning organization is one that uses knowledge to improve processes, it has the ability to identify problems and correct problems, and learns from its past (Garvin, 1993). Garvin (1993) identifies five main skills of a learning organization as systematic problem solving, experimentation with new approaches, learning from experiences, and ability to quickly and efficiently transfer knowledge. The works of Peter Senge provide more contemporary portrayals of von Bertalanffy's systems theory. Senge describes five disciplines of the learning organization as personal mastery, building shared visions, mental models, team learning, and systems thinking (Senge, 1990). Each of Senge's disciplines has relevance to the organization's interaction with its customers with the purpose of learning knowledge about their innovation priorities.

Personal mastery involves a shift of focus from goals to a personal vision (Senge, 1990). Personal mastery becomes the initial motivational step in an organization making the commitment to be successful at understanding its customers' innovation needs. Building a shared vision with customers has a double reward factor. First it makes the customer feel that he is part of the innovation development process, but it also gives the organization the ability to gain critical insights into the customer's priorities, which is useful in minimizing unnecessary R&D expenses. Mental models shape how businesses organize information, however they do not determine what the information is (Senge, 1990). Mental models are beneficial to determining innovation needs in that they allow the organization to better understand how customers process information. Team learning builds on the disciplines of personal mastery and developing shared vision. Its main contribution is that an organization which taps the thoughts of multiple minds will develop better intelligence than an organization that focuses on one mind (Senge, 1990). Relative to determining the innovation needs of customers, the organization needs to include all of its internal players in the innovation process in some way. Finally, systems thinking is the discipline that connects the four previous disciplines by focusing on inter-relationships and patterns of change (Senge, 1990). This discipline is useful in determining innovation needs from the perspective of forecasting longer-term innovation needs based on the past patterns of customer need development.

## **PRACTICAL IMPLICATIONS – CO-CREATION**

R&D expenditures are driven by the need for the organization to develop a product that is desirable by the end-user. This paper assumes that without clear communication for the customers regarding their innovation needs, the level of innovation development and implementation will begin to tail-off. This is a result of dwindling resource availability for R&D efforts. The theoretical foundations above focused on diffusion of innovation theory, knowledge management, and systems theory. Each of these foundations identifies relationship characteristics between the organization and end-users. The culmination of each of these theoretical foundations points toward a practice of co-creation between the organization and its end-users in the innovation process.

Co-creation of innovation has been presented through several different paradigms. One common paradigm differentiates between customer-driven innovation, customer-centered innovation, and customer-focused innovation (Desouza et al., 2008). The type of co-creation desired by the organization will influence the degree of customer involvement, control, and coordination. The following section presents practical examples based on case studies of how organizations tackle the co-creation practice. It will differentiate between customer participation and customer co-development and present an argument for co-creation. It will also answer questions regarding what is driving the concept of co-creation, how broadly it is based, and what the value-added contributions of customers are.

### **Customer Participation Versus Customer Co-development**

Customers can be involved in the innovation process in different ways. Two such examples are customer participation and customer co-development. Customer participation is limited to providing information to the innovation process while customer co-development involves the customer undertaking significant developmental tasks (Fang, 2008). Customer participation is carried out through open-source mechanisms that allow users to share their opinions on products (Prandelli, Verona, Raccagni, 2006). Co-development occurs

when customers participate in specific projects that include collaboration with functions such as marketing or R&D (Prandelli et al., 2006). In its study on 143 customer-component dyads, Fang (2008) identified two factors that can influence the value of customer participation or co-development in the innovation process as the level of network connectivity between retailers and distributors and the level of process interdependence in new product development. The study found that the greater the network connectivity, the less valuable customer participation becomes to the innovation process. It also found that the greater the level of process interdependence, the more valuable customer co-development is to the innovation process.

## **Argumentation for Co-creation**

In its study of 781 manufacturing firms during 1998–2002, Un, Cuervo-Cazurra, and Asakawa (2010) found that 66% of its sample did not utilize R&D collaboration at all, and of those that did, only 20% included the customer in that collaboration. When an organization adapts its innovation process to allow for customer co-creation, it is opening up opportunities to both obtain and use tacit knowledge from its customers in determining their innovation priorities. Proctor and Gamble is an example of a company that has developed its innovation process with the consumer as its integral component (Lafley & Charan, 2008). Its CEO believes that the consumer should be the main focus of the innovation process from the idea phase to the purchase phase. Making the customer the main focus creates an environment conducive to acquiring tacit knowledge.

In their case study, Kristensson, Matthing, and Johansson (2008) found that not only is co-creation a benefit to the organization, but it also helps the customer learn and define what he really wants in an innovation. Innovation management is not just an issue for the innovating organization. The customer also has limited resources and wants to ensure that his resources are allocated efficiently. For example, the federal government recently procured an order of Global Hawk un-manned airplanes that are known for their ability to obtain aerial intelligence. After the planes were put into production, the government made the decision not to use the new planes, but rather use the previous model, which is approaching 50 years of service. The decision was made because of budget constraints as well as the federal government's determination that the planes did not fulfill all of the needs. This decision will ultimately cost the government millions of dollars in production costs for a product that will likely never be used.

In the idea generation stage, organizations typically involve the customer by offering a mechanism for them to contact the firm through feedback sessions, surveys, or suggestion boxes (Prandelli et al., 2006). TGI Fridays uses information and communications technologies to collect data about their customers in real time (Desouza et al., 2008). This data is used in the idea generation stage of co-creation to identify the ideas, likes, and dislikes of its customers. The data ultimately resulted in new innovative menu items at the restaurant chain.

In the idea capture stage, organizations typically involve the customer through analysis of their opinions or virtual concept designs (Prandelli et al., 2006). In its study of 781 manufacturing firms during 1998–2002, Un et al. (2010) found that the most successful co-created innovations resulted from the innovator cautiously screening customer opinions, and the innovator implementing standards in evaluating customer satisfaction.

In the idea development or product design stage, organizations typically involve the customer through mass customization of functional attributes and aesthetic attributes, or by allowing customers to create their own patents for new products (Prandelli et al., 2006). For example, Best Buy allows customer to customize its products at kiosk stands at its local stores (Desouza et al., 2008). PARC, a research organization at Xerox implemented the Express project that brought its researchers and a sample of its customers together in one location to co-develop prototypes (Brown, 1991). Nike allows its customers to customize its sneakers from an online website. This strategy allows Nike to gather information on attributes that are desired and not desired by its customers (Prandelli et al., 2006). Nike will then use this acquired knowledge in the idea phase of its next innovation.

In the product launch stage, organizations typically involve the customer through word of mouth communications, special events, or customer newsletters (Prandelli et al., 2006). Google takes part in co-creation with its customers during the product launch stage by allowing users to experiment with its beta

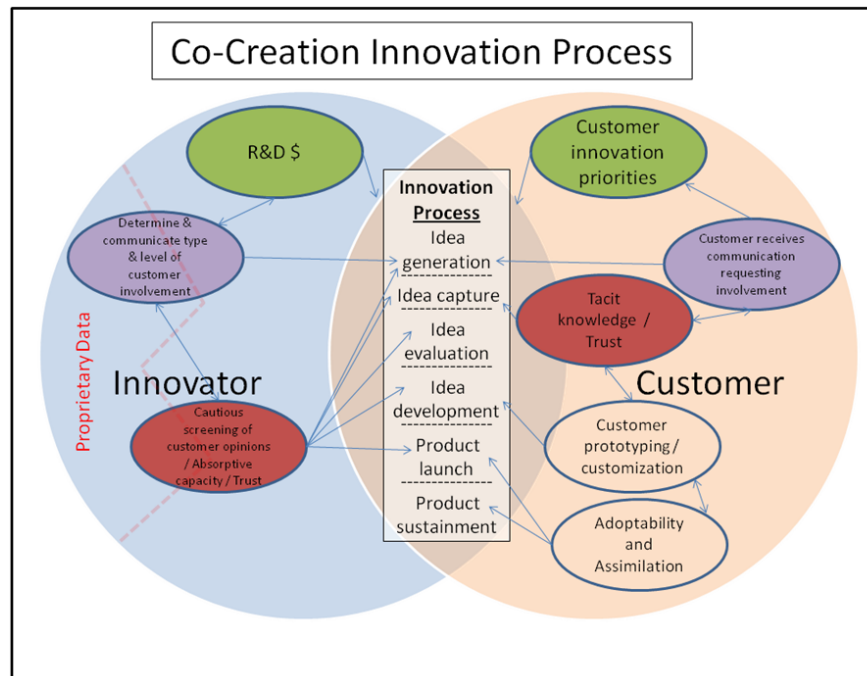
products on its Google labs site (Desouza et al., 2008). After a user has experimented with the beta product, he is allowed to leave feedback that is used to further enhance the offering.

In the product sustainment stage, organizations typically involve the customer through customized newsletters or customized customer relationship management (CRM) tools (Prandelli et al., 2006). Barnes and Nobles involves the customer in its product sustainment stage by allowing the customer to purchase a product on-line and return it at a physical store location (Desouza et al., 2008). This strategy allows the salesperson to collect direct feedback from the customer regarding his likes and dislikes about the product.

## INNOVATION FRAMEWORK

Based on an interpretation of the theoretical relationships and practical examples of the organization balancing its R&D expenditures with customer innovation demands, the following framework of the innovation process has been developed. Its main relationships include a shift from the organization's focus on innovating products to innovating customers. It also portrays the level and types of collaboration required from the organization and the customer population. A conceptual model of this framework can be found in Figure 1.

**Figure 1. Conceptual Model**



The overlapping environments of the innovator and the customer illustrate the systems theory relationship to co-creation innovation process. While the innovator and customer create and share lots of knowledge during the innovation process, the innovator still has the capacity to preserve knowledge deemed to be proprietary. The framework illustrates that the idea generation phase includes a determination and communication of the type and level of customer involvement to the customer. This communication, whether it is in the form of a survey, a comment box, or some other instrument, is the act that invites the customer into the innovation process.

This is the point at which trust begins to develop between the innovator and the customer. It is assumed that the customer has tacit knowledge regarding his innovation preferences. This tacit knowledge is what the innovator desires for the innovation process. The innovator will use this tacit knowledge to develop absorptive capacity. Throughout the remaining phases of the innovation process customer input comes in the form of customer-assisted prototyping, customer-assisted customization, and ultimately customer adoption and customer assimilation. During these remaining phases the innovator is constantly screening customer opinions to determine specifically how they should impact the innovation. Ultimately from the innovator's view, all of the

communication, knowledge, and feedback from the customer impacts the amount of R&D resources spent and the manner in which they are spent. From the customer view, all of the communication, knowledge, and feedback provided to the innovator assists him in defining his innovation priorities and preferences.

## CONCLUSION

This paper has presented theoretical foundations as well as practical examples of the significance of correctly identifying customer innovation preferences prior to committing resources such as R&D expenditures. Diffusion of innovation theory was presented to illustrate that the innovation process does not end once the product has been developed. Rather, the customer plays an integral role in the innovation process through adoption of the innovation. Further highlighting the role of the customer, knowledge management theory was introduced to illustrate additional benefits that the customer brings to the innovation process. Specifically creativity, improvisation, trust, social capital, and absorptive capacity are all components of knowledge management theory that become the foundation for better understanding the relationships between the innovator and the customer that positively impact the innovation process. While diffusion of innovation theory identified the necessity of the customer, and knowledge management identified additional benefits that the customer creates, systems theory presented a holistic view of the innovation process as an open system and a learning organization where the innovator interacts with elements of its environment (the customer) in order to create learning experiences between the organization and the customer.

The main theme of this work is that the organization must identify ways to routinely interact with its core customers throughout the innovation process (Anthony, Johnson, & Sinfield, 2008). This strategy of focusing on the organization's innovative ability can minimize wasteful spending of R&D resources (Brown, 1991). Practical examples have illustrated that organizations which already include its customers in the innovation process do so more at the beginning and at the end of the process. It is argued that additional focus of customer involvement throughout the entire innovation process will be beneficial in the strategy of efficiently spending the organization's limited R&D resources. Further, it is anticipated that the majority of future competitive advantages derived from innovations will depend on how well the organization innovates through co-creation with its customers (Brown, 1991).

The organization can motivate customers to want to be a part of the innovation process through initiatives such as compensation or even shaping the innovation team's structure so that it relates to the customer's structure (Anthony et al., 2008). The customer will be more prone to participate if there is some commonality or familiarity associated with the innovation process. While it is beneficial to create an environment of familiarity for the customer, this process can be difficult. In fact, a common challenge to co-creation has been the ability for the innovator to develop a common language sense of purpose throughout the innovation process with the customer (Brown, 1991).

This research is limited in that it is conceptual in nature and has not incorporated a complete systematic review. Its significance to management is that it identifies future areas of research by synthesizing theoretical and practical relationships between the innovator and its customers. One area for future research is gaining an understanding of the impacts that different means of interaction between the innovator and the customer will have on the co-creation relationship (i.e., virtual, in-person, etc). The means used to carry out the innovator-customer relationship in the innovation process may impact the level at which the customer is allowed to participate in the process. Another area for future research is to determine how the co-creation process of innovation varies between industries, and identifying the drivers that cause these variances. It is anticipated that understanding the drivers will add value to the overall strategy of determining how to better involve the customer in the innovation process through co-creation.

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# **T TYPOLOGY OF SENSEMAKING AND LEADER'S SUCCESS IN THE UNITED STATES AND FRANCE: A CROSS-CULTURAL STUDY**

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## **ABSTRACT**

*This cross-cultural review discusses the process of sensemaking as applied to the current economic environment comparing the United States and France along the dimensions Hofstede proposed on national culture. We develop a typology of sensemaking and successful leadership posing that if applied, has the potential to contribute to economic recovery. Sensemaking predictor variables, including event, time, resources, tools and national culture are hypothesized to influence the dependent variable, decision making, leading to the desired outcome. Given the prevailing world economic condition, the question posed in this study is whether organizational leaders could benefit by engaging in sensemaking.*

## **INTRODUCTION**

Many citizens across the U.S. and abroad seem puzzled amid today's economic malaise. For some it is a conscious thought process, whereas others are seldom mindful of this state of affairs. Think of the way many of us feel when driving to work. Anywhere in the US, gasoline prices are increasing three, sometimes four times during the course of the same day. We are just as amazed at the spike in the price of simple staples such as orange juice and milk. In addition, reports of an increasing number of educated and highly qualified individuals unable to find employment in the U.S. are causing some to speak of a jobless recovery. In France, one can hardly fathom how the price of a baguette has increased threefold in the same time it took the French to abandon the French Franc to reluctantly embrace the Euro. Even though it is agreed that European economies tend to be in a constant state of depression, the last years have not been easy for many in Europe, with the exception of those living in Germany.

## **RESEARCH QUESTION**

There is such a time as time for reflection (Obama, 2006). The difficulties facing our economies force all to question deep seated ways of operating, even as actors from different sides of the debate engage more in the blame game than in fact-finding exercises of the kind that will advance the debate (Obama, 2006). During such a time engaging in sensemaking is a means to understand what needs to be done to change the current tide (Ancona, 2010). The reflection in which one engages forces those involved to partake in thorough investigation and soul-searching forcing one to admit what is or used to be is no longer working (Ancona, 2010; Weick, 2011). The more one peers into what used to be and what is, the more the need to rethink (Ancona, 2010), remake (Berente, Hansen, Pike, & Bateman, 2011), reconstruct (Moss, 2001), and reinvent reality (Nonaka, 2007), becomes clear (Weick, 1995).

This is the process of sensemaking, in which people engage in order to unravel the meaning of events and happenings (Weick, 2011; 1995). It emerges in times of crisis, uncertainty (Moss, 2001; Nonaka and Takeuchi, 2011; 2007), ambiguity, and chaos (Fiss & Hirsh, 2005; Rutledge, 2009; Vuori & Virtaharju, 2012). Uncertainty, perplexity, and complexity drive the process of sensemaking (Nonaka, 2007; Rutledge, 2009;

Vuori & Virtaharju, 2012). Thus, sensemaking appears as the search for new knowledge (Nonaka, 2007) resulting in the creation of new ways of operating or innovations (Nonaka, 2007) targeted towards new but real problems.

In the context of the recent economic environment, the world is facing unprecedented and continued malaise. Case in point is the compelling example of an ever increasing number of educated individuals on public assistance, contradicting the prevailing assumption that individuals on welfare tend to be minority and illiterate. In the United States, the number of individuals with master's or doctoral degrees on public assistance grew from 20 million in 2007 to 22 million in 2010 (Patton, 2012). In France, economic indicators do not presage better news and the contraction of trade is but one of such indicators (Bricongne, Fontagné, Gaulier, Taglioni, & Vicard, 2012). Elsewhere in the world, the global nature of the world economy forces individuals everywhere to take heed to what is occurring in one nation, as it often portends what is going to happen next, regardless of where one happens to be (Daniels, Radebaugh, & Sullivan, 2013; Fiss & Hirsch, 2005; Kwantes & Boglarsky, 2007). Given the prevailing world economic condition, the question posed in this study is whether organizational leaders could benefit by engaging in sensemaking? In other words, this discussion focuses on the impact of sensemaking on innovative organizational leadership amid the uncertainty caused by a stumbling world economic climate (Berente et al., 2011; Fiss & Hirsh, 2005; Marmemout, 2010; Weick, 1995). Sensemaking is not a novel concept; it is one often studied in the context of organizations in an attempt to make sense of events to improve organizational performance (Ancona, 2010; Berente et al., 2011; Lundberg, 2000; Weick, 1995). While Pye (2005) goes so far as to reframe leadership as an example of sensemaking noting it is "more inclusive and draws in other crucial elements of everyday life in organizations which are overlooked by much of the leadership literature" (p. 37), for the most part, scholarship builds on sensemaking as a paradigm that reflects a myriad of indicators that drive some aspect of organizational effectiveness.

## **PURPOSE**

The purpose of this review is to develop a typology of sensemaking and successful leadership that if applied would move us one step closer toward the recovery of a world economy that seems to be heading in a direction no one could have fathomed (Patton, 2012). We argue that the path to innovation and excellence in society rests on managers, leaders, and others in positions of responsibility (Moss, 2001; Nonaka & Takeuchi, 2011). From government organizations to corporate enterprises, in the U.S., France and across the globe, leaders engaging in sensemaking initiate change resulting in innovation and excellence (Ancona, 2010; Garcia-Mira, Rea, Uzzell, San Juan, & Pol, 2006). By engaging in the kind of reflection (Vuori & Virtaharju, 2012) that goes beyond integrating the existence of ambiguities (Dedieu, 2010; Moss, 2001; Rutlege, 2009) the leader should be able to conceive new concepts leading to the building of a new reality (Berente et al., 2011; Obama, 2006), and the creation of effective change (Ancona, 2010; Nonaka, 2007; Weick, 2011; Drazin, Glynn & Kazanjian, 1999).

## **RATIONALE**

Uncertain times and an environment in which change makes obsolete many tested solutions (Nonaka, 2007) compel today's leader to become innovative in order to lead effectively in a global economy (Kwantes & Boglarsky, 2007). Thus, sensemaking develops in response to the prevailing economic reality (Lundberg, 2000; Marmemout, 2010; Rutlege, 2009). Besides a fragile U.S. recovery, similar accounts of economic instability in Europe and Asia, beg a discussion of a nature that leaves no one indifferent to or immune from the issues and implications discussed.

As mentioned, sensemaking is a powerful notion that has been used to study various organizational phenomena (Berente et al., 2010; Weick, 2011). In this discussion, we used the concept of sensemaking to provide insight into leadership during challenging economic times. We will proceed in the following fashion. First, we will discuss the reason we are comparing the US and France, two countries whose national cultures share few similarities (Hofstede, 2001), even as the two countries have always maintained a love-hate relationship (Essounga, 2009). Second, we will offer a typology of sensemaking and leader's success, leading to

economic recovery. The implications, future orientations and limitations of the present review will conclude this discussion.

## **WHY STUDY THE U.S. AND FRANCE**

France is part of Europe, a force to reckon with in today's global world. Europe is currently the most influential economic zone in the global economy. In 2009, the European Union (EU) had a GDP of over \$15 billion, and a population of 582 million individuals. This zone also shelters individuals with a purchasing power of \$16,011 per capita, only second to those individuals in the NAFTA coalition who boast a per capita GDP of \$38,085 due to the U.S. belonging to the NAFTA bloc (Daniels et al., 2013). Historic reasons make France a prominent political and cultural member of the EU (Lacouture, 1998; Nadeau & Barlow, 2003). As many familiar with the history of Europe will contend even today, there is no Europe without France and Germany (Nadeau & Barlow, 2003). Mitterand became president of France in 1981 and went on to govern France for 14 years, respected by all, and loved by some (Lacouture, 1998). However, history notes that building Europe was Mitterand's way of ensuring World War II, the war Europe never forgot would never happen again (Lacouture, 1998; Nadeau & Barlow, 2003). Thus, today, beyond the economic overtones of the EU, Europe remains a union with political motives at its core (Daniels et al., 2013). France today represents an impressive prospective market, and the U.S. can only stand to gain from its familiarity with France.

Given that the language barrier makes studies discussing this country sparse (Morgan-Thomas & Essounga-Njan, 2010), this review contributes to filling that gap. Hofstede's classification of countries along national culture dimensions (Hofstede & Hofstede, 2005) showed the U.S. and France are different on these elements. France was found to be higher in power distance than the U.S., higher in collectivism than the U.S., higher in uncertainty avoidance than the U.S., and lower in masculinity than the U.S. (Hofstede, 2001). These differences in national culture were found to influence the manner in which individuals engaged in the process of sensemaking (Fiss & Hirsch, 2005; Kwantes & Boglarsky, 2007). In addressing situations leaving no other choice but to react with novel responses (Fiss & Hirsh, 2005) individuals often found themselves reacting through the mental models (Kwantes & Boglarsky, 2007) lenses, and schemata known to color the manner in which we make sense of the world in which we live (Essounga, 2009; Hofstede, 2001; Kwantes & Boglarsky, 2007).

As a result, individuals approach sensemaking differently in the two countries. In the United States, when confronted with uncertainty and ambiguity, the sensemaking process focuses on the reason of the happenings, in view of preventing a repeat of them. In France, the fact finding mission and sensemaking will rather focus on a deep analysis of the surrounding events leading to the triggering event (Combes, Lafourcarde, Thisse, & Toutain, 2011; Dedieu, 2010; Garcia-Mira et al., 2006; Le Coze, 2008; Le Coze, 2010). In today's global economic environment there is only one reality that transcends the differences in national cultures and is clear for individuals across all cultures. In essence, the answer is an economic recovery consisting of getting world economies to the point where they start picking up steam instead of continuing to lag, stagnate, or frankly regress (Bricogne et al., 2012; Patton, 2012). This is the reason we are offering the following typology of sensemaking and leader's success. Success of the leader is defined in this study as resulting in getting the economy out of its current slump to a place where individuals stop talking of jobless or economic recoveries with no growth or very little growth (Ancona, 2010; Izzo, 2012).

## **TYOLOGY OF SENSEMAKING AND LEADER'S SUCCESS**

We are proposing a hypothetical model that could be assessed using Multiple Regression. The researcher may use Multiple Regression when seeking to calculate either a single or several independent variables. In this discussion we focus on sensemaking, a process that ensues as a reaction to uncertainty, ambiguity, and complexity (Fiss & Hirsh, 2005; Nonaka, 2007; Rutledge, 2009; Vuori & Virtaharju, 2012). The literature underscored that an event may be the trigger to sensemaking (Dedieu, 2010; Le Coze, 2008; Moss, 2001), thereupon calling for a timely response, using the right amount of resources, and calling upon an in-depth knowledge of the situation, including past, current, and future knowledge of the circumstances (Nonaka, 2007; Le Coze, 2008; Le Coze, 2010; Rutledge, 2009).

Thus, the following variables can be hypothesized as making up the independent composite construct, sensemaking: (1) E for event, as in the magnitude of an event acting as a trigger; (2) T for time, as in the appreciation of the urgency of the situation; (3) R for resources, as in the quantity of resources utilized to solve the problem; (4) K for knowledge, as in the past, current, and future knowledge of the surroundings of the event, and also (5) C for national culture, as in the national culture of the countries under review. In other terms, the null hypothesis can be framed as follows:

$$Y_{DM} = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5, \text{ where}$$

$x_1$  =E = event (magnitude of event)

$x_2$  =T = time (appreciation of time pressure)

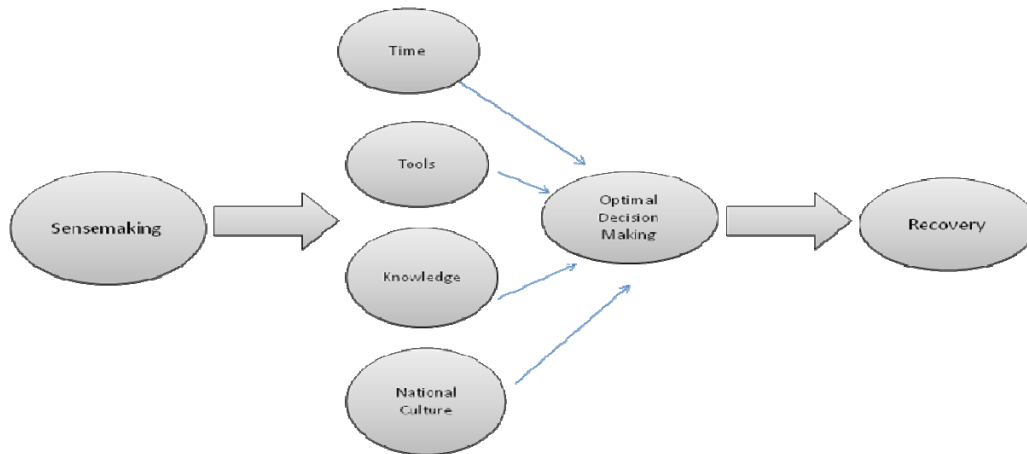
$x_3$  =R = resources (quantity of resources)

$x_4$  =K = knowledge (past, current, and future)

$x_5$  =C = national culture.

In the case of national culture, one dimension, masculinity, may be used as a proxy for culture. In this dimension, the relative higher U.S. score of 62 compared to the French score of 43 denotes a corrective and pragmatic U.S. society versus a more permissive and romantic French society. Given performance drives the US as the notion of welfare society drives the French psyche (Hofstede & Hofstede, 2005), the sensemaking process is not carried out in a similar fashion. In this particular model, the event, time, resources, knowledge and national culture are hypothesized to predict the optimal decision making outcome, which is expected to lead to recovery. Thus, decision making ( $Y_{DM}$ ) is equal to the constant ( $a$ ), plus the sum of the five sensemaking independent variables, multiplied by their respective regression slope,  $b_1, b_2, b_3, b_4, b_5$ . The constant ( $a$ ) belongs rightly in this equation due to the fact that only by virtue of being in existence, individuals in all societies are subject to the likelihood of facing a triggering event.

**Figure 1: Theoretical Model of Sensemaking and Optimal Decision Making**



**Figure 2: Five-layer framework of sensemaking variables**

	None	Poor Decision Making (DM)	Average DM	Good DM	Optimal DM
Event	X	X	X	X	X
Time		X	X	X	X
Resources			X	X	X
Knowledge				X	X
Nat. Culture					X

# CONCLUSION AND IMPLICATIONS FOR FUTURE RESEARCH

## Usability

The model of sensemaking and decision making offers the potential to assist public officials and other decision makers to consider variables whose combination is likely to result in the kind of decision making that if applied, would lead to economic recovery. Policymakers should be interested in analyses of this kind as they continue to work to ameliorate the current economic condition. Economists will take interest in the application of sensemaking in a cross-cultural environment, as the world's economies continue to be intertwined in the era of globalization. Although we did not test the model offered in this discussion, a valuable research addition would empirically test this hypothesis to continue building a theory of sensemaking and leader's success in an environment other than that of organizations looking for improved performance.

## Future Directions

Collecting data in order to test the hypothesis offered would provide insight into the validity of this hypothesis. Individuals in the United States, France, and other countries around the world appear helpless in finding solutions that would effectively cause a shift towards a positive outlook of their countries' respective economies. To obtain the highest probability of an optimal decision, the explanatory variables proposed in this study, including the realization of the time constraints, the importance of committing the needed level of resources, developing and deploying adequate knowledge to reflect on the situation, and taking into account the country's national culture, far outweigh any benefits of the certainty of an economic crisis condition.

Although it is true that there is such a time as a time to reflect, there is just as much a time to act upon one's reflection. In the United States, we pride ourselves in being able to take quick action in order to remedy adverse situations. In France, it is customary to reflect deeply for the sheer need to do so, extending the understanding of the phenomena under study to its tiniest dimension. Today, it is necessary for both countries, and many others to acknowledge a somber reality. In these trying times, it is critical to innovate and develop novel ways to reverse the current trend. Adopting sensemaking behaviors as proposed in this study is one step toward that direction.

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# MODERN ERA IN BUSINESS ARCHITECTURE DESIGN

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## ABSTRACT

*Nowadays there is a variety of views on future business architecture. On the one hand, it's getting more and more influenced by IT: information flows are growing rapidly and walls between the departments or even sub-companies are being erased. On the other hand, business architecture incumbents are not often ready for quick e-transformations due to their silos: inner friction, employees and "as-is" processes.*

*This article represents courageous attempt to business architecture development burning issues made by the authors. The proposal to increase agility suggested in this research is creating real-time business architecture: validate processes using practical cases and simultaneously publish the best examples in the cloud where they could be easily achieved on demand.*

## INTRODUCTION

The "architecture" concept plays fundamental role in organization development. Conjointly, the four architectures form Enterprise Architecture: technology architecture (1), business concepts (2), organizational architecture (3) and information architecture (4). Each concept encapsulates domains with sub-architecture's layers, where the importance of coherence and consistency plays the leading role. The current research is aimed on increasing the ability to change the business architecture layers according to environmental changes on demand.

Although the term "Business Architecture" is used in numerous publications, even in standards, it is still not defined unambiguously since there are few case studies of Enterprise Architecture available (Versteeg and Bouwman, 2006). The concept is used in information management theories within modeling approaches (IEEE 1471, ISO 15704) as well as in classification frameworks (Zachman, 1987, TOGAF ADM) or used in practice by consultancy organizations (IBM, Ernst and Young) to manage correspondence between the strategic-level enterprise targets to IT solutions. That is why in the most general classification Enterprise Architecture is linked to the area of informatics.

First of all, the basic definitions should be clarified. Majority of notions used in current research will be derived from (Hoogervorst, 2002).

- Business architecture can be defined as "a logically consistent set of principles and standards that guides how a particular field of (commercial) endeavour will be exploited and explored".
- Organizational architecture can be defined as "a logically consistent set of principles and standards that guides how the purposeful activities within a particular field of (commercial) endeavour are actually organized".
- Information Architecture is "a logically consistent set of principles and standards that guide how information is to be managed".

Apart of Hoogervorst we consider Business Architecture as a process of expert and associative creativity (creative work), which implements logic and structure of system information relationship in order to reach value added result by shortest way (Gromoff, 1999). Due to this definition we postpone dynamic



dependence of all system taking into consideration agility of structure as a result of instant expertise in empowering the processes and searching optimization of processes and structure by minimizing way to result. Critics could ask about necessity of standards implementation and following “the best practice or applied regulation”. Indeed, no business can exist in a field of legal ignorance and all required regulators as from financial, government, legal or social institutions should be mentioned and accepted as a framework, but the rest is a true responsibility of creativity produced by the acting subjects of particular business and their ability to reflectivity or depth in understanding their real value in reaching goal.

Layering strategy is used in Enterprise Architecture to separate the essential complexity of business from the accidental complexity of the enabling technology.

Architectural layering begins by separating business model from system model, providing business requirements to guide system design. Then after, it separates enabling technology logical design from actual technology physical design selected or built to support the business. Business architects use “business requirements” and “design specifications” concepts to maintain traceability from conceptual to logical layer (business requirements) as well as from logical to physical layer (design specifications). “Business requirements” identify management needs for a technology solution in order to support business operation. “Design specifications” are detailed descriptions of a technology solution design that can meet the business requirements.

The significant steps in order to draw up and adopt the business architecture creation are presented on Figure 1 (Versteeg and Bouwman, 2006). Talking about decomposition depth and architecture layering, three business architecture design levels should be mentioned: (1) conceptual (business), (2) logical and (3) physical. It is easy to witness that while passing from level to level we are facing gaps in both: conceptual understanding of business goals achievement logic and in means of applications description and implementation. Business Architects create blueprints (a.k.a business concepts) that represent the business executives and managers viewpoint. Respectively, this provides the basis for more detailed designs and other organizational planning. Information, Application, Security & Privacy, Policy & Rules and Technology Architectures each contribute to the design of required IT solutions associated with organizational change.

Design Level	Model Layer	Function
Conceptual Design	Business Concept	<ul style="list-style-type: none"> <li>Represents <b>shared stakeholder understanding</b> of business.</li> <li>Independent of enabling technology.</li> </ul>
Logical Design	Systems Design	<ul style="list-style-type: none"> <li>Represents design of <b>platform independent</b> system capability.</li> <li>Done in a formal manner that can be tested and validated.</li> <li>Logical designs obey laws of logic.</li> </ul>
Physical Design	Systems Solutions	<ul style="list-style-type: none"> <li>Represents design of <b>platform dependent</b> system capability.</li> <li>Uses known physical capabilities that implement logical design.</li> <li>Physical designs obey laws of physics.</li> </ul>

Fig.1. Three levels of architecture design

Throughout the design process, architects help conveying possible innovation opportunities arising from the world of technology and how these opportunities contribute to business objectives. The primary sketch of Enterprise Architecture is developed on the basis of the top-level strategy statements provides an overall definition of major business domains.

## APPEARANCE OF NEW PARADIGMS

Nowadays problem of Enterprise Architecture implementation can be expressed by two major factors. First of all it, should be mentioned, that companies are hampered in their response to changes in the environment due to existence of static organizational structures. VAN DIEPEN (2000) also insists on substantial level of redundancy

and rigidity of the internal processes in many organizations. This is the reason why being unable to meet customer demands quickly, coordinate processes and offer the necessary transparency, companies seek the optimal processes redesign (Hammer and Champy, 1993). Therefore, it should be noted, that declared agility of business processes happened to be rather marketing trick than effective method of realization.

Secondly, the agility of business processes is well described and logically proven but practically has never been properly implemented mainly due to lack of sufficient flexibility in actual business processes designed top-down and its rigid and redundant structures. Attempts to follow standards of decade freshness and binding them with clouds computing have led to extremely expensive solutions overloaded with unnecessary components and links between unexecuted functions.

In order to overcome lack of flexibility and adaptability increasing companies' response to changing market circumstances, companies seek new innovative solutions that support their business needs and lead to competitive advantage. The following attention to cutting edge paradigms is being attracted:

**Paradigm 1:** BPM, business process management (Scheer);

Business process management a concept that appeared in early 90s as dynamic structure was offered by Sheer. Unlike approaches of Davenport and Hammer-Champi, Sheer considers system of business processes as self-adjusting system which is flexibly reactable to environmental changes. However, such system management is supposed to be carried out "from above" that imposes serious restrictions on decomposition level with compliance preservation of models of processes and real situation in business.

**Paradigm 2:** S-BPM, subject-oriented business process management (Fleischmann);

Fleischmann's approach to business processes management known as subject-oriented approach is based on performers' self-organization while formulated task accomplishment, and reflects the real executive mechanism within almost any human activity accordingly. However, picked up separately from other approaches, it does not allow to create bandage between strategy and processes of organization and to achieve global optimization.

**Paradigm 3:** ICS, namely, i-clouds services (Gartner);

I-clouds as a particular application of cloud computing become popular for outsourcing and load maintenance purposes. Offered by Gartner it represents generalization of service-oriented architecture for cross-corporate applications case; it allows technologically independent implementation of functions realization both inside company and out of it. Being the technological tool, iCloud allows allocating and realization of functionality decomposition up to each expert (or functional role).

**Paradigm 4:** BPO, namely Business Process Outsourcing

Business Process Outsourcing is a subset of [outsourcing](#) that involves operations [contracting](#) and responsibilities of specific business functions (or [processes](#)) to a third-party service provider aimed on increasing companies' flexibility.

**Paradigm 5:** Lean process principles (Ohio, 1980);

Firstly used in Toyota factories lean manufacturing principles allowed elimination of waste (or Muda, in Toyota). Ohio identified seven wastes to be addressed by the Toyota system, and they have become known as 7Ws.

Participating in large number of consulting and educational projects, authors face real problems of customers, among which: impossibility to reflect in information systems changes of requirements rendered to business (compliance), fear to lose system controllability by processes optimization, impossibility to optimize organizational structure without failure in labor productivity and operability of business structures, high dependence on specific person on a certain place, high financial risks while changes or modernization of information systems.

The primary motivation for this investigation was to provide strategic insights on the critical challenges faced by organizations in their quest for business value in today's rapidly changing, technology-enabled environment since either scholars or practitioners have rarely (practically sole IBM) attempted to combine these paradigms.

Real-time Business Architecture (RBA) – an advanced EA notion that underlines the extended agile possibilities that allow EA to be transformed quickly according to changing business requirements.

## Business Process Modeling Using Subjects for Handling Innovations

Since CEOs are focused on revenue growth as means of creating value to shareholders they constantly seek for measures to cut costs and for innovation opportunities. Many experts believe that agility is the key issue to creating sustainable revenue growth (See Figure 2).

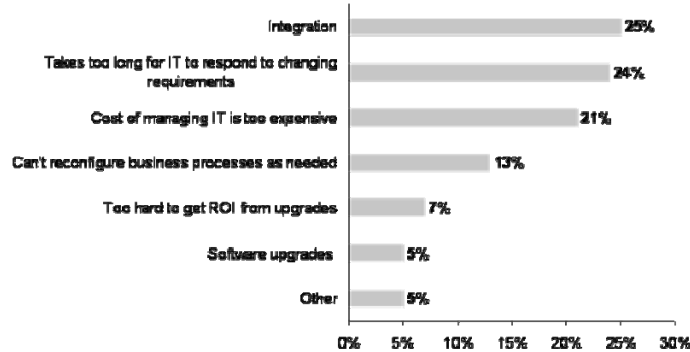


Fig.2. Top challenges in managing IT (IBM working report, 2011)

Business subjects are in charge of responding to changing conditions. They should be distinguished from ordinary (routine) business resources by their internal motivation to reach business goals and ability to have coherent with running business aims, and indeed, as a main feature, professionally gain skills, based on accumulated experience of the socialized business group of subjects.

The Subject-oriented Business Process Management (Fleischmann) is in charge of this challenge. To rearrange models immediately and imitate execution of process models this approach started to be used recently into incumbents and new market entrants. But the real benefit of S-BPM approach is not only in time/money saving while implementing developed processes in reality, but to rearrange rigid system structure into ad-hoc agile self-organized system, dedicated to reach the goal by the optimal way.

According to survey (S.A.R.I., 2009), (Gromoff et al., 2010) the core advantages of the S-BPM for the business process management are:

1. low cost, high quality and speed of business process automation;
  2. ability to make quick adjustments and their immediate implementation;
  3. ability to active compliance management accomplished by all employees involved in processes.
- These features reflect technological advantages of the S-BPM, from one point of view, and are able to provide subjects with opportunities for creative and reflective work at the same time, what might be decisive in this case (Gromoff A. et al., 2010), (Chebotarev V. et al., 2010).

The S-BPM refers to participants exhibiting their behavior pattern within a process as “subjects.” Each subject in the process is defined, modeled and documented by the description of its individual actions. Here “subject” is considered not only as a resource which is required to perform a specific action but as rational person who possesses intelligence, creativity and reflection. And indeed, one the key issue for such creativity to be reached is unified semantic information field of the particular business.

## Cloud Services

The basic design, therefore, is based on the most important strategic statements. These relate to cost reduction: synergy through horizontal integration; customer centricity: synergy through sharing customer information; sharing the industry, giving third parties access to the supply chain: synergy through sharing resources within the sector; and multi-channel approaches.

Cloud services can facilitate the proper [management of information technology](#) resources within the organization. This characteristic is also crucial to multi-task demands that are being made in modern business. In

order to deal with a tough market, there is an increase in activities diversification that different companies undertake.

The ICS was chosen since Cloud services via Internet make number of new business models possible, that have to be flexible in order to respond quickly to changing circumstances and to adapt the business model if necessary (Timmers, 1999; Bouwman and Van den Ham, 2003).

## **Practical implementation**

In order to build flexible SOA, aligned with business necessities, the S-BPM approach was chosen due to its supple nature. Since full description of business processes is strongly required the S-BPM usage will help to involve the process participants in gathering fresh data and give competitive advantage because new compositional services will be collected in real-time.

Metasonic S-BPM platform allows employees to model their processes easily by themselves using an intuitively operated user interface, and orchestrate the services they need for that purpose. They operate with five items: “subject”, “message”, “send” and “receive”, “function”. Last three items describe the subjects’ state while performing the process. Metasonic Build uses two types of models: the “process manager” and the “subject manager”. The first model type is intended to describe the process of messages exchange between subjects (this is quite enough!); the second - subjects’ participation in the process which can be described by subjects states and transitions from one state to another (Gromoff et al., 2011).

An executable application for workflow control is generated automatically from the description of the business process. Modeling, validation and implementation stages are integrated and interrelated. The necessary feedback is also provided since process users are always given real information about process runtimes, critical paths, and resource bottlenecks.

The described approach on platform S-BPM allows realization of operative connection as plural services of information access to unstructured information and various DBMS with access to data at fields’ level. Thus, access to unstructured information can be carried out via one query executed in several services simultaneously, for example Google, Exalead, Fast, at this moment connected to the system. Therefore, there is an auto-generation of system architecture of innovative process management which in more mature phases of self-realization could be corrected and analyzed by experts group, responsible for processes of innovative development.

By storing services in i-Cloud it is possible for customers to exploit the service repeatedly (as long as it is required) in various orchestrated combinations in on-line environment. Here is meant, that while using i-Cloud it is possible for minimum time to provide response to executives about project deadlines, implementation of a new product or service & etc, what is self-evident, but moreover, it become an open way to create business meaningful processes from pre-prepared fragments as from puzzles, switching required intellectual resources into such processes from ‘free-lancer’ expert groups, available from ‘clouds’ as well. And such construction of the business processes could be more effective, since all human resources are combined not because of the particular ego, but automatically due to best compliance.

Here critics might talk about problems of competitiveness which is basis of true progress in evolution; yes, it will be reformed as well as morality has changed in evolution but basic principles are unbroken. In such a case competitiveness will be more depended from quality, service-timing, business transparency and hospitality, inter-operability and stability in custom support. All that means that competitiveness will depend on architectural effectiveness reflected in on-fly flexibility of business process without lose of required features, it also means, that processes have to be constructed from the best of the breed resources.

## **Synthesis**

It is worth noting, that flexibility of an architectural skeleton in this case is the cardinal advantage, which allows reaching innovative results in the optimal way. Morally formulated in 1983 by academician V.A. Legasov

(Legasov,1985) concept of flexible production management on a platform of universal informational highway (pipeline), is realized today in the form of services to information corporate bus (ICB).

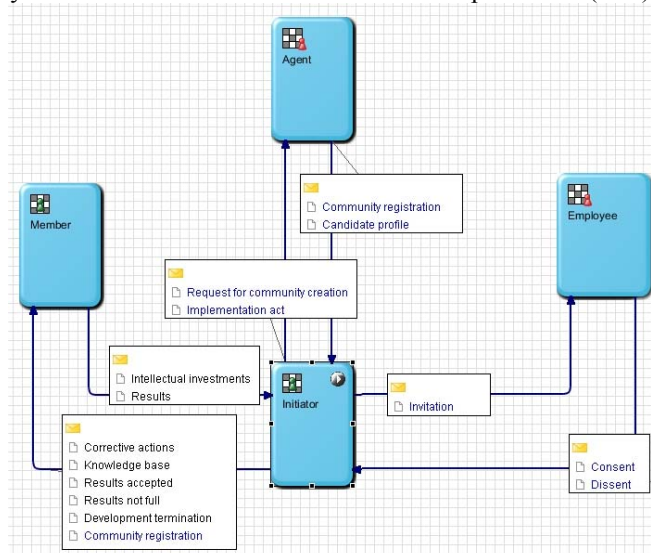


Fig.3. Model of the innovation process in a "Process manager" looks very simple (Chebotarev V., 2011)

Two modifications of classical information Service-oriented Architecture (SOA) with effect of synergy are proposed. Firstly, executive activities layer is reformed in a frame of S-BPM assumption, thus, transformation from rigid process structure into Subject-orientated Business Process moderation due to market excellence requirement. This transformation is organically realized in S-BPM paradigm by lowest level of process executives in ad-hoc mode, moderated by senior expert responsible for goal achievement. In this case, the real orchestration of real-time market requirements is developed. Secondly, while monitoring the process of moderation we extract repetitive or long lasting fragments of the processes and fix them in the clouds for further usage. Thereby, a set of extremely required services is obtained and immediately become valid for exploitation. See Figure 4

As a result, all architecture become more flat and market adoptive. Next feature of these transformations is business mobility and instead of today's specific granularity its acquired generality. This feature became real not only because of 'tangible' services that are created and used but also 'intangible', so called 'intellectual assets' and while solution of the known task is developed by known, fixed and established process, the new solution search of a problem or unknown task is provided by this intellectual asset constrained on a platform of search based applications (SBA). Therefore, instant intellectual support is provided to modern business architecture on a fly.

## CONCLUSION

The mid-term results of carried-out research that are presented in this work, shows the extended possibilities of traditional Enterprise Architecture in order to support the modern environmental and business/technology challenges and explains the concept of Real-time Business Architecture implementation. Logically this transformation is very much similar to the processes that took place in building and city construction architecture at the beginning of XX century when socially required new forms of excellence in life quality have appeared and dominated next three decades declined later by weak economics in general.

Moreover, it is stated that the provided approach to realization of architecture has certain benefits of social impact. It gives real freedom to the mass of executive employees in their intellectual potential realization, as well free time from the operations with 'wait' functions. It also reforms market from classical market-of-advertisement-use into market-of-value-use, because of business accessibility since its transparent and reflective nature representing core feature of S-BPM approach.

The further approaches and results of these studies may be used afterwards for improvement the processing and transferring of the complicated unstructured information content within the Enterprise 2.0, joined ventures or modern vertical integrated organization.

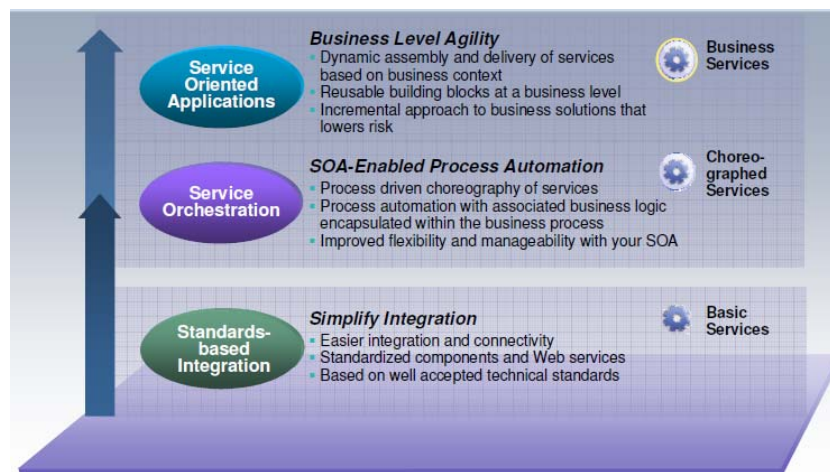


Fig.4. Future of Service Oriented Applications, based on I-cloud and S-BPM

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# **LEARN, LIVE, AND LEAVE. WHY FOREIGN STUDENTS EDUCATE IN THE UNITED STATES THEN LEAVE: A REVERSE BRAIN DRAIN**

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## **ABSTRACT**

*In the concept known as the reverse brain drain, people migrate to become educated, live, then leave to return to their home countries or a third country in search of greater prosperity. This paper explores why people from less developed countries are leaving their homelands to be educated in the more developed countries, and possible additional reasons why the brain drain student changes gears to reverse. The quality of academia in more developed countries results in a valuable experience. There are reasons why foreigners are drawn to the United States for schooling. This discussion brings to light evidence of education, global influence, effects of the reverse brain drain, and the need to take drastic measures to stop the spiral downturn within the United States.*

## **INTRODUCTION**

The purpose of this paper is to explore reasons why people from less developed countries are leaving their homelands to be educated in the more developed countries. This concept is known as the brain drain. However, the greater focus is on the reverse brain drain. In this concept, people migrate to the more developed countries, become educated, live, then leave to return to their home countries or a third country in search of greater prosperity.

### **What is the Brain Drain?**

Jalowiecki and Gorzelak define the brain drain as an occurrence in which a nation endures a depletion of its finest educated to the extent which jeopardizes the requirements of future national growth. The reverse brain drain is defined as students who obtain the greater part of their education in the foreign country, i.e. the United States, and depart to their native land to settle and utilize their newly attained intelligence (Johnson, 2008).

### **Why is this occurring?**

Historically, the brain drain effects from Europe can be found at times such as post World War II. The persecution of scholars, mostly the German-Jewish scientists, could be the beginning of the event, especially because at this time the United States was becoming known as a nation accomplishing scientific distinction. Emigrants are captivated by these Western countries' privileged salaries, improved working environments, strength and political liberty, and enhanced educational scenarios for their offspring. (Jalowiecki and Gorzelak, 2004). There are those that debate the effectiveness of the brain drain on wealthier developed countries than those developing nations. (Foadi, 2006).

## **QUALITY OF EDUCATION IN THE UNITED STATES**

### **College Rankings**



In education there has been debate about the cost of higher education versus the quality of education the student receives. An article in U.S. News & World Report entitled Learning the Hard Way by Kim Clark discusses the idea that dropping costs of higher education does not need to diminish the quality. In the article, How We Measure Success found in U.S. News & World Report, September 2010, rankings evaluate the comparative quality of schools determined by generally accepted gauges of superiority including retention and graduation quantities and the asset of the faculty as are created for families alarmed by the results of the best academic value for their money. This ranking system relies on two stakes: quantitative measures that education specialists have projected as dependable markers of academic quality and the studied perspective of what is most important in education.

The 2007 The Times Higher-QS World University Rankings substantiates that the top universities on several levels are in the English-speaking world. The top 200 universities can be found throughout only 28 countries. The theory that non-English-speaking Asia is a place that students originate instead of going to will not be maintained indefinitely.

There is no essential association between the quality of teaching and learning and the quantity and quality of research. There is a general relationship between a country's total economic ability and the position of its research universities. (Marginson and van der Wende, 2007)

## **MIGRATION OF PEOPLE, WHAT DRAWS FOREIGNERS TO THE UNITED STATES?**

As recruitment of native-born students deteriorates, U.S. colleges and universities are likely to campaign for and register even greater amounts of foreign students. Foreign students are characterized as a citizen of another country on a quest for education in a U.S. school insisting on a high-school diploma or something comparable. These students can attain residence, and qualify for financial support at the local and national level. The U.S. portion of the global foreign students has dwindled. Other significant western countries registering foreign students are France, United Kingdom, Germany and Canada. Foreign students account for approximately 2.7 percent of the U.S. total university registration.

There are some key variables that affect foreign students from attending colleges in the United States. They include elevated living everyday expenses, less employment openings, travel costs, and tuition. Due to these reasons, some foreign students register at public schools with reduced tuition rates. Some of the greatest increases of foreign student scheduling comes from OPEC countries that have encountered quick development. Benefits to enrolling in a college within the United States include superior teaching and research, greater than anticipated duration income, esteem of a foreign degree, international links, travel, research or existing within another culture enhancing the college experience. Reasons why foreigners wish to study in the United States include political uneasiness in their home country, racial or religious harassment or evasion of military participation.

The future may see an increase in foreign students. One reason might be because the colleges may decrease admission requirements and aggressively seek to engage foreigners. This may lead to an institution's financial dependency on enrolling a minimum of foreign students and creating a greater dependency on globalization.

There has been an increasing occurrence of migration for education. From the 1970's to 2009 the amount of students registered beyond their native nation has risen more than four times to slightly over 2.7 million. There are three reasons for this event: 1. beginning with, contributing spaces to foreign scholars can assist in encouraging international shared insights, both involving countries and concerning current progressively more multicultural civilizations, 2. international students as economically profitable and 3. learning abroad could be one move to an extended stay in the host country. This can precipitate an extensive tenure position in satisfying the requirement for experienced immigrants.

# **POST EDUCATION EMPLOYMENT OPPORTUNITIES**

## **Why are international college graduates leaving the United States?**

A globalizing economy entices the most innovative brains to go overseas, stay there and produce products. Additionally, companies outsource manufacturing work to other countries where labor rates are lower. This affects the United States' unemployment rate and the eventual economic future for the country. (Webber, 2004) Another reason why foreign students and graduates are not coming or staying here is because the United States is not issuing enough visas. (Webber, 2004) There are not adequate permanent-resident visas obtainable each year for capable workers and their families. (Wadhwa, 2007) This is why these international students who come to the United States for education then leave and return to their home countries or a third country is suppressing the influx of innovative researchers to the United States. (Webber, 2004)

The United States profits billions of dollars from educated experts who abandon their home nations to migrate. In the same manner the United States squanders billions of dollars when they leave and likely return home for greater opportunities. (Wadhwa, 2007) The current state of the growing crisis of American education will eventually result in the company and the country with the most exceptional brains prevailing. (Webber, 2004)

## **Opportunities in the Home Country**

Often extremely capable Chinese employees abandon their foreign employers for more advanced career possibilities in Chinese companies. Multinational corporations squander their Chinese workers to local businesses after some development because employees assume that openings for career growth and advancement are more likely in Chinese companies. Chinese companies may be viewed as more enticing employers in the long term. Chinese employees communicated that the primary purpose for leaving was because of the shortage of viable career directions. (Zimmerman, Lin And Buck, 2009)

In the United States companies will attempt to influence the government to amplify the accessibility of H-1B visas. There won't be sufficient workers to satisfy all the high-skill/high-wage positions that will be available throughout the world. (Gordon, 2009)

# **OPPORTUNITIES IN THE UNITED STATES**

## **Job Placement Data**

According to the United States Department of Labor college graduates will sustain an optimistic, successful future. Between 2002 and 2012 more than 56 million available positions are projected for those launching a specific career path for the first time. Of these, 14 million employment prospects are to be filled by personnel who have a bachelor's or graduate degree and are beginning a profession for the first time. More than half of these opportunities are presumed to originate from the necessity to satisfy newly formed positions. The residual possibilities for college-educated recruits are expected to be derived from the requirement to restore staff who abandon employment permanently. Considering several of today's college-educated professionals are perched for retirement, alternative requests are anticipated to be immense.

Top five occupations with the most job openings for college graduates entering the occupation for the first time projected from 2002-12 include Postsecondary teachers, Elementary school teachers, Secondary school teachers, Accountants and Auditors, and Management Analysts. Business, finance, and sales positions are predicted to have an improved need for college graduates. Degrees relating to sales of complex scientific or technical products are particularly prized. Healthcare positions will also increase. As the population matures the requirement for healthcare will amplify. Most job options in education will originate from the necessity to fill the many teachers and administrators positions that are likely to retire over the 2002-12 time period.

## **Work Visas**

In excess of 1 million extremely skilled experts are waiting for an annual allowance of approximately 120,000 permanent-resident visas for employment-based fundamentals. Many cross the borders into the country legally to work or study. They participate in the U.S. economic expansion and global viability. Minimizing visas is actually encouraging them to repatriate to countries such as China and India. The United States is positioned to squander essential genius and workers who have acquired desirable knowledge and comprehension of American industry and may become possible contenders. There are not enough permanent-resident visas obtainable annually for skilled workers and their families. Fewer than 10,000 visas can be granted to immigrants from any one country. Delays for employment visas are four to six years. Skilled workers have started to repatriate. Numerous low-skilled immigrants are coming into the US illegally. It is thought that if the United States waits five years to resolve the immigration policy, the unskilled workers will prevail, but the skilled workers who are in “immigration limbo” will have left. The failure of the United States in these areas will benefit countries the United States is continuously challenging within the new global terrain. (Wadhwa, 2007)

It is said that this reduction on the number of H1B visas to almost a quarter of its earlier allowance was a consequent answer to the September 11th occurrence. (Siliconindia, 2004). A majority of Indians were visiting the U.S. on B1 and B2 visas. 90,000 Indian students were studying in the United States, which is the highest amount among all immigrants studying in that country. (Siliconindia In Focus 10). Furthermore, these current technology workers are being asked to prepare their alternates. Once these alternates are educated, they usually return to India to do programming and computer work for their American companies. (Hafner, Preysman, 2003)

## **ECONOMIC GROWTH**

### **Growth of the United States**

Growth in terms of employment in the United States is somewhat stagnant. At the end of March 2011 there were 3.1 million job openings. However, the number of job openings is actually on an upward trend, especially since the conclusion of the recession in June 2009, but is still under the 4.4 million openings at the beginning of the recession in December 2007. (BLS, 2011) As jobless declarations persist in slumping, consumer confidence is growing, and they are splurging more. (Casiano, 2011). Employment sustained deterioration until December 2009. Employment began to increase, however, the damage had been done and a continuous increase of employment, temperate production growth, and minimal inflation would be needed to repair the destruction of the economy. (Witte, 2010)

### **Global Growth in Comparison to the United States**

In 1995 various European countries including Belgium, France, Italy, and the Netherlands the Gross Domestic Product per hour worked was 10 percent or greater beyond the United States average. By 2004 the Gross Domestic Product per hour worked in the European Union was approximately 10 percent under the place of the United States. Working hours per capita in the European Union countries reduced from approximately the same to the United States point in 1973 to only 76 percent of the U.S. level by 1995. Since 1995, the European Union has not encounter a deceleration in Gross Domestic Product growth. (Ark, O'Mahony and Timmer, 2008)

There are those that believe the world economy is sluggish again. We function in an extremely entangled global financial market where events that occur in one country influence the position of financial institutions in other countries. Additionally, it has been forecasted that many developing countries' economies will cultivate more expeditiously than the United States and those equivalent to it. Possible reasons for the slow growth could be inadequate consumption and ineffectual investment. Additionally, the population is aging, causing experienced professionals to retire. While the United States may be faltering, promising markets such as Asia are intense and at the forefront the global resurgence. (Mafi-Kreft, 2010).

## **College Enrollment**

In 2005-'06 globally students came to the United States to follow their educational dreams. (Batalova, 2007) In 2008-'09 approximately 671,616 international students were enrolled in higher education schools in the United States. (Fischer, 2009). The United States is the top destination for foreign students, (Fischer, 2009) not only to learn but to instruct and conduct research.

A 2005 New York Times article discusses China having amplified its funding for higher education from \$4 billion in 1998 to more than \$10 billion in 2003, and has had a tremendous rise in the amount of students who accomplished their undergraduate and graduate studies. (Batalova, 2007) A growth in the middle class in nations such as China and India implies more families have the means to send their children overseas to learn. (Fischer, 2009) India has made significant investments in its domestic higher education by taking resources from public and private suppliers. (Batalova, 2007) This hosting of students provides approximately \$17.6 billion to the United States economy. (Fischer, 2009)

More than 40 percent of all doctorates in agricultural sciences and 40 percent of Master's degree students were foreigners. (Wadhwa, 2009, Wahdwa, Saxenian, Freeman and Salkever, 2009) Between 1990 and 2000 the amount of people with college degrees (at least a Bachelors) born in Asia who were working in science and engineering professions in the United States increased from roughly 141,000 to 460,000. (Wahdwa, Saxenian, Freeman and Salkever, 2009)

## **Additional Reasons For Leaving**

One of the greatest explanations noted by ex-immigrants as to why they came to the United States was professional and educational growth prospects; these are the same explanations as to why they returned home. (Wadhwa, 2009) As the wealth of the developing countries has industrialized facts insinuate that less foreign students aspire to remain in the United States following graduation. They are concerned they will not be able to find employment in the United States after graduation and their mounting idea that the economy of the United States will soon fall behind global growth rates. (Wahdwa, Saxenian, Freeman and Salkever, 2009)

Career advancement is one of the greatest reasons for returning home. A study was conducted showing only 10 percent of the Indian returnees held senior management standings in the United States, but 44 percent established positions at this rank in India. Chinese returnees went from 9 percent in senior management in the United States to 36 percent in China. (Wadhwa, 2009)

Social factors, nearness to friends, and the capability of tending to aging parents were other reasons employees were drawn outside of the United States. (Wadhwa, 2009) This was referred to as one of the glaring motives for departing the United States. (Wahdwa, Saxenian, Freeman and Salkever, 2009)

One of the least important reasons for leaving is a visa. Many foreign students are apprehensive about acquiring work visas and specific positions in their area of concentration. Many Chinese students believe that the most lucrative job prospects are in their native country. Indians are the most optimistic on the economic outlook of their resident country and are less probable to see the economic potential of their home nation as negative. (Wahdwa, Saxenian, Freeman and Salkever, 2009)

## **CONCLUSION**

The brain drain focuses on a depletion of a country's most educated to a point that jeopardizes the future growth of the nation. A reverse brain drain refers to students who receive their education in a foreign country then leave to return home or to a third country to settle and utilize their newly attained intelligence. Then the brain gain concentrates on concepts that attract professions to a specific country. Mobility includes both migration and relocation.

Quality of education in the United States is often considered superior to other countries. The academic quality compared to the cost results is a valuable experience. Foreigners are drawn to the United States for a finer education, the respect of the foreign degree, globalization, and exposure to other cultures.

Therefore, it is understandable why students come to the United States, but the issue is why they are leaving. The unemployment rate in the United States and eventual economic future of the country is faltering. Additionally, the number of visas being issued has diminished. Many are finding jobs in their home countries. Agencies exist to assist in finding these jobs overseas. In their home country they are often opening new tech-based companies or profiting from wage inflations manipulated by a shortage of skilled workers across China and India.

Often these students are returning home for professional growth. They are concerned they will not be able to find employment in the United States. Additionally, there is great concern the United States is falling behind in development. Therefore, career advancement opportunities are much more likely in the home or a third country. Another significant reason for returning home is the social factor. Being closer to family and friends and tending to aging parents has become more important. Lastly, the reduction in available visas is another reason to return home or leave for a third country.

In summation, the United States has a significant issue that needs to be addressed. Considering the evidence of education, global influence, and their effects on economies, the United States will need to take drastic measures to stop the spiral downturn.

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# AN ANALYSIS OF RECENT CIRCUIT COURT OF APPEALS CASES REGARDING IRC SECTION 1058

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## ABSTRACT

*The importance of liquidity in financial markets cannot be understated. It is particularly noteworthy during a time of economic uncertainty. Congress and the Internal Revenue Service have always recognized the need for liquidity and recognized that if a lender of securities was subject to a federal tax liability when making a loan, the lending markets would be impaired. However, the tax treatment of these loans has been inconsistent. In 1978, Congress enacted IRC § 1058 which makes it relatively easy for a securities lender to make or settle a securities loan so long as certain criteria are met. Recently, two separate Circuits had the opportunity to rule on purported securities lending transactions. In *Samueli v. Commissioner*, 661 F.3d 399, the Ninth Circuit Court of Appeals denied nonrecognition treatment because it did not meet the requirement set forth in §1058(b)(3). Specifically, the transaction reduced the opportunity for gain of the transferor. In *Anschutz v Commissioner of the Internal Revenue Service*, 2012-1 ¶ 50,117, the Tenth Circuit held that a proposed securities lending transaction did not qualify for favorable treatment under IRC § 1058, specifically the transaction violated §1058(b)(2) and §1058(b)(3). This paper will examine the cases to analyze the reasoning of the different Circuits.*

## INTRODUCTION

The importance of liquidity in securities lending markets cannot be understated. It is especially noteworthy during a time of economic uncertainty. The recent volatility in the securities markets casts an even brighter spotlight on the need for liquidity.

Under a typical securities loan agreement, someone borrows securities and posts collateral to secure its obligation to return identical securities. Congress and the Internal Revenue Service have always recognized the need for liquidity in the securities lending markets and acknowledged that if a lender of securities was subject to a federal tax liability when making a loan, the lending markets would be impaired. However, the tax treatment of these loan transactions has been inconsistent.

In 1978, Congress enacted Section 1058 of the Internal Revenue Code of 1986, as Amended (Code) which makes it relatively easy for a securities lender to make or settle a securities loan so long as certain criteria are met. These transactions were developed in response to the needs of securities brokers, who faced delays in obtaining securities to deliver to purchaser and therefore were forced to borrow the required securities from organizations and individuals who held the securities for investment purposes.

During the last few years, the IRS has been successful in denying non-recognition treatment to purported securities loans. Two of the cases which are the subject of this paper involve the construction and interpretation of Internal Revenue Code Section 1058. The two cases are *Samueli v. Commissioner* and *Anschutz v. Commissioner*, 664 F.3d 313.

Recently, in *Samueli v. Commissioner*, the Ninth Circuit Court of Appeals largely affirmed the decision of the United States Tax Court holding that the taxpayers were not entitled to non-recognition treatment for a purported securities lending transaction. Specifically, the Ninth Circuit held that the transactions reduced the taxpayer's risk of loss or opportunity for gain which is a requirement under Code Section 1058(b)(3). An

additional issue was raised regarding the deductibility of interest. The Tax Court initially held that the taxpayers were not entitled to interest deductions for interest paid on the transactions because the debt was not recognized for tax purposes. The Ninth Circuit disagreed with the Tax Court and ruled that the deduction for the interest should be allowed.

In a similar case, the Tenth Circuit Court of Appeals affirmed the decision of the United States Tax Court in *Anschutz v. Commissioner* and held that the taxpayers were not entitled to non-recognition treatment for a proposed securities lending transaction. The case involved the treatment of stock transactions entered into by the Anschutz Corp. (TAC), a qualified subchapter S subsidiary of the Anschutz Co (AC). TAC entered into a master stock purchase agreement (MSPA) to sell shares of stock to an investment bank. The MSPA also called for TAC to lend those same shares to the bank. One issue was whether this sale agreement with concurrent share lending requires TAC, and its parent, Anschutz Co., to recognize built-in gain upon entering into the transaction. The Tenth Circuit concluded that TAC and Anschutz Co. must recognize gain to the extent that the upfront cash payments received in 2000 and 2001 exceed TAC's basis in the stock. Additionally, the Tenth Circuit held that the taxpayer could not be afforded preferential treatment under Code §1058.

Before looking at the specific facts and analysis of each of the cases, the relevant sections of the Code should be reviewed.

## **RELEVANT SECTIONS OF THE INTERNAL REVENUE CODE**

Code §1001(c) provides the general rule for the recognition of gains and losses. It provides in pertinent part, “[e]xcept as otherwise provided in this subtitle, the entire amount of the gain or loss, determined under this section, on the sale or exchange of property shall be recognized.” As a general rule, any sale or other disposition of property is a taxable event unless a transaction qualifies for nonrecognition or exclusion treatment. One Code provision that affords taxpayer preferential tax treatment is Code §1058.

Code §1058 provides the general rule under subsection (a) which provides that “In the case of a taxpayer who transfers securities (as defined in section 1236(c) pursuant to an agreement which meets the requirements of subsection (b), no gain or loss shall be recognized on the exchange of such securities by the taxpayer for an obligation under such agreement, or on the exchange of rights under such agreement by that taxpayer for securities identical to the securities transferred by that taxpayer.

In order to qualify for non-recognition treatment, the Agreement must meet the requirements in **§1058(b)** which provides that an agreement shall:

- provide for the return to the transferor of securities identical to the securities transferred. §1058(b)(1);
- require that payments shall be made to the transferor of amounts equivalent to all interest, dividends, and other distributions which the owner of the securities is entitled to receive during the period beginning with the transfer of the securities by the transferor and ending with the transfer of identical securities back to the transferor. §1058(b)(2);
- not reduce the risk of loss or opportunity for gain of the transferor of the securities in the securities transferred. §1058(b)(3); and,
- meet such other requirements as the Secretary may by regulation prescribe. §1058(b)(4).

Accordingly, pursuant to Code §1058(a), all four requirements of Code§1058(b) must be met before a securities loan agreement qualifies for nonrecognition treatment. The main issues in these cases focus on the requirement of Code §1058(b)(3).

## **THE NINTH CIRCUIT’S DECISION IN *SAMUELI***

### **The Facts**



On October 17, 2001, the taxpayers, Mr. and Mrs. Samueli and Mr. and Mrs. Ricks (“Samuelis”) purchased a \$1.7 billion principal strip (“Securities”) issued by the Federal Home Loan Mortgage Corporation (“Freddie Mac”) from their securities broker, Refco Securities, LLC (Refco) by obtaining a margin loan at a price of \$1.64 billion as outlined per the agreement underlying the transaction (“Agreement”). By purchasing a strip, they were purchasing the right to receive the principal on a Freddie Mac bond at the date of maturity but not to right to receive interest prior to maturity. Simultaneously, they transferred the securities back to Refco pursuant to Refco’s promise to transfer identical securities to the Samuelis on January 15, 2003. There was an addendum to the agreement between the Samuelis and Refco that allowed the taxpayers to require an earlier transfer of the identical securities only by terminating the transaction on July 1, 2002 or December 2, 2002. Once the transaction settled, the Samuelis transferred the securities to their broker in exchange for cash collateral of \$1.64 billion. When the taxpayer received the cash, they repaid their margin loan. The Samuelis were required to pay a variable rate fee for the use of the cash collateral. The taxpayers treated the transaction as a securities lending agreement eligible for non-recognition treatment under §1058 of the Internal Revenue Code. Accordingly, the Samuelis reported approximately \$50.6 million in long term capital gain on the sale and also deducted millions of dollars of interest related to the transaction.

The IRS determined that the transaction was not a security lending arrangement subject to §1058 and viewed that the Samuelis had purchased and immediately sold the securities in 2001 to Refco at no gain or loss. Moreover, the IRS determined that the taxpayer repurchased the securities pursuant to a forward contract and immediately resold the securities in 2003, realizing an approximate \$13.5 million short term capital gain. Additionally, the IRS determined that the Samuelis could not deduct the cash collateral fees claimed as interest in connection with the reported securities lending arrangement because no debt existed. In 2006, the IRS Commissioner issued a Notice of Deficiency for the tax years 2001 (in the amount of \$2,177,532) and 2003 (in the amount of \$171,026) to the Samuelis, and a Notice of Deficiency for the tax year 2001 (in the amount of \$6,126) to the Rickses. They both filed petitions with the Tax Court seeking redetermination of the deficiencies.

## **Holding and Analysis**

The Ninth Circuit Court of Appeals largely affirmed the decision of the Tax Court and denied non-recognition treatment pursuant to Code §1058. However, the Samuelis not only challenged the conclusion of the Tax Court, but also argued that Code §1058 is not determinative or relevant to the transaction.

The Ninth Circuit expanded the reasoning of the Tax Court and held that the terms of the Addendum reduced Taxpayers’ upside exposure to the market value of the securities in another way as well, which was not highlighted by the Tax Court in its decision. Per the Addendum, if the taxpayers had elected to terminate the loan on either of the two optional early termination dates, Refco would have had the right to purchase the Securities at a LIBOR-based price. On both such dates, the LIBOR based formula ended up yielding a price that was *higher* than the trading price for the securities. This means that in all likelihood Refco would not have exercised its right to purchase the securities if the taxpayers had terminated the transaction on either such date, assuming the same securities were readily available from other sellers. If this had been the case, the taxpayers could have only terminated the transaction on one of those dates at the risk of being forced to sell the securities to Refco for less than their market price. In effect, this further reduced taxpayers’ ability to exit the transaction at will.

The Samuelis argued that their inability to secure the return of the securities on demand did not affect their ability to recognize gain because the securities were “zero-coupon bonds whose value did not widely fluctuate with windfall profits at some momentary period.” The Court opined that “[a]lthough the argument seems convincing, it was not a sufficient basis for finding that this transaction *did* comply with § 1058(b)(3). First, the value of the Securities would not need to fluctuate “widely” during the term of the loan to provide opportunities to sell at a profit; when one owns \$1.6 billion of a particular security, even a small fluctuation in value can produce a significant opportunity for profit. Second, as noted above, even if one could assume that there was zero risk of any fluctuation in the market value of the securities, Refco’s option to purchase the securities at the LIBOR-based prices still affected the taxpayers’ ability to realize the market price of the

securities on the dates when they had the option of getting them back from Refco. Finally, the assumption that the market price of the securities — Freddie Mac bonds — will never fluctuate widely or unexpectedly seems less valid today than it may have when taxpayers invested in the Securities.”

Congress’ explicit goal in enacting § 1058 was to encourage loans for the benefit of brokers who needed large supplies of securities on hand to deliver to purchasers, because such loans “can have a favorable impact on the liquidity of securities markets” *Senate Report at 6, 1978 U.S.C.C.A.N. at 1292*. It may be possible that non-recognition treatment should be given to a transaction that fails to meet all of the specific requirements of § 1058(b), but that nonetheless is motivated by the goals that Congress had in mind when it enacted § 1058. In the form of a loan, a tax shelter marketed as such for which the borrowing broker (Refco) did not pay the lender any consideration, was clearly not “the thing which the statute intended” *Gregory*, 293 U.S. at 469.

The taxpayers’ second argument is that § 1058 is not relevant and that their transaction should not be treated as a securities loan at all. Instead of treating it as the purchase and immediate resale of the securities, creating short-term capital gain, the taxpayers argue that what really happened in 2003 was that they liquidated a contractual right to receive the securities from Refco (the “Contractual Right”). The Contractual Right was a capital asset that they acquired in consideration of their 2001 sale of the securities to Refco; their basis in it was the price that the first taxpayers, and then Refco, paid for the securities in 2001 (\$1.643 billion). Over a year later, in 2003, that asset was liquidated when Refco paid the taxpayers the market value of the securities in lieu of delivering the actual securities. The liquidation of the capital asset yielded exactly the long-term capital gain that taxpayers reported, not the short-term capital gain.

The Court opined, “The taxpayers are correct that a contractual right of this nature could be a capital asset under § 1221 and that gain attributable to the cancellation or termination of such an asset is capital gain under § 1234A, which provides that “[g]ain or loss attributable to the cancellation, lapse, expiration, or other termination of . . . a right or obligation . . . with respect to property which is (or on acquisition would be) a capital asset in the hands of the taxpayer . . . shall be treated as gain or loss from the sale of a capital asset” § 1234A. *See also Wolff v. Comm’r*, 148 F.3d 186, 188 (2d Cir. 1998) (“[A] gain or loss from the cancellation of a futures or forward contract would result in capital gain or loss pursuant to [§ 1234A].”).

The IRS Commissioner in turn argues that taxpayers’ theory is valid only if the contractual right was “cancelled” or “terminated,” rather than merely *fulfilled*, in 2003. Specifically, if Refco actually did sell the securities to the taxpayers as the contractual right obligated them to do, there was no cancellation or termination of the capital asset, and the Tax Court’s interpretation of the 2003 events as yielding short term capital gain is correct. The Court agreed with the Commissioner with regard to this argument. However, the Court reasoned that there was nothing in the record to support the assertion that Refco “cancelled” or “terminated” its contract with Taxpayers. According to the terms of the loan agreement, Refco was required to return the securities to taxpayers, and there is no evidence in the record of any discussion between them that would constitute an acknowledgment that this obligation would not be met. In Tax Court, the parties also stipulated that “Shiloh sold the Securities to Refco” at that time, which Shiloh could not have done if Refco had not first delivered the securities to Shiloh, as Refco was required to do under the contractual right. Additionally, the Court noted that the taxpayers do not have the right to call the transaction whatever they want after the fact.

## THE TENTH CIRCUIT’S DECISION IN *ANSCHUTZ*

### The Facts

Mr. Anschutz, an individual, was the sole shareholder of Anschutz Co., which elected to be treated as an S corporation and for its wholly owned subsidiary, the Anschutz Corporation (TAC), as a qualified subchapter S subsidiary (QSub) under Internal Revenue Code § 1361(b)(3)(B)(ii). As a result of this election, all assets, liabilities, income, deductions, and credits of TAC were treated as those of Anschutz Company on the Anschutz Company’s federal income tax returns. TAC, the QSub, was used as an investment vehicle to hold large blocks of stock.

In the late 1990's, Mr. Anschutz and its executives began investigating potential sources of cash to fund Mr. Anschutz's business and investment activities. They ultimately decided to leverage TAC's stock holdings by entering into three transactions involving variable prepaid forward contracts (VPFCs) and share-lending agreements (Share-Lending Agreements), with an investment bank, Donaldson, Lufkin & Jenrette Securities Corp. (DLJ). The transactions were intended to allow the QSub to receive cash by using the appreciated stock as collateral without causing a sale for federal income tax purposes.

Under the prepaid forward contracts, DLJ was required to make an upfront payment to Mr. Anschutz in exchange for the right to receive a variable amount of shares over a ten-year time period. The number of shares was a function of a formula relating to the market value of the shares at maturity. The economic effect of the formula was to transfer the *downside exposure* of the stock to the bank and to divide the *upside exposure* between the bank and the taxpayer. Mr. Anschutz entered into a pledge agreement whereby shares deliverable under the variable prepaid forward contract was placed in a collateral account in order to secure his obligation to deliver those shares at maturity.

In turn, DLJ borrowed an identical number of shares equal to the number of shares held in the collateral account from a third party lender to hedge its exposure under the prepaid forward contract and then sold those shares short in the market. The amount received from the short sales determined the amount DLJ paid under the forward contracts. Additionally, pursuant to the terms of the pledge agreement, the bank had the ability to borrow the shares in the collateral account which DLJ did to close the short positions.

Under the transactions:

- The QSub entered into long-term sale and lending agreements with regard to the stock at issue.
- The sales agreements were memorialized by a master stock purchase agreement (MSPA) and various accompanying documents which were referred to as "prepaid variable forward contracts" (PVFCs) by the taxpayer.
- The PVFCs had corresponding share-lending agreements (SLAs) with respect to the shares subject to the PVFCs.
- The QSub and the investment bank negotiated the terms, provisions and structure for over the term of a year.
- The QSub received 75% of the cash value of the stock in upfront payments under the PVFCs totaling \$350 million and an additional 5% (\$23 million) in prepaid lending fees under the SLAs.

The taxpayer treated the transactions as open transactions, not sales--and did not report any gain or loss on the federal income tax returns.

The IRS determined that the QSub's transactions ought to be treated as a closed sale and the income had to be reported on Anschutz Co.'s tax return. The IRS also found that Anschutz Co. was liable for deficiencies of built-in gains tax of approximately \$49.7 million for 2000 and \$63.9 million for 2001. Additionally, since Anschutz Co. was an S Corporation, the IRS made adjustments to Mr. Anschutz's distributive share of income and gain and imposed deficiencies of \$12 million for 2000 and \$17.9 million for 2001.

The issue was whether the sales agreement and concurrent share lending triggered the recognition of built-in gain.

## **Holding and Analysis**

The Tenth Circuit agreed with the Tax Court and held that a prepaid variable forward, plus a stock loan, is a sale for federal income tax purposes. As part of the decision, the taxpayers were not entitled to preferential treatment under IRC § 1058. The Court held that the shares subject to the pre-paid variable forward contracts (VPFCs) and lent pursuant to the share-lending agreements (SLAs) were sold for federal income tax purposes. TAC transferred the benefits and burdens of ownership to DLJ in exchange for valuable consideration.

The Tenth Circuit conducted a 10-part analysis to determine whether the Tax Court was correct in treating the transactions at issue as sales of the pledge stock. The factors included (1) legal title to the shares; (2) how the parties treated the transactions; (3) whether DLJ, the investment bank and counterparty acquired an equity interest in the pledged shares; (4) present obligations of the parties; (5) right of possession of pledged shares; (6) risk of loss; (7) opportunity for gain; (8) voting rights; (9) dividend rights; and (10) right to sell the shares. When all of the factors were considered together, the Tenth Circuit agreed with the Tax Court that the transactions should be treated as current sales of the pledged shares to DLJ.

The Tenth Circuit opined that in addition to DLJ obtaining and disposing of the actual shares pledged, Anschutz received significant value for the shares and lost nearly all incidents of ownership.

Like the Tax Court, the Tenth Circuit held that the taxpayer should not have relied on *Revenue Ruling 2003-7* due to the nature of the transaction. The facts surrounding the Revenue Ruling were simplistic in that they only involved a forward contract which is clearly distinguishable from the facts in this case.

The Tenth Circuit additionally held that the transactions could not be afforded preferential treatment under §1058. The specific requirements for nonrecognition treatment were already discussed.

Petitioners argued that the lending agreements did not violate Section 1058(b) because: DLJ is required to return shares to TAC of the same issuer, class, and quantity as those borrowed; (2) DLJ was required to pay TAC amounts equal to all interest, dividends, and other payments with respect to the lent shares while the loans were outstanding; and (3) TAC's risk of loss or opportunity for gain in the borrowed shares was not reduced.

Petitioners disagreed with the respondent's contention that the SLAs were illusory and violated §1058(b) because the PVFCs limit TAC's risk of loss. Part of the petitioner's argument focused on the need to look only at the documents connected with the SLAs, not those connected with the PVFCs.

The Tenth Circuit rejected the petitioner's argument that the transactions were not taxable sales because they qualified for non-recognition treatment under §1058. The Court found that the MSPA eliminated the risk of loss with regard to the lent shares and thus violated Section 1058(b)(3) that a SLA not limit a security lender's risk of loss or opportunity for gain.

## CONCLUSION

In *Samueli*, the Ninth Circuit largely affirmed the Tax Court and held that a purported securities loan transaction did not qualify for non-recognition treatment. The main issue before the courts was whether the securities loan requirement met the specific requirements of §1058(b)(3), which states that the securities loan agreement must not reduce the lender's risk of loss or opportunity for gain in the securities loaned.

In *Anschutz*, the Tenth Circuit affirmed the Tax Court and held that the transactions under review were sales, not open transactions and the share lending agreements (SLAs) were not entitled to preferential treatment under §1058. However, the Court was clear that they held that the underlying transaction amounted to a complete disposition of stock, not a loan.

There is a question about whether these holdings should be read to create a necessity for a lender to obtain an immediate right to recover lent securities. However, that would preclude many, if not all, securities loans from qualifying for §1058 treatment since as a practical matter, a borrower cannot be sure of its ability to deliver securities to a lender in a time period that is shorter than the settlement period for stock purchases in the market.

Treasury regulations proposed two decades ago, but never finalized, clarify that the securities loan agreement must provide that the lender may terminate the loan upon notice of not more than five business days in order to meet the requirement. One of the securities loan agreements entered into between the taxpayer and

his broker had a term of approximately 15 months and prevented the taxpayer on all but three days during that period from causing the broker to transfer identical securities back to the taxpayer.

The Tax Court in *Samueli* never mentioned the proposed regulations in its decision but it would seem beneficial to structure a transaction in a manner that gives the lender the right to ask for the loaned or other identical securities on short term notice, perhaps not more than 3 – 5 days since today's regular stock settlement is three days in order to qualify for §1058 treatment. The one thing that is clear from reading these decisions is that Treasury and the IRS should issue guidance with regard to IRC § 1058. Perhaps the proposed regulations deserve a second look and the types of securities covered should be defined. Additionally, guidelines to handle a fact pattern similar to the *Anschutz* case should be addressed. These two cases reached different circuit courts within a few months with other cases being heard in the Tax Court.

## REFERENCES

*Anschutz v. Commissioner*, 135 T.C. No. 78

*Anschutz v. Commissioner*, 664 F.3d 313

Code § 163

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Code § 1001

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Code § 1234A

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Report 1239 of the Tax Section of the New York State Bar Association, June 9, 2011

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# THE EFFECT OF INTERNAL CONTROL ON RESTAURANTS' SURVIVABILITY

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## ABSTRACT

*Researchers have found that more than 67% of restaurants fail within the first 3 years of their operation. These findings underscore the restaurant industry's current crisis of profitability and survivability. The industry's average profit is generally small, ranging from 3% to 7%. Despite these problems, researchers have not examined the effect of internal control on the operating activities of small restaurants. The purpose of this study was to determine restaurant managers' perceptions of the internal control systems and (a) the protection of assets, (b) the segregation of duties, and (c) the verification of transactions. Two hundred and seventy restaurants were selected through random sampling, and multiple regression and exploratory data analysis, including descriptive statistics, were used to analyze the data. The multiple regression analyses indicated statistically significant relationships linking perceptions of internal control systems in restaurants with each of the 3 predictors; protection of assets, segregation of duties and verification of transactions. The results indicated that majority of the study group perceived restaurants' internal control system to be inadequate compared to the Committee of Sponsoring Organization Treadway Commission (COSO) internal control integrated framework.*

## INTRODUCTION TO THE STUDY

The restaurant industry is the second largest employer in the United States. It employs an estimated 13.1 million people, or 9% of the workforce in the United States (National Restaurant Association [NRA], 2008). More than 945,000 restaurants and food services locations with annual sales of more than \$500 billion exist in the United States (NRA, 2008). Restaurants generated more than \$70 billion in profits in 2008 (NRA, 2008). This total amounted to 47% of what people in the United States spend on food annually (NRA, 2008). Typical restaurant food costs are about 30% to 35% of sales (Kotschevar&Withrow, 2008; Brown, 2006). Payroll and employee benefits cost around 30% to 35% of sales (Kotschevar&Withrow, 2008). The average industry profit is generally small, ranging from 3% to 7% (Kotschevar&Withrow, 2008; NRA, 2008).

Few food service operations operate successfully if their combined costs of goods sold and labor costs are above 65%, with the most common division being 35% food and beverage and 30% labor (Kotschevar&Withrow, 2008). Operations with higher costs that operate well are usually subsidized in some way. According to Kotschevar and Withrow (2008), this 65% figure is not universal. If there is proper internal control, the combined cost could total 75% and still leave a profit (Kotschevar&Withrow, 2008; Brown, 2006).

Although the restaurant industry is important to the U.S. economy, a substantial number of restaurants fail in the first 3 years (English, 1996; Parsa, Self, Njite, & King, 2005). Restaurant failures have been attributed to economic and social factors, competition and legal restrictions, and even government intervention, but most restaurant failures can be attributed to inadequate planning and improper internal control (Lee, 2006). Parsa et al. (2005) found that failure rates are notably higher for small, independent operations than for relatively large franchised restaurants. Parsa et al. (2005) also found that no restaurant had closed because of external forces. In contrast to earlier studies (English, 1996), Parsa et al. (2005) concluded that if restaurants are properly managed, external factors may not automatically lead to failure.

Previous studies on internal control bearings have focused on financial statements and their impact on the operation of firms (Curtis & Borthick, 1999; Janvrin, 2003; Kiger & Rose, 2004; Samson, Flesher, & Previs,

2006). Other studies have focused on the documentation of internal control structures and the significant monetary effect of weak controls on the firm's value (Dow, Shea, & Waldrup, 2009). The focus of this study is on internal control procedures in restaurants, on financial statements as well as the operation of restaurants through the use of the Committee of Sponsoring Organizations' ([COSO], 1992) internal control integrated framework to determine the extent to which best business practices lead to survivability. Operating activities are defined in this study as the sales and the expense activities that enter into the determination of operating income (Needles, Powers, & Crosson, 2005). Operating profit is defined as the return from standard operations, excluding the impact of extraordinary items and other comprehensive income such as investments and financing (Garrison & Noreen, 2009). The operating profit reveals the extent of a company's ability to earn profit from standard operation ( $S-VC-FC > 0$ ) (Whittington & Delaney, 2009; Garrison & Noreen, 2009; Needles, Powers, & Crosson, 2005)

## **Literature Review & Hypotheses**

The literature review includes a description of the COSO (1992) framework and the five components that are pertinent to best businesses practices. The rational choice theory (Becker, 1996; Cornish & Clark, 1986; Rubin, 1978) and communication theory (Altman & Taylor, 1987; Capella, 1985; Street & Giles, 1982; Weick, 1979) in organizations are subsequently discussed. A focused discussion of the reasons restaurants fail follows.

## **Internal Control Integrated Theoretical Framework**

According to the COSO (1992) internal control integrated framework, internal control encompasses the policies, rules, and procedures enacted by management to provide reasonable assurance that financial reporting is reliable, the operations are effective and efficient, and the activities comply with applicable laws and regulations. The AICPA (1972) identified two types of internal controls to help principals make decisions, namely by confirming or correcting agents' faithful performance of their duties and by providing information for future expectation. These financial controls are related to the reliability of financial information, and the administrative controls are related to the actions of agents and employees (Marchetti, 2005).

The corporate scandals of the 1980s saw many people lose their jobs (Marchetti, 2005). COSO was formed in 1985 to identify the various factors that can lead to fraudulent financial reporting and to develop recommendations to address these issues (Kieso, Weygandt, & Warfield, 2005). In 1987, COSO published its findings of the gross corporate irregularities of the 1980s. The report indicated that fraud occurred because of improper internal control that included not only financial statement controls but also certain environmental, institutional, or individual forces and opportunities ([COSO], 1987).

As part of COSO's work in identifying the factors that contributed to corporate fraud, the members also designed a model for corporations to use to address the lack of proper internal controls in corporate organizations (Jackson, 2006). In 1992, COSO established the internal controls integrated framework for developing an effective internal control system. This framework provides direction to any business that wishes to establish an effective internal control system ([COSO], 1992). This now recognized framework consists of five interrelated components: control environment, risk assessment, control activities, information and communication, and monitoring ([COSO], 1992).

These five major components of the COSO (1992) internal control integrated theoretical framework are part of a holistic framework needed to strengthen efficiency within the management of any organization. Throughout this holistic framework, a variety of activities and steps are taken to ensure that the organizations do not provide opportunities for the manifestation of fraudulent behaviors by employees ([CSOS], 1992). The framework created based on these components is constantly assessed for clarity so that the implemented internal control functions throughout the lifespan of the organization ([COSO], 1992). The five components of internal control also work harmoniously to detect, prevent, or correct errors or misstatements in the overall operations of the business ([COSO], 1992). For the process of internal control to be seen as viable, all of the financial statements generated from all business activities must be authentic and noteworthy in accounting terms (Quall, 2004).

## **Control Environment**

According to COSO (1992), the control environment sets the tone for an organization (Pickett & Pickett, 2005) by influencing the control consciousness of its people. It is the foundation for all of the other components of internal control because it provides discipline, structure (Nearon, 2005), integrity, ethical values, employee competence, management's philosophy and operating style, and the leadership provided by senior management and the board of directors (Quall, 2004).

## **Risk Assessment**

According to COSO (1992), every organization, be it private or public, large or small, faces risks from external and internal sources that must be assessed. A precondition to risk assessment is the establishment of objectives that are linked at different levels and are internally consistent ([COSO], 1992). Risk assessment is the identification and analysis of risks relevant to the achievement of objectives ([COSO], 1992). This assessment determines how the risks should be managed ([COSO], 1992). Because economic, industry, regulatory, and operating conditions will continue to change, mechanisms are needed to identify and deal with the special risks associated with change.

## **Control Activities**

Control activities are the policies and procedures that ensure how management directives are executed (Whittington & Delaney, 2009). Control Activities include such activities as approvals, authorizations, verifications, reconciliations, reviews of operating performance, the safeguarding of assets, and the segregation of duties (Quall, 2004). These actions dissuade fraud or theft activities that could eventually lead to losses.

## **Information and Communication**

Pertinent information must be identified, captured, and communicated in forms and timeframes that enable people to carry out their responsibilities. Information systems produce reports of operational, financial, and compliance-related information that make it possible to run and control the business (COSO, 1992). Information systems deal not only with internally generated data but also information about external events, activities, and conditions necessary to informed business decision making and external reporting (COSO, 1992). Effective communication also must occur in a broader sense by flowing down, across, and up the levels of the organization (COSO, 1992). All personnel must receive a clear message from top management that control responsibilities must be taken seriously (Quall, 2004). Employees in an organization must understand their own role in the internal control system, as well as how individual activities relate to the work of others (Pickett & Pickett, 2005). Employees must have a means of communicating significant information upward (Jackson, 2006). Effective communication also must exist with external parties, such as customers, suppliers, regulators, and shareholders (COSO, 1992).

## **Monitoring**

Monitoring is a process that assesses the quality of the internal control system's performance over time through ongoing monitoring activities, separate evaluations, or a combination of the two (COSO, 1992). Ongoing monitoring occurs in the course of operations. It includes regular management and supervisory activities as well as other actions that personnel undertake while performing their duties (Jackson, 2006). The scope and frequency of separate evaluations depend primarily on an assessment of risks and the effectiveness of ongoing monitoring procedures (COSO, 1992). Internal control deficiencies should be reported upward, with serious matters reported to top management and the board of directors (COSO, 1992; Jackson, 2006).

## **Methodology**



This study was designed to investigate restaurant managers' perception of the internal control systems in small restaurants operating in Nassau County in New York State, and if a significant relationship exists between the dependent variable, restaurant managers' perception of internal control system, and the independent variables, protection of assets, segregation of duties, and verification of transactions. The survey method was used to gather data from respondents that own or operate restaurants in Nassau County of New York State. The collected data were analyzed statistically to establish the findings.

## **Sampling Procedure**

The participants were selected by random sampling. The ultimate goal of the research is to arrive at findings that have general applicability (McTavish&Loether, 1999). The participants were chosen from a list of the small restaurants in Nassau County in New York State that have been in operation for at least the last 3 years. The criteria to participate in this study are that (a) the participants must be the managers of small restaurants operating in Nassau County in New York State, (b) the participants must have at least 10 employees, and (c) the participants must have been in business for at least the last 3 years.

According to the National Restaurant Association ([NRA], 2009), there are 1,173 restaurants in Nassau County, including small and large restaurants. A random sample of 270 restaurants was drawn as a subset of the total population of all the small restaurants listed on the New York State Restaurant Association's database of small restaurants in Nassau County in New York State that have been in business for at least 3 years. All the names of the small restaurants operating for at least 3 years in Nassau County were assigned a numeric value and were entered in an Excel formula function that randomly selected 270 restaurants as the sample frame from the target population. If a restaurant was selected that did not meet the criteria for selection, I discarded that selection and make another selection.

## **Data Collection**

The sample comprised of 270 restaurants operating in Nassau County in New York State that were selected through random sampling. I telephoned the selected restaurants and introduce the study to the managers. I then scheduled an appointment with the manager of each restaurant over the course of 3 weeks. Restaurant managers were given the option of doing the survey by mail, telephone or by face to face interview. The survey was then administered to the manager of each restaurant to fill out. The survey was conducted over 3 weeks. I made follow-up telephone calls to the restaurant managers weekly over the 3-week period. Internet or web survey was considered but rejected because such survey of the restaurant population can be subjected to bias if the respondents are restricted to restaurant owners who use only the Internet, which could result in low response rates. There also is no systematic way to sample the general population using a web survey because there is difficulty obtaining a sample frame in which every individual in the target population has a known chance of being selected for participation (Dillman, 2000). In addition, extremes in variation of users and equipment capabilities can affect sampling (Bradley, 1999).

## **Research Questions**

Following are the research questions that guided this study:

1. What are the restaurant manager's perceptions of the internal control systems in small restaurants operating in Nassau County in New York State?
2. What is the nature of the relationship between the segregation of duties and restaurant managers' perception of the internal control systems in small restaurants operating in Nassau County in New York State?
3. What is the nature of the relationship between the protection of assets and restaurant managers' perception of the internal control systems in small restaurants operating in Nassau County in New York State?
4. What is the nature of the relationship between the verification of transactions and restaurant managers' perception of the internal control systems in small restaurant operating in Nassau County in New York State?

5. Are internal control systems in consistent with COSO standards present in small restaurants operating in Nassau County in New York State?

The first research question was addressed descriptively through exploratory data analysis using descriptive statistics and charts. The second through fourth research questions were assessed by testing the hypothesis listed in the section below. The fifth research question was addressed descriptively by comparing the responses given by the restaurant owners regarding internal control systems to the COSO standards.

## Hypotheses

The following hypotheses were tested in this study:

- $H_01$ : There is not a significant relationship between the restaurant managers' perception of the segregation of duties, and their perception of the internal control systems.
- $H_11$ : There is a direct negative relationship between the restaurant managers' perception of the segregation of duties, and their perception of the internal control systems.
- $H_02$ : There is not a significant relationship between restaurant managers' perception of protection of assets, and their perception of the internal control systems.
- $H_12$ : There is a direct positive relationship between restaurant managers' perception of protection of assets and their perception of the internal control systems
- $H_03$ : There is not a significant relationship between restaurant managers' perception of verification of transactions and their perception of the internal control systems
- $H_13$ : There is a direct positive relationship between restaurant managers' perception of verification of transactions and their perception of the internal control systems
- $H_04$ : The level of internal control is not adequate by obtaining a mean score of 4 or 5 in the survey questionnaire.
- $H_14$ : The level of internal control is adequate by obtaining a mean score of 4 or 5 in the survey questionnaire.

## Data Analysis

The response data from the survey was entered into SPSS version 16.0 software for statistical analysis. A linear regression analysis was used to analyze the data. Singleton and Straits (2005) commented that regression analysis is the effect of one interval or ratio variable on another. The four variables that were analyzed are one dependent variable and three independent variables. The dependent variable was internal control in restaurants (Y1). The three independent variables are (a) protection of assets (X1), (b) segregation of duties (X2), and (c) verification of transactions (X3). A 5-point Likert scale was used to integrate the theoretical framework examining the dependent and independent variables. Each question on the Likert scale had five possible answers, with possible scores ranging from 5 (*best possible internal control*) to 1 (*lowest possible internal control*). Total scores as defined by the maximum points on the instrument were obtained for each set of independent variable questions. The average of the total scores was used as a predictive construct validity measurement. Low scores indicated a lack of internal control, and high scores indicated adequate internal controls (Kistler, 2008).

The mean score was determined by averaging all scores for the dependent variable and the three independent variables. The mean score for each variable was used to determine whether internal control was adequate or inadequate among the sample of restaurants operating in Nassau County in New York State. A reading of 4 (*Likely*) or 5 (*Very Likely*) on the Likert scale indicated that for-profit standard has been achieved, which is consistent with the COSO (1992) framework.

Factor analysis was conducted to assess how well each of the questions measured the independent variables. According to Rea and Parker (1992), "the main applications of factor analytic techniques are: (1) to *reduce* the number of variables and (2) to *detect structure* in the relationships between variables, that is to *classify variables*. Therefore, factor analysis is applied as a data reduction or structure detection method" (StatSoft, 2010, para. 1). Combining two (or more) correlated variables into one factor, illustrates the basic idea of factor analysis, or of principal components analysis to be precise (Statsoft, 2010, para. 8). Principle components analysis (PCA) is a common technique for finding patterns in data of high dimension

(Leedy&Ormund, 2005). Thus, for each of the independent variables, the items on the survey were assessed with PCA to determine if they are measuring the same factor or component.

The following logistic regression module summarizes the variables and design for the research:

$$\text{INTCTR} = \beta_0 + \beta_1\text{PRASSET} + \beta_2\text{SEGDY} + \beta_3\text{VERTRN} + \varepsilon$$

Internal control in restaurants is the dependent variable or the predicted value. The dependent variable depends on the regression of the independent variables and their slopes. The slopes of the independent variables will determine whether the dependent variable's value will increase or decrease in the same or in the opposite direction.

## Empirical Results

Research question 1 was assessed using exploratory data analysis, including descriptive statistics. The mean score for the dependent variable, internal control, was 2.97 (s.d. = 1.17, Table 1). The mean score for the independent variable, segregation of duties, was 2.89 (s.d. = 1.02, Table 1), while the mean score for the independent variable, protection of assets, was 3.31 (s.d. = 1.12, Table 1). The mean score for the independent variable, verification of transactions, was 3.10 (s.d. = 1.26, Table 1). These mean scores are near 3.0, which represents a neutral response. Since these means are all below 4.0, which represents the cut-off between adequate and inadequate control, it can be concluded that, on the average, small restaurants operating in Nassau County in New York State have internal control systems that are considered inadequate.

**Table 1**  
Mean and standard deviation for the four study variables (n = 117)

	Mean	Std. Deviation
Internal control	2.97	1.17
Segregation of duties	2.89	1.02
Protection of assets	3.31	1.12
Verification of transactions	3.10	1.26

For each variable, the restaurants' scores were divided into two groups, those with adequate control and those with inadequate control. Since a score of 4 (Likely) or 5 (Very Likely) on the Likert scale indicated that for-profit standard had been achieved, the restaurants with a mean score above 4.0 were considered to have adequate control. Thus, the restaurants with mean scores greater than or equal to 4.0 were categorized as adequate, while scores below 4.0 were considered inadequate. Table 2 displays the frequency of occurrences for the four variables, and each of the variables had a higher percentage of restaurants with inadequate control than adequate control. For internal control and verification of transactions, 77 (66%) restaurants had inadequate control, while only 40 (34%) were categorized as adequate. Of the restaurants overall, 92 (79%) had inadequate segregation of duties, while only 25 (21%) had adequate segregation of duties. Seventy-four (63%) of the restaurants had inadequate protection of assets, while only 43 (37%) had adequate segregation of duties.

To determine if the percents (also called *proportions*) shown in Table 2 are significantly different from 50 %, a one-sample binomial test was conducted. A one sample binomial test is used to test whether the proportion of occurrences for a two-level categorical variable significantly differs from a hypothesized value (Creswell, 2003). For this study, I wanted to determine if the proportions were significantly different from 0.50 (50%), which would mean that the percent of restaurants with inadequate control was equal to the percent of restaurants with adequate control. Since the *p*-values for all four variables are less than alpha of 0.05 (Table 3), the null hypotheses that the proportions are equal to 0.50 are rejected. Thus, the one-sample binomial test results were significant for all four variables, which indicate that the proportions were significantly different from 50%. Thus, the percent of restaurants operating with inadequate internal control systems are significantly greater than 50 %. It can be concluded that the managers of small restaurants operating in Nassau County in New York State perceive the internal control, segregation of duties, protection of assets, and verification of transactions in their restaurants to be inadequate.

**Table 2****Frequency of occurrence for restaurants with inadequate control and adequate control**

	Inadequate Control	Adequate Control	Total
Internal Control	77 (66%)	40 (34%)	117
Segregation of Duties	92 (79%)	25 (21%)	117
Protection of Assets	74 (63%)	43 (37%)	117
Verification of Transactions	77 (66%)	40 (34%)	117

Research questions 2 through 4 were assessed with hypotheses 1 through 3, respectively. Hypotheses 1 through 3 were tested using a multiple regression analysis. The results of the regression analysis indicated that all three independent variables were significant predictors of the dependent variable, since the observed significance ( $p = 0.000$ , Tables 4 and 6) was less than alpha of 0.05. The regression model was determined to be

$$\text{INTCTR} = -0.218 - 0.121 * \text{SEGDTY} + 0.676 * \text{PRASSET} + 0.419 * \text{VERTRN} + \epsilon,$$

where INTCTR represents internal control, PRASSET represents protection of assets, SEGDTY represents segregation of duties, VERTRN represents verification of transactions, and  $\epsilon$  represents the standard error of the estimate (Table 6). Research question 2 was addressed using hypotheses 1. There is a negative relationship between segregation of duties and internal control as evidenced by the negative slope of -0.121. This indicates that the dependent variable internal control will decrease by a factor of -0.121 for every value of segregation of duty that is computed. Research question 3 was addressed using hypotheses 2. There is a positive relationship between protection of assets and internal control as evidenced by the positive slope of 0.676. This indicates that the dependent variable internal control will increase by a factor of 0.676 for every value of protection of asset that is computed. Research question 4 was addressed using hypotheses 3. There is a positive relationship between verification of transactions and internal control as evidenced by the positive slope of 0.419. This indicates that the dependent variable internal control will increase by a factor of 0.419 for every value of verification of transactions that is computed.

**Table 3****Coefficients for the Multiple Regression Analysis**

Coefficient	
R	.992
R <sup>2</sup>	.984
Std. Error of the Estimate ( $\epsilon$ )	.15048

**Table 4****Results of the Multiple Regression Analysis**

	INTERCEPT	SEGDTY	PRASSET	VERTRN
<i>b</i>	-0.2182	-0.121039	0.676689	0.419589
<i>s(b)</i>	0.06387	0.052065	0.107938	0.078228
<i>t</i>	-3.417	-2.324758	6.269243	5.363649
<i>p - value</i>	0.0009	0.0219	0.0000	0.0000

Furthermore, the correlation coefficient (R) was 0.992 (Table 3), which indicates that there is a very strong correlation between the independent variables and the dependent variable, internal control. In addition, the coefficient of determination ( $R^2$ ) was 0.984 (Table 3), which indicates that 98.4% of the variability in the internal control in small restaurants operating in Nassau County in New York State was accounted for by the independent variables, verification of transaction, protection of assets, and segregation of duties. It can be concluded that there is a positive relationship between the independent variables protection of assets and verification of transactions and the dependent variable internal control, and there is a negative relationship between the independent variable segregation of duties and the dependent variable internal control.

Research question 5 was addressed with hypothesis 4. A one-sample t-test was used to test hypothesis 4 by comparing the mean score for internal control to the value of 4.0 to determine if it was significantly greater. The mean score was 2.97 (s.d. = 1.17, Table 1) and the *t*-test had a *p*-value that was less than alpha of 0.05 “ $p < .05$ ”, therefore, the mean score for internal control was not significantly greater than four. In addition, as

described above for research question one, the proportion of restaurants categorized with inadequate internal controls was significantly greater than 50 %. Therefore, the results of this study indicate that the managers of small restaurants operated in Nassau County of New York State perceive the restaurants' internal control systems to be inadequate.

## **CONCLUSION, LIMITATION, AND FUTURE STUDIES**

The results of this study support earlier findings that supported a relationship between internal controls and failure rate (English, 1996; Parsa, Self, Njite, & King, 2005) and profitability (Lee, 2006). The implication of this research is that restaurants managers who have negative perceptions of internal controls systems may not consider the usefulness of internal control systems and its relationship to cost, profitability, and survivability. In contrast, restaurant managers who have positive perceptions of internal control systems may increase profit margin, lower costs, and increase the return on investment (Doyle et al., 2005; Eldridge & Kealey, 2005; Franco et al., 2005).

The results support Doyle et al.'s (2006) findings in that material weaknesses in internal controls are more likely in organizations that are smaller, younger and financially weaker. Although the size, structure, and financial resources of the company affect its ability to establish internal control, the need for internal control is unique to each organization's particular operating environment. Krippel et al (2008) concluded from their study that the number of small hospitality companies declined while the number of franchise operations increased. This was attributed to restaurant managers being able to master various essential skills and closely scrutinize the details of the organization. No system of internal control is without any weaknesses (Brown, 2000), but basic internal control procedures may enhance profitability and survivability of restaurants.

## **RECOMMENDATIONS FOR FUTURE RESEARCH**

The findings of this study offer several recommendations for future research. First, it would be interesting to see this study replicated on a larger scale, example, for the entire restaurant industry. This would include other restaurants operating in other states that have lower operating costs and lower prices. Would reduce business cost such as lower taxes, lower utility, and real estate or rent expense affect internal control systems in restaurants?

Second, this study could be replicated in other small businesses that are not restaurants. It would be helpful to determine if internal control is adequate in other small businesses because these findings could help other small businesses identify cost constraints and be better able to deal with high costs associated with internal control problems. Future research is warranted because small businesses managers need to understand how to design and implement internal control systems that are congruent with their operating environment. This understanding would help them to collectively and individually understand and share existing internal control measures to improve small businesses operations, survivability and profitability.

Finally, it is recommended that this study be replicated with profitability ratios such as profit margin and or return on assets. This recommendation is proposed because financial ratios are the most common measure of how well a business is performing. Ratios express the mathematical relationship between one quantity and another. Profitability ratios may aid in measuring the success or failure of restaurants. Profitability is also linked to liquidity because earnings ultimately produce cash flow. Profitability management is a complex activity that includes, first, achieving a satisfactory gross margin and, second, maintaining acceptable levels of operating expenses. Achieving a satisfactory gross margin depends on setting appropriate prices for merchandise and services and purchasing merchandise at favorable prices and terms. Maintaining acceptable levels of operating expenses depends on controlling expenses and operating efficiently. Future research may focus on determining if there is a significant relationship between internal control systems and profitability of restaurants using profitability ratios.

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# FORECASTING AND INVENTORY CONTROL STRATEGIES FOR TV RETAILERS: INFOMERCIAL AND LIVE SHOPPING COMPANIES

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## ABSTRACT

*This paper examines and contrasts forecasting and inventory control strategies used by two types of TV or online only operating companies: Infomercials and Live Shopping Companies. Although both companies compete in the similar media environment (no brick-and-mortar stores, but online or TV only), there are significant differences in their business models and consequently their operating strategies. While sales forecasting methods of these companies may differ, their approaches to inventory control have marked similarities. This paper aims to compare how infomercial and live shopping companies forecast sales and use week-supply model and open-to-buy model for managing inventory. We use actual sales data, although product and company names may be intentionally omitted.*

## INTRODUCTION

Two most common direct-to-consumer forms of TV shopping are infomercials and live shopping. Television shopping represents a thriving business with over \$150 billion of consumer products sold in the US only through infomercials. Many are familiar with infomercials through products such as Snuggies and Shake Weight. TV networks such as QVC and HSN represent the most familiar 24-7 television channels devoted to shopping. Just like brick-and-mortar retailers, to remain competitive these companies must forecast their sales and inventory levels as accurately as possible. Proper inventory control can improve fill rates, reduce overstock, and enable company to better meet cash-flow requirements. Unfortunately, just like in all retailing industry, buyers often overbuy during times of strong sales, which leads to excessive markdowns when sales decline, decreasing the overall gross margin. Finance must often step in to a role of controller or devil's advocate on inventory relates issues. This makes it more difficult for traditional retailers, who need to keep their shelves stocked across the country, but what about retailers selling on TV or online? Do they have the same inventory management challenges? Although it is TV and Internet penetration that drives these retailers, forecasting sales and managing inventory remain critical. Regardless of the ultimate product placement location (on the shelf, online, or on TV), maximizing profitability and minimizing inventory risks remain key operational objectives. However, infomercial retailers, in addition, need to optimize online traffic while TV retailers need to optimize their medium.

### Infomercial companies

Both industries have business models which have some similarities, but still differ significantly. Infomercials have two basic formats: long form and short form. *Long-form infomercials* are 28.5 minute shows and include products like Proactive, P90X, Total Gym, Bare Minerals. *Short-form infomercials* are 60 to 120 seconds long and include such most famous products in 2011 as Snuggie and Shake Well. The infomercial industry is highly fragmented with several large players and many small ones. There is no one domineering company on the market.

Infomercial companies tend to have limited product lines of anywhere from 1 to 30 products. They typically run campaigns for each product individually, while some larger companies could run as many as 20 campaigns at the same time. Companies acquire customers by purchasing TV airtime from cable companies and

then delivering customers to either call centers for purchasing or online. Thus, infomercial companies are constrained by how much media and where they can buy it. The biggest driving factor for these campaigns is *media spend*. Media spend drives sales and inventory plans for each product, which become part of the normal campaign-management process. The two key tools of forecasting and managing inventory include sales forecasting based on Media Efficiency Ratio (MER), and using week supply model to manage inventory.

## Live Shopping Companies

Unlike infomercials industry with its many players, one company, QVC, dominates the live shopping industry with over \$10.75 billion in revenues in 2010 and networks in England, Germany, Italy, and Japan. HSN, the next largest player, had only \$3.18 billion of revenue in 2011. Unlike infomercials companies that must purchase media time, live shopping companies have their own 24 hour television channels, and as the result have different sales drivers. Instead of running 1 to 20 different product campaigns on TV, they try to put a product on air every 10 minutes; making it 144 products per day, 1,008 per week, and over 52,560 products per year.

In addition, the organization has control over all levels of the process, because it employs live producers who are trained to know when to quit product's airing and replace it with a new item. Infomercial organizations lack such control factor since they focus on one product campaign. Several forecasting methods are used by live shopping companies, including *new-name generation*, *repeat-buyer* trends, *week supply* and the *open-to-buy (OTB)* system.

Much like any retail organization, these companies have finite space to promote their products, except that their space is on TV. Infomercial companies are constrained by how much and where they can buy media, and TV shopping networks are constrained by the number of cable subscribers they can acquire. While the goal of each company remains maximizing sales and minimizing inventory costs, infomercial companies would forecast sales and would make purchasing decisions for each product separately, while live shopping companies would take a more general approach to inventory management. The main differences arise in what inventory value they use to calculate inventory. For example, infomercial company's weekly supply would be based on units of inventory (since they run product campaigns), live shopping companies use inventory value. Further, while live shopping companies may have an OTB system in place, the infomercial company mainly looks at managing the open Purchase Orders (POs).

## LITERATURE REVIEW

A review of the literature shows the many approaches that could be taken to manage inventory, including the classical Economic Order Quantity (EOQ) model, statistical modeling, and OTB system. No matter which inventory control model is chosen, most will agree that the initial forecast is vital for proper planning; no matter how much analysis is done, seasonality and consumer preferences will always effect forecasting. While EOQ model remains one of the most widely used today, its weakness of constant demand overtime, makes it hard to apply for many retailers. However, expanded EOQ model (by Wagner and Whitin, 1959) is capable of providing a cost minimizing inventory management policy under dynamic demand conditions. While most EOQ models, including the dynamic version, focus on long term inventory planning, Lovejoy, 1992 examined a myopic inventory model that could be applied to infomercial companies. His model described a single-item periodic-review inventory system with linear procurement, holding, and shortage costs and immediate delivery. While myopic inventory planning is not meant to be optimal, the one advantage over other models is it is easy to calculate and this is why infomercial companies have developed their own versions.

Wagner and Whitin model did work to enable the EOQ model to allow ordering inventory for shorter periods, however, it is still not enough for most retailers. Unfortunately, consumer demand and preferences could change arbitrarily and seasonal plans could change as fast as the weather. If, for example, a warm spell occurs at the beginning of the winter season, it may dramatically affect the sales and stock plan for boots. In this environment, retailers need a more dynamic and flexible system.

The OTB offers one such approach. The literature defines OTB as the difference between planned purchases and stock already ordered, or the amount of stock that a merchandiser can order for a particular period.

The traditional OTB does not normally deal with merchandize, except to point out the company has too much inventory and should not buy more. Instead of finances just pushing numbers, companies should take a more balanced approach towards OTB. This increased balance would include listing all items sold by category and price; listing all on hand inventory by sell price and number of days in stock; re-pricing nonperforming inventory to fit into price points selling well; and replacing fast sellers as they sell. Further, OBT works for retailers for a multitude of reasons: it creates an inventory spending line consistent with marketing and financial plans; it provides tools to adjust and react to changes within the season; it creates an acceptable overstock budget that retailers can track; it allows for measurable accountability for management; and it provides tools to prevent overspending/overbuying as well as to ensure that retailers do not spend dollars twice.

With the advent of more powerful computer systems, companies have used more advance statistical models to plan inventory. Moore et al. (1992) provided a review of statistical forecasting techniques for large-scale inventory systems. Originally, Bearden (1977) proposed a statistical model for finish for goods with a seasonal pattern. He proposed using exponential smoothing for seasonal demand for short-term planning for companies with stable demand. Here, retailers use a weighted average of sales in the current period to forecast future periods. This provides an advantage as it requires less information and can respond rapidly to demand shifts. Bearden's proposed forecasting model included breaking down the season into smaller units to adjust forecasts faster and provide closer coordination with buyers to manage markdowns to minimize future obsolescence costs.

## INDUSTRY COMPARISON ANALYSIS

Inventory planning and control for each business model starts with sales forecasting, but while infomercial companies will ultimately use units to manage inventory, live shopping focuses on total inventory value. Further, while an infomercial company uses a media plan to forecast sales, a live shopping company depends on the number of newly added cable SUBs (subscribers) and new customers. The following sections will provide an overview of the sales and inventory planning strategies for infomercial and live shopping companies, comparing and contrasting the key drivers for each industry, while providing detailed examples which utilize actual data from companies within each industry segment.

## INFOMERCIAL OVERVIEW

Unlike live shopping, infomercial companies take a very simplistic approach to inventory control. Inventory control focuses on two to three months into the future rather than the long term. This occurs mainly because of the variability of demand and limited life of most infomercial products of only one to three years. For a product campaign, the key drivers rest on how much media the company will purchase, the performance of the media, product lead time, and customer sell outs. Infomercial campaigns are multichannel with sales generated from TV, Internet, and retail. Inventory control focuses on sales generated from TV and the Internet. While retail sales are often on a consignment basis, no inventory control measures are used, creating some exposure for these companies. This paper examines only the inventory control process related to TV and the Internet.

### Infomercial approach to sales forecasting

As stated, infomercial companies plan their sales based on the amount of media exposure planned for a set period. Infomercial companies focus on the initial sales and use the *media ratio* (MER), a multiple of the amount of media spend, to estimate sales. So, for example, if for a particular product campaign, company needs to have sales equal to two times the media spend to make a profit, it translates into a MER of 2. The MER varies depending on the product and campaign costs, which include call center costs and distribution costs per order. Companies primarily use the MER to calculate initial orders and sales and do not use it to calculate expected inventory. Inventory projections need to consider shipped sales, customer cancelations, credit card declines, and resalable returned items. So, if a company starts with a MER of 2 and spends \$100,000 on media, it should expect to have \$200,000 in orders, but a 4.4% credit card decline will result in only \$191,200 in shipped sales.

Next, let us turn to a model campaign and examine how these different variables interact to produce a shipped sales forecast that the company can then use in inventory planning.

First, some key terms are explained:

- Orders calculated based on the MER;
- Shipped orders (orders adjusted for credit card declines);
- MER (a factor based on previous campaigns that incorporates all financial variables needed for a campaign to be profitable);
- Average order value (AVO) (orders usually having more than one product); and
- Shipped units.

Table 1 shows a 12-month campaign forecast for Pro-Fit Abs, a revolutionary machine marketed to individuals of all ages wishing to improve their abdominal muscles. The campaign manager has determined that to reach a profit, media and Internet orders will need to generate an MER of 1.84, the average order will have 1.2 units per order and an order value of \$103.19. Based on past campaigns, the company can expect that customers will cancel 4.4% of the orders, and only 2% of the returned units will be re-sellable.

Based on this, Pro-fit expects to generate approximately \$39 million in shipped sales during the first 12 months, with a possible 456,427 in units sold; nearly 40,000 of which will be returned. Of these, about 11,000 units will be put back into stock.

**TABLE 1. Infomercial Sales Forecasting**

Sale Price	85.99													
Average Order Value	103.19													
Units Per Order	1.20													
COGS	23.0													
MER	1.84													
Credit Card Declines	4													
Return Rate	8.7													
Re-sellable	25													
	Beginning Inventory	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12	Total
<i>Pro-Fit Abs</i>		3,288,974	2,846,472	3,061,508	2,822,388	3,162,979	2,994,569	3,218,288	3,406,929	3,222,139	3,536,139	2,830,115	2,830,115	37,594,785
<i>Shipped Sales</i>		3,433,698	2,971,717	3,196,214	2,946,573	3,302,150	3,126,330	3,359,893	3,556,834	3,363,913	3,691,840	3,345,161	2,954,640	39,248,955
<i>Orders</i>		33,275	28,798	30,974	28,555	32,001	30,297	32,560	34,469	32,599	35,777	32,417	28,633	380,356
<i>Media Spend</i>		1,787,486	1,546,996	1,663,863	1,533,906	1,719,010	1,627,483	1,749,070	1,851,592	1,751,162	1,921,872	1,741,401	1,538,106	20,431,948
<i>Units Sold</i>		39,930	34,558	37,169	34,266	38,401	36,356	39,072	41,363	39,119	42,933	38,901	34,360	456,427
<i>Resalable returns</i>		998	864	929	857	960	909	677	1,034	978	1,073	973	859	11,411
<i>Planned Inventory</i>	45,083	43,198	41,965	39,977	43,356	42,416	44,114	46,700	45,639	48,472	45,384	38,793		
<i>Required Receipts/Open to Buy</i>		37,047	32,461	34,252	36,788	36,501	37,145	40,682	39,267	40,974	38,771	31,337		

## Infomercial Approach to Inventory Planning

As its next step, the company must plan how much inventory to bring in. For an infomercial company, the major drivers for inventory planning include lead time and acceptable stock out level. While carrying costs and order costs represent elements of traditional EOQ models, because of the short period of life of the product the infomercial company's concern focuses more on forecasting the period it takes to get the next shipment. In the above example, to keep costs down, Pro-Fit Abs is manufactured in China and takes six weeks for delivery once a customer places an order. The management team is also concerned with stock out and anticipates that Pro-Fit will have heavy demand. Hence, based on past campaigns, the team expects a standard deviation on order generation of 25%. Further, while the product will take six weeks to ship, the management team only wants to have a four week base of salable inventory on hand, meaning it uses no dead or obsolete inventory. Further, 25% of safety stock brings the week supply to about 4.5 weeks. While they have three possible ways to calculate the week supply including using retail value of inventory, infomercial companies tend to focus on the number of

units, or COGS (Cost of Units Sold). Table 2 shows that based on a four week supply, Pro-Fit Abs will need close to 45,000 units in stock when the campaign starts and can expect to sell 456,000 units over 12 months. Since infomercial campaigns have high variability, companies examine inventory levels on a weekly basis to insure they do not have too much over or under stock. Table 2 shows how a company can manage inventory planning on a weekly basis.

Using the same basic week supply calculation as the monthly calculation, the initial plan shows that the company should receive close to 45,000 units before the campaigns starts and 3,090 units in the first week to maintain a four week supply. It also shows that the company should order 7,673 units in Week 1 to receive them in Week 7 if it expects to have the correct target inventory. Unfortunately, due to the nature of infomercials, these plans can change suddenly. Table 3 shows what could happen if only two drivers, demand and return unit, change compared to the plan.

**TABLE 2. Infomercial Inventory Planning on a Weekly Bases**

Week Supply	Beginning Inventory	Week 1	Week 2	Week 3	Week 4	Week 5
<i>DR Sales</i>		118,852	866,536	744,809	757,237	713,015
<i>Shipped Sales</i>		124,081	904,664	777,580	790,555	744,387
<i>Orders</i>		1,202	8,767	7,535	7,661	7,214
<i>Media Spend</i>		64,593	470,944	404,787	411,542	387,508
<i>Units Sold</i>		1,443	10,520	9,043	9,193	8,657
<i>Resalable returns</i>		36	263	226	230	216
<i>Planned Inventory</i>	45,083	46,766	47,496	45,784	45,343	42,358
<i>Required Receipts/Open to Buy</i>		3,090	10,987	7,104	8,523	5,456
<i>Orders to be placed</i>		7,673	7,998	3,487	2,490	2,229

**TABLE 3. Week Supply Budget vs. Actuals**

	Beginning Balances	Original Week 2	Week 2 Actuals	Variance	Original week 3	Revised week 3
<i>Units Sold</i>		10,520	9,574	(947)	9,043	9,043
<i>Sellable Returned Units</i>		263	281	18	226	226
<i>Inventory</i>	46,766	47,496	48,461	965	46,523	46,253
<i>Receipts</i>		10,987	10,987	-	7,104	7,104
<i>Orders to be Placed</i>		7,673	7,673	-	3,487	2,521
<i>Week Supply</i>		4.51	5.06	0.55		

As the table demonstrates, in Week 2 the company missed the sold unit target by 947 units, and it received 18 more resalable units than forecasted. The effect increased the week supply from 4.51 weeks to 5.06 weeks. Since orders occur six weeks in advance, buyers cannot effect any change in the immediate weeks. As in every open-to-buy system, the company has the basic choice to decrease future purchases or liquidate bad inventory. This works very well for most infomercial companies since they are not overly concerned if the product mix has too much dead inventory. Since liquidation is usually considered at the end of the campaign, planners focus on the actual orders customers will place. In the above example, the planners will need to adjust the number of orders placed in Week 3, decreasing the order amount from 3,487 to 2,521 or 965 units - the same number of changes as in Week 2. The company has an issue with this process because it already committed to orders that will arrive six weeks in the future, and there is no immediate effect a planner can have on the inventory level. The opposite is true: if a campaign exceeds expectations, then the inventory level can drop so fast that the company cannot fill customers' orders. In this case, the media planners may need to decrease the media spend, which can be adjusted within two weeks, to avoid backorders. Other options also include working with the factory to increase shipments or continue the media spend and accept customer backorders with increased customer cancellations.

## LIVE SHOPPING OVERVIEW

While both infomercial and live shopping companies broadcast on TV, their key business drivers and customer relationships differ. Unlike infomercials, which do not relate to long term customer relationships, it is considered

vital for a live shopping company to maintain that relationship. Repeat customer percentage makes up one of the most important Key Performance Indicator KPIs for live shopping companies. For example, if the repeat percentage decreases, it may indicate a problem with product selection or a shift in the customer base. Therefore, companies make a great effort to listen to the customer's voice including having a dedicated department to handle fan mail as well as a merchandise- analytics team to examine customer buying patterns. The ultimate goal remains to find the right on--air talent to sell the product and the right product mix, and instead of managing one or two products, managing the purchasing and inventory planning by category is what drives live shopping. Lastly, both companies may own their inventories, but live shopping companies leverage their size to dictate *return to vendor* privileges (RTV), or, in effect, consignment inventory. While live shopping companies do not have 100% RTV privileges, it does minimize financial risk, improve free cash flow, and offer ways to better plan inventory.

## Live Shopping Approach to Sales Forecasting

As a first step in controlling its inventory, a live shopping company must forecast its initial sales. Unlike a brick-and-mortar store that can build a new store in a new neighborhood to increase its customer base, TV shopping companies need to expand thru the acquisition of cable SUBs then convert them to a new customers. If the company can reasonably estimate how many cable SUBs it will add each month, it can develop a simple but realistic sales projection. The key variables for this model include the number of cable SUBs it acquires each month, the number of new customers it will generate, and how many customers will repeat each month. Table 4 shows a simple new name forecast utilizing cable SUB growth.

**Table 4. New Name Monthly Forecast**

	1	2	3	4	5	6	7	8	9	10	11	12	Average
<i>Total weighted Subs</i>	11,419,000	11,539,000	11,659,000	11,870,000	11,992,000	12,115,000	12,239,000	12,363,000	12,488,000	12,654,000	12,781,000	12,899,000	12,168,167
<i>New Name per Million</i>	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150	4,150
<i>New Names Forecast</i>	47,389	47,887	48,385	49,261	49,767	50,277	50,792	51,306	51,825	52,514	53,041	53,531	50,498

To build this model, the company first estimates the total number of SUBs that the company will have on a monthly basis. Table 4 shows that over a 12-month period the average monthly weighted number of SUBs is about 12.1 million with about a 100,000 increase each month. Weighted SUBs equal the total number of SUBs acquired not only through cable companies but also by satellite with a different weight given to each channel. Next, based on historical performance, a company knows the number of new names added per million, and in the above case for every million SUBs, the company can expect to have 4,150 new customers each month. Further, based on the weighted SUBs and new names per million, the company can forecast close to 47,400 thousand new names in Month 1 and 53,000 in Month 12. The company can use this forecast, combined with average order values and attrition, to calculate monthly sales.

The company then builds a model incorporating the new names and their possible buying pattern. Table 5 shows how a company can create a monthly sales forecast using the new names forecast. The process has several vital assumptions and key drivers that a company needs to understand to insure an accurate forecast. In the example below, it is assumed that prior year information was available when a model was developed.

Several important factors need to be understood in the model: first time buyers and repeat buyers have different buying patterns. First time buyers tend to be leery of buying on TV and tend to buy lower priced products. However, after the first purchase, they become more comfortable and willing to purchase higher priced items and often more than one product at a time. For calculation purposes, it is assumed that the first purchase a customer will make is only \$40, but after the first month a customer can expect to spend on average \$75. This \$75 is an average order value for all customers who made a purchase and does not differentiate between customers who bought ten items or just once. The next variable needed to be estimated is the number of customers that will repeat each month. In Table 5, customers in the first year repeat on average 17% each month, and the customer in the current year will repeat at 21%. The difference in the two estimates results from year

over year attrition of customers. The new customer acquisition rate consists of two elements: first, the customer acquired from new SUBs and, second, new customers generated from the old SUB base. A simple way to understand the repeat rate holds that for every 100 customers, 17 will repeat each month and spend \$75 each month; so, these 17 customers will on average generate \$1,275 in monthly sales and \$15,300 per year. In the example below new customers will generate \$24.2 million at their first purchase and another \$46.4million in the months that follow, and customers from the previous year will generate another \$47.8 million. The two final variables built into the above model involve seasonality and attrition rate. Based on historical data, an average of 1% of prior year customers will stop purchasing each month, and the repeat rate is expected to be lower in January and February as well as from June and July. What we cannot readily see in the model is the importance in the growth of the SUB base. If we add no new SUBs, then we must generate new customers from the existing SUB base. In simple terms, if a TV shopping company reaches 97% of homes with cable television service, it has no room to add more customers and new name growth will begin to decrease. Using the model above, this will forecast negative sales growth. Once this level of saturation occurs, the company will need to find new ways to generate new customers.

**TABLE 5. Repeat Buyer Sales Forecasting Model**

Key Drivers	Year 1	Year 2
First Month Average		\$40
Monthly Average	\$75	\$75
Repeats per Month	17%	21%
Slow repeats in 6 & 7	13%	13%
Slow repeats in 1 & 2	14%	14%
Customer Lost per Month	1%	

	Active customer	1	2	3	4	5	6	7	8	9	10	11	12	Total
Year 1	405,529	4,216,129	4,173,542	4,130,955	4,088,367	4,045,780	4,003,193	3,960,606	3,918,019	3,875,432	3,832,844	3,790,257	3,747,670	47,782,794
Year 2	Monthly New Names	1	2	3	4	5	6	7	8	9	10	11	12	Total
1	47,389	1,895,554	497,583	746,374	746,374	746,374	462,041	462,041	746,374	746,374	746,374	746,374	746,374	9,288,215
2	47,887		1,915,474	754,218	754,218	754,218	466,897	466,897	754,218	754,218	754,218	754,218	754,218	8,883,011
3	48,385			1,935,394	762,061	762,061	471,752	471,752	762,061	762,061	762,061	762,061	762,061	8,213,328
4	49,261				1,990,420	775,853	480,290	480,290	775,853	775,853	775,853	775,853	775,853	7,586,111
5	49,767					1,990,672	485,226	485,226	783,827	783,827	783,827	783,827	783,827	6,880,260
6	50,277						2,011,090	490,203	791,867	791,867	791,867	791,867	791,867	6,460,627
7	50,792							2,031,674	799,972	799,972	799,972	799,972	799,972	6,031,532
8	51,306								2,052,258	808,077	808,077	808,077		4,976,726
9	51,825									2,073,008	783,827	783,827	485,226	4,125,889
10	52,514										2,100,564	827,097	512,012	3,439,674
11	53,041											2,121,646	517,151	2,638,797
12	53,531												2,141,234	2,141,234
Total Year 2														70,665,408
TOTAL Year 1 & 2	605,975	6,111,683	6,586,599	7,566,941	8,321,441	9,074,959	8,380,490	8,848,690	11,384,449	12,170,688	12,939,484	13,745,076	13,317,704	118,448,202

Sales drive the week supply calculation, which can determine the target level of inventory. Unlike infomercial companies, live shopping companies do not forecast just one product at a time but multiple products with different lead times. Further, it is normal for a live shopping company to use the week supply calculation in an open-to-buy system, but instead of using sales, live shopping companies use the inventory value in the OTB.

## Live Shopping Approach to Inventory Planning

Once a company has forecast its sales, it must develop a week supply and open to buy model to manage the inventory level for the next 12 months. To do this, it needs to determine the targeted week supply. This management decision can be as simple as estimating the inventory turn for the company. For this example let us assume the targeted week supply is 14, which is equal to an inventory turn of 3.7. It should be noted that this 14

-week supply is a weighted number with each category having its own targeted supply that a company then uses to actually manage the open-to-buy and inventory level. Once a company decides its week-supply target, it finds it simple to forecast inventory using a very basic formula that takes into consideration the weekly and daily COGS for each forecast month. For example, for a 14-week supply, simply take the first 3 months of COGS, which will give anywhere from 12 to 13 weeks of inventory, and the remaining 1 to 2 weeks is just a percentage of the inventory in the fourth month. Table 6 shows the results of applying a weekly---supply model to the sales forecast. Table 6 also shows that net sales will grow to \$13 million and inventory will increase from \$12 to \$15 million.

Due to budget considerations, the company must next manage the inventory level using the open-to-buy model. As mentioned, one can look at an open-to-buy system purchasing budget, but if not handled properly, it can have a negative effect on a company. Table 7 gives a snapshot of how changes in the week supply can affect the inventory plan.

**TABLE 6. Week Supply Inventory Forecasting**

	Beginning Inventory	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11	Month 12
<i>Days in Month</i>		31	28	31	30	31	30	31	31	30	31	30	31
<i>Weeks in Month</i>		4.43	4.00	4.43	4.29	4.43	4.29	4.43	4.43	4.29	4.43	4.29	4.43
<i>Net Sales</i>		6,111,683	6,586,599	7,566,941	8,321,441	9,074,959	8,380,490	8,848,690	11,384,449	12,170,688	12,939,484	13,745,076	13,317,704
<i>COGS</i>		3,157,554	3,413,470	3,904,169	4,295,544	4,674,626	4,282,872	4,555,442	5,853,860	6,251,732	6,715,822	7,116,584	6,848,596
<i>Daily Cogs</i>		101,857	121,910	125,941	143,185	150,794	142,762	146,950	188,834	208,391	216,639	237,219	220,922
<i>Target Inventory</i>	11,080,576	12,970,333	13,730,914	14,281,691	14,645,945	15,942,520	17,960,870	20,244,731	21,630,596	21,485,318	19,025,319	16,579,583	15,016,876
<i>Purchases</i>		5,047,311	4,174,051	4,454,946	4,659,798	5,971,201	6,301,222	6,839,303	7,239,725	6,106,454	4,256,319	4,670,352	5,285,889

**TABLE 7. Week Supply Budget vs. Actuals**

	Beginning Balances	Month 1	Week Actuals	Variance	Original Month 2	Revised Month 2	Variance
<i>Net Sales</i>		6,111,683	5,561,631	(550,051)	6,586,599	6,586,599	-
<i>COGS</i>		3,157,554	2,873,374	(284,180)	3,413,470	3,413,470	-
<i>Inventory</i>	11,620,672	12,970,333	13,254,513	284,180	13,730,914	13,730,914	-
<i>Purchases</i>		4,507,215	4,507,215	-	4,174,051	3,889,871	(284,180)
<i>Week Supply</i>		14.00	20.43	6			

Table 7 shows that in Month 1, the company missed its Net Sales figure by 550,000, resulting in an increase in the week supply to 20.43 weeks. If management takes no action, the week supply will remain high; if sales continue to be low, inventory level and week supply will continue to grow. Based on this, the normal reaction would be to drop Month 2 purchases by 284,000 and hope the company achieves its sales target. If we adjust the purchase plan for Month 2, then the company will meet its week supply. Unfortunately, incorporating an OTB into the planning process is not as simple as decreasing purchases. If properly implemented, the total inventory picture will be examined incorporating not only financial but merchandising concerns. Since live shopping manages inventory based on categories instead of brands, in each category will have its own OTB process. Further, while finance may drive the forecasting and overall inventory planning, it is up to the buyers and merchandising to allocate that plan to the different categories. In addition, as part of the process, the buyers' open---to---buy process will include the following four steps:

1. List all items sold by category;
2. List all onhand inventory by sell price and number of days in stock;
3. Re-price nonperforming inventory to fit into price points selling well and;
4. Replace fast sellers as they sell. If properly implemented, the OTB will still enable merchants to bring in fresh inventory that will keep the repeat buyer percentage up but still keep the week supply under control. The end result may include creating markdowns, RTV of older inventory, liquidating or disposing of bad inventory, and delaying product airing. If a consistent problem occurs, the merchant can examine its order policies and estimates if its policies have caused a problem.

## CONCLUSION

While infomercial and TV companies may both leverage TV to generate sales, they share the same basic inventory problems as regular brick-and-mortar companies. Both companies are susceptible to consumer trends



and seasonality issues as well as the risks of merchants' overbuying inventory. Further, in this paper we have shown that the same fundamental drivers to manage inventory exist in the Direct-to-Consumer (D2C) industry, and while the business models may differ, the overall approach to forecasting and inventory control exhibits pronounced similarities. Each type of company forecasts sales based on industry drivers, but the basic inventory planning is the same. While infomercials may manage inventory based on ordering units for only a few products at a time and TV shopping companies may plan based on inventory value, they both focus on minimize inventory related issues. A week-supply model drives each, and each builds a strategy around this with the infomercial company taking a simplistic view on order management and the live shopping company leveraging an OTB. The end result serves the purpose common to all retailers try to maximize profit while minimizing inventory.

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# QUANTIFICATION OF THE ETHICAL-LEGAL DECISIONS

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## ABSTRACT

*To study enterprise logistics several academic models have been created, one of them is the Logistic Model Based on Positions (MoLoBaC), which explains logistics through the functions of its forty four positions. One of the positions in MoLoBaC is the Ethical-Legal Consultant, which must make decisions, in many occasions, under uncertainty or risk. For decision making under uncertainty The Amplitude Model (EMA) was created, and for decision making under risk was created the Amplitude Model for Risk and Uncertainty (MARI) The input of this investigation is to present part of the decision making process for the Ethical-Legal Consultant therefore its objective is: Show how the Ethical-Legal Consultant in MoLoBaC, uses EMA and MARI in its decision making processes The methodology used is scientific method applied to decision making.*

## INTRODUCTION

It is common to find that when defining the profile of a manager includes decision making in its competences and ethical formation among its abilities. Sometimes even these two terms go together as in Ahner (2007), who all through his book builds a structure which illustrates the importance of ethical behavior in business. In enterprise logistics and in supply chain management this ethical behavior is of great relevance.

Enterprise logistics is a complex study field, prove enough is to revise a complete concept of itself: Enterprise logistics is centered in searching and achieving the greatest possible future and present satisfaction of the final costumer and includes the social-environmental aspects and ethical-legal aspects, the planning, organization, execution and control of all the activities related with obtaining, flow, gathering and maintenance of materials, products and services; from the raw material source, including the costumer through inverse logistics, to the finished product sale point, whether local or international, massive or business, in the more efficient and effective way, maximizing the expected quality and performances, minimizing wastes, time and costs and using modern information technologies(Hernández et al., 2012). Because it embraces many knowledge fields and organization departments, the study of enterprise logistics implies great difficulty. To minimize these difficulties for handling logistics four quantitative-quantitative models were created to improve its teaching. Each one of these models focuses on logistics from a different point of view (Hernández et al., 2009; 2012):

1. The first, the Supply, Production, Distribution and Inverse Logistic (LSPDI, in Spanish el modelo Logístico, Abastecimiento, Producción, Distribución e Inversa [LAPDI]) model is centered in all logistics flows;
2. The second, Logistic Model Based on Positions (LoMoBaP, in Spanish Modelo Logístico Basado en Cargos [MoLoBaC]), studies logistics through the functions performed by the managers in logistic and relate positions in an organization;

3. The third, it superimposed to the previous one, the Logistic Model Based on Indicators for Positions (LoMoBaIPo, in Spanish Modelo Logístico Basado en Indicadores de Cargos [MoLoBaICa]), which measures enterprise logistics through indicators and
4. The Logistic, Strategic, Tactical, Operational with Inverse Logistics Model (STOILMo, in Spanish Modelo Logístico, Estratégico, Táctico, Operativo con logística Inversa [MoLETOI]), which analyzes logistics through the three normal stages of administrative analysis: Strategic, Tacit and Operative.

This investigation focuses in one of the forty four positions in MoLoBaC, which are distributed in twelve areas and integrated in six stages.

Supply, with one area, 1.-Procurement

Production, formed by two areas: 2.- Maintenance and 3.- Inventories;

Distribution, with four areas, resulting in the stage with more areas: 4.- Order processing, which is a mixed area because it has the contribution of positions for different stages, Production and Distribution: 5.- Physical Distribution, 6.- Transportation, which is also mixed and the area, that is the reason for this model: 7.-Customer Service.

Inverse, formed by one area: 8.- Inverse Logistics;

General to the enterprise, with three areas: 9.- Intrinsic to logistics, 10.- Supported by logistics, and the more relevant to this work, 11.- Supporting logistics and the last stage,

General to Information, formed by one area: 12.- Information, which is also a mixed area.

In particular it will be worked with area 11.- Supporting logistics, which is the area with a greater number of positions, six: Cost Manager (10), Finances Manager (11), Marketing and sales Manager (20), Human Resources Manager (26) and Environmental Manager (41) and the only position in the model that does not receives the manager name, the Ethical-Legal Consultant (40), that will be central motive for study in this work. The numbers in parenthesis uses the model to identify positions.

When a manager performs its functions it is involved constantly in decision making processes, some of them trivial, others more complicated and many of them given by decision making under uncertainty and risk. To solve problems of decision making under uncertainty a new focus was created, which focuses in using data dispersion with differentiation parameters between alternatives, in particular it was used the amplitude or range, therefore the model is known as The Amplitude Model (EMA), from this model it surges for decision making under risk, the Model of Amplitude for Risk and Uncertainty (MARI).

From the process analysis for decision making for the Ethical-Legal Consultant and the possibilities that this manager has to apply the models for decision making under uncertainty and risk, it surges the objective of this work: To show how the Ethical-Legal Consultant in MoLoBaC uses the EMA and MARI in their decision making processes.

This general objective carries three specific objectives:

-Presenting the position of Ethical-Legal Consultant, from MoLoBaC.

-Presenting The Amplitude Model and the Model of Amplitude for Risk and Uncertainty.

-Show, the process for decision making for the Ethical-Legal Consultant and how this process can be done using the EMA and MARI models, according to the situation for decision making presented.

About the limitations and reaches, it will not be done a field study; instead it will be illustrated through a hypothetical case, so to guarantee a broader approach.

To achieve the proposed objectives, the scientific method applied to the decision making is used (Hernandez et al., 2009; 2012), instead of establishing hypothesis, the steps to follow are:

- a) Defining the problem, that as presented in the objectives is to show the Ethical-Legal Consultant in MoLoBaC uses EMA and MARI;
- b) Searching data, in particular information about decision making under uncertainty and risks and about ethical and legal aspects in the organization;
- c) Establishing alternatives, that will be the different models to make decisions under uncertainty and risk, that could use the Ethical-Legal from MoLoBaC;
- d) Establishing alternatives, according to the proposed objectives, to see which all of the proposed alternatives are feasible;
- e) Selecting the best alternative, as the product of previous evaluation, and in function of the secondary, tacit or explicit objectives, had;

- f) Implementing the alternative, that based in a hypothetical case, consists in illustrating the decision making process for the Ethical-Legal Consultant in MoLoBaC, using EMA and MARI and
- g) Establishing controls, which allows recognizing if the proposed solutions are valid over time.

## **THE ETHICAL-LEGAL CONSULTANT IN MoLoBaC**

In all organizations it is usually presented, in the daily doing a series of problems that does not belong to quantitative, physical-chemical aspects, nor are related to the productive processes. These problems, generally closer to human beings than to machinery, are related with the Ethical-Legal world. Because of the presence of these problems, organizations must count with a person that handles these ethical-legal aspects of itself. Although there might be a small amount of essays in which are mentioned simultaneously the logistics or supply chain and the ethical or legal aspects or related terms, whether directly or indirectly, among the authors that do are: Cholette and Venkat (2009), Hutchins and Sutherland (2008), Nasioulas and Tsobanoglou (2006) and Nof et al. (2008), although they do not necessarily use both terms on the same phrase. A different case is what occurs on different subjects specific to logistics; in particular Stern et al. (2006) dedicate a whole chapter of their book to analyze the legal aspects that arises from directing the channel. But this lack of relation between logistics and ethical-legal aspects in the literature does not imply that an ethical behavior and respect for the law is not essential for enterprise logistics, therefore the Logistic Model Based in Positions (MoLoBaC) it was considered indispensable to count on a position that handled these aspects.

The Ethical-Legal Consultant in MoLoBaC is the manager that must deal with and solve all the problems of ethical and legal character. Besides in its performance it must give advice to all the organization and its personnel in the problems of ethical legal character that they could face. There that the Ethical-Legal Consultant does not act alone in logistics, but has competence in the whole organization and it must also work with its surroundings, interacting with the supply chain to which the organization belongs. It also corresponds to it to maintain relations with their direct and indirect suppliers, immediate and final costumers for its products and services, and equally have a tight relation with society and their governments.

From all the interrelations arises the principals functions of the manager that includes:

01. Establishing the ethical-legal normative that must rule the organization, from the personnel behavior, to the treatment and use of machines and equipment in the enterprise, as the service to provide the costumers with and the relations with the community and the environment in general.
02. Supervise that raw material, packaging material, equipment, spare parts and other goods necessary to the organization, are acquired respecting ethical principles and guaranteeing the best materials, at the best prices without prejudices for providers or third parties.
03. Study new ordinances or legal statutes produced in the surroundings that affect the organization.
04. Guarantee that quality standards are met, both demanded by international or local legislation, as the ones established by the organization.
05. Establishing rules for handling and maintaining equipment and machinery with the intention of guaranteeing the personal security of all the persons that could visit the enterprise.
06. Contribute in the minimization of costs along the productive process and distribution.
07. Supervise that the finances in the organization are performed under legal and ethical principles.
08. Participate in any kind of negotiations done by the organization to guarantee the funds are protected under a legal point of view.
09. Establishing control mechanisms that allow guaranteeing an adequate handling of the inventories, making sure to rotate supplies and products to minimize the possibility of inputting to the productive process or delivery to costumers obsolete or expired products.
10. Raise awareness in the personnel, especially directives, to work under ethical principles that allow to avoid, and anticipate to any kind of legal problems that could be present in the future.
11. Deeply knowing the legal environment to which the organization will be faced when executing expansion plans.
12. Using new information technologies to acquire information and knowledge of the surroundings that affect the organization, while using these technologies to broadcast more relevant findings.
13. Establishing and broadcasting normative for the use of equipment and handling information in order for them to be used to take the maximum advantage in the organization.

14. Collaborating in guaranteeing that the products sold through virtual media are presented to the customer in the clearest way possible to avoid legal problems.
15. Supporting and find support in the managers of information management to gather the greatest amount of useful information, even beyond the ethical-legal field.
16. Guaranteeing that all the marketing campaigns are done under ethical principles.
17. Establishing permanent campaigns that allow boosting morals and strengthening the ethical principles of everyone in the organization.
18. Participate in the creation and discussion of collective contracts, searching for equality for all parts, without damaging the organization, or the employees.
19. Create rules to perform picking, in order to avoid any unethical handling that affect a customer.
20. Implementing design and production normative that besides respecting the legislation, are benign to the environment in every sense, including its easy recovery after its life cycle.
21. Establishing norms about response time to be given to customers with purchase orders or information requests for products and services.
22. Constantly update the statements that rule the personal growth within the organization. This will include rules for raises, promotions based on ethical and legal principles.
23. Create normative for the delivery of finished products, in order that dispatch to customers follows ethical and equality principles, without neglecting its efficiency.
24. Constantly revise the norms that manage the distribution channels, in order to guarantee an ethical treatment and avoid legal problems.
25. Revise and analyze the norms and laws applied in any locality when thinking of installing a new facility, whether it will be a dispatch center, production plant or headquarter.
26. Establishing the norms for the vehicle fleet, to guarantee that all the transit laws are complied.
27. Analyze all the documents for hiring of third parties to provide services related to transportation or other services that the organization uses external entities.
28. Collaborate in the elaboration of gathering and reception norms for products returning through inverse logistics, guaranteeing that they will not cause perjury to employees or others.
29. Collaborate in the writing of all internal and external rulings, in particular with those related to customer service and inverse logistics, while through them favoring society as a whole.
30. Supervise that all the internal projects or with third parties undertaken by the company respect all the ethical-legal principles that concern them.
31. Participate in the elaboration of norms oriented to the caring of the environment.
32. Supervise that the norms for the treatment of fluids are met satisfactorily.
33. Govern its management by ethical principles adjusted to the law, preaching by example.
34. Supervise that the industrial safety norms are enough and being disclosed with enough depth to guarantee compliance and minimizing accidents.
35. Regulate external relations, for them to be ruled under a legal frame and ethical principles.

With the functions here mentioned, the impact of the Ethical-Legal Consultant in organizations and its role in minimizing the legal problems in the organization can be seen. But when meeting its functions could always find situations that depend on the environment so many of its decisions will be made under uncertainty and risk, therefore a brief introduction to these concepts will be made.

## **DECISION MAKING, EMA AND MARI**

When studying decision making it is considered the perception, aversion and possibilities of minimizing risk (Greco et al., 2001; Montibeller et al., 2007; Rommelfanger, 2007). But to understand risk in decision these concepts must be clear (García et al., 2011):

- i) Alternatives, as could be the actions to be followed by the analyst, being this person or group in charge of making the decision,
- ii) States of nature and situations of the surroundings that could occur at a given time and on which the analyst has no control
- iii) Payments ( $P_{ij}$ ) which are the consequence or results, expressed in adequate measuring units, obtained when choosing an alternative, when a determined state of nature is.

This three concepts and over all the way that the states of nature are present allows to consider different conditions for decision making:

Under certainty – in which the parameters considered are known with certainty, without depending on a probability measure, which will be equivalent to having only a state of nature. Problems that here are presented can be solved by mathematical programming techniques.

Under risk – is when the states of nature are known and obey a probability measure.

Under uncertainty – is the one in which the states of nature are all known, but their probability measure is not.

Under ignorance – is the situation in which the states of nature are unknown. To solve the problems presented under this situation is generally needed to increase the information.

Under competition – where the states of nature are not generated by an outside entity but by a competitor, chasing the same objectives as the analyst. In this case the problems are solved through Games Theory.

To solve the problems presented in decision making under uncertainty and risk in literature, especially in the academy, several methods are mentioned. Among the more mentioned methods for decision making under uncertainty are (Baumol 1977; Hillier and Lieberman, 1974; Levin and Kirkpatrick 1975):

Model Maximax, also known as the optimist model,

Model Maximin, known as the pessimist model or Wald criteria,

Model Minimax, or regret model, or Savage model,

Model of realism, known as the Hurwicz criteria

Model of averages, generally known as Laplace criteria.

For the case of decision making under risk, the two methods most commonly used are the expected value and the maximum likelihood (Levin & Kirkpatrick 1975), however, for more individual focus are also used the utility curves (Machina, 1982). All these methods, both the decision making under uncertainty, as the decision making under risk, as can be seen in the quoted literature, are of old dated, therefore will be referred as traditional methods. Looking to reinforce these traditional methods for decision making under uncertainty, especially Hurwicz and Laplace, a new method was introduced (Hernández and García, 2003). This method focuses its interest in the dispersion of data and uses it as a value parameter to perform the selection of the best alternative. Particularly, it uses the amplitude as a dispersion measure, there its name The Amplitude Model (TAM [EMA]). The use of amplitude, as a parameter for decision making under uncertainty became extensive to decision making under risk and it surged (García et al., 2011) the Model of Amplitude for Risk and Uncertainty (MARU [MARI]).

EMA, is a combination of the traditional models that were expected to reinforce. Same as Laplace, it takes the expected value when calculating the average of payments. Similarly to Hurwicz, it corrects this average value through a factor  $\beta$  that multiplies the amplitude. The amplitude then acts as a punishment for each alternative. EMA is founded in considering that as more disperse the data the less the probability to find an expected value. Then when faced with alternatives with similar payments, differing only in its measure of dispersion, it must be selected the one with the least dispersion, since it implies a lesser risk. The expressions to evaluate EMA, will be given by equation (1), in the case of maximization and equation (2) for minimization.

$$EMA_i = \{VE_i + (\beta * VE_i - (1 - \beta) * A_{mi})\} \quad (1)$$

Where  $EMA_i$ , is the value that alternative  $i$  takes for EMA, with  $A_{mi}$  = higher  $P_{ij}$  – lower  $P_{ij}$ , the amplitude of the alternative  $i$ , with  $P_{ij}$  the payment that alternative  $i$  produces if the state of nature  $j$  is given,  $\beta$  is the correction factor for  $VE_i$  according to the amplitude. And  $VE_i$  the expected value of alternative  $i$ , calculated by the Laplace model  $VE_i = \sum_{j=1,n} P_{ij} / n$ .

$$EMA_i = \{VE_i + (\beta * VE_i + (1 - \beta) * A_{mi})\} \quad (2)$$

This equation (2) conserves all the nomenclature of the previous (1). The only difference between (1) and (2) is that in the first the product  $((1 - \beta) * A_{mi})$  is subtracted and in the second is added, this makes sense since the amplitude, as has been told, acts as a punishment, therefore the bigger the amplitude the further away from the persecuted objective, being maximize or minimize. In any case the selected alternative will be the one with greater EMA value in the case of maximization and the one with the smaller EMA in case of minimization.

MARI works just like EMA, therefore the expressions that represent it (3) for maximization and (4) for minimization are equivalent to equations (1) and (2), with the difference that the expected value for each alternative  $i$  ( $VE_i$ ) is calculated through the probabilities of occurrence in each state of nature, as presented in equation (5).

$$MARI_i = \{VE_i + (\beta * VE_i - (1 - \beta) * A_{mi})\} \quad (3)$$

Where  $MARI_i$ , is the value that the alternative  $i$  takes for  $MARI$ , maintaining the nomenclature in (1).

$$MARI_i = \{VE_i + (\beta * VE_i + (1 - \beta) * A_{mi})\} \quad (4)$$

Equation (4) conserves the nomenclature for (3). And as with EMA, the selected alternative will be the one with greater value in the case of maximization and lower value in case of minimization.

$$VE_i = \sum_{j=1,n} P_{ij} * P_j \quad (5)$$

In (5)  $P_j$  is the probability of occurrence in the state of nature  $j$  and  $P_{ij}$  is still the payment of alternative  $i$ , if it occurs in the state of nature  $j$ .

In  $MARI$ , when calculating the amplitude it can happen that the  $P_j$  of greater  $P_{ij}$ , will be too big (or too small), respecting to the  $P_j$  with the minor  $P_{ij}$ . If this situation occurs the difference between the greater and lower payment, could not indicate a true relation of the dispersion of payments, or it could be punishing a situation that on the contrary should be rewarded. For the reason previously pointed an additional way to calculate amplitude was generated. This new amplitude was called the Corrected Amplitude ( $A_c$ ) which is reflected in the equation (6). Besides it was created the Revised Amplitude ( $A_r$ ) that is presented in equation (7). Because of space neither  $A_r$  nor  $A_c$  will be commented further. Whoever has interest on all the details for  $A_c$  and  $A_r$  will be found in the references García et al., (2011).

$$A_c = [(1 - P_{jm}) * \text{mayor } P_{ij}] - P_{jm} * \text{menor } P_{ij} \quad (6)$$

Where  $A_c$  is the corrected amplitude,  $P_{jm}$  the probability for state of nature  $j$  where, for alternative  $i$  it is found the greater payment and  $P_{jm}$  is the probability that has the state of nature  $j$ , that for alternative  $i$  produces the lower payment.

$$A_r = \{[(1 - P_{jm}) * \text{mayor } P_{ij}] - P_{jm} * \text{menor } P_{ij}\} * A_{mi} / [A_{mi} + 1] \quad (7)$$

Equation (7) with revised amplitude  $A_r$ , maintains the nomenclature of all the previous equations. This amplitudes  $A_c$  and  $A_r$  will be used in similar equations to (3) and (4), where they will substitute  $A_m$ .

After presenting some of the functions for the Ethical-Legal Consulting and the formulas for EMA and  $MARI$ , it can be illustrated how to use these techniques to help the Ethical-Legal Consulting in decision making.

## EMA, MARI AND THE EHTICAL-LEGAL CONSULTANT

From the functions of the Ethical-Legal Consultant previously presented, one of them will be chosen to illustrate through an hypothetical situation, that guarantees a broader approach, how it can improve decision making, using, The Amplitude Model (EMA) in a situation under uncertainty and then the Model of Amplitude for Risk and Uncertainty ( $MARI$ ) under a situation of risk.

It will be used function 03. Studying new ordinances or legal statements that are produced in the environment and that directly or indirectly could affect the organization. It will evaluate the impact of divulging a new labor law. This law can increase excessively the payments to be done when reaching a settlement with the employees leaving the organization. The three alternatives are presented in Table 1.

In order to not generate an ethical problem, employees must be notified when their retirement is anticipated, the motives of their proposal and the consequences that its decision could bring. Additional to the treasury problem to pay anticipated retirements, expenses must be made to train new personnel to substitute the one retiring. Having an estimate of the percentage of employees that would accept retirement creates a problem of decision making under uncertainty. For this problem the states of nature will be: Increasing the payments for settlements is; Small ( $E1$ ), moderate ( $E2$ ) and high ( $E3$ ).

Table 1. Alternatives of a new labor law, to the Ethical-Legal Consultant.

Alternatives	Definition
A1	Proposing early retirements to the employees that desire it and they be ready to be retired.
A2	Proposing early retirements, but only to the employed candidates to be retired that desire it and that already they are showing low performances.
A3	Advance not any proposed of retirement.

According to the alternatives, the states of nature presented in Table 2, where besides, for each alternative, are shown expected values, amplitudes and the values given by EMA with a  $\beta = 0.8$ , that although in this investigation was not justified is the value recommended for the parameter.

Table 2. Valuation of the different alternatives, according to EMA with  $\beta = 0.8$ .

Alternatives	States of nature			VEi	Ami	EMAi
	E1	E2	E3	-	-	-
A1	-10	0	70	20	80	20
A2	0	90	-60	10	150	-12
A3	90	-10	-80	0	170	-34

In the case of probabilities being of 10% for low increases, 30% for moderate increases and 60% for high increases, in Table 3, are the different results, but this time using MARI since it is a decision made under risk.

Table 3. Valuation of the different alternatives, according to MARI, to  $\beta = 0.8$ .

Alternatives	States of nature			VEi	Amplitude			Different MARI		
	E1	E2	E3		Ami	Aci	Ari	MARI	MARic	MARIr
A	-10	0	70	41	80	29	28.64	57.8	68.0	68.07
B	0	90	-60	-9	150	99	98.34	-46.2	-36.0	-35.87
C	90	-10	-80	-42	170	129	128.25	-109.6	-101.4	-101.25
	0.1	0.3	0.6	← Probabilities						

In tables 2 and 3, it can be seen how in both cases the alternative that results favored is the first, that besides its greater ethical cost, it gives a better payment globally, there its expected value, especially in the case of decision making under risk, where probability of strong increases in the settlements are high and the first alternative is more favored. With this demonstration, although general of the use of EMA and MARI some conclusions and recommendations can be presented.

## CONCLUSIONS AND FUTURE INVESTIGATIONS

Although only one of the multiple functions of the Ethical-Legal Consultant of the Logistic Model Based in Positions (MoLoBaC) and with it only a hypothetical example was built, because of the generality of said example, it can be inferred that the process of decision making, this manager, in many occasions will be working under uncertainty and risk. Besides with the example it was illustrated that using The Amplitude Model (EMA) to make decisions under uncertainty or the Model of Amplitude for Risk and Uncertainty (MARI), in decision making under risk. Equally it must be pointed, that the Ethical-Legal Consultant has a tight relation with all the organization, therefore its decisions will affect all the areas and employees in the enterprise. In order to have a mild effect, the decision making process must be carried away using the better techniques, as would be EMA and MARI. The latter affirmation allows to recommend that similar analysis must be made, about the Ethical-Legal Consultant, using as an element of study the MoLoBaC positions. On the other hand studying the functions of the Ethical-Legal Consultant and analyzing its impact on the organization, it must be recommended to encourage the study and analysis of these functions, because a good performance by this manager can solve many present and future problems in the organization. Equally it is recommended to replicate these studies in real world enterprises and helping then to solve a sizable amount of their problems.

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# THE INDUSTRIAL DESIGN MANAGER OF THE LOMOBAP AND KNOWLEDGE MANAGEMENT

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## ABSTRACT

*Enterprise Logistics is the source of knowledge generation and management. In this investigation knowledge management and enterprise logistics are studied. Parting from the Logistic Model Based in Positions (LoMoBaP [MoLoBaC]), which explains logistics through the functions of its forty four logistic positions. These positions are grouped in twelve areas and these on six stages: Supply, Production, Distribution, Inverse, General to the Enterprise and General of Information.*

*This investigation is based in the Industrial Design Manager, from the Order Processing area and its objective is: To show through the functions of the Industrial Design Manager, from the Logistic Model Based in Positions, the generation and management of knowledge in an organization.*

*The used methodology is scientific method applied to Decision Making.*

## INTRODUCTION

Each day new fields on the study of enterprise knowledge generation and management appears, to them it has been added enterprise logistics (Hernández et al., 2012). However when studying Enterprise logistics there are many aspects to consider: functions to perform, performance measuring, flows handled, strategies, tactics and operational activities that must carry on in order to achieve a good performance. This confluence of fields increases the difficulty of understanding enterprise logistics. To minimize this difficulty in the handling of logistics four qualitative-quantitative models were created, in order to ease their teaching. These models focus on logistics from different aspects (Hernández et al., 2009; 2012):

- Supply, Production, Distribution and Inverse Logistic (LSPDI, in Spanish el modelo Logístico, Abastecimiento, Producción, Distribución e Inversa [LAPDI]) model, centered in flows;
- The Logistic Model Based on Positions (LoMoBaP, in Spanish Modelo Logístico Basado en Cargos [MoLoBaC]), studies logistics through the functions performed by the managers in logistic positions in an organization;
- The Logistic Model Based on Indicators for Positions (LoMoBaIPo, in Spanish Modelo Logístico Basado en Indicadores de Cargos [MoLoBaICa]), which measures enterprise logistics through indicators and
- The Logistic, Strategic, Tactical, Operational with Inverse Logistics Model (STOILMo, in Spanish Modelo Logístico, Estratégico, Táctico, Operativo con logística Inversa [MoLETOI]), which analyzes logistics through normal stages of administrative analysis: Strategic, Tacit and Operative.

This work is centered in the MoLoBaC model (See figure 1), which is formed by forty four positions, distributed in twelve areas integrated in six stages:

Supply, with one area, 1.-Procurement;  
Production, integrated by two areas: 2.- Maintenance and 3.-Inventories;

Distribution, which is the stage with a bigger number of areas, four: 4.-Order Processing, which is a mixed area since it possesses positions in different stages, 5.- Physical Distribution, 6.-Transportation, which is also a mixed area, and the area that is the main reason for the model: 7.- Customer Service; Inverse, formed by one area: 8.- Inverse logistics; General to the Enterprise, with three areas: 9.-Intrinsic to logistics, 10.- Supported by logistics, and 11.- Supporting logistics, and a last stage, General of Information, formed by one area: 12.-Information, which is also a mixed area.

From MoLoBaC, in this research focus will be made on area 4.-Order Processing which is formed by five positions: Warehouse Manager (21), Industrial Design Manager (23) and Materials Handling Manager (24), which are form the Production stage and Picking Manager (22) and Order Processing, who names the area, form the Distribution stage. In particular, it will be worked with the Industrial Design Manager (23). Numbers on parenthesis are used by the model to identify positions.

When an organization generates knowledge, its main sources are the environment and the members of the organization. In particular the Industrial Design Manager, is often in relation with some suppliers and some final costumers, making them both possible external entities in the generation of knowledge. Additionally, the Industrial Design Manager, often interacts and affects the whole organization, for which it is an interesting element to analyze when it is required to study the possibilities of generating and managing knowledge. From this possibility of acting as a knowledge generator offered by the Industrial Design Manager, the objective of this investigation arises: To show through the functions of the Industrial Design Manager, from the Logistic Model Based in Positions, the generation and management of knowledge in an organization.

This main objective leads to three specific objectives:

- Presenting the position of Industrial Design Manager, from MoLoBaC.
- Presenting a model of knowledge management and generation, particularly of dynamic knowledge that can be useful for different organizations.
- To show through the functions of the Industrial Design Manager, from the Logistic Model Based in Positions, the generation and management of knowledge in an organization.

About the limitations and reach, there will not be made a field study, instead the analysis for knowledge management and generation through Enterprise logistics will be done by theoretical analysis of the MoLoBaC Industrial Design Manager functions, following the spiral model by Nonaka et al. (2000), as presented by Hernández et al. (2012).

To achieve the proposed objectives, it will be use the common methodology for decision making, scientific method applied to decision making (Hernández et al., 2009; 2012), than instead of establishing hypothesis follows the next steps:

- a) Defining the problem that as presented in the objectives is to show how knowledge can be generated and managed through the Industrial Design Manager from MoLoBaC
- b) Search data, in particular from management and generation of knowledge and industrial design following MoLoBaC;
- c) Establishing alternatives, that will be the different ways to explain organizational knowledge generation and management through the Industrial Design Manager;
- d) Evaluate alternatives, according to the established objectives find which proposed alternatives are feasible;
- e) Selecting the best alternative, as a product of the previous evaluation process, and in concordance to any secondary or tacit objectives had;
- f) Implementing the alternative, that based in a hypothetical case consists in illustrate how generation and management of knowledge in an organization, is handled through the Industrial Design Manager; g) Establishing controls, or mechanisms that allow to recognize if the applied solutions are valid through time.

## **KNOWLEDGE MANAGEMENT AND GENERATION**

When studying knowledge generation and management through the Customer Service Manager, Hernández et al., (2012), affirms that for the development of any field of knowledge it is needed an adequate generation and

management of knowledge. There are presented a great amount of authors that refer to generation and management of knowledge (Carney, 2006; Erden et al., 2008; Nonaka y von Krogh, 2009; Price, 2009; Wang et al., 2009), just to mention a few. Some of the referred authors by Hernández et al., (2012) highlight the constant interaction between tacit and explicit knowledge, which generates dynamic knowledge, who follows and ascending spiral (Nonaka et al., 2000), who also centers the process of creating and managing knowledge in a dynamic spiral that covers three main dimensions: SECI, Ba and Knowledge assets. All of them taken from Hernández et al. (2012), following Nonaka et al. (2000), some brief comments for these three fields will be made, starting by SECI, which are the initials for Socialization, Externalization, Combination and Internalization and corresponds to the found processes for knowledge conversion presented by Nonaka et al. (2000).

Socialization will be understood as the process of converting new tacit knowledge through shared experiences, while the Externalization will be the process of con articulate the tacit knowledge as explicit knowledge, thus allowing it to be shared by others and forming the base of a new knowledge. Combination is the process of converting explicit knowledge into more complexes and systematized explicit knowledge, is the process of gathering from inside and outside of the organization the explicit knowledge in order to process, combine, edit and convert it into a new knowledge. Finally Internalization is the process of integrating explicit knowledge to tacit knowledge, meaning the generated explicit knowledge is shared through the organization and converted into tacit knowledge for all the individuals in the organization, transforming this knowledge into a valuable asset.

Continuing with Hernández et al. (2012), based in Nonaka et al., (2000), Ba would be related to the necessary context for knowledge, which should be specific for both who participates and how they participate in the creation of knowledge. A first approximation to Ba is assimilate it with place, understanding it as the place were knowledge is created, shared and used (Nonaka et al., 2000). Ba is not analyzed as only a physical place but it also has a tight relation with time and space.

Finally when referring to knowledge assets, Nonaka et al. (2000), restrict the concept of assets to those specific to the company and that are indispensable to create knowledge, there that Knowledge assets “are the incomes, outcomes and moderating factors in the basic process of knowledge creation” (Nonaka et al., 2000, 20). Besides, Nonaka et al. (2000), to understand how Knowledge assets are created, acquired and exploited, propose to categorize them in four types: Experimental, Conceptual, Systemic and Routine Knowledge Assets. Experimental Knowledge Assets is referred to the tacit knowledge shared that is re-built through shared experiences with the members of the organization and between them and its relations, and besides the work experiences it must be included here emotional and affective experiences and knowledge, as experiences and knowledge of entertainment, improvisation and enthusiasm among others, there its tacit character, which Knowledge assets must be built for the organization. Conceptual Knowledge Assets are conformed by explicit knowledge articulated through images, symbols and languages. Systemic Knowledge Assets is the explicit knowledge that has been organized, systematized and even legalized, there that it is much easier to comprehend and transmit, which makes it the more visible of Knowledge assets. Finally Routine Knowledge Assets is tacit knowledge that is already part of the organization daily routine, being among them the know-how, and the organizational culture, for its day to day character Routine Knowledge Assets is essentially practical.

From this it is understood that in order to carry an appropriate knowledge management and understanding dynamic knowledge, Nonaka et al. (2000) spiral based in SECI, Ba and Knowledge assets, can be used. In this work the handling and acquisition of knowledge can be illustrated through the functions of the Industrial Design Manager, for which some comments on relation to its functions will be done. To close this section a definition of dynamic knowledge will be given: Is an intangible resource that works as the gravity center of knowledge creation and its process for creation, dissemination, transfer, internalization and absorption of knowledge, starting from the transformation and conversion of tacit knowledge into explicit knowledge and continuously through a spiral, converting the latest explicit knowledge generate into tacit knowledge, restarting the cycle. For all of this dynamic knowledge is expansive and complex, and is one of the most important sources of competitive advantages in organizations (Hernández et al., 2012).

## **INDUSTRIAL DESIGN MANAGER**

As indicated by Hernández et al. (2009; 2012), in the MoLoBaC the Industrial Design Manager is located in the area of Order Processing. Joint with its staff and superior, they are in charge of receiving and managing the demands of costumers for the whole organization. From this position the Industrial Design Manager receives all new ideas, service demands and client products whether external, intermediate or internal. Industrial Design Manager is responsible from converting all this demands in concrete facts, trough feasible designs of Equipment, processes, products and parts. Besides all that is generated by the Industrial Design Manager must meet the needs, in the adequate conditions from the demanding costumers. Understanding that, feasible designs must be in all dimensions. In this dimensions are mainly technique and economy, but without leaving behind environmental aspects, that have become more relevant every day (Gungor and Gupta, 1999; Jelinski et al., 1992, Sarkis, 2003).

According to each organization the participation of the Industrial Design Manager can be very active or little active. In enterprises that produce for inventories or to take products into an existent defined market, design is reduced to constant innovation within the organization. In the other extreme are organizations obliged to participate in licitation processes or that works under requests to satisfy special customer orders, in which design labors become one of the most relevant aspects of the enterprise daily work. Especially for this lasts organizations, the Industrial Design Manager must maintain tight relations with all the areas of the enterprise, including clients and suppliers.

Following the premise of eco-design from the last three decades the Industrial Design Manager must design products that consume the least amount of energy and materials, while at the same time generating the minimal amount of wastes and where effluents and residues must be converted in raw material of other productive processes (O'Rourke et al., 1996). This conditions are aligned with the four principles proposed by Korhonen (2001): Roundput, in the sense of utilizing in other processes the residues of a first process; Diversity in the production to avoid overspending one resource; Locality, that allows to adapt to the local environmental conditions, cooperating at the same time with the recovery of resources and Gradual Changes, with the objective of allowing the recovery of natural systems.

Under these premises and restrictions, the functions that must be performed by the Industrial Design Manager arises, among witch stand out:

1. Maintaining permanent information exchange with the Customer Service Manager, the External Relations Manager and the Marketing and Sales Manager, to be attuned with the new market tendencies and be ahead with designs that satisfy them.
2. Revise, with the Environmental Manager and the Ethical Juridical Consultant, the new environmental legislations, to generate new vanguard designs in the respect of environments.
3. Analyze with the Projects Manager, the Expansion Manager and the Forecast Manager, the future growing of the organization and the feasibility of the new processes and products to be designed.
4. Include in the designs, aspects that eases the recollection, reception, classification and later use, of the parts that come back through inverse logistics, counting for this with the support of the Logistics Manager and its subordinates.
5. Design products that are easy disassemble to reinforce the previous function.
6. Design products and processes that minimize wastes and residues to reinforce the previous functions.
7. Design products, easy to transport, that adapts to the company fleet and uses low cost packages, all this in coordination with the Transport Manager and its subordinates.
8. Design packages that stand out for its aesthetics and have low environmental impact in all the phases of its life cycles, this in collaboration with the Packaging Manager.
9. Design processes and products that exploit the local conditions of production centers, including looking ahead for new possible locations, for this it must rely on the collaboration of the Localization Manager, Project Manager and Expansion Manager.
10. Design and modify products, taking into account, the commercialization channels, for this it must be in permanent communication with the Physical Distribution Manager and its subordinates, in particular the Channel Manager, as the Virtual Channels Manager.
11. Design products in order to guarantee an easy packaging and dispatch of them, in coordination with the Packaging Manager and the Expedition Manager.

12. Define trainings to be done by the staff in order to implement new designs for products, parts, Equipment and processes. These designs must be done minimizing risks and guaranteeing the safety of operators. It is important the support of the Human Resources Manager and the Industrial Safety Manager (Industrial Safety and Internal Relations Manager).
13. Take into account the Equipment, processes, products and parts design, the movement of materials inside the organization, minimizing personnel and installations risks. To achieve this it is needed the support of the Industrial Safety Manager, the Materials Handling Manager and the Layout Manager.
14. Being in permanent contact with the Order Processing Manager, to analyze in which projects the design demanded by the customers may become part of the enterprise and which not, with the support of the Costs Manager and Financial Manager.
15. Perform designs, which parts and final products are of low weight and low volume to ease carry them and store them, in direct contact with the Picking Manager, Warehouse Manager, Dispatch Manager and Procurement Manager and its subordinates.
16. Handling new information technologies, to use vanguard techniques with the latest Equipment, obtaining more current information. For this it must be counted with the support of the Information and Development Manager and its subordinates.
17. Perform Equipment and product design, whose components and replacements are easy to handle and acquire, if possible in existence or already in use by the organization. In order to check the existence of parts, it must count with the support of the Warehouse Manager and the Inventory Manager and its subordinates.
18. Design equipments, products and parts, which maintenance is easy and economical. For this is needed the support of the Maintenance Manager and its subordinates
19. Define the yearly goals in the matter of new designs.
20. Establishing schedules for testing new designs.
21. Promote the incorporation of new designs for Equipment and processes, products and parts.
22. Supervise, with the Quality Manager, that the new designs maintains the quality standards of the organization.
23. Supervise, with the Layout Manager, that the defined layouts for production of new designs are the more convenient for the organization.
24. Being in permanent contact with the Procurement Manager and its subordinates to guarantee the acquisition of the necessary goods for all new designs.
25. Coordinate with the Layout Manager and the Quality Manager the spaces to perform quality control in these goods, in order to complement the previous function.
26. Establishing, with the Procurement Manager and the Raw Material Manager, programs to develop suppliers that could bring in new goods to incorporate in new designs.
27. Analyze and study, with the Expansion Manager, any opportunity of growing within the organization, supported in new designs.
28. Work closely with the Customer Service Manager, to search permanently designs for products, Equipments and processes that contribute to improve the service for the final costumer.

Although not discarding other functions, with the ones mentioned it can be seen the intrinsic relations of the Industrial Design Manager, with the organization and its surroundings, which eases performing such an important role as knowledge management. Next, following Nonaka et al. (2000), is important to analyze the contributions of the Industrial Design Manager in the Generation of Knowledge making emphasis only in the spiral of transformation of explicit knowledge into tacit and vice versa. Meaning the creation and broadcasting of knowledge.

## **KNOWLEDGE MANAGEMENT THROUGH THE INDUSTRIAL DESIGN MANAGER**

The many functions of the Industrial Design Manager allow multiple relations with almost all of the responsible for positions in the MoLoBaC. These multiple interactions will convert the Manager into a motor of generating knowledge in the organization. To stimulate the generation and diffusion of knowledge the Industrial Design Manager thanks to its interaction with the whole organization, achieves, first and foremost Socialization. Simultaneously participates in the conversion of tacit knowledge into explicit knowledge, also easing

Externalization. Additionally it helps the conversion of this explicit knowledge into a more complex explicit knowledge, therefore being part of the Combination and finally is involved in the process of integrating this explicit knowledge to the tacit knowledge, achieving Internalization, completing the SECI presented by Nonaka et al. (2000) and discussed by Hernández et al. (2012). In respect to Ba, being a space-time relation, even though is not responsibility of this manager, in its daily bases contributes directly to create the context that would be translated in space-time for the generation of knowledge. As already observed by its functions, the Industrial Design Manager participates in the creation of Equipments, products and processes from the moment they are just an idea. This early intervention, allows it to participate in the creation of knowledge, from the basic moments, therefore it becomes a direct protagonist in the transformation of tacit knowledge into explicit knowledge, to complete the cycle established by Nonaka et al. (2000)

On the other hand, according to its functions, the Industrial Design Manager guarantees Knowledge Assets, since it aides to reconstruct shared tacit knowledge, including emotional and affective aspects, which will be registered in experimental Knowledge Assets, not only in the organization personnel, but also has an active participation in some of the providers. This way, it turns this explicit knowledge into images or symbols besides concrete objects and especially language, explaining its achievements to the rest of the organization it also participates in conceptual Knowledge Assets. From its interactions with almost all the personnel in the organization, but especially when establishing norms and handling conditions, it allows its participation in the organization, systematization and legalization of knowledge also participating in the creation of Systemic Knowledge Assets. Finally, the Industrial Design Manager, being a position of many interactions, must be explaining how to contribute with each of the individuals in an organization to achieve new goals, will broadcast this practical knowledge formed in the organization, helping the routine Knowledge Asset.

Especially for its constant interaction with almost the whole personnel in the organization, from all of the above, it can be seen that on its daily functions, the Industrial Design Manager is a fundamental axis of the dynamic knowledge spiral (Nonaka et al., 2000), that must exist in all organizations to improve and preserve knowledge created within itself.

Once shown the participation of the Industrial Design Manager in all the steps: SECI, Ba and Knowledge Assets of the Nonaka et al. (2000) model, as studied by Hernández et al. (200), some conclusions can be presented.

## CONCLUSIONS AND FUTURE INVESTIGATIONS

The functions of designing, modifying and incorporating new Equipments and products and parts according to the Logistic Model Based in Positions (LoMoBaP [MoLoBaC]), rest in the Industrial Design Manager, who also intervenes in the design and modification of processes. This investigation allowed to evidence that through the functions that the Industrial Design Manager must comply, great part of the creation of knowledge in an organization can be managed. The great advantage of the Industrial Design Manager is its tight relation, not only with some suppliers and clients, but with most managers of MoLoBaC. This interactions with external and internal elements of the organization is given in the moment when products and processes are taking shape, allowing to generate knowledge and transform it from tacit in to explicit and once again into tacit knowledge in an increasing and continuous spiral. When participating in the creation of dynamic knowledge, the Industrial Design Manager aides with: Socialization, Externalization, Combination and Internalization, while acting as a facilitator of Ba, even participating as a generator and receiver of knowledge assets: Experimental, Conceptual, Systemic and Routine.

From the obtained results through the applied focus, with the Industrial Design Manager and the Service Client Manager in a previous investigation, is recommended to repeat equivalent experiences with other positions in MoLoBaC. It is equally recommended to establish some system of measurement for dynamic knowledge created by each of these positions. Particularly it is recommended to try this measure through a multi-criteria model that is easy to implement, as could be Matrixes Of Weighing (MOW [MDP]) and Multiattribute Models with Multiplicative Factors (MMwMf [MMcFm]).

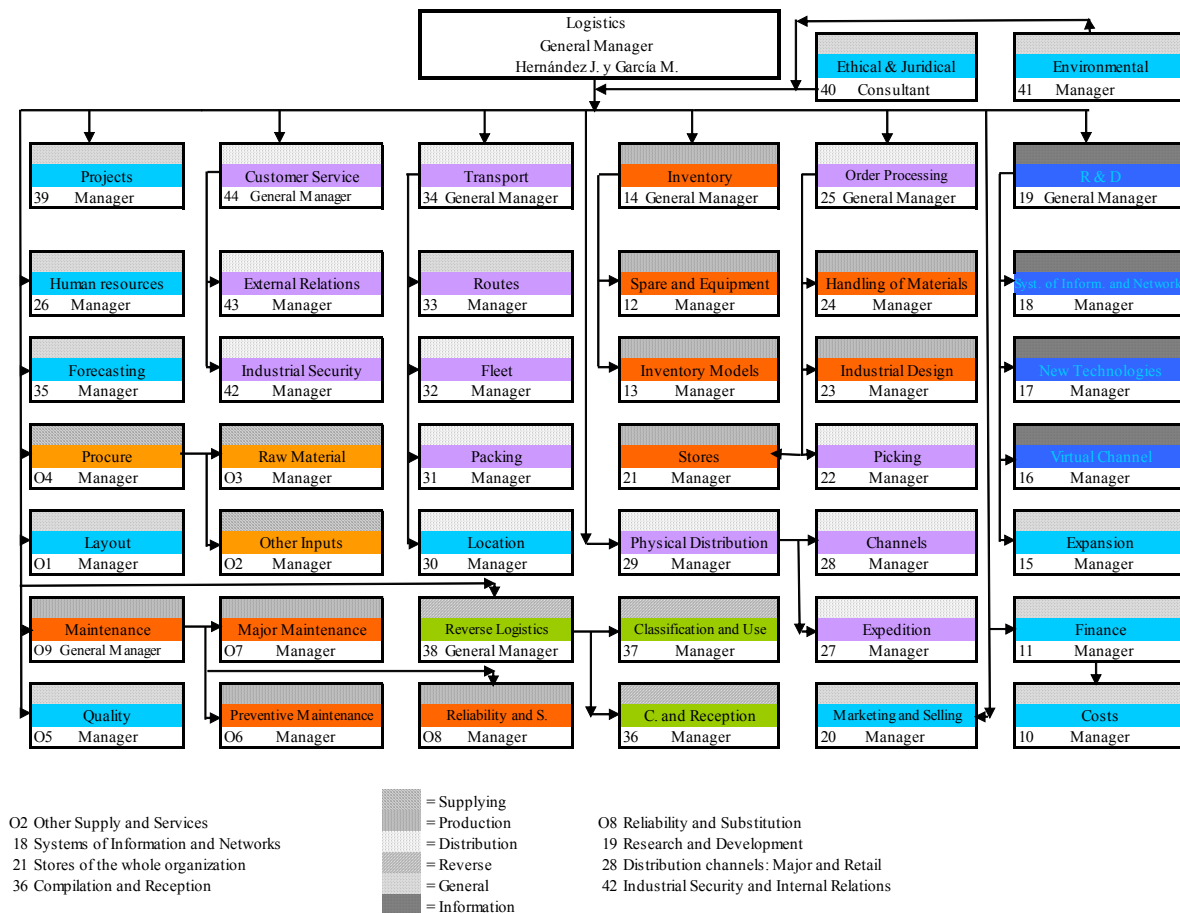


Figure 1: Logistic Model Based in Positions (LoMoBaP [MoLoBaC])

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# STUDY OF THE INFLUENCE OF E-TOOLS ON THE MARKETING MIX FOR PHARMACEUTICAL INDUSTRY

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## ABSTRACT

*There has been tremendous growth in information technology, which has pervaded to significant areas of business and human activities, thereby influencing human attitude, lifestyle and behaviour. Marketing, being largely dependent on perception & attitude of customers & influencer, has not been untouched by these developments. Pharmaceutical industries, which are growing fast in India, are trying to reap the benefits of the IT revolution for marketing of its products. This paper examines the role of e-Tools on the marketing mix for the pharmaceutical industries and how pharma sectors are utilizing these tools to optimize their resources and marketing efforts.*

## INTRODUCTION

Internet emerged in the last few years as a new, global, robust interactive channel, supporting all the characteristics to be used as a self-service long distance tool, and as enabler of closer relation between business partners. Being a rich source of multimedia information, highly interactive and 24 hours available, it allows real time answers to consumers' requests. These characteristics help Internet players to develop a mass-market-of-one, where it's possible to identify consumers' habits and preferences, tailoring the offer according to individual profile in micro market segmentations.

Information technology (IT) has revolutionized the way information is being processed, transmitted and received. IT has great impact on thinking, behaviour and activity of people. As marketing has large dependence on the psychology of its customer and the environment surrounding it, the IT developments have influenced the marketing in a big way and the pharma marketing has not been untouched by these developments. In this case, its main customers (doctors), who prescribe the medicine for the end consumers (patients) are educated and well conversant with new technology and hence IT tools can be used effectively for marketing of pharma products.

e-Tools are web-based or internet based tools such as application software or websites which can be used for information, business or networking. There are approx. 2 billion internet users in the world (*Internet World Stats-2010*), constituting about 30% of the world population. Asia has about 42% share in the global population using internet. In India, the population of internet user increased from about 5 million in 2000 to 81 million in 2010, showing a high growth rate in the usage of internet. Over 145 million consumers used the Internet to research health and medical information in 2008 (Manhattan Research, 2008) and these e-Health consumers were not limited to a specific demographic –individuals of all ages were turning to the internet for health management. Internet contribution to GDP is about 15% for US and about 5% for India (*Economic Times, 25 May, 2011*), which emphasize the role of internet on different economic activities.

## E-tools on the Marketing Mix in Pharmaceutical Industry

Marketing mix is the tool used by the marketers to elicit the desired responses from their target markets (Kotler, 2000). These tools help the firms to pursue its marketing objectives in the target market. These tools have been classified into four broad groups and named the four 'Ps' of marketing (McCarthy, 1999): **product, price, place, and promotion**. Marketing-mix decisions must be made to influence the trade channels as well as the final consumers. Typically, the firms can change its price, sales-force size, and advertising expenditures in the short run. However, it can develop new products and modify its distribution channels only in the long run. Thus, the firm typically makes fewer period-to-period marketing-mix changes in the short run than the number of marketing-mix decision variables might suggest. Robert Lauterborn (1990) suggested that the sellers' four Ps (product, price, place and promotion) correspond to the customers' four Cs, namely, customer solution, customer cost, convenience and communication. Winning companies are those that meet customer needs economically and conveniently and with effective communication. In case of prescription of drugs, there are four main buying parties, which may vary country to country (Corstjens, 1991) - (i) Prescribers, who may include doctors, dentists, pharmacists, nurses and optometrists (ii) Influencers may be hospitals, nurses, professors, reimbursement agencies, peers (iii) Consumer is patient (iv) Financier may be partly patient, partly government or third party like insurance companies etc.

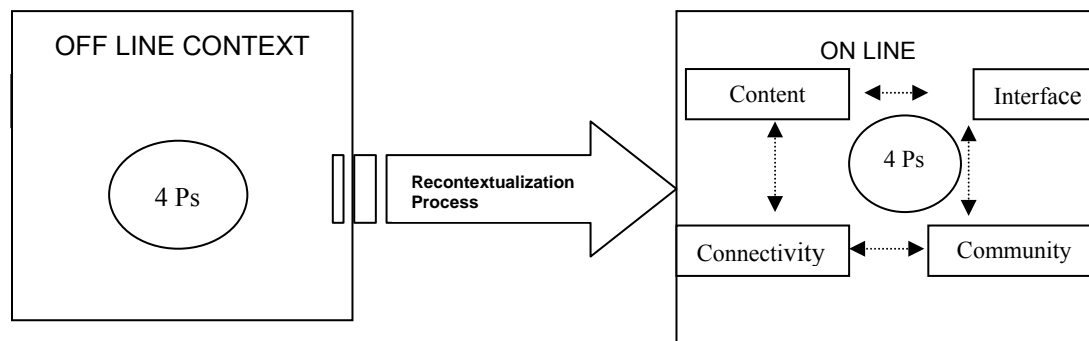
## New Marketing Mix for the Digital Business Environment: The Literature Review

There is a wide range of research which argument against the 4 Ps of marketing mix. The 4 Ps model is internally oriented and there is a lack of customer orientation and the insufficient attention to the relationship with customers (Moller, 2006; Popovic, 2006, Constantinides, 2002 a, b). Schultz (2001) says that in today's marketplaces there is the need for externally orientation, which considers the network system view.

A common factor in all the e-marketing mix literature examined is the need for a more explicit customer orientation. This limitation includes all the aspects of pharmaceutical marketing, nevertheless it has a particularly strong consequence in Internet marketing, where interactivity is a very crucial aspect.

It is interesting to notice that, in spite of these criticisms, the majority of the research agree to include the 4 Ps in their marketing mix models, with few exceptions.

### Contextualization of the 4Ps in the 3Cs+I



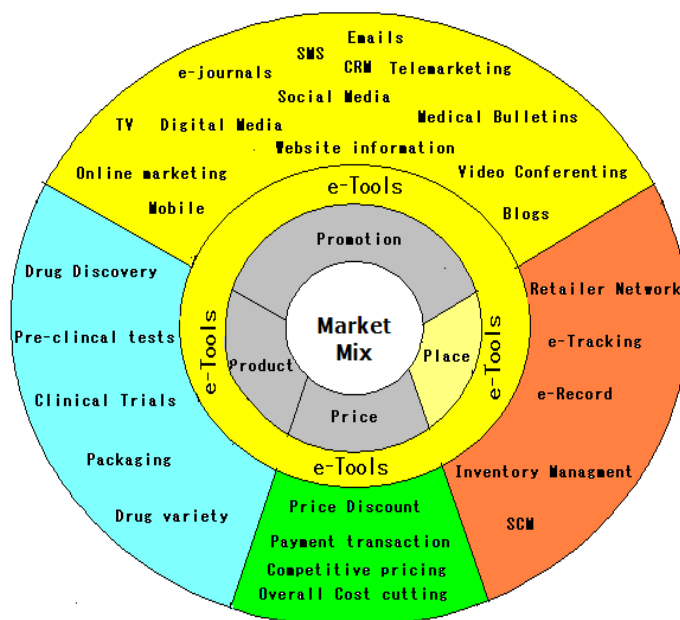
Source: Pastore & Vernuccio, 2004

## Product

Product is an important feature for the marketing. Due to more time needed to change the product constituents, companies need to plan properly for different aspects of the product, like- variety, quality, design, features, brand name, packaging size, services, warranty. E-Tools have an important role to play in each of these product constituents.

For the pharmaceutical industries the product phase consists of three parts- drug discovery/ research, drug development (include pre-clinical testing) and clinical trials.

### Influence of e-Tools on the Marketing Mix Components



## Price

Price of the drugs can be effectively used for marketing of pharmaceutical products. This component can be changed fast to bring changes in market share. Pricing of drugs is dependent on a number of factors like cost of manufacturing, promotion, distribution, market position & category of drugs, government regulation etc. e-Tools affect most of these factors thereby influencing the price of drugs. They help in reduction of cost of manufacturing through reduction in cost of product discovery and development including clinical trials. They are instrumental in fast clinical trials with reduced overhead costs. They also reduce cost through e-procurements of inputs including reduced paperwork and cost of ordering.

## Promotion

Information Technology (IT) has transformed the ways modern healthcare systems acquire, store, access and communicate medical information (*Chin, 2003*). These developments offer significant benefits to patients and healthcare providers, for gathering information about not only the diseases and medicines, but, they also give rise to ethical and legal challenges and spread the notion that IT can be used to bypass the need for personal consultations. The information gathered by patients through web is often presented to doctor and more and more queries are done regarding the treatment procedure, effect and efficacy of drug, dietary changes etc. This results in greater satisfaction of the patients and an aware response from doctors. Though younger consumers are adopting the Internet for health management at a higher rate than older groups, there has been a 23% increase since 2004 in the number of eHealth Consumers aged 55 years and older who use the Internet for health-related purposes (*Manhattan Research, 2008*). Additionally, the e-Health Consumer population has seen a 15% annualized growth rate over six years. In fact, more U.S. consumers used the Internet as a source of health information (eHealth) than they used doctors, indicating that health management is now a more hands-on, interactive process than before.

## Place

e-Tools have great role in the supply chain management (SCM) process, which involves coordination of order generation, order taking and order execution. e-Tools are used for both the push types of SCM, in which the merchandise is pushed into the customer's hands, and the pull type SCM, in which the customer actually initiates the supply chain. As per one survey (*Rahman, 2003*) on supply chain management, 80% of the respondents confirmed the use of internet in supply chain management with major application in purchasing/procurement system. Also, 45% of the firms confirmed the use of internet in the actual order process. *McCormack and Kasper (2002)* furthermore propose that the use of internet for connections with customers and suppliers can improve SCM performance and it can be significantly used for B2B supply chains process like sharing data, exchanging e-mails, providing timely digital orders and establishing a collaborative effort with their partner. Suppliers are the ones that benefit the most from ordering systems on the internet. Benefit for online buying depends on the buying situations (*Hunter et al., 2004*). When purchasing a strategic product, the risk is essentially higher than for non-critical products (*Haan, Groot, Loo and Ypenburg, 2003*). Hence customers may be treated differently depending on the type of product bought. Long-term relationships with a partner that are buying strategic products are more carefully managed. Therefore suppliers may be more concerned to invest in systems that will speed up the communication with these buyers than those buying low risk, non-critical, items. *Martin and Hafer (2002)* have investigated how purchasers perceive changes of the buying procedure due to the impact of the Internet.

## e-Business Models in Pharmaceutical

e-Business is marketing, buying, selling, delivering, servicing, and paying for products, services, and information across networking linking an enterprise and its prospects, customers, agents, suppliers, competitors, allies, and complementors. (*Weill & Vitale, 2001*). For business on internet, there are four business models for the pharmaceutical industries, namely business to consumer (B2C), business to business (B2B), consumer to consumer (C2C) and mBusiness. B2C model is generally related to online sale of products to consumers. There are some online sites like alldaychemist.com, 3gchemist.com etc. which offers online sale of prescription and generic medicines. B2B model is more complicated than B2C model due to additional activities inherent between two businesses. Pharmaceuticals can utilize the B2B model to manage e-Business with suppliers, wholesalers, doctors, physicians, and distributors. This model requires more complicated software, hardware, and systems integration. C2C model is pursued by online auction site, like eBay, which serves to connect buyers and sellers online and charges a nominal fee to consumers. This model is applicable to the pharmaceutical industry as connecting buyers and suppliers of pharmaceutical products could be a lucrative initiative. Auctioning between businesses has been achieved by FreeMarkets Online and may be a model for connecting B2B pharmaceutical companies for auctioning in the future. mBusiness involves use of mobile phones, which are increasingly being used for banking and commercial transaction. In India, Apollo pharmacy tries to contact with patients for refill of monthly supplies and also gives reminder before the next due date for refill. With the fast growth of mobile users in distant part of the globe, this business is going to pick up fast.

## Objective of the Study

1. To study about the location of e-tools usage by the respondents.
2. To check existence of gender differences in the usage of e-tools
3. To find out the most important factors affecting e-Tools Buying Behaviour of the respondents.

## Hypothesis of the Study

Ho: There is no significant gender difference for e-toll usage

H1: There is a significant gender difference for e-toll usage

## Research Design

The present study is descriptive in nature. The study is based on survey method where data has been collected from 250 respondents regarding their habit of using e-tools for pharmaceutical products. The data

collection tool was a structured questionnaire and data has been analyzed with the help of Factor analysis and chi square.

## Personal Demographics of Respondents

Prior to studying the e-tools buying behavior, it's imperative to first study the demographic profiles of Indian e-tools users. Following statistics was obtained.

**Table-1: Gender**

<b>Gender</b>		
	<b>Frequency</b>	<b>Percent</b>
Male	139	55.6
Female	111	44.4
Total	250	100

**Table-2: Age**

<b>Age</b>		
	<b>Age</b>	<b>Percent</b>
15-24 years	70.5	28.2
25-35 years	159	63.6
36-44 years	17.5	7.0
45-60 years	3	1.2
Total	250	100.0

**Table-3: Education**

<b>Your highest level of education is</b>		
	<b>Highest Level of Education</b>	<b>Percent</b>
Graduate	8	3.2
Post Graduate	239	95.6
Ph. D	3	1.2
Total	250	100.0

**Table-4: Annual Family Income**

<b>Annual Family Income</b>		
	<b>Annual Family Income</b>	<b>Percent</b>
< Rs. 2 Lakhs	12.5	5.0
Rs. 2 – 5 Lakhs	75	30.0
Rs. 6 – 8 Lakhs	57.5	23.0
Rs. 9 – 11 Lakhs	55	22.0
Rs. 12 – 14 Lakhs	25	10.0
> Rs. 14 Lakhs	25	10.0
Total	250	100

## e-Tools Usage Statistics

To study the e-tools usage patterns amongst Indian e-tools users, the survey form constituted multiple choice questions related to location of e-tools use, kind of e-tools connections at home and the e-tools usage time of tools users. Following statistics was obtained.

**Table-5: Location of e-Tools Use**

	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid At home only	50	20.0	20.0	20.0
At workplace only	5	2.0	2.0	22.0

Both at home and workplace	187.5	75.0	75.0	97.0
Other places	7.5	3.0	3.0	100.0
Total	250	100.0	100.0	

**Table-6: Chi-Square Tests (Gender differences)**

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Person Chi-square	29.642 <sup>a</sup>	1	.000		
Continuity Correction <sup>b</sup>	28.641	1	.000		
Likelihood Ratio	30.332	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	29.583	1	.000		
N of Valid Case	250				

a. 0 cell (.0%) have expected count less than 5. The minimum expected count is 84.36.

b. Computed only for a 2x2 table.

## Gender vs. e-Tools Purchase

While examining the “a” footnote at the bottom of the Chi-Square Tests table, its observed that cells with an expected count of less than 5 is less than 20% and the minimum expected count is greater than 1. This indicates that Chi-square is a valid test for this analysis.

As we find the value of significance for Person Chi-square in the significance column .000 which is less than 0.05, hence the null hypothesis is rejected and alternative hypothesis is accepted. We can accept the following alternative hypothesis:

**“H1: There is a significant gender difference for e-toll usage.”**

### Factors analysis for choosing most important factors affecting e-tool usage behavior:

This research constituted a primary data collection from 250 respondents. The survey questionnaire consisted of 26 items to capture the psychographic behavior of online users. This research aims to identify the perceptions of the e-tools users with respect to online purchasing activity. These variables are thereafter categorized under 5 main factors using Factor Analysis on SPSS ver. 19. (Annexure 1)

If the above number of variables can be represented in smaller number of composite variables, then it's understood that factor analysis could be the best choice to analyse that data.

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.734
Bartlett's Test of Approx. Chi-Square Sphericity	10201.270
Sig.	.000

**Table-9: Bartlett Test of Sphericity**

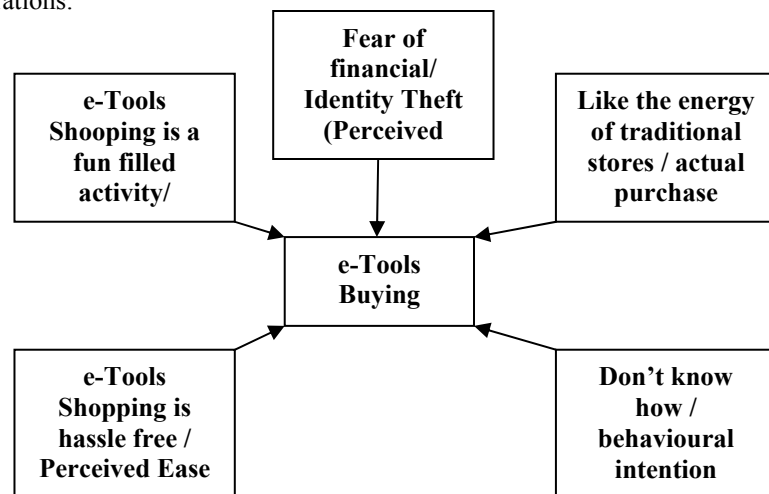
Total Variance Explained:

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %

1	8.365	21.063	21.063	8.365	21.063	21.063
2	3.677	9.343	30.506	3.677	9.343	30.506
3	3.360	8.550	39.156	3.360	8.550	39.156
4	2.453	6.283	45.539	2.453	6.283	45.539
5	1.568	4.069	49.708	1.568	4.069	49.708
6	1.503	3.007	53.715	1.503	3.007	53.715
7	1.283	3.356	57.171	1.283	3.356	57.171
8	1.146	3.014	60.286	1.146	3.014	60.286
9	1.077	2.617	63.003	1.077	2.617	63.003
10	1.049	2.548	65.651	1.049	2.548	65.651
11	1.002	2.431	68.182	1.002	2.431	68.182
12	.873	2.331	70.613			
13	.824	2.210	73.013			
14	.796	2.141	75.164			
15	.699	1.897	77.161			
16	.647	1.769	79.029			
17	.609	1.673	80.802			
18	.596	1.641	82.543			
19	.506	1.415	84.058			
20	.468	1.319	85.477			
21	.444	1.260	86.837			
22	.431	1.227	88.163			
23	.366	1.064	89.227			
24	.346	1.015	90.443			
25	.332	1.071	91.524			
26	.309	1.013	92.547			

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.



Reliability of the multi-item scale for each dimension was measured using Cronbach alphas. Measures of reliability were above the recommended minimum standard of 0.60 (Bagozzi and Yi, 1988).

<b>Factor</b>	<b>Cronbach's Alpha</b>	<b>No. of Items</b>
Fear of financial or identity theft / Perceived Risk	0.833	4
e-Tools shopping is an easy and fun filled activity/Perceived Usefulness	0.747	8



e-Tools Shopping is hassle-free/Perceived Ease of use	0.748	7
Don't know how/Behavioural Intention	.198	6
Like the energy of traditional store/ Actual Purchase Behaviour	.615	11

## CONCLUSION

With the fast integration of tools of information technology to different business and social activities, e-Tools have become very significant for marketing of pharmaceutical industries. It has significance influence on different components of the marketing mix-product, price, promotion and place for pharma sector. E-tools are increasingly being used for drug discovery, drug development and clinical trials reducing the cost and time of introduction of new drugs. With the benefit of e-tools penetrating to different aspect of production, procurement and marketing, there is scope for reduction in cost of product offering greater flexibility in leveraging the price of drugs for effective marketing in short term. It has great role to play in promotion of drugs and in particular, in communication of information on OTC drugs. It can reduce overdependence on MRs for interaction with doctors for drug promotion by taking recourse to different alternatives offered by e-Tools. It makes supply chain management much more effective and convenient for tracking of drug delivery, drug stocks and management of information. Hence, e-Tools have significant role in the marketing of the pharmaceutical industries.

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# PERFORMANCE IMPLICATIONS OF PACKAGING ON CONSUMER BEHAVIOUR: THEORETICAL ORIENTATION

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## ABSTRACT

*The concept of product packaging has been defined in many ways and has made huge strides since the end of the Second World War, when new materials were introduced, new fabrication techniques and new regulations were introduced to meet the increasing demand for consumer goods, ending the commonly-held belief that it is only packaging and does nothing more than preserve the food content. It has flourished in many ways, as many concepts of product packaging have been introduced from the conventional to its currently acclaimed status by playing the role of the 'silent salesman'. This study explores the impacts of chocolate packaging on the consumer purchasing behaviour, and explores the subject of chocolate packaging from the perspective of the consumer. However, understanding consumer behaviour is a complex matter, especially when the purchasing decision is fuelled by many factors, both internal and external.*

## INTRODUCTION

Consumers nowadays are facing more and more challenges when performing their daily grocery shopping trips in the supermarket as a result of the intensely competitive food marketplace (Nancarrow *et al.*, 1998). They are exposed to information and a plethora of messages through various types of product packages used by manufacturers to cater for different purposes (Nancarrow *et al.*, 1998). For instance, when a consumer steps into a store, they will be greeted with thousands of products, neatly arranged on clean white shelves, each being either different or similar to the next product. All of them are packed and packaged in different ways and to suit different purposes. Naturally, before a purchase is made, the consumer will have to come up with a purchasing decision as to whether to purchase the item or not (Nancarrow *et al.*, 1998). This phenomenon is a typical daily occurrence, which is involved in almost all retail trade transactions, leading to the rationale of selecting the subject of chocolate packaging.

The UK confectionery industry is huge, consolidated and an intensively competitive industry as illustrated earlier. Hence, it is vital for industry players to seek new and attractive ways, or alter their 'way of life' to champion their rivals and gain the market share. However, the current trend in the chocolate sector is that of premiumisation; this involves driving towards the upmarket indulgence direction so that products can be sold at a higher price, and huge sums of funds are channelled to invest in this trend (Business Monitor International, 2010). On the other hand, the sugar confectionary industry in Irish is rather concentrated whereby branding plays a significant role due to customer loyalty (Datamonitor, 2012).

On the other hand, from the psychological aspect of the consumer, the purchasing decision made can be evaluated from various perspectives and one of the most conventional approaches to the decision-making process is the rational perspective. In this context, decisions are made after it passes through a series of logical, rational and systematic evaluation (Solomon, 2004). Hence, it would be a worthwhile endeavour to understand the behaviour of their consumers and how the presentation of the 'end' product looks from their perspective. I believe it would be another sustainable alternative for companies to undertake as it would provide them with an added advantage; apart from moving with the trend, understanding what are the best ways to win the stamp of approval from their target consumer is equally important.

For that reason, this study sets out to investigate and explore the various communicative designs of different chocolate packages, concentrating on how various messages were transmitted to the consumers from a consumer's perspective and, finally, a thorough explanation of the meaning behind these stories. Apart from that, the concept of sustainable packaging is explored from the consumers' point of view and asks the question: Does it play a major role in their chocolate purchasing decision?

## THE THEORETICAL UNDERPINNINGS OF PACKAGING

Food packaging plays a very important role in industrial activities and can be influenced by almost every aspect of any commercial enterprise (Paine, 1962). This is to ensure the items reach the consumers in the correct condition, safely and ready for use (Paine, 1962). Packaging is involved in the food we consume, clothes we wear, medical products to treat illnesses e, and has experienced many significant developments since the Second World War (Paine, 1962). This is attributable to the development and introduction of new materials and better and improved fabrication techniques; also, consumer satisfaction has become increasingly important, where manufacturers compete to improve consumer goods and services in order to meet consumers' ever-growing demand in a variety of methods (Paine, 1962).

There are many ways of defining packaging and according to Paine (1962), the general definition of packaging is defined as the following;

*"Packaging is the art, science and technology of preparing goods for transport and sale"* (Paine, 1962: 1)

while the second definition is more specific and defined.

*"Packaging may be defined as a means of ensuring the safe delivery of a product to the ultimate consumer in sound condition at the minimum overall cost"* (Paine, 1962: 1).

In today's competitive food retail environment, consumers are exposed to thousands of products, each conveying different messages in a single grocery shopping trip to the super market.

*"The change from buying behaviour related to acquiring products to buying behaviour related to the buying situation, is also a change in direction from product properties to experiences at the point of sale, which in turn may also influence buying behaviour theory"* (Clement, 2007: 917).

The twenty-first century also sees a developing and increasing tendency for consumer experiences and also a shift in consumer behaviour, where products are wanted and needed based on immaterial and personal aspects such as fantasy, emotion and amusement (Pine and Gilmore, 1999, in Clement, 2007). As illustrated above, it can be seen that packaging has evolved throughout history from when groceries were packed in paper bags, and tin cans and bulk food predominated the market (Sonya, 1999). As a result of frequent and constant technological advancements, usage of sales assistants as a marketing and promotion strategy has been phased out and replaced by automated self-service systems making the role of a product's package even more profound as the sales assistant no longer acts as the ambassador of the product and brand (Smith, 1998). Instead, the product itself acts as the brand ambassador, taking up the evolutionary role of the 'silent salesman' (Smith, 1998).

The 'silent salesman' holds great responsibility in assisting consumers in choosing their desired products by establishing the presence of the brand, accentuating the unique selling proposition, and highlighting the benefits of the product. In addition, it offers helpful tips and information on the product and its usage; and last but not least, it assists in breaking the misery of choice as a result of an ever-increasing range of similar products from various brands and more (Smith, 1998). Nonetheless, not all the information can be fitted onto the package as the package can only convey a limited amount of information – and this limited amount of information is normally set by the Food Standard Agency in the UK as a guideline for all manufacturers (Food Standard Agency, 2010).

*“The Agency is responsible for making sure that the rules on the safety of materials that come into contact with food are enforced. Food contact materials include the containers food is sold in, the packaging, as well as the articles used to handle food, from food processing machinery to cutlery”* (Food Standard Agency, 2010).

Even so, there are always opportunities to develop a proposition to support and fulfil the company, brand and product communication objectives on every label and packages (Hoyne, 2007). Nonetheless, in order to be effective, the message disseminated must be easy for consumers to understand, concise and clear (Hoyne, 2007). This demonstrates the magnitude of package design, as it not only creates a competitive advantage by adding value to the product, but it also improves the product itself (e.g. freshness, longer shelf life, simple to use physically), thus creating and fortifying consumer and brand relationship. Finally, it ensures brand positioning is in line with the brand’s communication objectives (Smith, 1998).

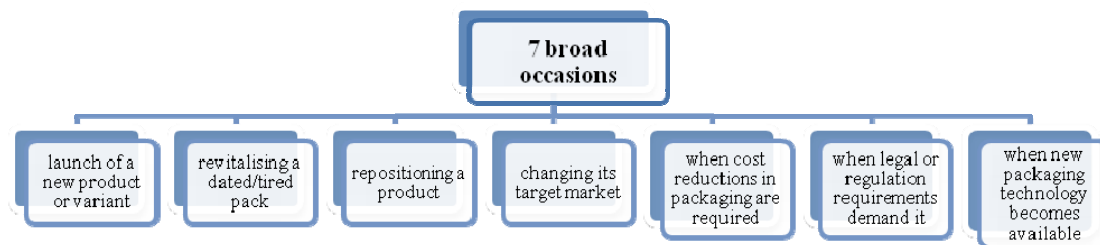
According to Banoo (2000), food packaging has three basic functions. Firstly, to serve as a cocoon, protecting and containing the product against hazards of further packaging, storage and transportation. Secondly, to provide a mode of transport and storage, offering convenience. Finally, to act as medium by performing marketing tasks on behalf of the manufacturer and retailer, which includes the utmost important task of attracting the consumer’s attention (Banoo, 2000). Nancarrow *et al.* (1998) added that packaging provides marketers the opportunity to gain competitive advantage against their rivals.

## Product Packaging As A Lens

Researchers in the past have examined the relationship between packaging and purchasing behaviour, and decisions made have come from different perspectives, from the role of the ‘silent salesman’ (Pilditch, 1973) to a brand builder (Underwood, 2003). Hansen (1986), on the other hand, asserted that consumer purchasing behaviour can be significantly influenced by product packaging in three general packaging aspects, *communication, functionality and the environment*.

Hansen (1986) argues that the communication aspect of the model makes reference to marketing tasks such as brand promotion, packaging designs, graphic design and nutritional information. In addition, the packaging design also includes brief specifications on marketing, legal requirements, and regulations, showing information such as content amounts and ingredients used in the manufacturing of the product (Nancarrow *et al.*, 1998). Nancarrow *et al.* (1998) also added that, apart from the above, the packaging design is also involved in seven broad aspects in marketing communication as portrayed in Figure 1.

**Figure 2: Seven aspects involving packaging design in marketing communication (Nancarrow et al., 1998).**



In this model, functionality is related to the practice condition employed by manufacturers involving transportation, e.g. manufacturer to distributor, distributor to retail, retail to consumers, home carrying, usage and storage of the products, while environment is associated with disposal of the packaging after use (Hansen, 1986).

However, this model does not disclose to what extent the influence of the three aspects above impact the consumer purchasing decision, nor how these aspects were perceived visually from a consumer’s perception in less than twelve seconds from when the decision of purchasing is made (Dickson and Sawyer, 1990). According to Bech-Larsen (1996), the environment factor has no concrete impact on the consumer during that particular moment the decision is made. Vanhuele and Dreze (2002) added that consumers spare little time and effort on cognitive process; for instance, reading labels and information printed on the packages and comparing

prices of similar products. Folkes and Matta (2004), however, added that consumers subconsciously make extensive decisions and judgements based on what they see. For instance, products with packaging that receive a larger share of attention is generally judged to be of better quality or contain more (Folkes and Matta, 2004).

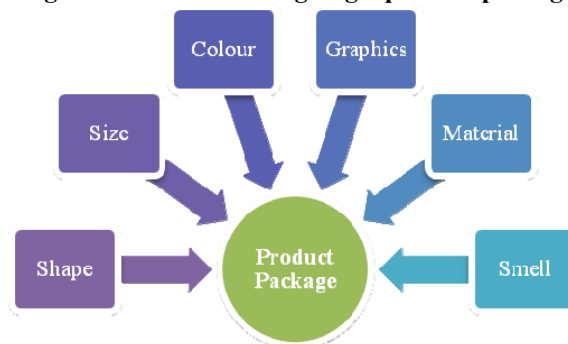
The visual communication aspect in an eye-track experiment was examined by Pieters and Warlop (1999), who discovered a relationship between consumer gazing time and the brand of choice among unknown packaging brands. It was discovered that the longer a consumer gazes at a preferred product, the time pressure changes the physiological search focus from low information visual elements to high information value elements. Selame and Koukos (2002) added that the semantic element is vital as it may impact on the brand evaluation; however, capturing a consumer's attention is also a key factor for in-store purchasing processes and to attract new consumers, as attractive packaging attracts more attention. Clement (2007) added that, in the marketplace, consumers experience difficulties in determination and differentiation of the brand quality. Therefore, consumers normally choose products purely on the basis of the product packaging with an attractive visual attention (Clement, 2007), which can break through the cluster of visual information put forward to them (Pieters *et al.*, 2002).

## Product Packaging Designer Elements/Tools

When one enter a store to purchase a chocolate bar, one will be greeted with rows and rows of chocolates packaged and presented in different shapes, sizes, colours and dimensions, which are arranged neatly on the shelves.

Smith (1998) illustrated in Marketing Communication there are mainly six elements or tools used in designing a product package, as follows:

**Figure 3: The six designer tools used in designing a product package (Smith, 1998).**



## Shape

Some brands can be easily recognised from the distinctive package shape alone (Smith 1998). Ferrero Rocher is one example of a prominent brand, which can be distinguished from its distinctive round shape. In 2007, Ferrero Rocher was one of the biggest players in the premium chocolate confectionery industry, locally and globally, and also the world's best-selling boxed chocolates according to Euromonitor (Superbrands (UK) Ltd, 2010).

Apart from that, the shape of the packages also conveys conscious and subconscious meanings to the consumers (Smith 1998). A group of respondents were asked to draw the first image that comes to mind when the word 'love' was mentioned, the next task being to draw an image for 'hate' (Smith 1998). About 95% would have the same perception on the matter and the drawings would tend to conform to a particular shape (Smith 1998). For instance, the love image would tend to have curves, softer edges and heart shapes, while the hate image would tend to be illustrated with strong and sharp shapes, and jagged edges such as daggers (Smith 1998). Hence, it is revealed that our mind subconsciously links these meanings with different types of shapes (Smith 1998).

It was discovered that children react to colours more than form compared to adult men and vice versa (Smith 1998), which I believe would be an important aspect when determining the targeted consumer segment.

Different shapes convey different meanings; for example, as Pilditch (1973) suggested, a rectangular box creates an image of neatness, sharpness and cleanliness, while a round box is often associated with feelings of security, bountiful and generosity. Another important aspect of the packaging shape is the convenience and protection functions; for example, holding and storing is a part of the study of ergonomics, as a well-designed package fits comfortably in the hand (Smith, 1998). Shapes also portray a sense of masculinity and femininity. Shapes can also be used to help reinforce the product's value by designing certain product features on to the packages (Smith, 1998). For example, Cadbury Schweppes's produce half of the country's Easter eggs, which are shaped like eggs, and are the most popular chocolate gifts during the Easter (Bowers, 2008).

## Size

Another important factor associated with packaging is the size (Smith, 1998). Consumers normally associate larger packages, containers or boxes with a subconscious feeling of expansiveness, better quality and plentiful, while smaller ones were associated with solid, heavy and less attractive – in other words, no good (Smith, 1998). However, for consumers hunting for a bargain, generic packaging would be their choice as it is packaged in larger sizes and costs less, making the product value for money (Prendergast and Marr, 1997).

Larger packs gives a plentiful and expansive feeling while smaller packs may be viewed as heavy, solid and of no good (Smith, 1998). However, products of different sizes were aimed to target different consumer market segments (Smith, 1998). For instance, Premier Food PLC's Cadbury cake bars are wrapped individually (Marian, 2011) which is convenient for snacking and those on the go.

Nicholas O. Hahn, managing director of Vivaldi Partners, a strategy consulting firm, claims that the major food companies are looking for more variety of products to be marketed in single portion packages as healthier choices, as has become the popular trend (Warner, 2005). According to marketers, a '100 calories' message displayed prominently on the front of the package is seen as an effort to persuade consumers to indulge, in a guilt-free manner, in something normally regarded as an indulgent treat (Warner, 2005). This strategy has proven to be a successful marketing strategy, targeting health-conscious consumers or those not aware of how much calories they should consume (Warner, 2005).

## Colour and Graphics

Graphics cover a wide range of illustrations, e.g. layout, colour combinations, typography and photography, and are used to communicate with different target segments (Smith, 1998). It was revealed in psychological researches that laterality of the human brain results in an asymmetry perspective in the aspect of package designs according Rettie and Bower (2000). Hence, the brain's ability to remember the various elements on the package is probably affected by the lateral position on the package, which is also influenced by factors such as the size, colour, and even fonts (Silayoi and Speece, 2004). In addition, Silayoi and Speece (2004) mentioned that research reveals that verbal stimuli is easily recalled on the right side of the brain, while non-verbal stimuli is more effective on the left. Therefore, in order to capitalise on the biological physic of a consumer's recall strength, it would be advisable to position pictorial elements on the left of the package (Silayoi and Speece, 2004). One of the many roles of graphic is to make a package immediately recognisable and providing it a distinctive and also increasing the aesthetic quality of a particular product (Smith, 1998). It can also double as a promotion strategy such as festive seasons or limited collector editions, for instance Easter, Christmas or commemorative packaging, providing added value to the particular product (Smith, 1998). According to Smith (1998), graphics also have the ability to influence lifestyle aspirations or creating a particular mood which usually reflects the latent desires of the target market.

During the re-launching of Cadbury buttons in 2002, designers Martin Grimer and Adam Ellis were hard-pressed to come up with a design that would attract audiences beyond the children market. Hence, after much pondering, they've decided on doodling (Hargreaves, 2004). Martin Grimer, creative director of agency Coley Porter Bell, said that people usually doodle, whether they are in a classroom or even a boardroom, making it an activity which is simple enough to relate to both children and adults. Hence, the button itself is the brand icon placed in the central of the package with doodles of different kinds to make it personalised with a touch of individuality (Hargreaves, 2004). The major colour of the package is purple as it is representative of the brand

and company (Hargreaves, 2004). According to Tony Bilsborough, Cadbury's spokesman, the brand Cadbury has been associated with its iconic 'purple' colour for more than 100 years which is now their trademark and signature colour after a lengthy legal battle with rival Nestle for the use of the colour on their wrappers (Griffin, 2011). Another Cadbury representative mentioned that the colour plays a major role in brand identification in the competitive impulse purchase based market (Baker, 2011). Albert Kner, the former design chief of Container Corporation of America, mentioned that '*Colour is the quickest part to the emotions*' (Smith, 1998: 475). Similar to graphics, colour is able to communicate in a wide range of levels which has the potential of triggering an emotional and physiological response from the viewer, simply meaning feel the colours, according to the Russia's Pedagogical Institute (Smith, 1998).

## Material

Materials have the ability to communicate to the consumers and it affects the perceived quality of the product (Smith, 1998). Hence, choosing the right material for packaging is important as certain materials (metal or glass) have certain intrinsic values; for instance, glass is commonly perceived of better and higher quality (Smith, 1998).

Many companies have innovated packaging that stands out on the shelves in the premium confectionary industry (Hofbauer, 2008). For instance, Starbucks launched a new line of artisan chocolates in uniquely shaped paper boxes while tall paperboard box designed with curved sides was the front of M&M Premiums (Hofbauer, 2008). According to Smith (1998), when material is applied in an innovative matter, for example, chocolate containers made out of metal tins, it can increase the extra 'shelf presence' of the product. Lindt & Sprüngli has conceded five main materials commonly used in the production of their chocolate packages, as listed in Figure 4 (Lidgett, 2010).

**Figure 4: Choosing the right material for chocolate packages (Lidgett, 2010).**

Paper
•used for labels, wrappers, liners and box lid covers
Cardboard
•rigid and is ideal for boxes and cartons. This can be coated, laminated, treated and printed to change its characteristics and appearance
Cellulose & plastics films
•used for over wrapping of boxes, 'windows' in boxes and also wrapping individual chocolates
Clear perspex
•used to show off contents; e.g. Lindor gift boxes
Aluminium foil
•wrapping individual chocolates, bars and also Easter Eggs and bunnies

One prominent example would be Cadbury's Roses trial whereby the company did a pilot test by using cardboard boxes for Christmas 2010 but later on confirmed that the packaging will not be revamped as metal tin boxes for Cadbury Roses were viewed as the Christmas tradition (Euromonitor PLC, 2011).

## Smell

The final aspect of the designer tool is smell, which has the potential to change a consumer's shopping experience and behaviour (Smith, 1998). Mood-changing odours have the capability to influence the human brain patterns (Smith, 1998). Scented packaging is currently receiving a constructive response in the USA and is becoming trendy (Heller, 2006). Scented marketing is a huge business, raking in more than \$90 million and taking the term 'marketing' to new heights (Solomon, 2004). According to US-based company, ScentSational Technologies, who claim to be pioneers of this invention, they applied the concept of utilising and modifying food grades, integrating them into plastics and producing aromatic food packages (Heller, 2006). It was expected to be a hit in the industry as scented food packages may help increase marketability and attractiveness of odourless products (Heller, 2006). This technology is commonly used in the fragrances and cosmetic industries, where the manufacturer transfers the desired scent into the product packaging as an 'encapsulated aroma release' as a strategy to attract consumers (Heller, 2006). However, in this context of food packaging, it projects a

perception in the mind that we are eating something which the actual product does not necessarily contain (Heller, 2006). Thus, this will bring shopping to a whole new and rewarding experience, enabling manufacturers to gain a positive competitive edge by incorporating a pleasant scent to their product packages (Heller, 2006).

## **Sustainable Packaging**

The subject of packaging is a key feature in sustainable development, coupled as major facilitators of distribution, marketing and promotion, and product use safety. It also brings forth challenges in advancing sustainable development in the packaging context (Sonneveld *et al.*, 2005). According to James *et al.* (2005) in Sonneveld *et al.* (2005), some of the significant drivers of creating novel packaging concepts and technologies are consumer behaviour; market segmentation, spending trends and also development in distribution usually oppose the concept of sustainable development.

According to Datamonitor (2009), sustainable packaging is gaining in popularity, integrating itself into consumers' expectations at a relatively fast pace, but it still does not fall into the primary factors motivating their purchase decision. However, this is a major growing consumer issue stimulated by movements in ethics, environmentalism and also economics in the packaging industry (Datamonitor, 2009).

Reports in the second half of 2008 published by Datamonitor (2009) show that only 39% of consumers consider the package design influences the choice of food and beverage products, ranking this factor as ranging from medium to high level of influence. Out of the 39%, only 9% said that package design plays a vital role in their decision-making process (Datamonitor, 2009). Nonetheless, the increasing concern over environmental issues such as ecological factors shows that product packaging is fast becoming an issue of concern (Datamonitor, 2009).

In response to the above, there is a need for companies in the confectionery industry to review their marketing strategy, evaluate their products in terms of packaging presentation and align their business objective in line with the growing sustainable packaging trend, which benefits not only the company, but also the industry, environment and also the consumer (Datamonitor, 2009). According to Datamonitor (2009), one approach which can be employed by the companies is to revise the packaging presentation and cut costs by employing techniques like reduce packaging. By using this method, the amount of food sold to the consumer at the same price would be smaller and it would also decrease the risk of having leftover food (Williams *et al.*, 2007).

However, the amount of wasted packaging is always of concern, especially so during the festive seasons in the UK such as during the Easter or Christmas periods (Osborne, 2007). During the Easter season, the Easter egg packaging itself contributes to an estimated of 3,000 tonnes of waste in the UK (Hills, 2012). An annual survey by Liberal Democrat MP Jo Swinson indicates that 3 major confectionary companies, namely Nestle, Cadbury and Mars used recyclable materials such as cardboard to produce their eggs' packaging but Nestle leads the movement by being the first among the other two to use 100 percent recyclable material in the production of Easter chocolate packaging range (Hills, 2012). The survey also indicates that many companies are using recyclable materials in their chocolate packaging such as plastics where some manufacturers promotes green credentials but have yet to prove their word (Smithers, 2012).

Awareness of sustainable packaging is reaching a higher level of prominence and, from the responses received from the respondents; they seem to demonstrate strong support for sustainable packaging. They may be ecologically minded and are aware of the concept of sustainable packaging and how it impacts on the environment, industry and the global continual development, but they may not be willing to compromise other factors for the benefit of their own purpose. For example, on the issue of price, using recycled materials in packaging may allow the companies to charge a premium price for their chocolates, but this may not be favourable to consumers who are out looking for bargains.

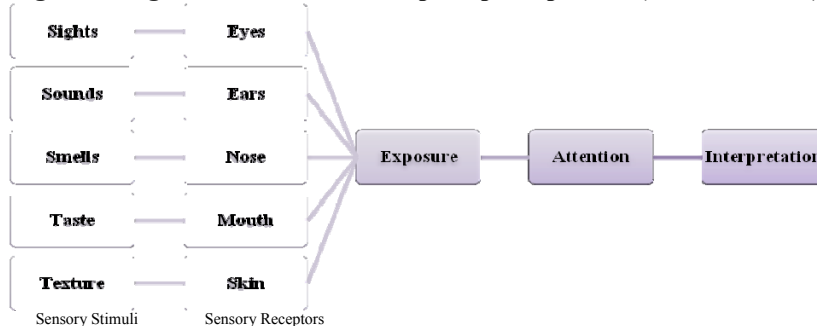
## **Consumer Behaviour**

The consumer behaviour field covers a huge area which involves the study of a series of steps or events associated when an individual or group of consumers' selection, purchasing, usage, disposal of product and



services, ideas or even experiences to fulfil their own ‘wants’ and ‘needs’ (Solomon, 2004). These ‘wants’ and ‘needs’ fall into the satisfied category, ranging from hunger, status, thirst to love and also spiritual fulfilment (Solomon, 2004).

**Figure 5: A general overview of the perceptual process (Solomon, 2004).**



In fact, consumer behaviour is particularly complicated as there are many possible factors influencing their behaviour at a particular point in time. This may include situational factors, where the experience of one making a purchasing decision may be influenced by personal factors, for instance the present mood, stress, time pressure and many more (Solomon, 2004). The consumption factor involves aspects above both personal and product characteristics in the decision-making context, which can possibly be both perceptual and behavioural or either one of them (Solomon, 2004).

Another important factor influencing the consumer’s purchasing decision is the time factor, that most precious of resources, as many try to achieve maximum satisfaction through time balancing, e.g. by performing various task usually within a particular time frame (Solomon, 2004). This shows that the time taken to make a purchasing decision varies between different consumers, as not all of them have the same amount of time to spare.

It was suggested by Rosen and Turano (2008) that there is a co-relation between risks (i.e. high risk, when consumers take their time to evaluate and examine a particular product of purchase) and time (i.e. the time availability). These two factors act as determinants determining the type of shopping behaviour the consumer is adopting at a point in time; there are mainly four different types of behaviour, as follows: reluctant, impatient, painstaking and recreational (Rosen and Turano, 2008).

The consumers’ decision-making process is perhaps one of the most important aspects of this research. It can be illustrated as realisation and recognition that a problem exists, as well as a need to be motivated in order for the problem to be solved (Belch and Belch, 1999). Figures 5 and 6 shows a typical basic model of consumers’ decision-making process.

**Figure 6: Stages in consumer decision-making process (Belch and Belch, 1999).**



**Figure 7: Relevant internal psychological processes (Belch and Belch, 1999).**



At a particular point of time, the consumer will have to stop gathering and evaluate all the information obtained on a particular product and make a decision as to whether or not to purchase the product, i.e. purchase intention, as they cannot continue with the evaluation processes due to various factors, e.g. personal factors (Belch and Belch, 1999). The purchase intention is constructed based on corresponding their own purchase intention with the characteristics or attribute of the product or brand under consideration; when the consumer

decides on purchasing the product or brand, only then is the actual purchasing procedure, the trade transaction, performed (Belch and Belch, 1999). Vanhuele and Dreze (2002) added that consumers spare little time and effort on cognitive process; for instance, reading labels and information printed on the packages and comparing prices of similar products. Folkes and Matta (2004), however, added that consumers subconsciously make extensive decisions and judgements based on what they see.

Solomon (2004) indicated one important aspect of the consumer decision-making process involves in-store decision-making elements. It is important to understand that many of the purchases in-store are strongly influenced by the surrounding environment and visual elements (Solomon, 2004). The visual communication aspect in an eye-track experiment was examined by Pieters and Warlop (1999), who discovered a relationship between consumer gazing time and the brand of choice among unknown packaging brands. It was discovered that the longer a consumer gazes at a preferred product, the time pressure changes the physiological search focus from low information visual elements to high information value elements. Selame and Koukos (2002) added that the semantic element is vital as it may impact on the brand evaluation; however, capturing a consumer's attention is also a key factor for in-store purchasing processes and to attract new consumers, as attractive packaging attracts more attention. Clement (2007) added that, in the marketplace, consumers experience difficulties in determination and differentiation of the brand quality. Therefore, consumers normally choose products purely on the basis of the product packaging with an attractive visual attention (Clement, 2007), which can break through the cluster of visual information put forward to them (Pieters *et al.*, 2002). This factor is of more importance to consumers shopping for food, especially grocery shopping, as this is the time where probability of consumers making spontaneous purchases; i.e. being prompt to make an in-store purchase, is significantly higher (Solomon, 2004).

One major factor in stimulation of purchase is the Point of Purchase Stimuli (POP). Researches show that presentations and displays were able to boost sales by up to 10% and this trend seems to be catching up in the US, as US companies are spending over \$13 million per annum on POP to help market and increase their product sales (Solomon, 2004). Some POP activities can be elaborated product presentation or display booth/shelves, illustrated demonstrations, or even the giving out of free chocolate samples to passers-by (Solomon, 2004). According to Nancarrow *et al.* (1998), companies are concerned about this and are putting more effort into products with attractive packages to attract attention, communicate effectively and improve their retail outlet to appeal to consumers given the competitive retail environment, even more so in the confectionery industry. In order to sell more of their products and achieve more sales; one of the methods to do so is to improve their food packaging which is of particular importance in the retail industry, given the competitive environment (Nancarrow *et al.*, 1998). Judd *et al.* (1989) maintains that consumer makes their decision within seconds while Rettie and Brewer (2000) claim that almost 73% of the consumer decides at POP in Löfgren *et al.* (2008). Hence, companies will need to understand and appreciate their consumer's perceptual process, their senses limitations and also the information processing capabilities and capitalise on them (Nancarrow *et al.*, 1998).

## IMPLICATIONS AND FUTURE RESEARCH DIRECTIONS

This study has evaluated and explored several aspects of chocolate packaging and their impacts on consumer purchasing behaviour. Several feasible recommendations will be highlighted here which it is hoped may be able to assist in creating a better understanding of the subject.

There are several elements that are generally more striking and attention seeking compared to the others. It would be an advantageous strategy if companies can capitalize and emphasize on the strengths of these elements. Colours and graphics are commonly the most prominent element of the chocolate packaging and these elements, especially colours, can be easily recognized from a distance. However, this does not mean that other elements are not important, for a combination of elements is important in order to produce an attractive packaging of aesthetic quality. The overall presentation of the packaging is the final intermediary between the consumer and the manufacturer. From a psychological point of view, consistent and repetitive usage of a certain design elements or combination leaves a strong and lasting impact on the consumers – for example; a distinctive style or colour combination (Creusen and Schoormans, 2005). A recognizable style or thematic categorization of elements in different products can be associated with the same brand (Creusen and Schoormans, 2005).

However, it is also crucial to take into consideration the aesthetic and symbolic value of the elements as it give rise to imagination and personal interpretation as different individuals may view the same element from a different perspective based on their upbringing, culture, emotions etcetera. The connotations associated with the design previously may not be interpreted or associated with the same representation today (Creusen and Schoormans, 2005). Thus, it is worthwhile for confectionary companies to undertake periodic reviews on their product packaging design as the views of the society evolves from time to time. A design that creates a sensation 10 years ago may not result with the similar impact today. Doing so enable the confectionary companies to capitalize on the changes and creates a niche for themselves. A prominent example, Smarties are always easily recognizable for its distinctive packaging. It's 1980's design features a dark and bold backgrounds with contrasting white fonts. In 2005, the legendary colourful lids and cylindrical cardboard tubes were replaced with hinged cardboard lids and a hexagonal designed body (Turbill, 2011). The decision to purchase lies in these few seconds, where the consumer ponders over what they have just seen and interprets it in their mind. Therefore, a combination of the elements can be effective when creating such an effect.

One of the package designing elements, scent, is a fairly fresh initiative in the confectionary industry. Most consumers might resist the idea of scented packaging; nevertheless, there are also those who are open to this suggestion. This is an opportunity for manufacturers to explore the depth of this 'new element' in food packaging, where the idea is considered novel in this industry. We believe this element has a great persuasive capability; for example, packaging may contain traces of fresh Brazil nuts infused with cocoa, giving a subtle smell of alluring, mouth-watering chocolate packed in the package. Consumers may not be able to readily accept the idea, for many have various sceptical perspectives on scented packaging due to factors such as personal judgements. Nonetheless, those who succeed in establishing scented packaging acceptable to the general population may probably gain the 'first mover' advantage, creating a niche and legacy advantage. However, much in-depth research needs to be made in the context of scented packaging in order to produce a packaging of excellent quality, in terms of health and safety and other aspects. In order to make this strategy successful, manufacturers should educate consumers gradually by creating awareness of its existence and subtle acquaintances with such element in the confectionary context. There are some limitations driven by the nature of the approach undertaken on the current study. Our research is composed exclusively on the synthesising the extant literature between packaging and consumer buying behaviour. A more empirically and granularly research is required to examine the impact of packaging on consumer behaviour.

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# EFFECTIVENESS OF NATIONAL SCIENTIFIC RESEARCH SUPPORT IN RUSSIA

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## ABSTRACT

*The problems of innovation economic development are the fundamental concept of the post-crisis transformation of the economy. In order to solve these problems, we should develop brand-new approaches to analysis and assessment of R&D cost-effectiveness in scientific and production activities as well as innovation activities. In Russia these problems are not attended to properly. There are no more or less significant practical development or theoretical justifications which allow using value approach in management, so tackling the afore-mentioned issues, one the one hand, requires their systematic development due to the specifics of scientific and technological progress characterized by systematic innovation with broad use of information technology and commercialization of intellectual property as R&D result which is formed during innovation activities. This paper is aimed at researching into ways and methodology of effective social and economic systems management, which will ensure increased effectiveness of innovation processes. This scientific problem is of high priority for the economy and has a great value for the economic growth both on the national and general market scale.*

## INTRODUCTION

Modern development of the world economy implies that the results of companies' intellectual activities, knowledge and experience are becoming very important. Since the Russian economy is moving towards a more science-driven model of development, intellectual property, as a result of R&D commercialization and transformation, is becoming one of the main assets for existing businesses.

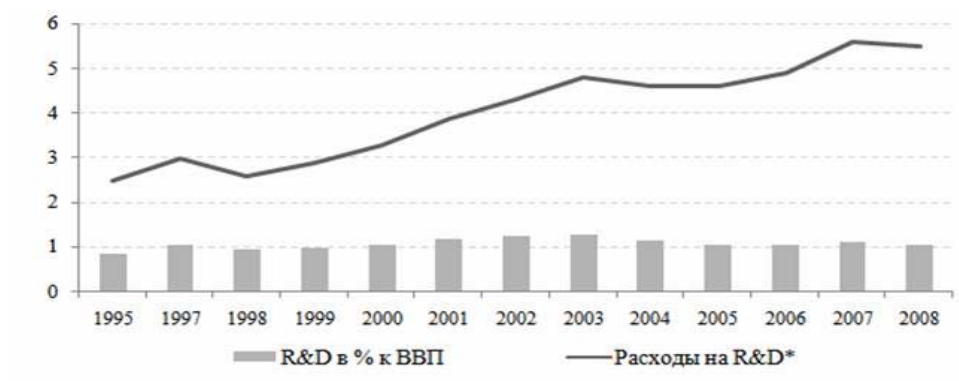


Fig. 1. Dynamics of internal R&D costs.

Source: Science Indicators: 2010. The statistical compilation. -M.: HSE, 2010

In 2011-2013 the government policy aimed at making Russia one of the world leaders in the field of nanotechnologies will continue to be put into action. According to the official statistics, the program of Ministry of Economic Development and Trade of the Russian Federation says that since 1998 R&D costs in Russia have been growing relatively steadily in real terms (Fig.1) and at the rate outweighing that of GDP. Moreover, by this factor Russia considerably falls behind (31 place) the countries which lead in innovations and China, and occupies the 10<sup>th</sup> place by absolute amount of R&D costs in dollar equivalent. Also, Russia is not sufficiently



presented in the world science, which is one of the main factors characterizing the quality of the research being done. Thus, in 2008, Russia only had 2.48% of the total number of publications in the scientific journals, indexed on the base of the Web of Science, whereas this figure was 5.53% for France, 7.5% for Germany and 9.69 for China. In this respect, Russia had the same level as Brazil (2.59%) and the Netherlands (2.46%).

This article presents the analysis results of R&D investment effectiveness on micro and macro levels and studies matters, related with grants funding and taxing:

- R&D funding mechanism in Russia
- Tax incentives on innovation activities
- Analysis of the economic mechanism for interaction of grant-holders and the state
- The effectiveness of governmental measures for supporting Russian science with the existing system of grant taxation
- Methodical approaches to assessment of scientific results effectiveness
- Science is supported all over the world. This support extends to definite researchers and takes the form of grants. There are specific features of grant support in Russia. What are they?

The problems of R&D cost-effectiveness and forms of R&D funding and taxing have been researched in different times by famous scientists, such as: A. Akayev, A. Andrianov, A. Asaul, E. Balatsky (2009), V. Baranchev (2007), I. Blank, F. Boyer (1999, 2007), Y. Bychaev, D. Bugrov, I. Dzhazovskaya (2010), D. Demidenko, G. Goldstein (2000), V. Glukhov, A. Gryaznova, E. Egereva, I. Eliseeva, I. Ivashkovskaya, A. Karlik, V. Kovalev, E. Kozlovskaya (2010), V. Kelle (2003), I. Kusheleva (2011), M. Limitovsky, V. Livshits, G. Malinetsky, L. Mindeli (2011), N. Komkov (2011), A. Novozhilov (2006), A. Ostashkov, D. Rodionov, O. Shcherbakova., S. Valdaitsev, A. Viktorov, P. Vilensky, V. Volkova, V. Zhrebina.

## **R&D FUNDING MECHANISM IN RUSSIA**

The R&D funding system in the developed foreign countries has proved to be effective for dozens of years. These countries have a large share of high-tech products in the structure of domestic production and consumption, the same as in the structure of the world market export. Typical mechanisms of R&D funding can be seen as R&D funding: in large corporations; in a group of small businesses; through setting up of venture funds; on the basis of non-commercial scientific organizations which work in the field of application-oriented R&D of high priority; through developed cooperation of companies in the field of R&D; through direct governmental funding of fundamental research and application-oriented high priority work (I. Kusheleva 2010). However, just copying this mechanism without trying to adapt it to the current conditions in the country does not seem reasonable, since one should take into account the specifics of the environment in the foreign countries where this mechanism has been formed and has been working, as well as the specifics and conditions of Russian reality ([www.miiir.ru](http://www.miiir.ru)).

In Russia, innovations in state corporations and big parastatal companies are developed as part of the relevant innovation development programs, whose guidelines have been approved with a decree of the Governmental Committee on High Technologies and Innovations on 3 August 2010 (National innovation systems in Russia and the EU. 2006). Approval of such programs, together with increased R&D costs the companies are required to have will ensure that the number of orders on innovation products on the domestic commercial market will grow, the same as the demand for R&D results. As an additional incentive to create domestic demand for R&D results, the requirements in the innovation development programs of parastatal companies' recommend the measures for effective cooperation between these companies and leading higher education institutions, scientific organizations, small and middle innovation businesses so that the results of their R&D can be used in practice (Komkov N., Goldstein G. 2000). The major mechanism to stimulate innovation activity in privately-owned companies in 2010-2012 has been support of cooperation between Russian universities and organizations involved in hi-tech projects, which will be subsidized at the total amount of 19 billion rubles (I. Kusheleva 2011). The tax legislation has already been amended to provide preferential conditions for innovation activities. These conditions imply that companies are stimulated to conduct R&D through establishment of a mechanism when R&D costs are administered by the tax bodies and considered when calculating profit tax for organizations with 1.5 coefficient of the planned R&D costs reserve. Also, information technology companies are granted the right to pay lower insurance amounts in 2011-2019. Development and



implementation of innovations require joint efforts from different economic and social domains. Innovations are not possible without governmental support (Kozlovskaya E. 2012). Three schemes are used for this.

1. Direct participation of the state in implementation of special purpose programs and assignments of regional, local governmental bodies; creation of big national centers (laboratories) which are financed by the government and give free training to a broad number of potential users.
2. Giving subsidies and grants to implement particular projects in the spheres of science, culture, education. A grant is a support or stimulation of R&D with money, property or service by the government. Grants are often used if the results of work are uncertain or cannot be beneficial in the nearest future.
3. Provision of favorable conditions to conduct R&D by private companies and individuals. Privately-owned companies which invest in R&D and buy relevant equipment are granted with various tax incentives, state credits and guarantees, as well as funding through state participation in share capital.

## **Tax incentives for innovation activities in the president's budget message in 2010**

The tax policy of the state in the long-term run should be aimed at providing conditions for innovation development of the economy: motivation to create new products, work (services) and stimulation of the demand for them (Balatsky E 2009). So, the state should act in the following major directions. Firstly, companies which are mainly involved in intellectual activity should be supported. A significant part of tax burden in such companies lies within payroll. That is why, to support them, the total rate of insurance amounts should be lowered up to 14 per cent within the limits of the insured annual earnings for the period until 2015, and for certain types of organizations – until 2020.

Secondly, additional conditions should be created to activate innovation activity. In particular, when defining the profit tax base for organizations, one should consider the expenses of tax-payers on purchase of the right to use IT programs and databases on sublicensing agreements, as well as single payments which are made to use the rights for intellectual activities results and means of individualization. There is a reserve to support innovations in economy and depreciation policy. To calculate depreciation, not only physical life periods of fixed assets objects are important, but also other factors, such as: speed of technology development which makes update fixed assets or remove them from service before the physical life period is over.

Thirdly, to stimulate innovation activity in the innovation centre “Skolkovo”, the following incentives should be granted to the project participants: mandatory insurance amounts should be paid by the project participants at the rate of 14 %, whereas the rate of profit tax, tax on company's property and land tax should be 0%. As for the value added tax, exemption from its payment should be done depending on the choice of a taxpayer. These incentives should be used by the project participants either within 10 years since they are registered or until the total profit amount, received by an organization, exceeds 300 million rubles since the beginning of a year which follows the year when such an organization has received a revenue exceeding 1 billion rubles (Mindeli L. 2011).

## **Effectiveness of government measures for Russian science support with current taxation system of grants**

**The problem of grant “stripping”.** The current system of grant provision in Russia has a number of serious defects. The major one is the taxation system applied to the subventions which state funds allocate for R&D. The grants taxation system in Russia implies that money is allocated to individual researchers and research teams by state funds through legal entities. The law makes it illegal to transfer money directly to individuals, involved in scientific research. Consequently, despite the fact, that these are individuals who compete for grants and, finally, win them, the amounts of money are paid to the organizations, which have nothing to do with the projects mentioned. So, being a donator when giving a grant, the state finds a legal entity, which does not only become a channel to transfer the money from the state to a researcher but also becomes an employer for the researcher. And as an employer, this legal entity must pay all relevant taxes. In the meanwhile, it is quite obvious, that neither the legal entity mentioned can be an employer in terms of the grant, nor the

researcher can be an employee. This is where a principle economic and legislative mistake lies (Balatsky E 2009, [www.nalog.ru](http://www.nalog.ru)).

As a result of such a system, direct researchers involved in implementation of projects receive much smaller amounts of money comparing to those included in the financial statements of state funds. This is how money allocated for research is stripped. The current taxation system of grants results in the situation when some organizations constantly join individual researchers and take from them a considerable amount of money allocated by the state. The state uses legal entities as a channel to return into the budget some of the money allocated for the research through a certain tax mechanism. This system cannot be considered acceptable at all, since almost all western funds act on quite different principles: money is allocated to direct grantees (individuals) and it is not subject to taxation. Russia has built its own grant model of science, pretty different from progressive western ones. So, it becomes clear that, from the standpoint of research stimulation, Russian model of scientific grant funding is much less effective than that of the West. However, the severity of this problem directly depends on the proportions of financial losses researchers experience as a result of the system when grant money “goes” through organizations and companies. If these losses are not big, the problem itself is not so acute. But if the losses are considerable, the practicability of the grand funding system itself becomes questionable.

**Estimation of research subvention losses due to taxation of legal entities.** Let us look into the leakage of money researchers experience as a result of the current taxation system. So, as a result of work done by a team of researchers ([http://csr.spbu.ru/pub/RFBR\\_publications/es.html](http://csr.spbu.ru/pub/RFBR_publications/es.html) «Thin-film multilayer coatings beat cracks» by V. Tabakov, M. Smirnov, A. Cirkin 2007, 2008), there has been found a solution to increase cutting tools durability with the use of the new three-layer coating TiZrFeTiZrFeNTiZrN. This technology has been applied by a machine-building company OAO “Klimov”, the leading Russian developer of gas turbine engines (<http://en.klimov.ru/about/general>). Let us calculate the amount of grant subsidies for the researchers and losses resulting from the current taxation system. We assume that the Russian Fund of Fundamental Research (RFFR, [www.rfbr.ru](http://www.rfbr.ru)) has supported the scientific research project and paid at the first stage (state of fundamental research development) 200 000 rubles to one of the scientists and the next year, at the second stage, paid 1,500,000 rubles to a team of 3 researchers as subsidies to put the technology into practice. According to the legislation, the team can receive the grant only through a legal entity.

The organization, through which the grant is financed, has the right for a specific “premium”. Its amount is strictly limited: for the Russian Humanitarian Scientific Fund (RHSF, [www.rfh.ru](http://www.rfh.ru)) it cannot be bigger than 15% of the total grant amount, whereas for the RFFR it is limited to 20%. From the financial standpoint, this premium is justified with the necessity to cover expenses related with finance monitoring and technical maintenance of the research project. However, this is a direct deduction from the grantees’ income. Furthermore, in case the money is transferred to the account of a legal entity and takes the form of salary, it is subject to the same taxation as salary payments (mandatory payments to insurance funds before 2011 were 26%, in 2011 – 34% and after 2012 – 30%.) This is one more serious deduction from the grantees’ income. This deduction appears automatically when converting an individual (researcher) into a legal entity (organization). Therefore, such a conversion influences destructively on the researchers’ work motivation. The income charged to the researchers is automatically liable for income tax (13%). This form of deduction cannot be controlled by researchers either and comes in force automatically. If we represent the initial amount of the research grant as GR, and the amount of money paid to the researcher as net income as NCF, the dependence between them with the current taxation system can be shown in the following way (in the general view):

$$NCF = \frac{(1-\alpha)(1-\beta)(1-\gamma)}{(1+\omega)} * GR \quad (1)$$

And, in case some equipment should be purchased (R&D):

$$NCF = \frac{((1-\alpha)(1-\beta)GR - R \& D)(1-\gamma)}{(1+\omega)} \quad (2)$$

where  $\alpha$  is the share of overheads, related with registration of scientific research work in RFSTIC (Russian Federal Scientific Technical Information Centre), bank commission for salary transfer into plastic cards, etc.;  $\omega$  - salary payments quota in percentage (Mandatory payments to insurance funds, 30%);  $\beta$  - the

percentage of grant amount paid for finance monitoring and technical maintenance of the project (15%);  $\gamma$  - income tax rate (13%); R&D – expenses related with equipment purchase in rubles.

Let us calculate the amount of grant paid after taxes to the project participants: the percentage of overheads  $\alpha$  includes expenses on registration of the scientific research work in RFSTIC, bank commission for salary transfer to plastic cards and deductions for increased value of company's material assets. As a rule, this amount is not big and for average grants is  $\alpha=3-4\%$ . The amount of grant  $\beta$ , paid for finance monitoring and technical maintenance of the project is  $\beta=15\%$  for RFFR. Although the regulatory documents stipulate the figure of 15% as a maximum (formally it can be equal to zero), in practice it is the one used when dealing with grant subventions. According to the R&D conditions some equipment should be bought in the amount of 500,000 rubles.

**Table 1: Calculation of tax burden**

Key figures:	1 year		2 year		Total
	Rate	Amount, RUR	Rate	Amount, RUR	Amount, RUR
Amount of grant on R&D in machine-building (GR)		200 000		1 500 000	<b>1 700 000</b>
Overheads (a)	3%	6 000		45 000	51 000
Finance monitoring of the legal entity (b )	15%	29 100	15%	218 250	247 350
Purchase of equipment and test samples (R&D)				500 000	<b>500 000</b>
Mandatory payments to insurance funds (w, MPIF=30%)	30%	38 054	30%	170 019	208 073
Net income of the researchers excluding personal income tax (as labor compensation fund)		126 846		566 731	693 577
Calculation of the personal income tax (13%)	13%	16 490		73 675	90 165
Net income of the researchers including personal income tax (NCF <sub>1</sub> )		110 356		493 056	<b>603 412</b>
<i>or in % of the grant amount</i>		55,2%		32,9%	35,5%
<b>Net R&amp;D costs (NCF<sub>2</sub>), RUR.</b>		<b>110 356</b>		<b>993 056</b>	<b>1 103 412</b>
<i>or in % of the grant amount</i>		55,2%		66,2%	64,9%
Financial and tax burden, RUR.		89 644		506 944	<b>596 588</b>
<i>or in % of the grant amount</i>		44,8%		33,8%	35,1%

As one can see, at the second stage, instead of 1.5 million rubles, the researchers received 493,056 rubles after taxes, which is equal to 32,9% of the initial amount. By now, the federal law “On amendment to article 217, part two of the Tax Code of the Russian Federation” has been passed. In accordance with the new version of the Tax Code ([www.garant.ru](http://www.garant.ru), [www.nalog.ru](http://www.nalog.ru)), taxes are not imposed on the incomes of individuals received by taxpayers in the form of grants (gratuitous aid) which have been given to support science, education, culture and arts in the Russian Federation by international, foreign and (or) Russian organizations included in the list of such organizations which has been approved by the Government of the Russian Federation. This list, according to decree No. 602 of 15 July 2009, includes Russian State Scientific Fund and Russian Fund of Fundamental Research.

We recalculate this figure without the income tax and receive the amount equal to 566,731 rubles. Anyway, the tax amounts are too high for individuals and the tax burden on grant subventions does not comply with any international or Russian standards. If we bear in mind the fact that grants themselves are a specific form of charity (in this case, state charity), this tax system seems to be absolutely absurd. Thus, the current Russian tax system is built in such a way that about a half of the given grants returns to the state treasury. Such a size of the tax burden is considered to be unacceptably high even for legal entities involved in commercial activities.

## Methodical approaches to assessment of scientific results effectiveness

One of the major conditions for science management optimization is development of methodical approaches to the assessment of scientific results. In order to ensure comparability of different R&D types (Iakovleva E. (2011), Dzhazovskaya I. (2010), Lemechenko P. (2011), Novozhilov A. (2006)) – from fundamental research to development and demo programs – the most general criteria which reflect three fundamental aspects inherent in any R&D program should be defined: relevance – justification of importance, possibility and necessity for federal investment in a program; quality – justification of the way how the invested budget funds can provide the best quality of R&D; performance – justification of the effective use of investment (Internal corporate guidelines for assessment of R&D cost-effectiveness STO Gazprom).

To assess the effectiveness of technology during the operational stage, cost, profitability, elasticity and other factors are primarily used. Shareholder value of the company is often used to measure its financial performance. For the management of the company, the proportion of the expected free cash flow and weighted average cost of capital is the shareholder value of the company. Thus, economic assessment of R&D should arise from the system influence on this proportion. As a result, the following factors should be analyzed: cash flow, related with the commercialization of R&D results; capital investment for introduction of the new system (problem of financing); effect of the new system on the monetary evaluation of the risk for all company's activities; institutional constraints (taxes, duties, direct constraints ...)

**Innovation cost-effectiveness.** The relative cost-effectiveness of innovations ( $EEff_{R\&D}$ ) can be calculated on the basis on elasticity factor (Novozhilov A. (2006)):

$$EEff_{R\&D} = \frac{P_{acc. eff. R\&D}}{P_{on R\&D}} \div \frac{C_{new}}{C_{old}} \quad (3)$$

Where  $P_{acc. eff. R\&D}$  - accumulated effect on R&D implementation in RUR;  $P_{on R\&D}$  - profit on innovation activities (profit on R&D) in RUR;  $C_{new}$  - new expenses in RUR;  $C_{old}$  - old expenses in RUR.

**Innovation company value growth.** Appraisal of the value growth and effectiveness of an innovation company based on R&D multiplier (Iakovleva E. (2008, 2011), Kozlovskaya E. (2012)):

$$Eff_{value} = V' - V = 0,5 \left( \frac{V}{\varphi} \times \varphi' - \frac{V}{1 - \varphi} \times (1 - \varphi') \right) - V \quad (*) \quad (4)$$

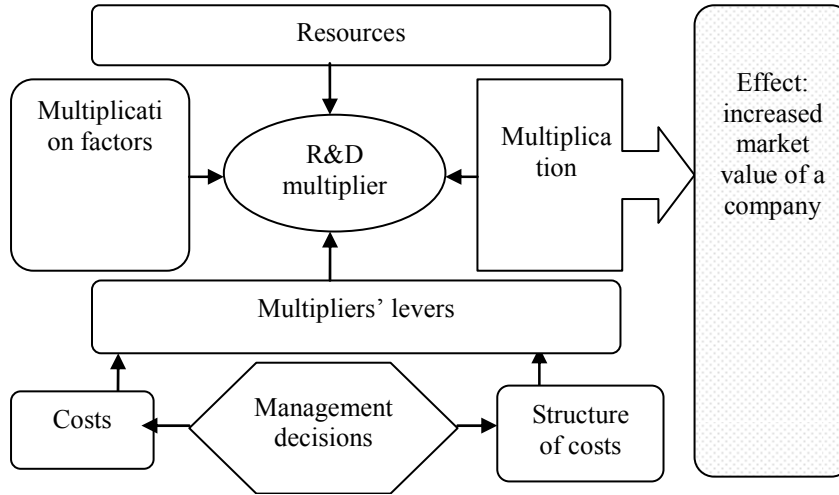
Where V is a market value of the company (RUR); V' is a market value of the company after having new R&D costs (RUR);  $\varphi$  - share of R&D costs;  $\varphi'$  – share of R&D costs on a new product;  $Eff_{value}$  – multiplication effect in rubles.

**Company's market value multiplication (R&D multiplier).** Implementation of any investment project requires capital investment in fixed assets and working assets, as well as R&D costs. R&D multiplier can be used to build different factors of project effectiveness (as modification of profitability factor). It is believed that, since the long-term limitation of a company is fixed assets, the company's goal is not to return R&D costs within a short term, but to ensure increased company value. In some cases, especially for innovation companies, these two things coincide.

We can extend the definition of R&D multiplier as relation of R&D costs and new product development costs to accumulated expenses of the company (Lemechenko P. (2011), Novozhilov A. (2006), Kozlovskaya E (2012)).

$$\text{R \& D multiplier} = \frac{\text{Costs of new product development}}{\text{Capital investment for production and sales of this product}} \quad (5)$$

Then, under the conditions of limited resources, expenses can be relocated to increase the share of R&D and new product costs and the effect (only related to costs relocation) can be expressed as shown in Fig. 2. Proportions between R&D costs and capital investments can be expressed through a so-called R&D multiplier.



**Fig. 2. Multiplication effect of the company's market value**

Let us assume that R&D multiplier is the elasticity of the capital investments effect. We see additional capital investments into innovative R&D as costs increment and the effect on innovations after project implementation as an effect on these investments:

$$m = \frac{\frac{\Delta Eff}{Eff}}{\frac{\Delta K}{K}} = \frac{\Delta Eff}{\Delta K} * \frac{K}{Eff}, \quad (6)$$

Where  $m$  is a elasticity coefficient on capital investments (in the accepted assumption – R&D multiplier);  $\Delta Eff$  – the effect increment of R&D;  $\Delta K$  – additional R&D costs;  $\frac{Eff}{K}$  – basis cost-effectiveness of capital investments for a company (invariable);  $\frac{Eff}{K} = \varepsilon$ .

When the value of the « $m$ » R&D multiplier is fixed, additional effect from R&D is equal to:

$$\Delta Eff = m * \frac{Eff}{K} * \Delta K \quad (7)$$

Effectiveness of additional capital costs:

$$NPV = -\Delta K + \frac{\Delta Eff}{(1+r)^n} = -\Delta K + \frac{m * \frac{Eff}{K} * \Delta K}{(1+r)^n} \geq 0 \quad (8)$$

Since obtaining of an additional effect is related to innovation projects, the condition of effectiveness, after some transformation, looks as follows:

$$\frac{m * \frac{Eff}{K}}{(1+r)^n} * P \geq 1 \quad (9)$$

Where  $P$  is a probability for obtaining the effect and  $1 > P > 0$ ;  $r$  - risk-free interest rate;  $n$  -period.

Let us also assume that «P» decreases linearly with «n» growing:  $P = P_0 - a * n$ . On the basis of the assumptions taken and condition of effectiveness, the minimum standard of the multiplier, ensuring

effectiveness, can be calculated 
$$m \geq \frac{(1+r)^n}{P_0 - a * n} * \frac{1}{\varepsilon}$$

Given limitations:  $r = 0,1$ ,  $n = 10$ ,  $a = 0,02$ ,  $\varepsilon = 0,05$ ,  $P_0 = 1$ , and find correspondence  $m(n)$

$$m \geq \frac{1,1^n}{1 - 0,02 * n} * 20 = 64,84.$$

We go back to our example and calculate the direct savings on cost for a machine-building enterprise OAO Klimov when using a new three-layer coating TiZrFeTiZrFeNTiZrN I «Thin-film multilayer coatings» (Tabakov V. (2008)).

The financial statements of the company say that the annual prime costs of OAO Klimov's products were 2 558 750 000 rubles in 2009. A considerable proportion of machine components and mechanisms are manufactured with the use of cutting. As the abstract of the scientific research says, the share of tooling costs can be 3-10% of the products' prime cost, and the doubled life period of the tools, all other things being equal, can result in decrease prime cost up to 5%.

Let us assume that the share of tools' purchase for a science absorbing industry in the overall costs of the products sold (prime cost) is 3% (the lowest limit of the range from 3 to 10% is taken) and the saving on costs is 5% (maximum value). Then the value of the first component of R&D implementation effect is 3 838 125 rubles ( $= 2 558 750 000 * 0,03 * 0,05$ ). We shall call the value identified as the direct effect of the innovation. Let us calculate one more index of R&D direct effect multiplication as a relation of the direct effect on the actual investments (modification of R&D multiplier by formula (5)) as:

**Table 2: Multiplication index of R&D direct effect**

Factors	Overall R&D costs (RUR) (from table 1)	Relation «direct effect / investments», (shares)
Amount of grants	GR=1 700 000	2,26
Net research costs	NCF <sub>2</sub> =1 103 412	3,48

With the use of the “direct effect/investments” multiplier equal to 3.48, it is possible to evaluate the institutional losses in the RF taxation system as the product of overall financial and tax load (596 588 rub. in Table 1) multiplied by the value of the multiplier. This amount is equal to  $2 075 181 = 596 588 * 3.48$ . With the application of the well-known principle of the time value of money, one can prove that, when removing part of the cash from the economic system, the state loses future profits from R&D commercialization.

Using financial statements data and direct R&D effect, the total value of the R&D result or effect can be formed:

**Table 3: Calculation of the overall effect of R&D implementation**

Factors	Amount, RUR
1. Profits from R&D (according to the accounting records)	472 667 000
2. Effect (savings on direct costs)	3 838 125
=Total overall effect of R&D implementation =1+2	476 505 125

Total overall effect of R&D implementation in the amount of 476 505 125 RUR will be used to identify the relative effectiveness of R&D result which the company obtained. In order to use the new technology OAO Klimov has to buy it from the researchers. The price of the new technology or its marginal cost must be

calculated. According to the expert data, the “R&D costs/IPO cost” multiplier has a value from 15 to 28 (shares). The reason for the IPO price identification is the amount of finance used for IPO creation.

Let us consider two options for R&D financing: including losses in the taxation systems and excluding them. Let us use the data of Table 1.

**Table 4: Identification of R&D cost at the stage of commercialization in terms of R&D costs/IPO costs multiplier**

Factors	Option 1 (including losses in the taxation system)	Option 2 (excluding losses in the taxation system)
R&D costs/IPO cost multiplier (times)	20	20
Net research costs (NCF <sub>2</sub> ), RUR.	1 103 412	----
Amount of grants (GR), RUR.	----	1 700 000
Identification of IPO cost range for the company from and to, RUR.	<b>22 068 238</b>	<b>34 000 000</b>

So, the value of the new technology can be identified from 22 to 34 million rubles, i.e. we review the process when the intellectual property object is being commercialized. Now we can estimate the effects of the new technology purchase (IPO) for the end-user, OAO Klimov. We will do this both including and excluding the taxation (institutional) limitations. With the use of the data from the company’s financial statements, we can calculate the index of the relative effectiveness of the investment costs on the basis of the elasticity principle. Traditional factors of the investment effectiveness (NPV, IRR) cannot be used here, since there are no capital forming investment costs, in the proper sense of the word, i.e. in this particular case we talk about purchase of an intellectual property object for the end-use by a manufacturer.

According to the accountancy requirements, the value added tax is not applicable for this transaction and the costs are written off in the current period with the reduction of the taxable profits. Further on, let us estimate costs of IPO introduction in the company. We know OAO Klimov production costs on high-technology products with account of direct savings when applying IPO (R&D results) and they are going to amount for 451 770 000\*0,97= 438 216 900 RUR.

**Table 5: The factor of the relative effect from R&D introduction (elasticity of costs connected with IPO introduction):**

Factors	Option 1 (including losses in the taxation system)	Option 2 (excluding losses in the taxation system)
IPO price, RUR.	22 068 238	34 000 000
Prime costs, including direct effect, RUR.	438 216 900	438 216 900
= New prime costs of R&D, RUR.	460 285 138	472 216 900
Overall annual costs of the company prior to IPO introduction, RUR.	528 532 500	528 532 500
Total overall effect of R&D introduction	476 505 125	476 505 125
Relative effect of R&D introduction (by formula 3)	<b>1,158</b>	<b>1,128</b>

$EEff_{R\&D} > 1$  - Innovation cost-effectiveness grows, and it is going to be higher for option 1, since IPO price is lower. I.e. at the micro level (researcher-manufacturer), the stipulated innovation activity is effective. In order to identify the effectiveness at the macro level, for the whole economic system: state – researcher and manufacturer- manufacture, the relevant cash flows should be identified. To do so, the value of OAO Klimov should be calculated prior and after IPO commercialization. The value of OAO Klimov prior to IPO commercialization can be calculated via the method of direct capitalization of profit as equal to 4 274 480 000 rubles at the recapitalization rate of 15%. At the same time, its balance value is equal to 3 837 437 000 whereas the value of the owned capital is 1 171 371 000 rubles.

To identify the market value of the company after the IPO has been commercialized, by formula (\*), the share of R&D costs should be defined (34.7% before the IPO was purchased and 35.98% after it) in the total amount of the company's expenses (2 663 971 000 RUR).

The financial statements show R&D costs as 924 437 000 RUR and the IPO cost as 34 000 000 RUR, which are included into the said expenses. Then the value growth by formula (\*) is 36 832 506 or 0.86% to the value of the company prior to R&D commercialization.

Let us calculate the relevant cash flows for the economic system (state-researcher-manufacturer):

**Table 6: Projection of the relevant cash flows for the economic system  
(state-researcher- manufacturer)**

Factors, RUR.	1 year	2 year	3 year	4 year
1. Efflux of grant subsidies, RUR.	- 200 000	- 1 500 000		
2. Money repayment through taxes, RUR.	89 644	506 944		
3. Direct R&D effect, RUR.			3 838 125	
4. Losses in obtaining direct effect because of the taxation system and substitution of relations			- 2 075 181	
5. Growth in the company's value				36 832 506
6. Overall CF in the economic system	- 110 356	- 993 056	1 762 944	36 832 506
7.NPV	22 936 505			

If the same cash flows are calculated, but without losses in the tax system, the amount of the current net value will increase and NPV= 23 898 367 RUR with the discount rate of 13%. I.e. the system effectiveness would grow by 4.2%. The obtained amount is rather modest, but for the economic system as a whole it is quite significant, therefore the above-mentioned approach helps to tackle the problem of use of the company's intellectual activity results, estimate the effects of the introduced R&D results both at the micro and macro levels.

## CONCLUSION

Cost-effectiveness is defined by many parameters. However, the innovative nature of the way the social and economic relations develop, according to the post-crises economic changes, causes shift in approaches, analysis, and assessment and management methods of social and economic systems management. The market economy development in our country has a number of specific features, the major of which is a broad attraction of investment resources. It requires a considerable increase in the motivation factors, which, in their turn, dictate the use of cost-oriented (value) approach.

To summarize, we should emphasize the necessity to introduce three simple principles for grant system formation: maximum trust for individual researchers from the state; rejection of the authorities from the savings on science with the help of "concealed" fiscal instruments; active introduction of modern financial technologies for the budget to work with individuals. Otherwise, constant "removal" of half of allocated money (grants) can seriously demotivate national researchers, who play an important part in building up modern national economy of innovation type.

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# ACCELERATION OF THE INTERNATIONALIZATION OF THE CHINESE NATIONAL CURRENCY RENMINBI AND ITS PROSPECTS OF BECOMING A GLOBAL CURRENCY

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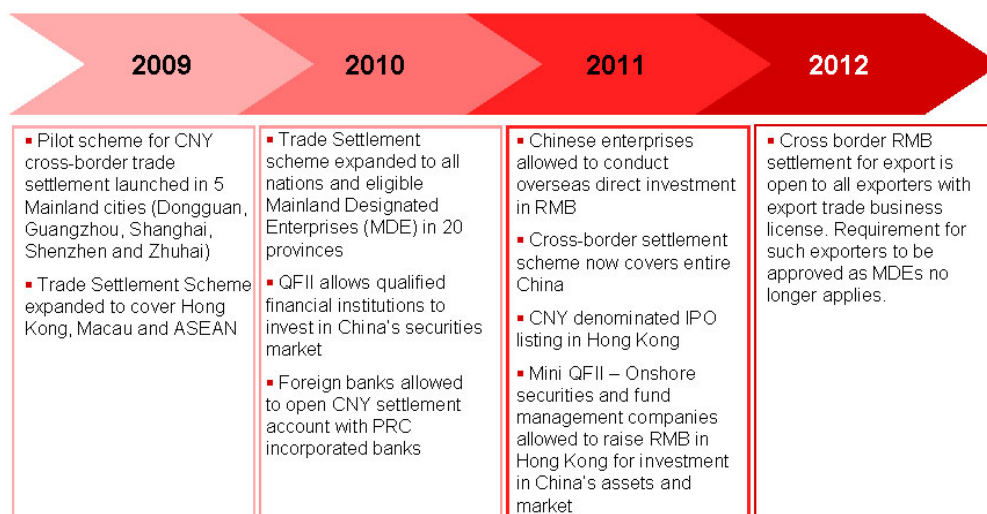
## ABSTRACT

*The internationalization of the Chinese renminbi started as the cross-border trade settlement scheme in 2009 and in March 2012, it was expanded to all Chinese mainland exporters. Although its financial products and services are still in their infancy, the RMB proved to be a globally recognized currency. The benefits, challenges, and future developments of this process are discussed, as well as whether it should become an alternative (world reserve) currency to the US dollar and euro (reducing their influence) or just one of a basket of currencies in use.*

## INTRODUCTION

Before the renminbi (RMB) cross-border trade settlement scheme, launched as a pilot in June 2009 by the Chinese government in an intention to establish the Chinese national currency (otherwise referred to as the CNY) as an international reserve currency, almost all transactions between Chinese companies and their foreign partners were denominated in US dollars. The preliminary scheme permitted the RMB settlement of cross-border trade of Chinese importers and exporters in just five mainland cities. In March 2012, the People's Bank of China (PBOC) announced this was expanded to all Chinese provinces and mainland exporters as well as to all countries worldwide. The milestones in Figure 1 set out the progress towards RMB internationalization achieved to date.

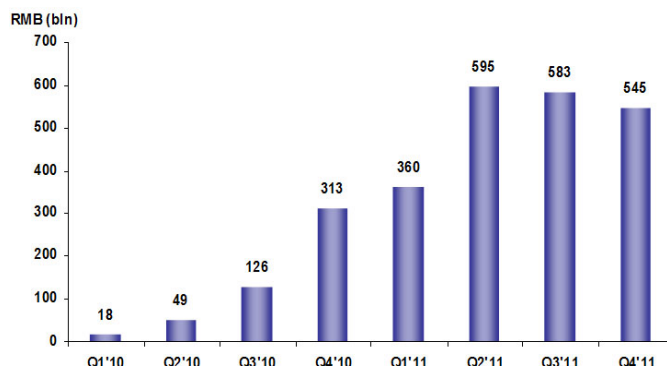
**Figure 1: Major Milestones towards RMB Internationalization** (Source: DBS Bank – Lee, 2012)



## DEVELOPMENT AND RESULTS OF RMB LIBERALIZATION

China, as the world's second largest economy, with over 1.3 billion people, holds the world's largest foreign currency reserves of over US\$ 3 trillion and is the largest exporter in dollar terms, totaling over US\$ 1.5 trillion. The bar chart presented in Figure 2 clearly shows *the acceleration of the cross-border trade settlement volume in RMB* since the launch of the RMB pilot scheme in spite of slight slowdown in the second half of 2011.

**Figure 2: RMB Quarterly Trade Settlement Volume** (Source: People's Bank of China – Lee, 2012)



Although over the past decade, since China joined the World Trade Organization (**WTO**) in September 2001, its foreign trade volume has grown six-fold up to US\$ 3 trillion, now accounting for 11% of world trade volume and making it the world's second largest trading nation (after USA), most of its trade still continues to be denominated in US dollars. However, the use of RMB as a trade settlement currency has grown over last two years, so that more than 10% of China's foreign trade transactions are now denominated in RMB and, according to SWIFT, the RMB has already grown to rank 17th among world payments currencies (Burnett & Ernst, 2012).

An estimate that even 58% of the RMB trade settlement volume in 2010 was between Hong Kong and Chinese mainland companies can be explained by the fact that many firms from Hong Kong have manufacturing operations across the border and likewise Chinese firms have established trading or sourcing arms in Hong Kong to leverage on each other's strengths. Singapore has also been catching up on RMB cross-border trade settlement with about 21% share in 2010, because Singapore banks actively seek to intermediate this cross-border trade by rolling out a number of RMB-related services such as CNH (offshore RMB deliverable in Hong Kong) fixed deposits, CNY remittance services, and RMB financing and foreign exchange hedging solutions. (Lee, 2012)

RMB payments among China's largest Asian trading partners have been growing sharply, except for its largest regional trading partner and major commodity supplier, Australia. At the end of January 2012, there were almost 3 million demand, savings, and time deposit accounts, with balances totaling RMB 576 bn (US\$ 91 bn), held at 134 authorized financial institutions in Hong Kong. The bulk of RMB payments volume, close to 80%, is with Hong Kong, as the centre of most of the innovation in RMB products and services. (Burnett & Ernst, 2012)

In early 2011, Chinese enterprises were allowed to transfer RMB offshore for investment abroad and Chinese banks could extend RMB loans for these purposes. While Hong Kong still accounts for 78% of RMB payments transactions, the significance of London is growing fast. In September 2011, the UK announced Chinese support for turning it into an offshore trading centre for the RMB. In the last quarter 2011, according to SWIFT, London did "30% of RMB payments and 46% of RMB foreign exchange (**FX**) (outside China and Hong Kong), placing it on a par with Singapore in RMB payments and first in RMB FX". Taking Japan as a model, SWIFT noted that whereas 96% of the banks that send payments to Japan use yen, only 21% of banks that send payments to China and Hong Kong use RMB, so it still leaves a lot of margin for RMB growth. (Hartung, 2012)

## **BARRIERS TO THE FULL RMB INTERNATIONALIZATION**

Despite the primary intention for export settlement, almost 90% of cross-border trade settled in RMB in the first quarter of 2011 included China's imports, mostly because **RMB remained undervalued**, making some

firms to continue holding RMB and/or to delay payments to benefit from anticipated currency appreciation. The market may also slow down as the players are driven by opportunities to arbitrage the RMB against other foreign currencies, so that the Chinese authorities need to fine-tune the regulatory framework as the market develops.

A limiting factor for a **foreign firm** wanting to use the RMB is it **cannot access financial markets in mainland China** and, therefore, hedging RMB is offered only in Hong Kong, covering around 80% of all RMB present overseas flows. This is why the UK recently opened a specialist offshore RMB trading capability in a deal with Hong Kong, and why only a third of the world's banks currently provide RMB services. (Salter, 2012)

China's asset bubble (especially in real estate) has led to price fluctuations, rising onshore inflation and causing higher funding costs for domestic banks trying to keep it under control. Since increasing manufacturing costs negatively impact competitiveness, being the priority of Chinese officials, **inflation has been in the focus**, temporarily taking precedence over RMB internationalization, but now that inflation is somewhat under control, they are making a new effort to push the RMB initiative, as 2015 is the proposed target for its full convertibility.

Since this plan is against the "**Triffin Dilemma**" that stipulates it is hard for the country (such as China) running a large trade surplus to demand that others buy goods using its own currency, the Chinese government is taking steps to develop the offshore market, while simultaneously tightly controlling its own, onshore market.

The technology development costs and necessary expertise challenges may **require the intermediation of specialist global providers of cross-border payments solutions**, as smaller cash management providers are unlikely to dedicate to this needed time and resources, at least in the short term. Although it would mean losing some control, it will allow them to capitalize on the opportunities of RMB internationalization. (DiCocco, 2012)

## DRIVERS AND BENEFITS FROM RMB INTERNATIONALIZATION

An extension of the trade settlement scheme to different areas, the initiatives on RMB bond restriction relaxation, long-term RMB-denominated loans to foreign countries, and the development of a new international payment system to facilitate cross-border RMB clearance have established the RMB as one of the key currencies.

Beside improving customer and vendor relations, RMB foreign trade settlement can **reduce negotiated prices** for overseas firms due to better supply chain visibility (because pricing in RMB is transparent), they can: diversify their currency portfolios, gain from the potential appreciation of the RMB, and benefit from a reduced administrative cost and burden when making RMB payments. Onshore suppliers **eliminate foreign exchange risk and costs**, and have a natural currency hedge when both inputs and finished goods are priced in yuan, the unit of account for the RMB. Chinese exporters also benefit from: faster and **shorter payment cycles**, **efficiency gains** from quicker carrying out transactions, as fewer institutions need to be consulted prior to completion, as well as simplified financial reporting and reduced unnecessary paper work, as State Administration for Foreign Exchange verification forms are not required for export customs declarations or for claiming export tax rebates.

Benefits extend to **investment opportunities** and **products designed to hedge risk and provide return**. One such opportunity, still in the nascent stage, is the development of the RMB as an asset class in the form of so-called "*dim sum*" bonds. They are named after the bite-size delicacy, denominated in RMB, issued in Hong Kong, and appeal to foreign investors who desire an exposure to RMB-dominated assets, but are restricted from investing in domestic debt due to China's rigorous capital controls. There is also bilateral country arrangement negotiated to ensure adequate RMB liquidity in offshore markets, such as direct Japanese yen-RMB exchange, now displacing US dollar as the intermediary settlement currency. London intends to be the next official offshore location beside Hong Kong and bankers' associations prompt the Bank of England to negotiate currency swap arrangements with the PBOC. The RMB depreciation at the end of 2011 and potential changes in fiscal policy, owing to ongoing economic changes in China, may alter the planned internationalization path. (DiCocco, 2012)

## CHINESE RENMINBI VERSUS US DOLLAR

From 1979–2010 China's average annual gross domestic product (**GDP**) growth was 9.91%, passing the economies such as that of Italy in 2000, the UK in 2006, and Japan in 2010, with the USA economy the only one

left to surpass. This growth was driven mostly by the access to the raw materials and natural resources necessary to generate a large-scale production and low labor cost manufacturing system. Moreover, joining WTO allowed China to reach finally the free trade flows with Europe and America. Many European and American banks also moved into China gaining stakes in its largest banks, while today China's banks, such as PBOC, the Industrial Commercial Bank of China, and China Construction Bank are among the top 15 banks worldwide. (Salter, 2012)

Significant trade frictions with the USA have happened partly due to the *huge trade surplus* between the world's two largest economies. While US officials, faced with the economic crisis, high unemployment, and slow growth have been claiming that China manipulates its currency to favor its exporters, the fact is these economies rely upon each other and are strongly linked. The USA benefits from cheaper goods and services and China's trade with the USA keeps its economy buoyant, providing China with *vast amounts of US dollar reserves*. The third and biggest issue in trade imbalances has been *the rise of the RMB*, which was pegged to the US dollar until 2005, when it was allowed to float and, since then, has risen on average 7% per year, except in the period from 2008–2010 when it was frozen. By keeping the value of the RMB artificially low, the Chinese authorities have ensured manufacturing export levels to remain high, as a strong national currency would make Chinese goods more expensive to foreign buyers, while at the same time the manufacturers' profits are also lower when they repatriate their foreign earnings. Besides the trade dispute resolutions lodged by the USA with the WTO, the US Senate passed the bill in October 2011 counteracting China for alleged undervaluing its currency and allowing the USA to impose tariffs on imports from China. The Chinese answer was the statement of its Prime Minister who announced in March 2012 that, from 2015, the RMB would be allowed to float freely on the world's markets.

Given the quantities of goods and materials sourced from China presently, combining this with other free market principles supports China's ambition to make its currency a true alternative to the euro and dollar, becoming the world's third reserve currency for use across global markets. Thus, global firms with operations extending to the Far East should recognize how to invoice trade and organize payables and receivables in RMB denominations. Organizations doing business in China have generally billed in US dollars (which excluded the need to manage RMB currency risk) as they had the infrastructure in place to manage dollar risk and suppliers have been happy to charge in US dollars and charge a margin for that. Given the appreciation of the Chinese currency against US dollar since the beginning of 2011, contractors may not continue to bill in this way, as there is no contractual protection for the current arrangements. These firms should adopt financial infrastructure that would enable them to bill and accept payments in the RMB, in order to preserve the cost efficiencies and growth opportunities that can be achieved. As for the cost of goods, impacted by the RMB in an economic sense, an offshore hedging is an effective way of avoiding exchange rates volatility. However, when physical delivery of RMB is needed, the issues are more complicated, as only few banks have the ability to deliver the RMB onshore.

Although it is to be seen whether using RMB will lead to more trade and investment, obviously there is a shift in risks and costs. The main change is a shift in FX risk from Chinese to overseas firms, particularly in the manufactured goods sectors, except for commodities, most of which continuing to be priced in US dollars. Even if a large portion of trade is not redenominated into yuan, the development of FX markets and swap agreements may lead to more bilateral trade in national currencies and greater RMB use, without the intermediate translation into the US dollar. It already occurs across many local Asian markets and between Russia and China. The fall of FX volumes with the broader use of the yuan could have the greatest impact on the US dollar service providers.

It is interesting that at the same time, the Chinese currency has been introduced into the payments among American and Chinese organizations. Although North America accounts for some 15% of total trade volumes and the balance of their trade is in favor of China by almost 3:1, an interest in settling trade transactions in RMB does not lag the rest of the world. A recent FImetrix survey including 300 Canadian and over 600 US middle market companies show that even 25% of US (and only 9% of Canadian) corporations have already executed trade transactions in RMB, and this percentage jumps to 35% in California, underlining the importance of the Asian corridor for the western part of the USA. An additional 9% have not settled but have been asked to settle in RMB and of these almost 75% have indicated they are likely to do so in the future. (Ernst & Burnett, 2012)

## **RESEARCH ON RMB SERVICES AND INTEREST IN USING IT**

Given remaining restrictions on capital account transactions i.e. on cross-border investments, trade is the basis of main portion of all RMB payments. Although 1,085 financial institutions from 95 countries doing business with China have completed transactions in the RMB so far, it seems bankers around the world are not yet ready to meet the emerging demand for RMB services. The survey on current and future use of the RMB as a trade settlement currency, in which more than 600 financial institutions worldwide took part during 2010 and 2011, showed that only 37% of the banks surveyed had executed or had an interest in executing RMB payments covering trade with China. According to Table 1, drivers for the banks' interest can be found in their customers' demand (74%) and related objective to offer services to meet corporate clients' needs (64%), while commodities being typically priced in USD and Chinese partners' preferences are main causes of the lack of bankers' interest.

**Table 1: Reasons for the Surveyed Bankers' Interest or Lack of Interest in Executing Payments Covering Trade Transactions to China in the RMB** (Source: FImetrix - Ernst & Burnett, 2012, p. 5)

Reasons for Interest		Reasons for Lack of Interest	
Customer Demand	74%	Commodities typically priced in USD	33%
Offering services to meet corporate client needs	64%	Counterparties do not wish to use RMB	30%
Accelerated payments	21%	No demand/interest	21%
Diversifying FX Risks	17%	Concerns about currency restrictions	11%
Price	12%	Inability to easily hedge	6%
Regulatory issues	9%	Does not provide comparable AML screening and protection	5%
Terms	3%		

Banks in Central and Eastern Europe reported the greatest interest in executing RMB payments to China. Due to the growing trade relationship between Russia and China, 14 of 16 Russian banks surveyed have already opened an RMB account. In Asia and the Pacific Rim, the most interested were banks from Australia, Malaysia, and Thailand, and in the Middle East – from Israel, Kuwait, and Lebanon. A sharp rise of the interest in executing payments in the RMB is yet to be expected in Latin America (being a net creditor to the world today, a reversal of the long standing role as a large borrower) and Sub-Saharan Africa (which has: abundant natural resources China requires; a need for infrastructure development that can deliver return on Chinese capital and consume Chinese manufactured goods and engineering expertise; and a growing population with increasing incomes and demands for consumer goods). With growth of trade and investment, in Africa the RMB may become more than a currency for bilateral trade – an international currency for intraregional trade and investment. (Ernst & Burnett, 2012)

Most respondents in this survey showed relative inexperience with the Chinese currency, so when asked about preferred locations to settle RMB transactions, more than two-thirds of them were either unable or chose not to answer, and for those that did respond, Hong Kong and Shanghai were on the top of their list. Similarly, when asked what other services they would expect from their RMB settlement bank, fewer than 30% responded, choosing “funding in RMB” twice more often than “risk mitigation through risk participation”. A rapid volume growth reported by SWIFT and high level of corporate demand reported by interested banks suggest corporate practitioners on and offshore are ahead of many of their bankers with their RMB strategy. (Burnett & Ernst, 2012)

HSBC research from 2011 found a growing interest of Chinese firms to use the RMB in their trade with foreign partners, as 29% of companies in China's top four cities (Shanghai, Beijing, Guangzhou, and Shenzhen) plan to adopt RMB within a year, while in the longer term nearly 8 out of 10 Chinese firms not already trading in RMB plan to do so in the future. They are mostly motivated by a need to hedge FX fluctuation risk (49%) and by a positive opinion on the RMB's long-term appreciation (44%). It means their offshore counterparties that do not have the capability to transact in the RMB may lose their Chinese partners, while RMB-compatible businesses might find they could negotiate even improved trading terms with Chinese suppliers and purchasers. (Box, 2012)

## NECESSARY FURTHER STEPS FOR RMB ACCEPTANCE

Despite the fact China is the third largest trading partner of the Association of Southeast Asian Nations (ASEAN), whose members might be expected to be an important catalyst for RMB internationalization, as they

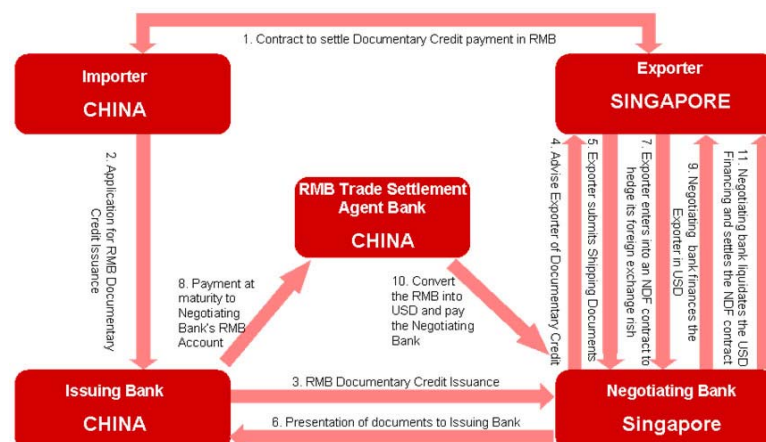


are the most affected by its growing strength, they have not really plugged into the cross-border trade settlement in RMB (except for Hong Kong and Singapore). The formal launch of the ASEAN-China Free Trade Agreement (ACFTA) in January 2010 created an economic region with 1.9 billion consumers and combined GDP of US\$ 6 trillion, where 90% of the products traded should enjoy zero tariffs, and investments to and from China should be much easier. Chinese firms have been attracted by a number of energy, mining, and infrastructure projects, but **foreign direct investments** in the opposite direction, from ASEAN countries' **into China** (due to the size of its market and the synergies of its supply chain) are needed to rise in order to help wider acceptance of the RMB.

Besides avoiding FX risk and cost, trade settlement in RMB offers onshore Chinese firms additional cost savings by optimizing their liquidity management and leveraging to conduct RMB remittances and to maximize the returns by deploying excess RMB funds. However, their offshore counterparties are faced with certain new issues, such as the availability of trade financing, FX risks, liquidity management issues, and other added costs.

A **trade financing solution** against a letter of credit (L/C) or under documentary collection (documents against acceptance) enables an exporter to leverage on the undertaking of the L/C issuing bank or the receivables to provide credit enhancement, and if he is buying and selling in the same currency, there is no FX exposure. It is present, however, in the form of the expected appreciation of the “people’s currency”, when an overseas exporter is selling in RMB, but buying in another currency. In this, prevailing situation, a bank should create the right and innovative value proposition for its client. Such proactive financing solution would allow the exporter to obtain financing in US \$ by discounting the RMB L/C upon shipment. As shown in Fig. 3, since the receivables are in RMB, the bank would require the borrower to enter into a non-deliverable forward (NDF) to hedge the FX risk.

Figure 3: Trade Financing Solution under RMB L/C (Source: DBS Bank – Lee, 2012)



The financing and **cost** of trade settlement in RMB also need to be **competitive** with the alternative US dollar settlement, e.g. through New York, if not lower, and supported by infrastructure to facilitate cross-border funds clearing either directly with designated clearing banks in China or through Hong Kong. Present lack of offshore RMB liquidity may impede the growth of trade settlement in these markets as banks outside China would need to fund the financing at a higher cost, which would be passed on to an importer or exporter overseas. Although PBOC has established bilateral currency swap agreements with some of the ASEAN central banks, in long run the solution can only be found by **developing** an active retail or wholesale **deposit market in RMB**.

While the denomination of the cross-border trade in RMB is a source of FX risk for an overseas trading partner, an unfavorable exchange rate may decrease the profit margin or even cause a loss to the exporter. Beside arbitrage on the appreciation of RMB, banks in Hong Kong and Singapore have developed **FX hedging products** such as NDF, offshore delivery forward in CNH, as well as interest rate swaps in both these financial centers.

**Cash management** imposes an efficient investment of any excess RMB receivables either in short-term assets (time deposits or structured deposits), or medium-term instruments providing an acceptable return, which should be made available to both retail and wholesale clients to attract liquidity in RMB. While Hong Kong has been developing its capital and debt markets due to its cross-border trade and a strong support from the Chinese

authorities, it is also necessary to add further liquidity within ASEAN and other markets, to entice the holding of RMB funds or assets among the retail and wholesale segment, and to create sufficient depth in FX trading.

A **changing post-crisis regulatory landscape** in terms of transparency, capital adequacy, and reporting regulations have imposed additional resource constraints on the banks' back office as new controls and processes have to be put in place to ensure compliance. It is a challenge for banks not having a system to respond to such changes in a timely manner or not being enough equipped to handle needed technology investments. (Lee, 2012)

It is absolutely also necessary that other countries hold the RMB as a FX reserve currency as well as that international markets use the RMB as an investment currency, that China fully opens capital accounts and reforms its exchange rate system. Having a large, deep, and **liquid bond market** could be a prerequisite for creating a reserve currency. McDonalds and Tesco are among the corporate giants that have already tapped into the RMB bond market, as part of their expansion into China. Total issuance of RMB bonds has risen, according to *The Banker*, from RMB 16 billion (US\$ 2.9 billion) in 2009 to about RMB 220 billion by late 2011. (Hartung, 2012)

Since the RMB is not freely convertible in the capital account yet, there are still restrictions on moving funds onshore, cross-border settlement is relatively inefficient, and RMB loans and risk management products still lack the availability and liquidity of their western counterparts. Nevertheless, PBOC has local currency swap agreements with more than a dozen countries, there is an active inter-bank FX market in London, nine major currencies now trade in the domestic inter-bank FX market, and there are continual developments and innovation in RMB deposit, loan and risk management products. Therefore, bankers worldwide should find their strategy for this emerging currency, and implement adequate policies, procedures, and infrastructure to serve their clients.

Being the world's second largest buyer of oil China intends to settle in RMB more of the oil trade with the Middle East and Russia. Expanding offshore RMB trade settlement to the Dubai International Financial Centre (DIFC) in the United Arab Emirates (UAE) will support a move to more commodity trade in the RMB. An increased RMB denominated commodity trade will enhance its status as a global currency and encourage additional bilateral trade and growth by boosting the available pool of offshore RMB. (Burnett & Ernst, 2012)

SWIFT RMB Tracker from March 2012 shows that RMB payments worldwide increased even by 33% in February versus January 2012. On the other hand, RMB payments with Australia are among the lowest in Asia, dropping down (from 3.1% in January) to merely 1.9% of all Australia's payments to China and Hong Kong and well below the average of 6.6% RMB payments in Asia (excluding China and Hong Kong). Since with nearly 20% China is Australia's biggest trading partner (2010–11, Australian Department of Foreign Affairs and Trade) and payments flows between them are among the highest in Asia, it should give ample opportunity for China and Australia to grow their RMB flows, especially considering large commodities trade flows from Australia to China.

In 2011, cross-border RMB trade settlements were RMB 2.58 trillion (US\$ 410 bn) or nearly 10% of China's total trade, overseas direct investment in RMB reached 20.15 bn and foreign direct investment 90.72 bn. China's world market share of 0.9% in FX value in June 2011 and its world GDP share of 9.5% in 2010 give a FX/GDP co-efficient of 9.5%, which is very low compared to other Asian currencies, which makes the RMB under-represented in the FX business and showing its underutilization in relation to the size of China's economy. Some Asian trade partners avoid the settlement in RMB owing to a lack of awareness and a lack of attractive yields on RMB liquidity management options. Besides certain benefits introduced by the Chinese government, banks need to see a positive return on investment (ROI) to build out the RMB trade settlement infrastructure. Banks in the region should identify the drivers for usage of the RMB for different types of firms and initiate specific programs such as industry-targeted liquidity solutions to increase RMB usage. (Mehrotra & Arora, 2012)

## MANAGERIAL IMPLICATIONS AND FUTURE OF THE RMB

The fact the RMB used to be a restricted currency that could not be taken out of China caused additional administration and potential costs. Allowing to hold it offshore enabled firms to further diversify their currency holdings and spread risk accordingly. Its deregulation has provided a natural currency hedge for firms having existing RMB receivables or payables. Organizations trading with China should consider who they currently trade with, or hope to trade with in the near future, to see if it is worthwhile reorganizing to trade in RMB. If it



is, the firm must check its internal accounting system has a capability to invoice in RMB and accurately monitor receivables. Then it has to prepare for any additional FX risk holding another currency in its portfolio will bring and to check it has appropriate banking support to handle RMB transactions and provide consultancy and advice.

Invoicing trade in RMB eliminates risks for China, because its national currency becomes the common unit of account, medium of exchange, and store of value. As the RMB convertibility improves, the volumes of payments in “people’s currency” rise, and it effectively becomes a world reserve currency (what could happen within the decade, given the strength of current trade flows), the need for China to accumulate large external FX reserves will decline. The central banks of Nigeria, Chile, Thailand, Brazil, Venezuela, and most recently Japan have already begun their efforts to include the RMB in their reserves portfolios, even if only at modest weights.

A recently published Brookings Institution study forecasts that, while opening Chinese capital account and including the RMB in the basket of currencies in the International Monetary Fund’s Special Drawing Rights basket can happen within the next five years, it could take up to a decade for the RMB to join the currencies of five other largest world economies as a reserve currency (Hartung, 2012). Bearing in mind HSBC’s Global Trade Forecast Report prediction that China will be the world’s largest trading nation by 2016, overtaking the USA and accounting for 12% of world trade (Box, 2012), firms should increase their RMB trade and banks have to provide them with RMB-based loan, deposit, investment, cash management, risk management, and FX hedging products.

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# NEW PATH TO TREASURY EFFICIENCY THROUGH CENTRALIZING PAYMENTS: PAYMENT FACTORY TRENDS IN EUROPE

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## ABSTRACT

*Focused on maximizing liquidity and minimizing costs, while improving cash flow visibility and control, post-crisis corporate cash management trend towards centralizing treasuries and payment processes is realized through various models – payment factories, shared service centers, and in-house banks. It streamlines operation and reduces bank transactions and costs as well as the number of accounts. A transparent, single, standardized view enables contingency planning on one single communications channel and payments platform. Specialist ERP-embedded solutions provide an opportunity to closely integrate within the entire financial value chain.*

## INTRODUCTION

The payment factory (PF) concept has been introduced by large US multinational corporations (MNC), attempting to increase control and rationalize payment and collection costs. Before international, they were faced at first with their own, enormous but fractured, domestic market. It was even bigger after their expansion across the Atlantic, additionally with an absence of standardized processes and numerous file formats. Besides MNC, nowadays more and more small and medium-sized enterprises (SMEs) use PFs to centralize payment processes in certain geographical region, saving them from maintaining banking relationships in several countries at the same time, as in the traditional multi-banking approach. Although setting up a PF may be time consuming and complicated, depending on firm's infrastructure and enterprise resource planning (ERP) system, especially if the payment process is already completely centralized, it has many advantages, particularly regarding costs and risks reduction and efficiency. The automation of accounts receivables (A/R) and accounts payables (A/P) in PFs has goal to achieve: 1) straight-through processing (STP) by enabling synched file exchange between the bank and a firm's ERP system, and 2) the integration of bank connectivity, authorization, and security in the firm's ERP.

Faced with unstable cross-border networked economies, profitability pressures, intense competition, weakened demand, and an evolving regulatory environment, the pressing issues for the organizations are cash management, improved working capital, reduced costs, optimized efficiencies, and tightened controls across the whole financial value chain. However, disparate business systems and processes cannot keep pace with the ever-increasing complexities of monitoring cash positions and managing available balances. Therefore, heightened risk management and a need for an increased cash-flow visibility and control have emphasized post crisis adoption of centralization. The infrastructure consolidation increases operational efficiency, and by leveraging technology, standardizing and streamlining processes, strengthens controls and mitigates risk. A transparent, single view via industry standards focuses contingency planning on one single communications channel and payments platform.

After two more commonly used models – shared service centers (SSCs) and in-house banks (IHBs), in search for opportunities to globalize operations, reduce costs, consolidate, centralize, and streamline the payables processes, treasury executives (applying a holistic approach to processes and technology) may adopt a complex, hybrid approach combining aspects of both models – a new generation, consolidated PF. This operating model for managing payments integrates back-end systems of payables and receivables with treasury in a SSC i.e. shared

business centre, centralizing and optimizing payments and collections and reducing the number of bank accounts and transactions, in the function of the total quality management in conjunction with six sigma improvement.

## PRINCIPAL MODELS OF TREASURY CENTRALIZATION

In a **SSC model** a centralized payments unit makes all payments (including treasury and A/P) through a single operating entity, standardizing processes, leveraging process **efficiencies**, and reducing costs. Its **benefits** include also centralized expertise, which delivers better service, quality and timeliness, tight alignment with the corporate strategy, and the opportunity to expand treasury activities at lower marginal costs. A SSC can reduce the number of systems interfaces, increase financial transparency, lower transaction fees, lower fixed operating costs, aggregate liquidity positions, and better leverage FX. It can be run as a large subsidiary, an independent service company (being the most prevalent model) or as a finance company serving as an agent. SSC governance is aligned with the firm's strategy through service level agreements (SLAs) and activity-based charges. Firms with a successful SSC typically have top executive sponsorship and a customer-centric/metric-centric culture. A SSC is generally similar to a PF but differs in that it should be recognized as a separate firm or unit dedicated to servicing transactions on behalf of several business entities. A SSC often has more responsibilities and activities than a PF. SSCs also offer flexibility and transparency of payment processes, and in addition, they can manage HR processes, financial analysis, knowledge management, liquidity management, and other administrative tasks.

An **IHB model provides greater control** at the highest level with funding and liquidity and distributes funds through sophisticated methods. It effectively serves as a "captive bank" for the parent and subsidiaries, being able to take deposits, pay interest, make loans, and charge interest. Therefore, it must be fully auditable and transparent, adhering to regulations and capital requirements in every country in which it operates. With this model, a TMS or ERP system maintains virtual bank accounts to track transactions executed by the IHB. Its main benefits include simplifying cash flow, gaining visibility, and improving liquidity. Owing to the standardization, the firm gains visibility, control, and new opportunities for cross-currency hedging and other risk management tactics. An IHB also brings improved cash utilization, allowing for inter-company netting and pooling, improved liquidity and inter-company funding benefits. Firms with an IHB model often have multiple legal entities and operate with multiple tax regimes, after having solved problems with handling the regulatory and statutory issues.

A **PF model combines a SSC (the brawn) with an IHB (the brain)**. This complex treasury structure consolidates payments with efficient funding, concentrates company cash at the highest level, and disburses funds through sophisticated methods designed to minimize cross-currency and bank fees. In other words, the operating efficiency of a SSC and the control, consolidated volume, and cash management benefits of a IHB are joined in a PF model, which is, therefore, actually more efficient than a SSC, because it: minimises the number of actual transactions, cross-currency exposure and transactions, and the number of fees and risks; aggregates and nets liquidity for improved performance; increases visibility and control across the firm; maximises the use of available cash and reduces overall funding costs. In the hierarchy of functions, a PF brings cost savings by: serving multiple legal entities, promoting (intercompany, cross-currency or third party) netting, reducing group-funding costs, managing incentives and disincentives to hold cash. Incorporating all SSC and IHB functions, a PF can handle payables and receivables on a worldwide basis, including the payable-on-behalf model, with which a payment even can be made e.g. in US dollars out of a US account on behalf of a UK entity. (Gniewosz, 2011)

If an organization wants to raise efficiency, control, security, and standardization, payments should be brought together in a payment consolidation or PF model, sometimes called a payment hub. There are **two types of PF**. The **first one focuses on consolidating all payment flows** enterprise-wide, which (both batch and manual) are routed through the PF and all bank communication takes place from there, centrally, leveraging the same bank interfaces for all payment types and operating firms. Besides consolidating the payment flows, the **second type of PF optimizes them**, too, e.g. through the transformation of cross-border payments into domestic and smart (re)grouping of payments, but due to tax and legal issues also requires the implementation or leverage of an IHB.

The first step in **setting up a PF** is transition to a centralized financial SSC for A/P, A/R and treasury, leveraging ERP and other specialized treasury systems to bridge and handle different payment types and formats. The PF workflow management system streamlines payment approvals, while the rules engine routes payments (manual and batch) to the least cost option. There is a trend with **next generation PFs** towards in-house banking

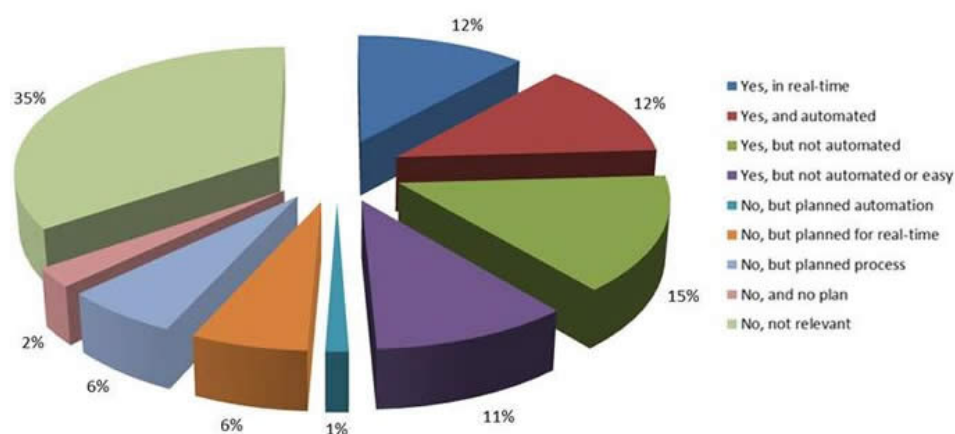
to settle inter-company transactions. When consolidating functions in the design of a PF, managers work closely with tax and legal advisers to get a transparent, auditable process, which would meet explicit firms' needs, and search the processes that can migrate first to deliver quick savings and help drive the implementation process.

## DRIVERS FOR PAYMENT FACTORIES IMPLEMENTATION

It was estimated in 2009, that 80% of the **cost savings** owing to the PFs comes from process automation and rationalization, 15% from replacing multiple local electronic banking system to one single pipeline, and the remaining 5% from reduction of bank charges. It has also been noted that one out of three pan-European requests for proposals that BNP Paribas receives relates to PFs and payment and collection optimization. (Simao, 2011)

According to a study by the Financial Services Club on companies' financial risk exposures in real-time, (as it can be seen in Figure 1) even half or exactly 50% of the corporations surveyed do not have insight into their liquidity exposure and among those firms who do have visibility, only 24% have access to real-time information.

**Figure 1: Do You Know Your Future Financial Exposures?**



*Source: The Financial Services Group Survey, sponsored by Logica, Autumn 2011 (Farrell, 2011)*

Besides driving payment costs down in this global economic recession, making many firms implement a PF concept (being the investment worth the return, with a breakeven point of approximately two years), there are three main **reasons for rising interest of European firms in PFs, caused by the need for harmonization**:

1) An example of the maturity of new technology is SWIFTNet, promoted as a single pipeline to many banks, and now more available to corporations thanks to the SWIFT service bureau connectivity model, having the potential to dramatically lower SWIFT implementation and running costs, and reduce the level of internal expertise a company needs to have, which will further increase the use of SWIFT services to process payments.

2) In the last decade – since the collapse of Enron, there has been an increased regulation, pressure on companies to document the way they operate, and their corresponding need for internal control. As regulations (even US ones) such as Sarbanes-Oxley (SOX) require detailed and complex audits, organizations are realizing that the more disparate their processes and technology, the more difficult, cumbersome and lengthy audits will be.

3) The single euro payments area (**SEPA**) is a banking initiative to support payment harmonization across Europe, along with its legal framework – the Payment Services Directive (PSD), but it affects a wider area than simply the eurozone, as once an organization begins harmonizing its payments processes, it may as well use the same technology to harmonize the non-SEPA processes and put in place its worldwide PF. (Simao, 2011)

New SEPA legislation, particularly the SEPA Direct Debit (SDD) instrument, moves the responsibility for managing client payments from banks to European firms, so that **other reasons driving them to rationalize treasury, consolidate payments systems and processes to raise efficiency, and implement a PF** are the following:

1) Since companies may have dozens of A/P units, the majority in the same currency, and possibly many of these payments running through the same few suppliers, they could save money by consolidating them into a PF and making currency exchange and supplier payments en masse to *get advantage of the economies of scale*.

2) Unlike multiple siloed systems, a single PF *provides thorough insight into treasury services* and more comprehensive view of all processes, timelines, suppliers, costs, corporate cash positions, and payments patterns, enabling: *more accurate cash flow forecast*; costs consolidation, rationalization, reduction, and savings without complex offline operations and spreadsheets; *better visibility of cash flow*, bringing more consistent controls, a reduced risk of fraud, and improved auditability; and (instead on a decentralized basis) *managing liquidity and risk across the whole company*, much more effectively and without the need for a “golden cushion” of cash kept unused to allow for cash flow forecasting margins of error, cash which can instead be put to more effective use.

3) Being scalable and flexible, a PF *makes easier a firm's expansion* across new territories and market sectors and integrating the payments systems of newly merged or acquired firms into the existing infrastructure.

4) A PF may even *help maintaining the reputation* of both the treasury department internally and the organization as a whole externally by consistently making payments on time and managing cash effectively.

There are at least three **dimensions in which PFs influence optimizing payments and collections**:

1) The core function of a PF – **technical optimization focuses on centralizing** the technology used for **bank connectivity**, e.g. by setting up a single pipe to connect the subsidiaries of a MNK to their banks, as when dealing with a few banks, it may be expensive to run multiple bank connections. Total cost of ownership of a proprietary bank channel from € 6,000 to € 10,000 per annum covers IT, resources, backup, hardware, etc. A SWIFTNet connection offers better control and is more cost efficient than disparate electronic banking solutions.

2) Centralizing what goes to and from the bank may improve links to a company's treasury management system not only for payments and collections, but also for balance reporting, treasury forecasting, and the other needs. Especially the development of financial SSCs helps **operational efficiency through centralizing A/P and A/R teams** and optimizing the purchase-to-pay (P2P) process, e.g. by using techniques such as invoice scanning.

3) The SEPA policy to have one central disbursement account (even for multiple countries and entities), which can be used across the SEPA zone and across the company's group, is the basis of **account rationalization**. It has promoted the concept of IHB, which makes payment from the bank account on behalf of a PF or a SSC and debits the internal current account of the subsidiary that initiated the payment. This, most complex model of a PF requires substantial IT resources and have some legal constraints, as certain tax payments cannot be done across Europe on behalf of, and some payments cannot be done electronically in various jurisdictions, such as Greece.

An organization operating a PF (or a SSC or an IHB with a central disbursement account) can **optimize** its **banking relationships** through rationalization of the number of bank accounts. Even then it may maintain its flexibility, too, e.g. by using SWIFTNet, as with a single pipe of standard connectivity, it is easier to switch from one bank to another. Anyway, the banks a firm chooses and their number will depend on its size, cash availability, purchasing power (when negotiating better pricing with banks) and credit market conditions. Lower number of bank accounts will also reduce number of costly audits and increase cash-flow visibility and economies of scale.

**Other drivers** for a PF include: increased efficiencies encompassing higher STP levels; lower bank, transaction, and operation costs; improved cash flow visibility; optimized payment flows and reduced exceptions processing; reduced fraud, risk, and errors; improved compliance and control; flexibility to gain fast access to multiple banks; ability to standardize payment processes; centralization of expertise; and securing future proofs.

Since a PF is one of the most complex structures to create, with significant costs involved in establishing and operating a PF, it would be a *challenge to calculate the return on investment*. Taking into account measurable benefits only, such as minimized bank fees and reduced headcount, the project can take four to five years to see a

return. However, taking into account other benefits, too, such as a reduced cash float and minimized volumes of payment errors, a return will be seen in one to two years. Calculations can also be made in terms of opportunity cost, e.g. the losses incurred by production shutting down due to an unpaid supplier not delivering raw materials.

## **TREASURY CENTRALIZATION IN EUROPE**

### **Favorite Country Locations**

Although various treasury centralization solutions become increasingly common globally, the greatest rise can be expected within Europe, partly because SEPA is pushing companies to adjust their existing payments solutions, and partly as Europe is a unique region grouping sophisticated technology-aware firms with an array of differing domestic markets. In spite of intentions to create a single common market, each country still operates a variety of dissimilar domestic instruments, so that firms have to manage different countries in different ways.

A number of criteria have determined favored locations for outsourcing treasury services in SSCs or PFs to serve European treasuries: legal issues, political and country risk, availability of skilled resources, labor costs, taxes, and travel time from the main subsidiaries. Choosing near-shore as opposed to offshore and avoiding Asia due to the time zone differences, central and eastern European (CEE) countries have been considered the prime locations so far. However, they are becoming increasingly expensive in terms of unitary FTE and office space, so that instead of favorite locations such as the Czech Republic or Slovakia, more traditional treasury locations, such as Dublin or the Netherlands may make a comeback. Establishing a PF in the countries belonging to the Baltic region is becoming popular as it is cheaper (due to lower labor, administrative, and IT costs), easier (an emerging, innovative market is keen to embrace new technology, necessary to simplify internal processes and better control overall liquidity), and still legal (in terms of the data protection, as certain data cannot move out of Europe).

There is a high concentration of SSCs (roughly 160) in Poland, established since 2004, which employ approximately 50,000 people, including core financial positions, IT specialists, HR and administrative staff. This country was initially favored owing to the pool of low cost, qualified, university graduates possessing extensive language skills, but now they already have right skills and years of SSC experience. (Nordkvist & Paegle, 2011)

### **Two Centralization Case Studies**

A northern European manufacturing firm has centralized its treasury operations into a brilliantly simple structure, in which this company buys all the components and value-adding activities from production entities, which means it owns the finished products, and sells them on to dealers and distributors. In practice, it means it sources and buys components globally, is billed by all relevant suppliers globally, and owns all production components regardless of which production unit receives the shipment. Thus, all vendor payments, irrespective of supplier origin, are handled centrally in one streamlined process, so that all cash-flow forecasts are straight forward and risks, such as counterparty, political, and currency risk, are centrally and commonly assessed.

Another, continental European, manufacturing firm has the structure built on technology bringing all units, such as purchasing, production, and sales, onto the same ERP system, with a seamless link to its treasury system. Although large number of its subsidiaries are scattered worldwide, it allows for centralized functions and practices such as billing, purchase order handling, supplier invoice handling, trade finance document handling, vendor payments, reconciliation of A/R, cash flow forecasting, cash concentration, risks management, etc.

An additional benefit of both approaches is that treasury gets a possibility to act as an internal advisor in different areas, e.g. working capital management, thanks to the information from different parts of the firm being transparent, comparable, and accessible, so as to apply the best practices across most processes. (Osmund, 2010)

### **SEPA Regulatory Influence**

While the SEPA initiative assists the convergence of payment systems across the eurozone and setting up PFs by standardizing payment instruction file formats and fixed payment execution rules as well as helps to

simplify payment flows and decrease banking expenses for European payments, it is too slow in terms of the number of clearing cycles per day and it does not meet all firms' needs in terms of payment types and frequency.

## **The Role of Technology – Leveraging Electronic Payments and Automation**

Payments architectures are usually country-specific and defined by cross-border constraints that are not easy to overcome. However, a PF requires rationalization regarding the channel through which the payment is delivered, as well as facilitating a single, standardized format for each payment, in order to ensure all the local payments can be delivered to the banking provider ideally in a single file for all payment types and countries.

Standardization across multiple systems and numerous areas managed through a single interface allows information from around the world to be seamlessly aggregated. Since firms receive payments from an increasing number of countries, particularly bearing in mind the growth of emerging markets, payments from a variety of systems can be standardized into the latest ISO 20022, multi-lingual interpretation and XML formats, enabling the path to global interoperability. Opposed to whether they are a high or low value transaction, payments become classified as urgent and non-urgent to determine the priority in which they need to be handled, which facilitates the infrastructure to respond to the firms' increasing focus on immediacy and timing of the payment execution. This has direct impact on working capital management and improvements in days payable outstanding (DPO).

Connectivity with a single format, one common security method and support are fundamental for any payment system implementation. Instead of country-specific formats, a key present trend is the payment format standardization, fulfilling the requirements for treasury centralization. It has been driven by the need for flexible, compatible file formats and the increased importance of a company's ERP system, as the firms depending on the treasury management system (TMS) or ERP system's capabilities are defining the requirements towards the banks (related to setting up PFs or SSCs) on the road to achieving STP, better connectivity between systems, and total integration to an ERP system. Companies, particularly those operating across borders, are increasingly demanding XML ISO 20022 as well as SWIFTNet FileAct for their connectivity when setting up a PF of a SSC.

XML is the desired worldwide connectivity format due to its compatibility with most ERP systems. Its introduction has helped standardization and supported the growth of PFs and SSCs, but there are still many obstacles to overcome regarding common communication protocols and security methods, as other connectivity options still remain divided and fragmented. Global and regional banks, corporations and ERP vendors have formed a group called the Common Global Implementation (CGI) and are working to define and standardize each field within the XML ISO 20022 format and how it will be used in order to streamline the process globally.

An increasingly complex financial supply chain requires more efficient ways to manage payments and connect to the network of banks and trading partners. A key initial step to an optimized PF, bringing incremental cost savings, starts with switching from paper checks to electronic payments (e-payments) and business process automation. Top-performing organizations use mainly electronic (ACH, commercial cards, and wire) transfers to better control the timing of cash flows. Sellers benefit from reducing days sales outstanding (DSO) and collection costs, while speeding payables gives buyers opportunity to take advantage of early payment discounts or dynamic discounting to negotiate lower prices with their suppliers. E-payments can be then enhanced by electronic invoice presentment and payment (EIPP), or by data standard formats such as financial electronic data interchange (EDI) and extensible markup language (XML – a set of rules for encoding documents and representing data structures) that enable electronic processing. The automation of business processes via digital invoices, EDI and XML bring lower processing costs, improve cash flow management, and build better customer relationships. (Farrell, 2011)

Unlike disparate systems that prevent accurate enterprise-wide cash flows visibility and forecasting, a PF enables cash control and improves liquidity, being again the priority of the treasuries nowadays. Many firms' bank-branded electronic banking systems are combined with local tools (offered by local clearing systems or software providers), which may be efficient for their sole purpose, but the one-to-one connections they introduce prevent cost efficient payments processing requiring STP, standardization, and centralization. Auditability and risk management impose that organizations are able to trace payments end-to-end: from the point an invoice is received, up to the point the processed payments are reported on bank statements, including all the steps within this process related to changes, authorization, intermediate feedback from the bank, etc. linked to a particular

payment transaction. An increased awareness of counterparty risk demands reducing bank dependency as well as the ability to quickly access multiple banks. Cash and treasury technology should also comply the corporate IT standards and be able to swiftly anticipate changes linked to regulatory changes and possible acquisitions.

## FUTURE TRENDS AND MANAGERIAL IMPLICATIONS

In the past, the addition of an increasing number of isolated payment and treasury software packages contributed to further complexity in terms of maintenance, integration and costs. The most valuable and beneficial integration is to link a PF it with the existing or strategic ERP system, without multiple administrative systems remaining in place. Next generation specialist payment solutions are completely integrated within leading ERP packages such as SAP. These PF 2.0 solutions provide a unique *opportunity to closely integrate within the entire financial value chain* as well as the following advantages: 1) no need for complicated interfaces between ERP and the PF; 2) more secure and better auditable processes, as no longer are payment files exported to external systems, the entire process from invoice approval to payment authorisation and release is all done within a single system, and even manual payments can be done in a single integrated environment; 3) close integration with the booking process, as manual payments in the PF are automatically booked within accounting; 4) leverage ERP master data, as no duplication of supplier data is required in external systems and the latest supplier bank account information can be used when entering manual payments; 5) easier reconciliation, as payments rejected by the bank are automatically reversed within accounting, while single payments from a batch can be removed within the PF without complicating the reconciliation process; 6) lower total cost of ownership, as no separate hardware or software is required and the investments made in the ERP environment are capitalised to the full extent; and 7) being easier to operate, on account of the fact that updates or upgrades of the PF software are conducted similarly to the other ERP modules, and training is easier due to the re-usage of ERP features. (Vonckx, 2010)

Since corporate customers continue to request global liquidity concentration platforms with immediate payment execution, in order to make the liquidity flow 24 hours a day without any restrictions, such a global payment system should be established *in the future*. While payment, collections and the reconciliation of account statements are in the spotlight now, in the future, it will be possible to include pre-processing, the administrative detail prior to payment or before it becomes a collection, such as orders and electronic invoices (e-invoices) in a streamlined, one point of entry process. The aim would be to encompass the whole corporate value chain.

**A PF model should be deployed** as advantageous to the company with the following features, i.e. if:

1) it has large amounts of payments or receipts in different **currencies**, or is long in some currencies and short in others, or its operations include restricted, volatile or less frequently traded currencies, as the aggregation and the co-ordination will allow it to maximize liquidity, offset costs, and minimize risk in these currencies;

2) it has excess or deficient **cash balances** in various regions, as the group of companies will offset them to minimize bank borrowings, increase liquidity yields, and provide lower cost funding to individual firms; or

3) its **organizational structure** includes diversified business entities (with different cash needs) or when different entities use the same suppliers and vendors or do third party netting on high-value contracts, because the ability to disburse funds on net or consolidated basis can lower processing costs and increase group liquidity.

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# PATIENTS' PERCEPTIONS AND LEVEL OF SATISFACTION WITH THE QUALITY OF FOOD SERVICES IN PUBLIC HOSPITALS IN SOUTH AFRICA

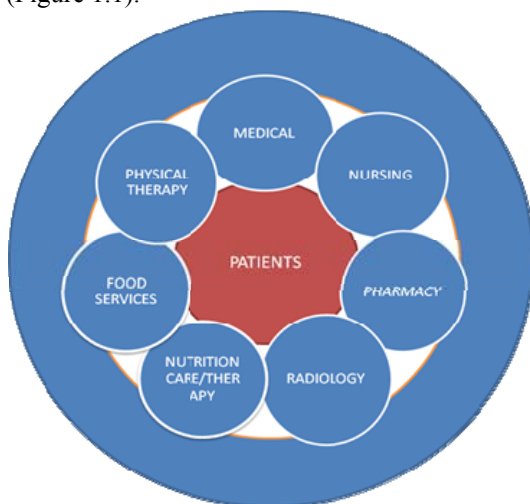
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## ABSTRACT

*Hospitalised patients leave liberal amounts of food provided by the hospital uneaten because of dissatisfaction with various aspects of food service quality. The nutritional requirements cannot be met when patients are not willing to consume the food provided for them by the hospital. Satisfaction of patients with the quality of food services improves the level of food consumption, and thus the nutritional status of patients. To bridge the gap between expected and perceived food service quality, continuous evaluation of food services, using appropriate and reliable instruments should be conducted. Feedback of patients on the quality of food services rendered should be implemented, and the services should be adjusted to suit the needs of patients. This paper assesses the patients' perceptions and level of satisfaction with the quality of food services in public hospitals in terms of tangibles, reliability of the food service system, responsiveness of the food service system, empathy of the food service personnel, attitude of the food service personnel and the overall satisfaction with the quality of food services.*

## INTRODUCTION

The concept of quality in health care services, according to Øvretveit (2003), has developed from a purely technical approach to a multi-faceted issue, which now tries to satisfy the needs, interests and demands of three parties: (1) those who provide the service (the health care professionals), (2) those who manage it and (3) those who use it (patients). This study will be focused on those who use health care services, namely the patients (Figure 1.1).



Source: Adapted from Sullivan & Atlas (1998: 4)

Figure 1.1. A conceptual model of supra-system (health care system) relationships

According to Howard, Jonker-Schuitema, Furniss, Kyle, Muehlebach, Ödlund-Onlin, Page and Wheatley (2006), there are a number of different disciplines (food service, medical profession, physical therapy, nutrition therapy, pharmacy, nursing and radiology) involved in providing health care services in a hospital setting. In support of the statement by Howard et al. (2006), Sullivan & Atlas (1998) indicate that public hospitals render the health care service as an integrated service consisting of the different subsystems operating within a supra-system, (Medical services, Nursing services, Pharmaceutical services, Radiology services, Physical therapy services, Nutrition therapy). This study will be focused on the satisfaction of patients with the quality of food service subsystem within the health care system.

## **Food service subsystem**

The food service system is a subsystem operating within the supra-system (health care system). The main purpose of the hospital food services is to provide patients with appropriate, wholesome, nutritious (furnish adequate nutrients), good quality food, (Department of Health, 2010). The food provided by the hospital food services should facilitate the process of recovery from illness by improving the nutritional status thus the health status of patients, (Puckett, 2004).

Health care food services affect every patients admitted to a hospital. Patients admitted to a hospital depend on the food provided by the hospital food services for recovery, (Baum, 2006). The provision of hospital meals is the most complex, difficult and diverse operation which depends on other sub-systems within the health care system for success. An essential aspect in successful food service management is customer satisfaction, which is very complicated and influenced by many factors in a hospital setting, (Bender, 1994).

Hospital food service provision has an important influence on the quality of life of patients, (Cassens, Johnson & Keelan, 1996) and malnutrition prevention (Ball, Whittington, Perkins, Hollingsworth, King and Combs, 2000). McWhirter & Pennington (1994) indicate that good quality and healthy food provides the body with sufficient quality and quantity of nutrients that are essential to protect against illnesses and facilitate the healing process in patients. McWhirter & Pennington (1994) further indicate that the hospital food services can have a major impact on the nutritional intake of hospitalised patients where the potential for malnutrition is well recognised.

According to the National Core Standards for Health Establishments in South Africa (Department of Health, 2010), food services are responsible for providing a service that meets the needs of patients through the development and implementation of policies and procedures (developed by the Department of Health's National Nutrition Directorate) that guide all aspects of food procurement, storage, preparation and serving of meals; effective management and delivery of food services that meet the needs of The purpose of this study is to determine the perceptions and patients' satisfaction with the quality of food services rendered to them by the hospital food services in South Africa. the health establishment; ensuring patients' satisfaction with the quality and presentation of food; management of food services that provide patients with adequate and nutritious food and beverages; provision of food services that meet the cultural, religious and special dietary needs of patients; and ensuring that the food service facility meets environmental health requirements.

## **Patients' satisfaction with the quality of food services**

Keegan, McDarby, Tansey & McGee (2003) found that patients' satisfaction is an attitude in terms of a general orientation towards an overall experience of the quality of food services rendered by the hospital. Satisfaction consists of cognitive and emotional facets and is related to previous experiences, expectations and social networks.

In determining the relationship between patients' satisfaction, perceptions and food service quality, Parasuraman, Zeithmal & Berry (1985) revealed that food service quality can be considered as patients' perception of how well a service meets or exceeds their expectations as judged by patients, not by the hospital. Patients' perceptions of food service are a form of outcome of food service delivery. McAlexander, Kaldenberg and Koenig (1994) refer to the food service outcome as a technical form of care and find that it is a primary determinant of patients' service quality perceptions. In the elaboration of health care outcomes, Rust and Olivier (1994) view the food service outcome as a food service product (meals and service) and confirm that it is a determinant in assessing

the food service experience. It is therefore clear that the quality of meals offered by the hospital must satisfy patients' needs.

## Factors affecting patients' satisfaction with the quality of food service

Patients' satisfaction with the hospital food service is a multifactorial issue and difficult to assess, particularly as each patient has his or her own nutritional needs and expectations.

A study by Sahin, Demir, Celik and Teke (2006) found a low level of patients' satisfaction with the quality of food services. It was found that patients were more satisfied with the attributes and behaviour of personnel serving food (85.6%), while patients were less satisfied with the warmth of food. Only 41.7% patients were satisfied with the warmth of food.

In a study conducted by Stanga, Zurflüh, Roselli, Sterchi, Tanner and Knecht (2003), it was found that temperature, appearance and aroma were the most crucial aspects of food presentation to patients. Thirty-two per cent of patients indicated that the portion sizes served were too large, while 59% felt they were adequate. Seventy-five per cent of patients judged the flavour of food to be good, while 14% considered the flavour to be bad.

A study conducted by Marcelino, Adam and Couronne (2001) revealed that when food is presented in an attractive manner, it has the power to develop the desire and appetite to eat the food. This was experienced by exposing people to pizza; most people developed a desire and appetite after visual exposure to pizza. Easaw, Mee and Thog (2004) found that tasty meals, sufficient quantity, good presentation, accuracy in ordering normal and therapeutic diets, choices of menu and correct service temperatures are the main attributes contributing to patients' satisfaction with the quality of food services they are offered in public hospitals.

The findings of a study by Donini, Castellaneta, De Guglielmi, De Felice, Savina, Coletti, Paolini and Cannella (2008) revealed that the portion sizes that were served to patients conformed to contract standards and diet orders both for normal and therapeutic diets. A study by Marshall and Bell (2003) showed that the eating environment has a great influence on people's food choices. The location appeared to influence the choice of different food for different purposes (e.g. lunch or snacking). It was found that the meal selection also depended on location and cultural background. The purpose of this study is to test the internal consistency of the SERVQUAL in determining the perceptions and patients' satisfaction with the quality of food services rendered to them by the hospital food services in South Africa.

## METHODOLOGY AND STUDY DESIGN

### Methodology

A quantitative approach was applied in this study, incorporating some qualitative features. The qualitative features were integrated by including open-ended questions, which introduced greater openness to inputs and new ideas from patients about the quality of food services offered by the hospitals.

Using a quantitative approach enabled the researcher to make valid and reliable measurements of data that can be generalised with clear anticipation of cause and effect (Cassell & Symon, 1994). Bias was minimised by applying the qualitative research method, as the researcher's personal thoughts and subjective preferences are not applicable to this type of research method.

The study methodology and questionnaire design find their foundation within the concept of the SERVQUAL method for measuring service quality (Parasuraman, Zeithmal & Berry, 2004), which covers the assessment of the six dimensions of quality.

The objectives of the study were as follows:

**Objective 1:** *Test the effectiveness of a SERVQUAL instrument Cronbach's alpha was used to determine the internal consistency of the SERVQUAL instrument*

**Objective 2:** Reduce data; regrouping and renaming the dimensions, sub-dimensions of the SERVQUAL instrument using factor analysis

**Objective 3:** Assessment of the six dimensions of quality, namely: tangible aspects (physical facility personnel appearance and equipment); reliability of the food service system; responsiveness of the food service system; empathy of the food service personnel, attitude of the food service staff and the overall satisfaction with the quality of food services in public hospitals.

## Study Design

Descriptive study design was used in assessing the quality of food service outputs in public hospitals in different provinces. The researcher used this research method because it was quick, practical and cost-effective to use in a study such as this that targeted the whole country. The descriptive study design allowed for a flexible approach, which enabled new issues and questions that arose during data collection to be handled appropriately. Such an approach can be used for qualitative and quantitative data and broadens the options available to a researcher in selecting data-collecting instruments. The method was the most suitable for gathering information on the condition of the quality of food service outputs in different public hospitals in the country. Two types of data were collected, namely primary and secondary data. Primary data were derived from the answers the participants gave during the survey process. Secondary data were obtained from published documents, government health policies (both published and unpublished) and literature pertaining to the survey of the quality of food service outputs.

In this study, the descriptive study design was applied in the form of a survey using structured questionnaires administered to patients in public hospitals in different provinces to obtain feedback and examine patients' perceptions on the following variables:

- Expected quality of food service outputs
- Perceived quality of food service outputs
- Assessment of the level of patient satisfaction with the service quality rendered by food services in public hospitals according to set criteria.

## Pilot study

A pilot study was conducted at one academic hospital in one province prior to the actual research project in order to test the questionnaires and to determine whether they would provide consistent and accurate information. The questionnaire and data collection sheets were adjusted, data were analysed for inconsistencies, and gaps were identified before the main study was conducted. The information received from this pilot study assisted in refining the final questionnaire and data collection tools to be used in the actual research.

## Study population

There are nine provinces in South Africa, namely: Eastern Cape, Gauteng, Mpumalanga, Limpopo, Western Cape, Northern Cape, North West, Free State and Kwazulu-Natal. According to the District Health Information Systems (Department of Health, 2005), there are 269 public hospitals in South Africa.

## Sampling strategy

### Selection of provinces

The Stata (version 10) statistical package was used to select the provinces for the sample. Stratified random sampling was applied to select the hospitals to be visited for the investigation. The strata were based on the classification by facility type, namely: provincial tertiary, regional and district hospitals. The sampling method was applied to ensure proportional representation from each province as well as the different facility types.

## **Sampled provinces**

Sixty seven percent (six provinces) of the South African provinces, ranging from rural to urban, were sampled.

## **Selection of patients**

A systematic random sampling strategy was applied for the selection of patients in different wards within the different hospitals in the various provinces in South Africa. Random numbers of patients were selected by making use of the number of approved beds and numbering the beds. Only 10% of patients were selected as part of the study. In-patient questionnaires were completed by patients hospitalised in medical and surgical wards, excluding psychiatric and paediatric wards and intensive care units, because most of the patients consuming normal diet meals were admitted in these wards and the data collected from these patients was thus considered to be reliable.

## **Sample population**

Fourty six hospitals were sampled in different South African provinces.

## **Data collection**

The sampled population was reduced to the 32 hospitals that granted permission for data collection.

## **Construction of data collection instruments**

The questionnaire was constructed using the concept of the SERVQUAL method for measuring service quality (Parasuraman et al., 2004), which covers the assessment of the five dimensions of quality, namely: tangible aspects (physical facility, personnel appearance and equipment), responsiveness, reliability, assurance and empathy of the food services. The method was previously used in the hospitality industry and was adjusted and adapted where necessary to suit assessment in a food service management field.

To make it suitable and easy for a hospital to use, a visual analogue scale with ratings from 0 = totally disagree/never/bad/not at all to 10 = totally agree/always/good/extremely was used to clearly indicate the level of satisfaction of patients with the food service quality. Open-ended questions were also included to give patients an opportunity to comment on the quality of the food service offered by the hospitals. The survey was conducted at patients' bedside to determine the overall perception and expectations of patients of the quality of food services in different hospitals based on their overall experience during the hospital stay.

## **Data collection procedure**

Data were collected by the researcher before lunch by means of interviews based on a schedule and questionnaire in the female and male medical and surgical wards of sampled hospitals. The interviews were conducted at the patients' bedside to determine the overall perception and expectations of patients of the quality of food services in different hospitals judging from their overall experience during their hospital stay. Patient's responses were rated on a VAS (Visual analogue scale) scale to determine their level of satisfaction.

## **Validity and reliability**

In this study, validity and reliability were ensured in the following ways:

- The pilot study pre-test questionnaire provided for reliability
- Validity was embedded in the tools by using models that had been used by previous researchers, for example, the Parasuraman et al. (2004) SERVQUAL method.

# **DATA ANALYSIS**

Data encoding was performed using Epi Info (version 6), and StatTransfer was used to convert data from the Epi Info format to Stata format. Stata (version 11) statistical software (StataCorp, 2009) was used to analyse the data. Where inferential statistics were required, the analysis was performed at the 95% confidence limit. The Pearson chi square test was performed to test for association between pairs of categorical variables. Cronbach's alpha was used, with a cut-off point of 0.7 to test for internal consistency; and factor analysis was performed for data reduction.

## RESULTS

### Internal Consistency Reliability Coefficient of the Instrument at National level

In this survey, participants responded on six dimensions of the questionnaire with respect to the level of patients' satisfaction with the food service quality offered in South African public hospitals. The internal consistency reliability coefficient of this study was measured on the six dimensions, excluding the demographic information and the open-ended questions. Cronbach's alpha was used, with a cut-off point of 0.7 to test for internal consistency. Factor analysis was performed for data reduction. In testing the internal consistency at national level, the measurement instrument met Cronbach's alpha requirements in sections 1, 4, 5 and 6, ranging from the lowest measure of 0.6578 (reliability of the food service system) to the highest measure of 0.8877 (overall satisfaction with the quality of food services) (Table 3.1).

**Table 3.1. Cronbach's alpha for subscales of measurement at national level**

Sections in the questionnaire	Instrument dimensions	Cronbach's alpha ( $\alpha$ )	Number of items
Section 1	Tangibles of the food service system	0.8803	8
Section 2	Reliability of the food service system	0.6578	6
Section 3	Responsiveness of the food service system	0.6914	4
Section 4	Empathy of food service staff	0.7637	5
Section 5	Attitude of food service staff	0.8327	3
Section 6	Overall satisfaction with the quality of food services	0.8877	5

### Factor Analysis at National Level

Factor analysis was performed at national level to reduce data, regroup and rename the items, and test latent constructs between variables. In this study, factor analysis was performed on all six dimensions of food service quality and all the variables classified under the six dimensions. In reducing the data for dimension 1 (tangibles of the food service system), the eight variables (1.1 to 1.8) were divided, regrouped and renamed into two subdimensions, namely meal appearance and meal experience tangibles. In reducing the data for dimension 2 (reliability of the food service system), the variables were divided into two subdimensions, namely service experience and waiting time. Factor analysis did not indicate any reduction of data on dimension 3 (responsiveness of the food service system). In reducing the data for dimension 4 (empathy of the service staff), the variables were divided into two sub-dimensions, namely food service delivery and appearance of the food service personnel. In reducing the data for dimension 5 (attitude of food service staff), the variables were divided into two sub-dimensions, namely the behaviour of food service staff and the attributes of food service staff. In reducing the data for dimension 6 (overall satisfaction of patients with the quality of food services), the variables

were divided into two sub-dimensions, namely satisfaction with the food services and satisfaction with the resolution of problems related to the food services, (Table 3.2).

**Table 3.2. Factor analysis at national level**

Sections in the questionnaire	Instrument dimensions	Renaming and regrouping of sub-dimensions	Regrouping of instrument variables
Section 1	Tangibles of the food service system	Meal appearance	v1.1, v1.2, v1.3, v1.4 v1.5 and v1.6
		Meal experience	v1.6, v1.7 and v1.8
Section 2	Reliability of the food service system	Service experience	v2.1, v2.2, and v2.5
		Waiting time	v2.3, v2.4 and v2.6
Section 3	Responsiveness of the food service system	n/a	V3.1, v3.2, v3.3 and v4.2
Section 4	Empathy of food service staff	Food service delivery	v4.1 and v4.101
		Appearance of food service staff	v4.3
Section 5	Attitude of food service staff	Behaviour of food service staff	v5.1 and v5.2
		Attributes of food service staff	v5.3
Section 6	Overall satisfaction with the quality of food services	Food service expectations	v6.2 and v6.7
		Satisfaction with problem resolution	v6.3, v6.4 and v6.5

## Patients' demographic results

An average of 352 patients per question, with an average hospital stay of nine days, participated in answering a questionnaire on food service quality and patient satisfaction regarding meals served by the hospital food services. Forty-four percent of patients were female and 56% were male. Of the patients who participated in the study, 7.27% were under the age of 18 years and were considered for the study because they were admitted in adult female and male surgical and medical wards, 7.79% were between 18 and 20 years old, 25.45% were between 21 and 30 years old, and 59.48% were over 30 years old (Table 3.3).

**Table 3.3 Demographic characteristics of patients**

Average number of patients responding per question	Average length of stay	Gender (%)		Age (%)			
		Male	Female	Under 18 years	Between 18 and 20 years	Between 21 and 30 years	Over 30 years
352	9 days	56	44	7.27	7.79	25.45	59.48

The scores for the Province 1 are sometimes missing. During analysis the statistical analysis package dropped the province because of multi-collinearity (same ratings for the different aspects of food service quality) of captured data.

## PATIENTS' SATISFACTION WITH QUALITY OF FOOD SERVICES IN PUBLIC HOSPITALS IN SOUTH AFRICA



## Patients' satisfaction with the quality of food service tangibles

The minimum possible score for patients' satisfaction with the food quality of the hospital food service was 0 (never) and the maximum possible score was 10 (strongly agree). The following scores were recorded (Figure 3.4.1):

- 397 participants responded to the statement "The food served by the hospital food services looks attractive"; their general or average score was about 6.9 (disagree) at national level
- 393 participants responded to the statement "Food that is supposed to be served hot is served hot to me"; their average score was 6.8 (disagree) at national level
- 361 participants responded to the statement "Food that is supposed to be served cold is served cold to me"; their average score was 6.6 (disagree) at national level
- 383 participants responded to the statement "My tray looks attractive"; their average score was 7.0 (agree) at national level
- 388 participants responded to the statement "I am satisfied with the quantity of the food served to me by the hospital"; their average score was 7.2 (agree) at national level
- 327 participants responded to the statement "The hospital food services serve meals which taste good"; their average score was 6.6 (agree) at national level,
- 394 participants responded to the statement "The cutlery used for service of food is clean"; their average score was 8.5 (agree) at national level,
- 330 participants responded to the statement "The crockery used for the service of food is clean"; their average score was 8.7 (agree) at national level,
- 395 participants responded to the statement "The environment in which food is served is clean"; their average score was 8.1 (agree) at national level.

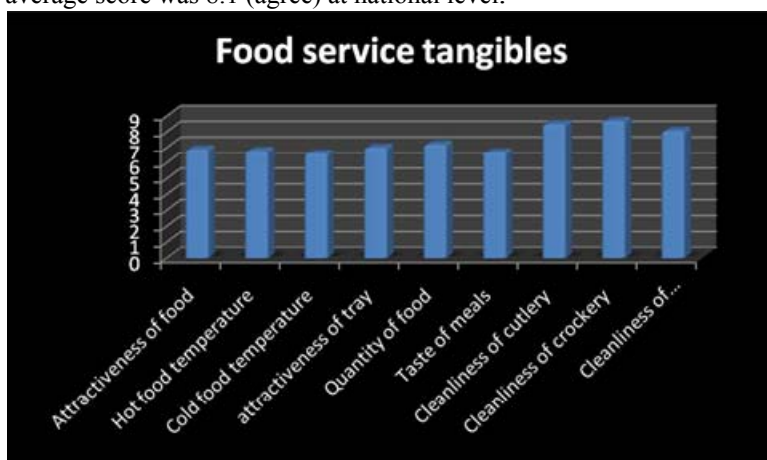


Figure 3.4.2. Patients' satisfaction with the quality of food service tangibles

## Patients' satisfaction with the reliability of the food service system

The minimum possible score for patients' satisfaction with the reliability of the hospital food service was 0 (never) and the maximum possible score was 10 (totally agree), except for question 2.3 with a possible minimum of 1 (yes) and maximum of 2 (No). The following scores were recorded (Figure 4.3.2):

- 389 patients responded to the statement "The service staff informed me about hospital meal times"; their average score was 2.1 (totally disagree) at national level
- 366 participants responded to the statement "Hospital meals are served on time"; their average score was 5.9 (disagree) at national level
- 384 participants responded to the statement "I am satisfied with the meal serving times of the hospital"; their average score was 7.1 (agree) at national level
- 371 participants responded to the statement "I had to wait longer than expected for the meals served to me by the hospital"; their average score was 2.1 (No) at national level

- 158 participants responded to the statement “If yes [i.e. I had to wait longer than expected for the meals served to me by the hospital], were you informed about the delays in the meal service”; their average score was 3.5 (totally disagree) at national level.

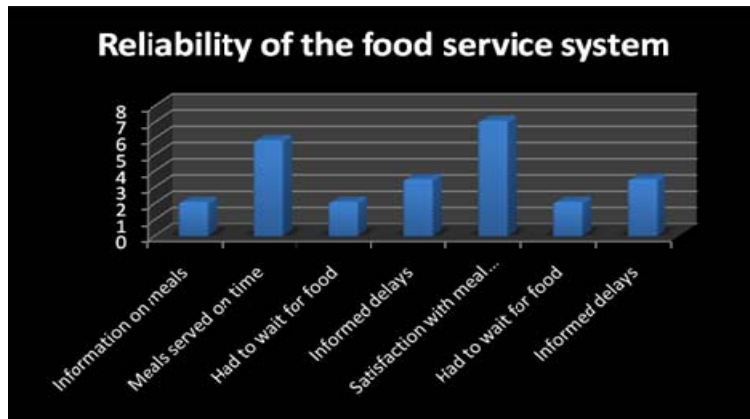


Figure 3.4.2. Patients' satisfaction with the reliability of the food service system

### Patients' satisfaction with the responsiveness of the food service system

The minimum possible score for patients' satisfaction with the responsiveness of the hospital food service was 0 (never) and the maximum possible score was 10 (totally agree). The following scores were recorded (Figure 3.4.3):

- 389 participants responded to the statement “The employees who deliver the meal trays are polite to me”; their average score was 8.0 (agree) at national level.
- 372 participants responded to the statement “The service staff respond when I ask for help”; their average score was 7.0 (agree) at national level.
- 324 participants responded to the statement “The service staff informs me of the nutritional value of food items on the different menus”.
- 386 participants responded to the statement “I am treated with respect by the service staff while I am served my meals”; their average rating was 8.0 (agree) at national level.
- 368 participants responded to the statement “The service staff handle my special requests”; their average score was 6.1 (disagree) at national level.

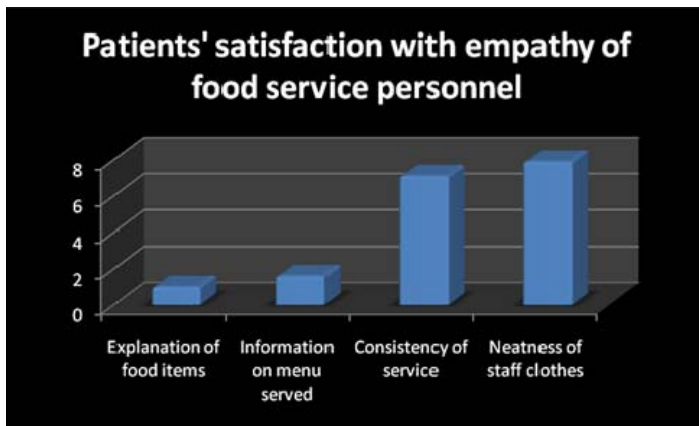


3.4.3. Patients' satisfaction with the responsiveness of the food service system

### Patients' satisfaction with the empathy of the food service staff

The minimum possible score for patients' satisfaction with the empathy of the hospital food service personnel was 0 (never) and the maximum possible score was 10 (totally agree). The following scores were recorded (Figure 3.4.4.):

- 324 participants responded to the statement "The service staff explain the food items on the different menus"; their average score was 1.0 (totally disagree) at national level
- 387 participants responded to the statement "The service staff inform me of the menu served by the hospital"; their average score was 2.0 (totally disagree) at national level. 322 participants responded to the statement "The service staff provides consistent food services to me"; their average score was 7.1 (agree) at national level.

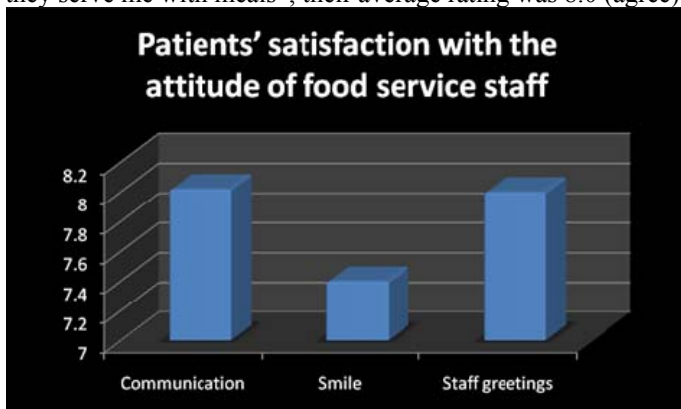


**Figure 3.4.4 Patients' satisfaction with the empathy of the food service staff**

## Patients' satisfaction with the attitude of the food service staff

The minimum possible score on patients' satisfaction with the attitude of the hospital food service was 0 (never) and the maximum possible score was 10 (totally agree). The following scores were recorded with respect to patients' satisfaction with the attitude of food service staff (Figure 3.4.5).

- 392 participants responded to the statement "The service staff talk to me in a pleasant way"; their rating was 8.0 (agree) at national level
- 388 participants responded to the statement "The service staff smile when they serve me with meals"; their average rating was 7.0 (agree) at national level.
- Three hundred and eighty-nine participants responded to the statement "The service staff greet me when they serve me with meals"; their average rating was 8.0 (agree) at national level,



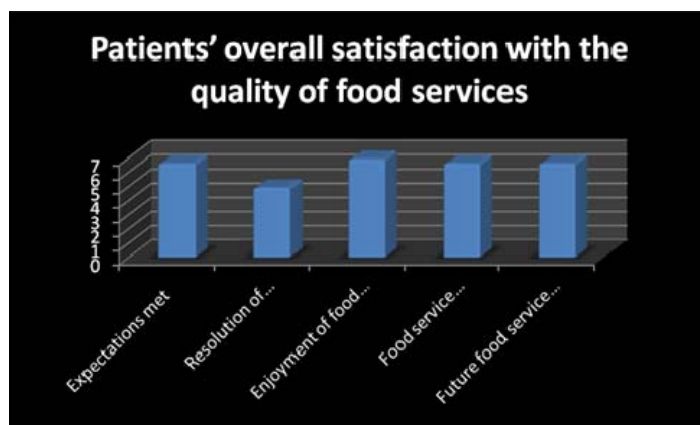
**3.4.5 Patients' satisfaction with the attitude of the food service staff**

## Patients' overall satisfaction with the quality of food services

The minimum possible score on overall patients' satisfaction with the quality of the hospital food service was 0 (never) and the maximum possible score was 10 (totally agree). In responding to the statement "In general what quality of service did you expect from the hospital food services", patients mentioned that they expected nutritious, tasty, appealing, good-smelling food, served in an environment free of odours. Three hundred and seventy-five participants responded to the statement "The food services met my expectations"; their average rating was 6.7 (disagree) at national level.

In responding to the statement "My problem was resolved satisfactorily", 79 patients indicated that they experienced problems with the hospital food service during their hospital stay; their average rating was 4.9 (disagree) at national level.

- 387 participants responded to the statement "I am satisfied with the food services during my stay in the hospital"; their average rating was 7.0 (agree) at national level.
- 327 participants responded to the statement "I will recommend the food service system of the hospital to friends and families"; their average rating was 6.7 (disagree) at national level.
- 320 participants responded to the statement "I am willing to utilise the food services of the hospital in future"; their average rating was 6.6 (disagree) at national level.



**Figure 3.4.5 Patients' overall satisfaction with the quality of food services**

## DISCUSSIONS

The questionnaire was tested for the internal consistency and reliability coefficient using Cronbach's alpha ( $\alpha$ ). Factor analysis was performed to reduce the data, regroup and rename the subdimensions, and test the latent construct between variables of the instrument. The two processes act as a confirmation that the results discussed in this chapter are valid and reliable.

Schenker (2001) indicate that food service quality has a significant impact on the health status of patients because of its importance in meeting their daily requirements and contributing to their recovery. It is therefore important for the hospital to identify patients' food service satisfaction variables and strive to meet or exceed their satisfaction with the quality of food services. This action encourages patients to eat well, thus improving their nutritional status, reducing the level of food wastage and reducing the length of hospital stay. In agreement with this statement, Bélanger and Dubé (1996) indicate that if the taste of the food does not suit the patients, the level of food consumption will decrease, which may result in malnutrition among patients.

The findings of this study revealed the lowest levels of patients' satisfaction and ratings on the information provided for patients on hospital meal times, menus served and the nutritional value of food among those patients who had to wait longer than expected for their meals; were not informed of the delays; and were given no explanation of food items. It is very important for hospital food services to inform patients about what food quality to expect. Food quality includes developing expectations or standards of quality (Harvey & Brown, 2001; Department of Health, 2010). This implies that patients have the right to be informed of the quality and/or

the standards they should expect from hospital food services. By informing them, patients psychologically prepare themselves for the food; they and know what type of food to expect and when to expect it. The sensory characteristics of food (in particular, taste, flavour, appearance, smell and texture) have been found to play an important role and to have very specific effects on patients' food choices, (Clark, 1998). The results of this study compared to the findings of Hartley and Hamid (2002) is evident that hospital food services remain to be a widespread problem all over the world.

## CONCLUSIONS

It is concluded that the SERVQUAL used in combination with the VAS measuring scale is an accurate, reliable measure of patients' satisfaction with the quality of food services in public hospitals in South Africa. In identifying patients' food service quality indicators (variables), the dimensions, sub-dimensions and variables of patients' satisfaction with the quality of food services were reduced, renamed and regrouped into the following groupings that are indicated in figure 4.1.



The dimensions, sub-dimensions and variables of food service quality identified above were used in the form of a questionnaire/ instrument with a Visual Analogue Scale (VAS) with ratings from 0 to 10, to measure the level of patients' satisfaction with the quality of food services in public hospitals.

The VAS scale assisted in identifying the actual ratings of patients rather than categorising them in a Likert form (e.g. totally satisfied), which might have limited patients in indicating their actual ratings. The SERVQUAL instrument was effective and efficient to be used in a public hospital setting as patients could clearly indicate the level of satisfaction with appropriate measurement/readings on the scale.\

## IMPLICATIONS TO MANAGERS

It is hoped that the results of this study will assist the hospital managers, food service managers and attached nutritional departments in their attempts to increase food consumption by providing much more value to patients about the food services. Results of the study indicate a need for improvement and adjustments on the following food service aspects: temperature, taste, portion sizes, variety of food items to be included in the menu.

- continuously assessing patients' satisfaction with the quality of food services rendered to obtain feedback on the services
- food service managers to integrate the feedback received from patients about the quality of food services in their food service provision planning activities

- reviewing, upgrading or alterations of food service and distribution system to suite and satisfy the needs of patients

In order to improve the nutritional status of patients, factors, dimensions, sub-dimensions and variables contributing to their level of satisfaction with the quality of food services should be considered.

## ACKNOWLEDGEMENTS

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# ENERGY PRICES AND THE ADOPTION OF OPTIMAL ENERGY MIX FOR AFRICA'S DEVELOPMENT: A REVIEW OF SOUTH AFRICA'S RENEWABLE ENERGIES PRICES

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## ABSTRACT

*Energy is an important prerequisite for increased economic activities in Africa. Renewable Energies (REs), in particular, will play an important role in the continent's economic activities and subsequent improvement of standards of living of its peoples given the increasing awareness of the negative impact of fossil energy use on the environment. Affordability of REs, as reflected by their unit prices, will be pivotal to their adoption though. The unit energy price to be paid by consumers is an important deciding factor for governments to adopt policy supporting a particular energy type with or against other alternative energy sources. Attaching wrong prices to different energy types can put a country on a sub-optimal and expensive energy mix path. Against this background the paper reviews prices attached to REs in South Africa from a global comparative perspective. It is found that unit production cost and subsequently unit price attached to REs, in particular, solar energy is too high compared to international RE prices. The status quo has the potential to put the country on a sub-optimal energy mix path. It is recommended that solar energy costs and unit prices for South Africa be re-assessed and harmonised with international prices. The positioning of solar energy in the country's long term energy mix strategy should also be reconsidered against the confirmed RE unit costs and their subsequent affordability.*

## INTRODUCTION

Energy, whether fossil or renewable, is an important prerequisite for increased economic activities in Africa. Renewable Energies (REs), in particular, will play an important role in the continent's economic activities and subsequent improvement of standards of living of its peoples given the increasing awareness of the negative impact of fossil energy use on the environment.

Africa is very well endowed with RE resources. Hydropower alone has a potential to contribute not less than 1750 TWh to the energy mix of Africa. This derives from the fact that Inga River as a standalone project (in the Democratic Republic of Congo) has the potential of generating up to 40000 MW of electricity, with additional capacities coming from rivers such as Nile and Zambezi (Ghoniem, 2010). The combined capacity of all African rivers is sufficient to meet all the energy demand for the continent (Kaggwa et al, 2011).

Biomass resource is also enough to serve as a reliable alternative source of energy for the continent (Bamikole et al, 2011). In addition, Africa has a potential to generate not less than 14000 MW from geothermal sources (ADB, 2011). Also, a great potential exists for solar power, which can be obtained from the continent's desert areas, which include the Sahara Desert (in the northern hemisphere) and the Kalahari Desert (in the southern hemisphere). Despite these vast sources, the utilization of solar in Africa is still minimal and varies among countries. South Africa operates a solar thermal power system plant that only generates 0.5 MW (Eskom, 2010). Egypt plans to install one that will generate between 30 and 300 MW by year 2020. Despite the scattered RE initiatives and low RE uptake on the continent, the diversity of renewable energy sources in Africa is such



that the continent has a possibility of playing a leading role in the supply of renewable energy to the world, significantly supplementing its external income hitherto received from export of mainly primary products to the world.

A major setback in Africa's effort to migrate to renewable energy (RE) is the cost attached to the energy and the associated technologies. Over the years, economies of the continent have been solely dependent on foreign technologies. As a result, the inherent cost of licensing and other intellectual property requirements have been a barrier that frustrates the adoption of technologies needed to migrate to REs. Ultimately affordability of REs, as reflected by their unit prices, will be pivotal to their adoption though. The unit energy price to be paid by consumers is an important deciding factor for governments to adopt policy supporting a particular energy type with or against other alternative energy sources. The energy mix as decided by governments will turn have an important bearing on respective country development dynamics.

## TECHNOLOGY AS A CRITICAL FACTOR OF RENEWABLE ENERGY AFFORDABILITY

Conversion technologies are a major determinant of the unit cost of RE energy harnessing. As such, these technologies have a bearing on the price that consumer will ultimately pay in using a specific RE source (Turkenburg, 2000). At present, estimates of the cost of harnessing energy from RE resources has been presented as being higher than that of fossil fuels (DOE, 2011). RE resources in Africa have a potential to meet many countries' energy demand, but without the right conversion technologies and affordability of RE to an average African, envisaged socio economic benefits of the continents migration to RE use will remain minimal.

Despite this general belief that the cost of RE is still high, there are international success stories of the use RE conversion technologies in national development effort. Germany that took a policy decision in 2000 to migrate to wider use of renewable energy in its economy has been able to achieve cost reductions and improved RE energy efficiency. Today, Germany is among the world's three major renewable energy economies and its policy serves as a model of success in more than forty seven European countries. German stands out as potential good benchmark for RE energy policy (Kaggwa et al, 2011).

Ultimately, assessment of RE affordability in Africa requires insight into RE conversion technologies being used on the continent given the importance of the technologies in determining unit RE energy cost. However, since the continent is a net importer of such technologies, it may not privy to the intricacies of the technologies. Nonetheless, affordability assessment of energy type can still be done based on data on unit energy production cost for different technology types available from developed countries like German.

The unit energy production cost is an important differentiator that should guide the policy of a country when it considers the possibility of supplementing its energy with RE. As long as REs are considered to be expensive; there will be less enthusiasm to adopt them. This is important for South Africa as it is on the verge of making a decision to introduce RE as an alternative source of energy. Without the knowledge of the actual RE unit cost, South Africa may run a risk of making costly policy decision.

International estimates for the unit cost of producing 1 KWh from different energies including minimum prices for carbon emission according to Unenergy are presented in Table 1.

**Table 1:** Estimates of unit production cost of 1 KWh selected energy sources

Energy cost / Energy source	Coal fire	Coal fired with 75% geo-sequestration	Nuclear	Combine d solar and PV panels	Geother mal steam	Wave power	Concen trated sola PV	Parabolic Concentr ated solar steam	Concen trated solar steam	Convent ional PV
Cost per KWh to produ	0.16	0.26	0.26	0.04	0.15	0.15	0.14	0.14	0.25	0.25

ce (US \$)										
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Source: Unenergy, 2009

It is noticeable in Table 1 that combined solar and PV panels have the least production unit cost than other RE sources. More importantly, the unit production cost of PV is less than that of coal-fired power plants, which is the main source of electricity for South Africa. Based on this, it seems plausible to recommend that South Africa gives priority to PV, which appears to be cheaper and affordable.

Energy tariffs on the continent may also be useful in providing some indication on affordability of different energies in cases where countries use the same energy mix or type. Energy tariffs data indicate that even for countries that are predominantly using oil as their main energy source, there is great variation in energy tariffs. Kenya and Uganda in the East Africa have similar energy use portfolio but their tariffs are significantly different. Whereas Kenya charges 9.7 cents (USD) for 1 kWh of energy for social use, Uganda charges 23.74 cents (USD) for the same (Table 2). Ultimately there appear to be little correlation between energy production costs according to Table 1 and energy tariffs being paid in different African countries. What is noticeable though is that countries which are comparatively more developed have lower energy tariffs. Egypt and Libya in North Africa, and South Africa have relatively lower tariffs than most African countries. This indicates that energy prices may have a bearing on economic growth rate.

**Table 2:** Comparative Tariff (cents USD/kWh) for selected African Countries

Utility		KPLC	UEGCL	GECOL	EEHC	ESKOM	ZESCO	SNEL	AES_SONE
Country		Kenya	Uganda	Libya	Egypt	South Africa	Zambia	DR Congo	Cameroon
Social Tarrif (100KWh/month)	1kW	9.7	23.74	1.52	1.34	4.62	1.13	2.65	11.55
Single phase domestic usage (E = 200KWh/month)	2kW	13.5	24.79	1.52	1.56	4.62	2.04	3.9	11.55
	4kW	13.5	24.79	1.52	1.56	4.62	2.04	3.9	11.55
Triphase domestic usage (E = 600KWh/month)	6kW	15.4	25.49	1.52	2.5	4.12	2.18	8.7	12.73
	10kW	15.4	25.49	1.52	2.5	4.12	2.18	8.7	12.73
Commercial usage (E = 1800KWh/month)	12kW	15.9	24.25	3.64	8.02	3.64	4.13	11.0	14.94
	15kW	15.9	24.25	3.64	8.02	3.64	4.13	11.0	15.7
Semi industrial and motive power (E = 2500KWh/month)	20kW	8.45	25.5	3.98	8.33	3.38	4.52	15.0	14.09
	25kW	8.45	26.0	3.18	8.33	3.55	4.52	15.0	15.0
Medium voltage (E = 35 000KWh/month)	250kW	7.25	11.83	2.35	3.2	2.81	4.74	9.8	13.17

Data extracted from UPDEA data 2009

From an energy policy perspective, price differences between production cost and energy tariffs have to be taken into account when deciding on affordable technology.

## RENEWABLE ENERGY PRICING IN SOUTH AFRICA A COMPARATIVE ANALYSIS

Specific to South Africa, the unit cost for solar energy relative to other RE sources is considerably high. Under the Renewable Energy Feed-in (REFIT) programme that is aimed at encouraging private producers to supply RE to the national grid, PV solar energy was considered most expensive. This was reflected by the highest unit price that was to be paid to independent producers when they sell energy, there from, onto the national grid under the first REFIT programme (Table 3). This was again confirmed by the new prices under the revised REFIT (Table 4).

**Table 3:** RE Energy Prices under the first REFIT Programme (cents US/kWh)

Renewable energy sources	Unit	REFIT price
Large scale grid connected PV systems	R/KWh	3.94
Concentrated solar power (CSP) trough (no storage)	R/KWh	3.14
Concentrated solar power (CSP) tower (6hrs storage)	R/KWh	2.31
Concentrated solar (CSP) trough (6hrs storage)	R/KWh	2.1
On shore wind	R/KWh	1.25
Biomass solid	R/KWh	1.18
Biogas	R/KWh	0.96
Small hydro	R/KWh	0.94
Landfill gas	R/KWh	0.9

Source: DoE South Africa

More so, South Africa's RE prices as reflected by the country's REFIT prices, are significantly higher than that of Germany (Table 4). The most significant difference in prices relates to PV solar energy where South Africa's price is 36.84% than that of Germany.

**Table 4:** RE Energy prices under the revised South African REFIT Programme compared to German's current REFIT prices (cents US/kWh).

Technology	RSA REFIT November 2011	Change to previous RFIT Cap	German REFIT for 2011/2012	RSA REFIT comparison to German
Concentrated solar	2.85	-9.24%	Not supported	Not applicable
On shore wind	1.15	-8.00%	0.91	20.86%
PV solar	2.85	-27.66%	1.8	36.84%
Biomass	1.07	-9.32%	0.82	23.36%
Biogas	0.8	-16.67%	0.71	11.25%
Land fill gas	0.6	-33.33%	0.51	15.00%
Small Hydro	1.03	9.57%	1.26	-22.33%

Since REFIT prices are set putting into consideration estimated cost of energy production using a particular technology, Table 4 implicitly indicate that the unit production cost of energy using technologies like PVs in South African is relatively high compared to international unit energy production costs.

Of major policy interest from this observation is that the assumed high solar energy production cost can bias policy makers in positioning solar energy use in the country. This can result into coming up with a national energy policy framework that puts South Africa on a wrong and expensive energy production mix.

It should be noted though that to correctly capture the actual cost of RE energy production in South Africa and to rightly position REs in the country's energy mix, other non-strictly technology factors affecting RE prices ought to be taken into account. These factors such as the cost of investment, government policy and technology management within a country can distort energy prices.

The market for renewable energy technologies in South Africa is relatively young. Its lack of maturity leads to high volatility and thus poses a great risk for investment. If technologies are politically supported by schemes such as feed in tariffs, it is uncertain whether a change of legislation will alter the economic dynamics of aligned projects. For example, alteration of the Spanish feed-in tariffs in 2008 led to a significant fall in the growth rate of solar technology market in Spain (Pagel, 2009). In addition, financial institutions have a tendency to factor in all risks associated with technology and incorporate them into their credit conditions, the

consequence of which is normally high cost of investment capital acquisition in developing countries like South Africa. The high cost of capital has a bearing on the price that ends up being attached to an energy source.

Technology management within a country has energy cost implications too. The cost of technology deployment and maintenance needs to be taken into consideration. Countries have different capacities and expertise to put to use existing technologies. Even if the same technologies were availed to different countries at the same price, putting it to use will be done at different cost. Although solar energy technology has improved to an extent that it is now economically feasible to use thermal solar energy for both heating and cooling purposes, this may be applicable to few developed countries. The downward trend in RE production cost may be universal but the slope of decline varies from country to country depending on countries' unique characteristics. Nonetheless, technology remains a core determinant of energy production cost and has a strong bearing on the energy prices within a country holding other factors constant.

## CONCLUSIONS

If applied in a modern way, renewable energy sources can positively contribute to a country's environmental, social and economic development. At a macro level, the increase in overall energy supply will have a positive spin off on the economy of a country through job creation. Moreover, REs in particular solar energy, allows decentralised energy supply, thus minimising distribution costs of bringing energy to remote areas that are vulnerable to poverty. What this means is that the increased use of RE energy in South Africa has a potential to: increase energy supply in the country, stabilise national energy supply and is likely to improve the welfare of the country's rural and urban population via the enabled jobs from increased economic activities.

At this point of deciding the direction that South Africa should take in diversifying its energy sources, the country should consider the unit production cost of REs as an important factor in determining the prioritisation of REs in national energy policy and direction. In this regard, prices attached to renewable energies, in particular solar energy, are too high and unrealistic compared to international trends. Based on available data it is evident that the cost PVs technologies in South Africa is overestimated, even after taking into account other secondary cost factors. The status quo has the potential to put the country on a sub-optimal and expensive energy mix path. It is recommended therefore that solar energy costs and prices for South Africa be re-assessed and the positioning of solar energy in the country's long term energy mix strategy be reconsidered against the confirmed RE unit costs and its subsequent affordability.

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# THE CURSE OF DISTANCE: EXPLAINING THE ENTREPRENEURS' GEOGRAPHIC DISPERSION IN TURKEY

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## ABSTRACT

*New firms, entrepreneurs, as vital elements for regional development are practical to identify the location choice of the economic activity. Originating from their significance this paper focuses on the remoteness issue and asks whether regions that are close to the economic activity centers are realizing substantial entrepreneurial activity. Results of the paper for the case of Turkey validate that, provinces that are close to the economic center of Turkey, İstanbul, and Ankara are realizing high levels of new firm formation. Moreover the provincial market potential index, which is a function of distance, also successfully explains the entrepreneurs' dispersion patterns in Turkey.*

## INTRODUCTION

With the rise of New Economics of Geography (NEG) different dimensions of regional economics are started to be analyzed by using the issue of distance. Location choice, which has already been in the agenda of von Thünen (1826) and Marshall (1920) decades ago, is one of the most but not the least important issues for geographers. Krugman (1991) and Fujita et al. (1999) underline that location choice is inevitably linked with agglomeration behavior of firms over space. The externalities that evolve around cluster of economic unit is one vital motive behind the agglomeration economies. While there are different ways to identify such location choice, new firm start-ups (firm formation and/or entrepreneurs) is widely used to analyze the geographical dispersion of location preferences. Cheng and Li (2011) discussed that new firms are crucial in the sense that they represent the entrepreneurship capabilities and following Schumpeter (1912), similar to Reynolds (1994) and Acs and Armington (2002), they underline that entrepreneurs are crucial for economic growth. In deed Reynolds et al. (1994) underlined that new firms and especially small firms are valuable as they have employment creation potential higher than the existing industry potentials. Although the job creation potential of new comers is critical, the capability of new firms in terms of knowledge transmission is also worth mentioning. Acs and Varga (2002) discusses that the existence of new firms across geographies helps explaining the transmission of the gross knowledge into an economically useful one. Overall in any case the existence of new firms in given regions, which can also be regarded as the location choice of firms across space, is a vital element of the development of geographies. The importance of new firms shifts the attention of regional scientists towards the examination of the factors that is affecting the location choices. Krugman (1991) revisits Marshal (1920) and underlines that local demand, local externalities, development of a pooled labor market and spillover of knowledge are the basic sources of new firms' creation process. Somehow, basically there will be some demand side and supply side factors that will evolve and act as pull and push factors that are going to shape the decision of the new firms. These arguments are subject to numerous studies starting from the mid 1990s. Fritsch (1992), Davidson et al. (1994), Garofoli (1994), Reynolds (1994), Guesnier (1994), Reynolds et al. (1994), Kangasharju (2000), Berglund and Branas (2001), Fritsch and Falck (2003), Lee et al. (2004), Sutaria and Hicks (2004), Bosma et al. (2006), Cheng and Li (2011) all underline that location base properties such as regional demand, human capital development, financial development, local subsidies, public policy, firm size, industrial spillovers and skill-creativity level of labor force have influence on the new firms' location choice. The common property of all these studies is the development level of the economies; empirical findings testing the determinants of the process are done for the developed economies of the globe. To the knowledge of this study, Kaya and Üçdoğruk (2002), Gaygısız and Köksal (2003), Günalp and Cilasun (2006) and Karahasan (2010) all examining Turkey are

the most striking studies done for developing and/or less developed economies of the globe. Although, in almost all of the listed studies above, Krugman (1991) type demand side “pull effect” is controlled by looking at the local income, population level (and/or growth) and population density, they all focus on the impact of the location’s demand potential on its own firm absorption potential. In deed looking at the possible trade opportunities especially for intra-country studies makes inclusion of remoteness to the demand areas as additional discussion issues. For instance, given low non-physical barriers to trade, in the form of tariffs and quotas between the regions of a country, controlling for distance to high market potential areas becomes more vital. Harris (1954) and later Krugman (1991) used the concept of market potential as to understand the impact of surrounding locations’ demand on the domestic production. More recently in Redding and Schott (2003) and Redding and Venables (2004) the significance of the market potential on dispersion of wages and human capital is discussed however a formal emphasis about the possible relationship between market potential and firms’ location choice has not been tested yet. Although empirical literature which examines the dynamics of the new firm formation is prosperous, it is remarkable and noteworthy that geographical proximity to center as well as distance based spatial interactions are neglected issues of the location choice of firms. It is first Fritsch and Flack (2003) and Cheng and Li (2011) to use the concepts of geography and spatial interactions in a setting that questions the location choice of new firms. Yet still directly questioning the impact of the distance has not been done yet. In this sense, this paper seeks to fill this gap and examines whether being close to the market affects the location choice of the firms or not. Remoteness to the market is controlled by first looking at the direct distance to the high market potential area(s); next the dynamic relationship between each location is investigated by the market potential approach. Other than the inclusion of distance and distance weighted demand (market potential) as an expected contribution, a second noteworthy role of the paper is applying a framework that helps to examine a developing economy Turkey, on her transition path to the access to European Union (EU) as a second expected contribution. Originating from the central discussion of the paper about the relationship between distance and location choice of new firms, the paper will continue by first showing how to identify the geographical and spatial interactions. The distinction between the global spatial autocorrelation and the local spillovers will be complemented by introducing the market potential index that defines the geographical proximity to center. Next the paper will introduce the area of study and give the first set of results about how new firms are dispersed across the geography of Turkey; the impact of distance on the location choice will be first visualized by looking at the local spillovers forming clusters and outliers in different geographies that are remote to each other as well as the economic centers. Next this visualization will be carried out by following a more formal framework that defines the geographical proximity concept by combining distance with the demand. The paper will continue by the construction of the econometric models with different specifications and the results obtained from each of them. Finally the paper will end with a conclusion.

## DATA AND METHODOLOGY

The central objective of the paper is questioning the impact of the distance on the location choice of new firms. As mentioned in the first section, the right measure to understand the location choice of new firms is basically the new firm numbers (start up numbers). Data on the number of new firms at NUTS 3 level in Turkey is gathered from the regional statistics of TURKSTAT for the year 2009. To account for distance; first direct distance to Istanbul, as the economic center of the country, next distance to Ankara as the bureaucratic center will be used. Yet these two measures is going to visualize the remoteness of provinces in a static manner; so as a contribution, a more formal way of understanding the impact of distance through including purchasing power is also implemented. Harris (1954) first proposed that accessing to markets can be best calculated by looking at the distance weighted sum of the incomes of the regions (see eq. 1). This approach is very recently used by geographers. For instance models of endogenous human capital accumulation search for the geographical dispersion of wages and its interaction with the market potential of regions (see Redding and Schott, 2003 and Redding and Venables, 2004). Therefore if one calculates the distance weighted purchasing power (income, population, tax revenue, household consumption etc.) of each location, then it will be possible to question the impact of distance by also taking into account the demand side of the relationship. Equation 1 is the market potential index, where  $Y$  will account for provincial population and  $D$  represents the distance between each pair of provinces.

$$(eq. 1) \quad MP = \sum_{j=1}^K \frac{Y_j}{D_{ij}}$$

The direct distance as well as the index proposed above is the way the research treats the location and distance phenomenon. Yet before relating distance and the new firms' formation, it is informative to illustrate the dispersion of the new firms among the geography of Turkey and give some preliminary information about the regional differences in Turkey to the reader. Next section aims to do so by using a number of spatial statistics that helps us to evaluate the cross section variation of the social and economical life in Turkey. What we mean by the dispersion of new firms among the geography of Turkey can be best understood by looking at its spatial concentration. The first measure considered is the Moran's  $I$  that is a well known measure calculating the spatial autocorrelation (see eq. 2). The statistic by itself shows whether the variable of interest is correlated across space or not. A positive and significant Moran statistic tells us that close locations are forming clusters composed of similar values, whereas a significant and negative statistic is a sign for the existence of outliers that behave on the opposite direction of its location. This spatial autocorrelation measure is useful to understand the spatial interconnections however will be insufficient to explain the local realization hence is labeled as a global measure. In equation 2;  $Z_i$ 's are the deviations of the variable from the mean for each cross section, whereas  $W$  represents the row standardized inverse distance weight matrix. Anselin (1993) formulated how one can decompose the global measure in equation 2, by proposing a decomposition. By doing so, it will be possible to examine the regional patterns of the spatial autocorrelation. The significance of this decomposition is computed by the Local Indicator of Spatial Association (LISA). LISA measure helps one to see the non-stationary across space (see eq.3).

$$(eq. 2) I_i = \frac{n}{s} \frac{\sum_i \sum_j w_{ij} z_i z_j}{\sum_i z_i^2}$$

$$(eq. 3) LISA = (x_i - \bar{x}) \sum_j w_{ij} (x_j - \bar{x})$$

The market potential index as well as the local spillovers that are computed by looking at the spatial indices all signals the dispersion and the geography of location choice of the new firms. Returning back to the central objective and to directly question whether firms prefer to locate close to the economic centers with high market potentials, models running from equation 4 to 6 are constructed. Note that remoteness indicator accounts for distance to Istanbul, Ankara and market potential index respectively. First model in equation 4 takes into account the direct distance to Istanbul, Ankara and also the market potential of each location (separately to deal with multi-collinierity) in a non-spatial way. Following this, two additional models are estimated to account for spatial interconnections. Spatial Lag Model (Spatial Auto Regressive Model-SAR) in equation 5 assumes that location choice of new firms in a given location affects its surrounding; on the other hand equation 6, which is the Spatial Error Model (SEM), proposes that the locational spatial links works over the omitted variables.

$$(eq. 4) y_i = \alpha + \beta \text{Remoteness}_i + \varepsilon_i$$

$$(eq. 5) y_i = \alpha + \rho W y_i + \beta \text{Remoteness}_i + \varepsilon_i$$

$$(eq. 6) y_i = \alpha + \beta \text{Remoteness}_i + \lambda W \varepsilon + u_i$$

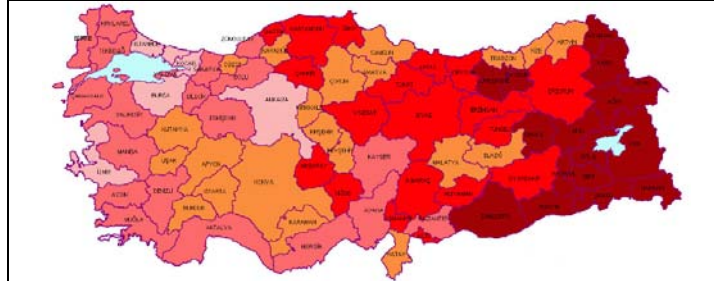
## REGIONAL INEQUALITIES AND GEOGRAPHY OF NEW FIRMS IN TURKEY

Regional differences and the rigidity of the inequalities in Turkey are discussed within the framework of both neo-classical convergence discourse as well as the policy reports of the public authorities. Among studies testing the income convergence, Doğruel and Doğruel (2003) and Gezici and Hewings (2007) remark that even there is very small and limited signs of beta convergence; the dual and heterogenous pattern for the income inequality is an ongoing problem. Studies remark that the dispersion of per capita income in the mid of 1980s is the same as the dispersion as of the beginning of 2001. Moreover a number of studies carry out this discussion towards the investigation of the other social and economical dimensions of the regional inequalities; Filiztekin (2009), Karahasan (2010), Karahasan and Lopez-Bazo (2010) and Karahasan et al. (2011) uses unemployment, new firm numbers, human capital, wages and employment distribution to examine regional divergence in Turkey. These studies agree that different social and economical facts of Turkey share much or less the same faith with the regional income differences. Especially after the first liberalization attempts of 1980s and 1990s, the overall inequality problem turns out to be a social and economical reality of the country. An important report published



by the Ministry of Development (former State Planning Organization) shows us that the regional inequality in Turkey makes five specific clusters of provinces. The index rankings are mapped and illustrated in figure 1 (Provincial and Regional Development Ranking Research, 2003). These 5 clusters validate the dual structure in Turkey; with the developed locations mostly on the north-west, west and south costal lines of the country. On contrary the eastern (specifically south eastern), mid-north Black sea and the Eastern Black sea regions of Turkey is composed of provinces with very low levels of development. Although some of the lagging provinces are observed to perform better with respect to the developed ones when the 1996 and 2003 figures are compared, still there is a remarkable gap between the first and the last cluster of development. Here it is noteworthy to remark the similar inequality pattern realized in the report of the public and the empirical studies for the post 1980 period. This validated the consciousness of the public or specifically government about the regional inequality problem, however also underlines once more the failure of public to deal with this issue.

**Figure 1. Regional Development Index (Provincial Development)**

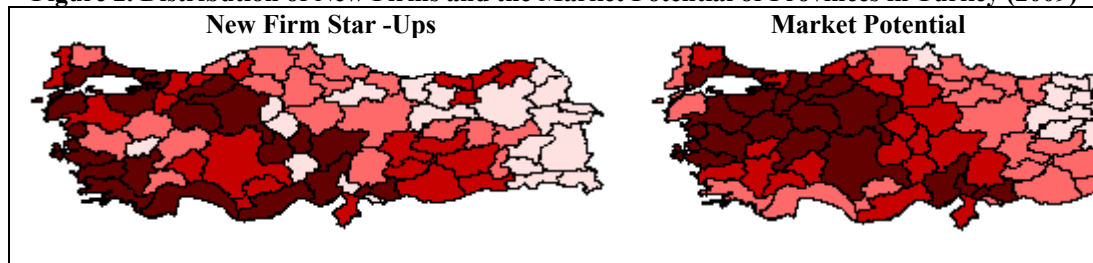


Source: T.R. Ministry of Development-Provincial and Regional Development Ranking Research, pp.72 (2003)



Note:  to  represents the degree of development from highest to lowest

This general outlook for Turkey shows us the general tendency of the inequalities. To divert the attention back to the central research question figure 2 gives insight about the distribution of the market potential as well as the new firms start up rates as of year 2009. Two things are valuable; first the two maps share a very similar pattern with the development ranking in figure 1, second the dispersion of the new firms seems to be highly correlated with the market potential's of the provinces. This early yet vital finding indicates that locations with high market potential are mostly endowed with relatively more new firm start ups. In a general yet important insight this postulates that distance, thus geography seems to matter for understanding the regional differences for entrepreneurs' dispersion in Turkey.

**Figure 2. Distribution of New Firms and the Market Potential of Provinces in Turkey (2009)**



Source: TURKSTAT, Author's own calculations

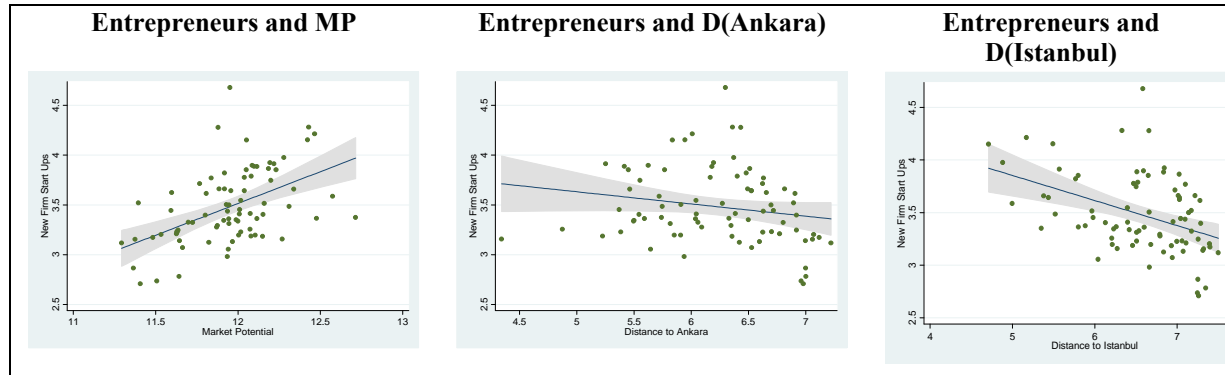
Note:  to  indicates the density from lowest to highest in both maps.

Starting from this point, it will be valuable to discuss the spatial concentration of the new firms through space and ask whether the pattern has something to do with the distance formally. For this concern we believe figure 3 is informative. For the three different remoteness indicators, the link between the new firms start up rates are evaluated.

**Figure 3. Link between Remoteness and New Firm Formation**

Source: TURKSTAT, Author's own calculations

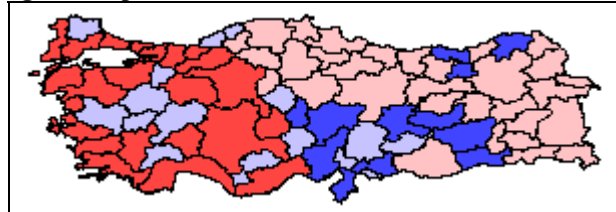
Figures clearly indicate the significant positive association between the new firm start-up rates the



market potentials. Whereas there is negative relationship between distance to Ankara and Istanbul; in line with the theoretical expectation; yet this relationship turns out to be stronger for the case of distance to Istanbul. Their empirical significance is left to the following section.

While these early findings indicate that new firms has a geographical pattern that seems to be influenced by the remoteness, still these observations do not yield information about the spatial concentration as well as spillovers of the entrepreneurs among the geography of Turkey. However as discussed in the introduction behavior of different social and economical realities may be cross section dependent; in a way that contributes to the ongoing discussion about the curse of the distance. Figure 4 is the decomposition of the spatial autocorrelation of the new firm start up rates in Turkey. The Moran's I indicator for the year 2009 is 0.273. This indicates that there is strong significant positive correlation between the entrepreneurs behavior in Turkey. However to see how this spatial association is dispersed and what happens to the local realization can be observed once the global statistics is decomposed and the local realizations are computed. Figure 4 is the decomposition of the global association and table 1 is the local cluster provinces that are influencing their geographies positively in the form of generation of mostly positive externalities.

**Figure 4. Spatial Concentration of New Firms in Turkey**



Source: Author's own calculations

Note: ■ and ■ represents the high and low entrepreneur clusters respectively, whereas ■ and ■ are high and low entrepreneurs outliers respectively. Moran's I: 0.273 (st. dev: 0.043, p-value: 0.01)

First the general outlook of the dispersion of the new firms in Turkey indicates the dual structure; that makes the data heterogeneous in its spatial decomposition. Thus the strong spatial autocorrelation is observed to be realized differently in the western and the eastern side of the country. Moreover once this decomposition is tested for the significance of the local realization, findings indicate that : Istanbul, Yalova, Kocaeli and Antalya are the leading locations forming pull areas with numerous externalities for the new firms; provinces such as Kars, Agri, Ardahan, Siirt and Van are suffering from the diseconomies that is discouraging the formation of new firms. These findings are vital in the sense that; both the spatial concentration as well as the local spillovers of the new firms is observed to follow a geographical pattern that seems to be highly correlated with the distance issue.

# ECONOMETRIC SPECIFICATION AND EMPIRICAL FINDINGS

To keep on the investigation of the link between distance and new firm start-ups, models summarized from equations 4 to 6 are estimated. Finding reported in table 1 are vital. Regardless of the econometric specification distance seems to be explaining the distribution of entrepreneurs in Turkey. For direct distance to Ankara and Istanbul; results indicate that including the spatial interaction parameters ( $\rho$  and  $\lambda$ ) are informative and the distance indicators are correctly signed in line with the expectations. Moreover the market potential index is also significantly and positively affecting the dispersion of the new firms; yet including the spatial interaction parameters is not contributing to the estimations. Here it can be important to underline that there seems to be the problem of heteroscedasticity in the models estimated for the market potential index. Also note that in none of the spatial models there is any spatial dependency left in the lagged as well as the residual values. Although results from the reduced form models are informative, they can suffer from lack of robustness check for other determinants of the new firm evolution. Remembering the numerous dimensions of the process, which are summarized in the previous sections using two specific ones are observed to be important; to assess the local demand potential population density of provinces are used. On the other hand to examine the local properties of the labor market as well as the quality of education, lecturer per student numbers in secondary education is used. All models in table 1 are re-estimated by including these two control variables. Interestingly in all models other than the once estimated for the distance to Ankara, there is a sharp decline in the significance of the distance indicators. However it is worth underlining that even there is a decrease in the direct distance indicators; the spatial interaction parameters that are already a function of the distance (inverse distance) are influencing the process significantly and again in line with the expectations. This time in none of the models estimated there is the problem of heteroscedasticity; and once more the spatial models are sufficient to explain the spatial interactions.

**Table 1. Reduced Form Models Estimating the Impact Geographical Location**

Dependent Variable: Firm Start up Rate (2009)									
	Models I			Models II			Models III		
	OLS	SAR	SEM	OLS	SAR	SEM	OLS	SAR	SEM
Distance to Istanbul	-0.223* (0.040)	-0.160* (0.044)	-0.188* (0.049)	-	-	-	-	-	-
Distance to Ankara	-	-	-	-0.161* (0.048)	-0.111** (0.04)	-0.140* (0.054)	-	-	-
Market Potential	-	-	-	-	-	-	0.750* (0.116)	0.620* (0.144)	0.725* (0.126)
$\rho$	-	0.443** (0.173)	-	-	0.655* (0.142)	-	-	0.260 (0.192)	-
$\lambda$	-	-	0.466** (0.193)	-	-	0.699* (0.138)	-	-	0.174 (0.238)
# of Obs.	81	81	81	81	81	81	81	81	81
$R^2$	0.27	0.30	0.20	0.12	0.22	0.09	0.35	0.35	0.32

Standard Errors in () for coefficient estimates, \*, \*\*, \*\*\* represents significance at 1%, 5% and 10%

## CONCLUSION

This study is motivated by the regional inequality fact of Turkey and applies a different framework to re-visit this issue. Focusing on the dispersion of entrepreneurs that are important for regional development and growth, their dispersion is investigated by taking remoteness and distance issues as an important factor. First set of descriptive findings indicate that the geographic pattern of the entrepreneurs are influenced by the market

potential as well as direct distance to two specific economic centers of Turkey: Istanbul and Ankara. These preliminary findings are also confronted in the reduced form econometric models. However once other factors affecting the process are also taken into account results indicate the loss in the significance and power of remoteness indicators. Yet keeping in mind that the spatial interaction parameters are already a function of distance, the entrepreneurs dispersion continues to be highly influenced by the remoteness but this time from a different perspective.

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# **MICRO AND MACRO ECONOMIC ANALYSIS OF ASSETS AND CAPITAL OF COMPANIES IN SERBIA**

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## **ABSTRACT**

*A company is a legal entity which carries on business for profit. By the latest current legislation in Serbia, the companies are transformed and this process is changing the way of how companies are establishing and displaying economic value of assets and capital and their increase and decrease. As a result of financial operations in market conditions it is determined the completely new way of profit distribution and dividend payments.*

## **INTRODUCTION**

Company assets are properties and rights owned by the company, as well as other rights of the company. Net assets (capital) of the company are the difference between assets value and liabilities of the company. Core (registered) capital of the company is the monetary value of the subscribed investments of company members in company. The investments in the company can be financial and nonfinancial and are expressed in dinars. If the payment of the financial investment is done in foreign currency in accordance with the law governing foreign exchange transactions, dinar value of investment is calculated of the average exchange rate of National Bank of Serbia on the date of investment payment. Nonfinancial investments can be the property and rights. Persons who, by the articles of association of a company or otherwise, took over the obligation to pay or bring in the company the certain investment, are obliged to the company for performing the obligation and they are also obliged to compensate the damage caused to the company by missing or being late in performing the obligation. When establishing the company or increasing the base capital, the financial or nonfinancial investment must be paid, i.e. entered into the period specified in the Articles of Association or the decision on capital increase, so that this period is calculated from the date of the accepting the Articles of Association, i.e. the decision on capital increasing.

## **ASSETS, CAPITAL AND THE INVESTMENTS**

Based on taken obligation, the persons acquire the stock in the company or shares of the company paid investments, or entered in the company become the property of the company. The value of nonfinancial investment is determining: agreeably by all members of company and by evaluation. In public joint-stock companies the value of nonfinancial investments determines exclusively by evaluation. The value of nonfinancial investment in company evaluates the authorized court expert, auditor or other expert person authorized by the side of competent public authority of the Republic of Serbia to do the value evaluation of some properties and rights. Evaluation can be made by a company that meets the statutory requirements to perform the evaluation of assets or rights that are subject to evaluation. Evaluation can not be older than one year from the date of entry of nonfinancial investment and is registered and published in accordance with the law on registration. If nonfinancial investments are securities or money market instruments, value of that investment is determined by at least 60 days before entering the nonfinancial investment in company. The value of nonfinancial investment determines as weighted average price of these securities, i.e. instruments of money market achieved on a regulated market or multilateral trading platform in terms of law regulating the capital market, in period of six months preceding the date of determination of this value, under condition that: achieved

turnover of securities in this period, i.e. instruments of money market whose value is determining, was at least 0,5% of their total issued number, and at least three months of this period achieved turnover of securities, i.e. instruments of money market was at least 0,05% of their total issued number monthly. Members of the company can not be refund by paid or entered investments, nor they can not be paid by interest on what they invested in the company. Paying the price in achieving own stocks or shares, as well as no other payments to the members of the company, do not consider as returning the investments to the members of the company.

**Table 1: Structure of total revenues and total expenditures of the company**

DESCRIPTION	2010 in million dinars		2009 in million dinars	
	Amount	(%)	amount	(%)
total revenues	7.116.539	100,0	6.328.036	100,0
total expenditures	7.184.563	100,0	6.409.342	100,0
operating income	6.637.852	93,3	5.888.890	93,1
operating expenses	6.335.350	88,5	5.701.153	89,0
Operating profit	282.502	-	187.737	-
Financial income	238.518	3,3	198.800	3,1
financial expenses	524.981	7,3	419.184	6,5
financial loss	286.463	-	220.384	-
other income	240.169	3,4	240.346	3,8
other expenses	304.232	4,2	289.006	4,5
other loss	64.063	-	48.660	-

Source: [http:// www.apr.gov.rs](http://www.apr.gov.rs) , APR Statement of Operations of Republic of Serbia, February 25, 2010 .

In 2010. companies in Republic of Serbia recorded slight increase in scope of activities. According to data from financial reports for 2010., companies have expressed the total revenue of \$ 7.116.,39 million which compared to the previous year increased by 12.5%. Total expenses are increased by 12.1% with amount of 7.184.563 million dinars. However, when considering this increase it should particularly have in mind the highly expressed inflationary trends and the weakening of local currency in 2010., and the fact that in the previous year, after a period of several years of increase, revenues and expenditures decreased significantly. Most of the revenues the companies generated from core business, and participation of business revenues in total revenues is 93,3%. Most contributions are revenues from sale making the mainly part, and expressed in amount of 6.371.065 million dinars. On the other hand, in total expenditures the most participation of 88,5% has business expenditures, with the majority of purchase price of sold goods and costs of material. More intensive increase of business revenues then business expenditures contributed to increase of business profit of the company in 2010. even for 50,5% compared to the previous year. However, in spite of realized business profit, still insufficient scope of activities and business in conditions of high indebtedness induced the further growth of financial expenditures (25,2%), primarily, expenditure of interests and negative exchange rate differences, so the financial losses exceeded the achieved business profit. In addition, the increase comparing the previous year recorded also other expenditure (5,3%), while other revenues are almost unchanged. Consequently, the companies in 2010. at the aggregate level expressed a negative net financial result amounted to 89.698 million, which is compared to the previous year decreased by 12,2%. With net profit operated 51.693 companies, with net loss 31.787 companies, while net financial result did not report 7.235 companies.

**Table 2: Business results (net profit and net loss) of companies**  
( in million dinars)

DESCRIPTION	2010		2009	
	amount	number of commercial society	amount	number of commercial society
net profit	316.548	51.963	282.906	52.917
net loss	406.246	31.787	385.109	32.592
negative net financial result	<b>89.698</b>		<b>102.203</b>	

Source: [http:// www.apr.gov.rs](http://www.apr.gov.rs) , APR Statement of Operations of Republic of Serbia,

February 25, 2010 .

Total assets of companies, as of the date of December 31st 2010., are expressed to amount of 10.302.976 million dinars and greater in comparison with previous year for 7,1%. In structure of total assets of companies fixed (non-current) assets participate with 54,0%, and current assets (working capital) with 39,3%. Investments in fixed assets (real estate, facilities, equipment and biological means) are 4.226.760 million dinars, while within working capital the investments in short-term claims, investments and cash are 2.786.262 million dinars, and in reserves 1.165.590 million dinars. Pretty unfavourable business conditions influenced the company to direct its resources, primarily, on current business, so the total investments of companies in 2010. are increased for only 1,6% in comparison with previous year. Slightly increase of investment activity is followed by significant growth of claims and growth of losses above capital level (11,9% i.e. 29,6%), which resulted by decreasing of fixed assets participation in total assets and caused further worsening of company assets structure. In structure of total assets resources the largest participation have the short-time liabilities (40,9%), then the capital (39,8%) and long-time liabilities (17,9%). In 2010. own sources of funding, i.e. the capital, has kept almost on unchanged level in comparison with previous year and was 4.104.396 million dinars. Beside that, possibilities for collecting fresh capital were limited due to still undeveloped capital market, so also in 2010. the companies mostly used borrowed sources of funding for operating. Intensive growth of long-term and short-term liabilities in conditions of nearly unchanged capital level in comparison with previous year influenced to decreasing of capital participation in total sources of funding from 42,3% in 2009. to 39,8% u 2010.

In the capital structure, the core capital is 3.326.188 million dinars, undistributed profit 1.195.735 million dinars, reserves and revalorized reserves 824.347 million dinars, unpaid subscribed capital 64.310 million dinars and loss 1.293.440 million dinars. Unrealized profits on the base of securities available for selling are 10.029 million dinars, and unrealized losses 16.311 million dinars. The weakening of companies financial position continued also in 2010. on which undoubtedly points the decreased participation of own capital in total sources of funding, from 36,4% in 2009. to 32,9% in 2010. At the same time, total liabilities are increased for 11,7%, wherein faster growth record short-time liabilities in comparison with long-term (12,4% i.e. 10,0%). These trends adversely affect the indebtedness of companies, which is increased in u 2010., so that 1 dinar of borrowed capital is covered with 0,55 dinar of own capital (previous year 0,63 dinar).

**Table 3:** The main business indicators of companies

DESCRIPTION	2010	2009
rate of return on assets after tax	0,3%	0,1%
rate of return on equity after tax	-2,6%	-2,9%
ratio of equity	35,3%	38,7%
current ratio	0,96	0,96
interest coverage ratio	0,42	0,26

Source: [http:// www.apr.gov.rs](http://www.apr.gov.rs) , APR Statement of Operations of Republic of Serbia, February 25, 2010 .

Beside the high indebtedness, the business of companies in Republic of Serbia constantly complicates also the high amount of accumulated losses, showed by data from financial reports for 2010. Although, in comparison with previous year, the number of companies which expressed the loss to amount of capital is decreased, and the number of companies which expressed the loss over the amount of capital retained almost the same as last year, the accumulated losses of the companies are increased for 18,1% and amounts to 1.947.926 million dinars. Losses to amount of capital are 1.293.440 million dinars, and losses over the amount of capital are 654.486 million dinars.

## **INCREASING AND DECREASING OF CORE CAPITAL OF LIMITED LIABILITY COMPANY**

The core capital of the limited liability company amounts at least 100 dinars, except if by the special law is regulated larger amount of the core capital for companies that perform certain activities. The core capital is increasing by: new investments of existing members or member accessing to company; converting the reserves or profit of company in the core capital; converting the claims of company in the core capital; status changes that result in increased core capital, as well as converting of additional payments in the core capital. The core



capital is increasing on the base of Assembly decision. Members of the company have the right of preferential subscription of share when the core capital is increasing by new investments in proportion to their shares. The core capital of the company can be decreased by Assembly decision of company members, but not below the minimum core capital. If from the annual financial reports arise that due to loss the net assets of the company is less than value of the core capital, the company is obliged, no later than 30 days from the last day for registration of annual financial reports in accordance with the law governing accounting and auditing, to conduct the procedure of decreasing of the core capital. If after decreasing, the core capital would have the value less than the amount of minimum core capital, the company is obliged at the same time to perform the increasing of the core capital on the other base in order the core capital of the company to be at least equal to minimum core capital. The company is obliged once in the year, along with the registration of annual financial reports in accordance with the law governing accounting and auditing, to register the level of amount of the core capital if in previous business year there were changes of the core capital, in accordance with the law of registration.

Member of the company acquires the stake in the company in proportion to the value of his investments in the total core capital of the company. Member of the company can have only one stake in the company. If member of the company earned many takes, those stakes are joining and make together one stake. Stakes are not securities. Stakes can not be acquired, nor should they be disposed reference to a public offering in terms of the law governing the capital market. The company can not, directly or indirectly, offer the financial support of any kinds to its members, employees or third persons for acquiring stakes in the company, and can not give the loans, guaranties, warranties, securities and similar. By founding charter or Assembly decision can be determined the obligation of the company members, that beside the payment of the subscribed core capital, they can made additional payments to the company in proportion to amount level of own stake in the company and different proportion can be determined. Additional payments can be done only in cash and with it the core capital of the company is not increasing. Assembly decision, by which the obligation on additional payment is determining, is taken unanimously, unless if founding charter in taking this decision predicts the other majority and that decision obligates only members who voted it. Also, by founding charter, i.e. Assembly decision instead of determining the exact amount of additional payments, it can be determined the maximum amount of these payments.

## **DETERMINING THE FINANCIAL VALUE OF ORDINARY AND PREFERENCE SHARES OF JOINT-STOCK COMPANY**

Joint-stock company issues shares and those shares are issued in dematerialized form and are on bearer. Registration is done in Central securities depository and clearing house (hereinafter referred to as: CSD) of their issuing, and all supporting data: legal ownership, transfer of shares, transfer of girths from shares, limitation of rights from shares and registration of rights of third parties to shares etc. The share is undivided. The Statute of the joint-stock company determines types and classes of shares, as well as types and important elements of other securities, which company can issue. In regards to joint-stock company and third parties, the shareholder considers the person who is recorded in CSD as legal owner of share, and the record date in CSD is the date of acquisition the share. The joint-stock company can issue the following types of shares: ordinary and preference shares. Within all types of shares, shares giving the same rights are a class of shares. All ordinary shares are always one class of shares. The company can issue the shares with or without nominal value. If the company issues shares with the nominal value, all shares of the same class must have the same nominal value, and if issues shares without nominal value, all company shares must be without nominal value. Ordinary share is the share which gives to the holder: right to participate and vote on Assembly, so that one share always gives the right to one vote; right to payment of dividend; right to participate in distribution of liquidation remain or bankruptcy in accordance to the law regulating the bankruptcy; preferential right to acquire ordinary shares, and other financial instruments exchangeable for ordinary shares, from new issues etc. Ordinary shares can not be converting in preference shares or other financial instruments. Preference share is share which gives one or more privileged rights to holder determined by the Statute and decision about issue, such as right: to dividend in advance specified money amount or in percentage from its nominal value, which is paid off primarily in relation to holders of ordinary shares; to cumulate and pay off the unpaid dividend before paying off the dividends to holders of ordinary shares (cumulative preference share); to participate in dividend belonging to holders of ordinary shares, to pay off dividends in all cases to holders of ordinary shares or after fulfilment of certain conditions (participative preference share); to priority payment from liquidation remain or bankruptcy

in relation to holders of ordinary shares; to convert these shares in ordinary shares or in other class of preference shares (exchangeable preference shares), as well as selling these shares to the joint-stock company by in advance specified price or under other conditions. Total nominal value of issued and authorized preference shares can not be greater than 50% of the core capital of the company. The shareholder with preference shares has right to participate the Assembly, without right to vote. Share can belong to many persons (hereinafter referred to as: co-owners of share). Co-ownership of share is acquired on the base of the law (inheritance and similar); contract (gift, buying and selling of ideal part of share and similar) as well as based on status changes of the company.

## **MARKET VALUE AND ISSUE PRICE**

Market value is determining in accordance to the law regulations. If the core capital is increasing, i.e. decreasing, and in both cases is not exceeding 1% of the core capital, the company is not obliged to change the law regulations about increasing, i.e. decreasing of the core capital, except the regulations about the registration of these changes in accordance with the law on registration. If the company issued the financial instruments which can be changed for ordinary shares, it is obliged to make the decision at the same time, i.e. to take other action to ensure that owner rights of these financial instruments stay unchangeable. Also, if the company does not act, every owner of financial instrument may complain to competent court and require repealing the decision. The complaint may be filed within 30 days of the decision and this also applies to shares without nominal value. Nominal value of the share is the value which is defined as such by the decision to issue shares. All shares of the same class have the same nominal value. Nominal value of one share can not be less than 100 dinars. Nominal value of preference shares of company can not be less than nominal value of ordinary shares of this company. Market value of public joint-stock company is determining as weighted average price achieved on regulated capital market, or multilateral trading platform, in terms of the law governing the capital market, in the six months preceding the date of the decision establishing the market value of shares, under condition that during that period the achieved turnover of shares of this class on capital market presented at least 0,5% of total number of issued shares of that class, and that within at least three months of that period the achieved turnover was at least 0,05% of total number of issued shares of that class on monthly level. Exceptionally, the share market value of public joint-stock company can be determined by evaluation, under condition that the Assembly accepts such determined market value based on the submitted proposal of the Board of Directors, or the Supervisory Board if the management of company is bicameral and the value of these shares must be stated. Market value of shares of public joint-stock company is determining by evaluation if one of the following conditions is fulfilled: if certain volume of turnover is not achieved and in case of issuing the shares of new class.

Issue price is the value at which the shares are issued and determined by the decision of issuing shares. The decision makes the Assembly, unless in specified case of issuing authorized shares when that decision makes the Board of Directors, or Supervisory Board if the management of company is bicameral. If the Assembly makes decision, the range of issue price can be determined by that decision and authorizing the Board of Directors, or Supervisory Board if the management of company is bicameral that by specified decision determines the issue price within it range. Issue price can not be less than market value, except in case when the shares are issued in procedure of public offering in terms of the law governing the capital market, by which the joint-stock company becomes public joint-stock company. Also, issue price can not be less than nominal value of share, or accounting value of shares without nominal value. When the issue price at which shares are issued is more than their nominal or accounting value, the difference between these two values represents the issue premium.

Shares are freely transferable, unless the statute limited the transfer of shares by pre-emption right of other shareholders or prior agreement of the company. Transfer of shares in companies that are not public joint-stock companies is a contract concluded in writing and verified form in accordance with the law governing the certification of signatures. Transfer of shares in public joint-stock companies is doing in accordance with the law governing the capital market Shareholder rights, given by a certain class of shares (hereinafter referred to as: rights attached to shares), except for voting rights, may be freely transferred. Statute or decision on the issuance of shares may limit or cancel the transfer of rights attached to shares. Transfer of shares or rights attached to shares of public joint-stock company can not be limited. On restrictions on the transfer of shares at the same time are applied regulations regarding the restrictions on transfer of shares in limited liability company.

## **ISSUE PRICE OF EXCHANGEABLE BONDS AND WARRANTS**

Exchangeable bonds are bonds that give the right the holder, under the conditions specified by the decision on the issue, to exchange for ordinary shares of the company. Warrants are securities that give their holder the right to acquire a certain number of shares of certain types and classes at a specified price, on a certain day or within a certain period. Exchangeable bonds and warrants, which give the right to acquire ordinary shares can not be issued if the number of ordinary shares which carry a right, together with the total number of ordinary shares which carry a right on already issued exchangeable bonds and warrants, exceed the total number of authorized ordinary shares. Exceptionally, exchangeable bonds and warrants can be issued if the number of ordinary shares which carry a right, together with the total number of ordinary shares which carry a right on already issued exchangeable bonds and warrants, exceed the total number of authorized ordinary shares, and if regarding to this difference, the Assembly made decision about conditionally increasing of the core capital and these provisions apply to warrants giving the right to acquire preference shares. The decision to issue exchangeable bonds or warrants is made by the Assembly. Exchangeable bonds and warrants can be entered only by cash deposits. Preferential subscription right of exchangeable bonds has shareholders with ordinary shares. Preferential subscription right of warrants has the shareholders with class of shares which can be acquired on the base of right given by the warrant. Issue price of exchangeable bonds and warrants is the value at which the exchangeable bonds and warrants are issued and also determined by the decision of their issue. The decision made by the Assembly, provided that this decision can determine the range of issue rates with the authority of the Board of Directors, Supervisory Board if the management of the company is bicameral, to establish a special resolution of issue price within that range. Issue price of exchangeable bonds can not be less than: a nominal value of shares that are exchangeable, i.e. in case of shares without nominal value than their accounting value, nor less than the market value of shares for which they can be exchanged.

## **DISTRIBUTION OF PROFIT AND DIVIDEND AND PAYING OF INTERIM DIVIDEND**

Upon approval of financial reports for the business year the profit is distributed in the following order: to cover losses transferred from previous years and the reserves, if they are determined by special law (statutory reserves). If, after profit distribution remains portion of profit, it can be distributed by Assembly for the following purposes: for reserves, if the company established it by the statute (statutory reserves) and for dividend.

Payment of dividends to shareholders may be granted by the decision on profit distribution adopted at a regular session of the Assembly, which determines the amount of the dividend (the decision on dividend payment). Upon a decision to pay dividends, the shareholder who should be the dividend becomes a company creditor of an amount of such dividends. The company is obliged to inform the shareholders whom should be paid dividend about the decision on paying dividend within 15 days of that decision. Dividends on shares are paid to shareholders in accordance with the rights arising from the type and class of shares owning on the day of dividend, and proportionally to a number of owning shares in total number of shares of this class. Agreement or the articles of the company which certain shareholders in the same class of shares provide special benefits for the payment of dividends, is null and void. The dividend can be paid in cash or in shares of the company, in accordance with the decision on dividend payment. If the dividend payments made in shares of the company: such payment must be approved by shareholders of class shares where such payment is made under the rules of voting shareholders within the class of shares and to each shareholder of that class of shares having right on dividend, the payment is made in shares of that class.

The company may pay temporary dividend ie. interim dividend at any time between regular sessions of the Assembly if: reports on the operations of the company and its financial results made for this purpose show clearly that the company in the period for which interim dividends are paid achieved profit and that the available funds of the company are sufficient to pay that interim dividend, and if the amount of interim dividends to be

paid does not exceed the total profit earned after the end of the previous financial year for which financial reports have been made, increased for undistributed profit and the amount of reserves that can be used for such purposes, and decreased by determined losses and the amount which must be entered in reserves in accordance with the law or statute.

The company can not make payments to shareholders if, after the latest annual financial reports, the net assets of the company is less, or due to such payments would become less, of the paid core capital plus reserves that the company is obligated to maintain in accordance with the law or statute, if such reserves exist, except in case of decreasing of the core capital. The total amount of payment to shareholders for the fiscal year can not exceed the profit at the end of the fiscal year, plus undistributed profit from previous periods and the amount of reserves provided for distribution to shareholders, and reduced by uncovered losses from previous periods and the amount of reserves that the company is obligated to maintain in accordance with the law or statute, if such reserves exist. Joint-stock company may be granted a loan, but to loan and providing security of the company given by the shareholders is applying legislation in force of the LLC.

## **INCREASING AND DECREASING OF THE CAPITAL OF JOINT-STOCK COMPANY AND THRESHOLD SUCCESS**

A joint-stock company must have a minimum core capital in the amount of 3,000,000.00 dinars, unless the special law provide for the higher amount. The decision to issue shares to increase the core capital of the company is made by the Assembly, unless in case of authorized capital when such decision can be made by the Board of Directors, or Supervisory Board (if the management of the company is bicameral. The decision is recorded in accordance with the law on registration within six months from the date of issuance. A decision that is not registered is invalid. Subscription of shares on the basis of the decision can not start before its registration. The decision can be made only after full payment, or the entry of investments for the previously issued and subscribed shares. The limitation is not applicable if the decision on issuance of shares is made in respect of: increasing of the core capital as a result of statutory change and increasing of the core capital by non cash investing: conditionally (so called the conditional increase of capital) from the undistributed profit and reserves available for this purpose (increasing from the net assets of the company) and as a result of statutory change. Under the increasing of the core capital by new investments is considering the conversion of debt to the core capital. In public joint-stock company the increasing of the core capital can not be carried out by conversion of debt in the core capital. The provisions of increasing the core capital by new investments are also implying on issuing the shares by public offering if it is not determined otherwise by the law governing the capital market. The decision on increasing the core capital by new investments include: the amount of increasing the core capital; the way of increasing the core capital, as well as the threshold success of share issuing; terms to carry out the decision; issuing price or the method of its determination, the essential elements of the shares to be issued, or the criteria by which to determine these elements, as well as the designation of the bank where the payment of the shares will be done. Success threshold is the ratio between the number of subscribed shares and the number of shares whose issuance is determined by the decision.

The core capital of the company considers increased by the registration date of the core capital increasing. Conditional increasing of the core capital of company implements only to the extent necessary for: the rights of holders of exchangeable bonds for conversion into shares of the company; the rights of holders of warrants to purchase shares of the company, the rights of employees, directors and supervisory board members, if the management of the company is bicameral, to purchase shares of the company, as well as conducting the statutory changes. The amount of increasing the core capital at the moment of making the decision can not be greater than: 50% of company core capital, 3% of company core capital, or 10% of company core capital, depending on the particular case that is specifically regulated by legislation. Assembly decision on the conditional core capital increase, which is inconsistent with these provisions, is invalid. Increase of the core capital of the company from the net assets of the company is done by converting the undistributed profit and reserves to the core capital of the company. Undistributed profit and reserves of the company can be converted to the core capital if the company has not reported a loss in the financial reports, on the basis of which the decision on increasing the core capital is made. Notwithstanding, the company may, if previously made covering the loss, increase the core capital from undistributed profit and reserves that are left by the coverage of the loss. In the

core capital can be converted only reserves that can be used for such purposes. The decision on the core capital increase from the net assets of the company include: total amount of the core capital increase; amount and type of reserves or amount of undistributed profit converted to the core capital; indication that new shares are to be issued or the nominal value of existing shares will be increased, or accounting value of shares without nominal value, as well as the essential elements of issuing shares, if increasing of the core capital is done by issuing of new shares. Right on shares based on increasing of the core capital of the company from the net assets of the company has shareholders of the company at the date of this decision. Shareholders are entitled to the shares on the basis of core capital increase in proportion to their paid or entered investment in relation to paid or entered the core capital of the company. The right belongs to a company based on the company's own shares. In the capital increase of the net assets of the company the rights of exchangeable bonds holders of the company are increasing in proportion in terms of number of shares they are entitled and their nominal or accounting value of shares without nominal value. Shares acquired by increasing of the core capital of net assets of the company, or the amount of increasing the nominal value or accounting value of shares without nominal value, give the right to dividend for the full fiscal year in which it was decided to increase the core capital.

The joint-stock company, beside the issued shares, also can have authorized shares of determined type and class, provided that the number of authorized shares must always be less than half the number of issued ordinary shares. Authorized shares may be issued when increasing the capital of the company by new investments or for the rights of holders of exchangeable bonds and warrants. Assembly hereby decides on authorized shares containing the essential elements of authorized shares, and may include authorization for the Board of Directors or Supervisory Board if the management company is bicameral to issue the authorized shares within a period specified by that decision. Period may not exceed five years from the date of the decision and may be extended by change of statute or by Assembly decision, prior to its expiration, provided that any such extension may be for a period that do not exceed five years. Notwithstanding, the decision of the assembly is not required if all the elements are specified and determined by the statute. The decision is recorded in accordance with the law on registration.

The core capital of the company can be decreased by: withdrawal and cancellation of shares held by shareholders, the cancellation of own shares of the company and reducing the nominal value of shares, or accounting value of shares without nominal value. Business Register publishes a decision on decreasing of the core capital of the company in continuous period of three months on the date of registration. The Company is obligated to creditors, who are known to society and whose individual claims are at least equivalent to 2,000,000 dinars of any currency at the average exchange rate of National Bank of Serbia on the day of registration of the decision to decrease the core capital, to send a written notice of such decision, within 30 days of conducted registration of that decision. In the case of decreasing the core capital, the company can make payments to shareholders only after the expiry of 30 days from the date of registration the decreasing of the core capital in accordance with the law on registration. Net assets of the company are not changing in case of decreasing the core capital used for: covering the losses of the company, as well creating and increasing the reserves to cover future losses of the company or increasing the core capital of the net assets of the company. Decreasing of the core capital of the company may only be used if the company does not dispose of undistributed profit and reserves that can be used for such purpose in an amount that does not exceed the amount of losses that are covered. Reserves after the completion of decreasing the capital may not exceed 10% of the core capital. Decreasing of capital can not be the basis for payments to shareholders or shareholders' exemption from the obligation of payment, or entry of subscribed, and unpaid, or not entered investments in the company. Directors and Supervisory Board members jointly and severally are liable to creditors of the company for the damage as a result of decreasing the core capital of the company if the statement was false. The core capital of the company considers decreased on the day of registration. Decision on decreasing the core capital of the company below the minimum of the core capital can be made only under condition to increase the core capital at the same time, so the result of this decreasing and increasing company's core capital must be at least equal to the minimum amount of the core capital. If the company fails to pass both the decision on core capital increasing and to implement the increasing, the decision to decrease the core capital is invalid. The Company may decide that the company's core capital at the same time reduces by one basis and increases on other grounds.

If a company acquires or disposes of assets (property) which purchase and / or sales and / or market value at the time of making decisions presents 30% or more of book value of total assets of the company reported at the last annual balance sheet, it is considered that the company acquires or disposes the assets of great

value. Under acquisition, or disposal of assets of great value, considers acquisition, or disposal of assets in any way, including purchase, sale, lease, exchange, establishment of a lien and mortgage, signing the credit and loan agreement, giving of guarantees and warranties, and taking any other action which leads to liability for the company. Notwithstanding, it will not be considered, as the acquisition or disposal of assets of great value, purchase or selling of assets that was made in the ordinary course of business activity of the company. The property is the property and rights, including real estate, personal property, money, stakes in companies, securities, claims, industrial property and other rights. An acquisition or disposal shall be considered and a number of related acquisition or disposal made in one year, taking the date of execution the last acquisition or disposal as the effective date. The acquisition or disposal of assets of great value may be implemented if the acquisition or disposal is previously or subsequently approved by the Assembly. If a company acquires or disposes of assets of great value, rules on the rights of non consistent members are applied.

## CONCLUSION

Necessity of rapid development of the country of Serbia, which should allow for proper integration into the international market, means among other things, a well-organized companies, which functioning is based on an efficient and effective operation of the economy. Domestic economy is going through a process of transition to market criteria of the operations of enterprises as its main subjects. This includes the use of certain solutions in the establishment of such organizational solutions that will be appropriate to solutions that recognize the practice of successful businesses in economically developed countries. Hence the necessity of modeling the organizational structure of local companies, according to models of practice in economically developed countries, whose business has shown a high degree of success. The new law from 2011., regulates the legal status of companies, and in particular their establishment, management, status changes, changes in legal form, termination and other issues of importance to their position, as well as the legal status of entrepreneurs, which is partly exposed in this paper.

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# **REGIONAL DIFFERENCES OF MONETARY AND NON-MONETARY EMPLOYEE BENEFITS IN CHINA: A COMPARATIVE STUDY IN BEIJING, SHANGHAI AND XI'AN**

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## **ABSTRACT**

*The combination of a fast developing economy, the challenge to attract and keep high qualified employees and the widespread phenomenon of job hopping has resulted in a strong competition for companies (Akhtar, Ding & Ge, 2008; Huang, 2011; Zhang et al., 2010) and a war for talents on the Chinese labor market (Iles, Chuai & Preece, 2010). In order to compete successfully, organizations have started offering their employees incentives to support them through their personal and professional challenges and most notably strengthen their loyalty (Muse et al., 2008; Vardaman et al., 2008). Consequently, firms have to consider the different interests of their workforce and develop appropriate social benefits to meet their expectations (Sun, Aryee & Law, 2007). As China is a dynamic and heterogeneous country, companies have to give special considerations to the differences in regional economic development - especially the enormous gap between the various regions in China. The purpose of this study is to investigate the regional differences of individual perceptions of employee benefits. We conducted an empirical study in three different Chinese cities: Beijing, the cultural and political center, Shanghai, the commercial and financial center and Xi'an, an emerging city representing the less economically developed inner regions of China. Results are analyzed and discussed in relation to the recent developments in this field. Moreover, we provide a list of preferred employee benefits with reference to the different Chinese regions explored. Finally, we highlight implications and suggestions for future research.*

## **INTRODUCTION**

One of the fastest growing and developing economies in the global competition that has faced a shortage of talented employees is without a doubt China (Han & Han, 2009). Since China's economy opened in 1978, China has experienced drastic transformation, marketization and the convergence of its economy with global capitalism (Preece et al., 2011). The economic reforms in this country led not only to rapid economic growth, but also to drastic changes in the structure of its economy (Ding, Akhtar, & Ge, 2006). Due to the growing interest in the world's largest consumer market, foreign direct investments (FDI) have increased as well (Cooke, 2004; Li, 2003). "China had overtaken the US to become the largest recipient of foreign direct investment in the world. Indeed, it is currently estimated that foreign owned firms now account for more than a third of China's total industrial growth." (Walsh & Zhu, 2007: 249) The FDI has had a substantial influence on the changing patterns of human resource practices in China (Ding & Akhtar, 2001). This economic development has led to high competition for qualified employees on the Chinese market (Akhtar, Ding & Ge, 2008). What is more, the employee turnover in China has exceeded rapidly and employee costs have increased similarly since the country started its reforms three decades ago (Jiang, Baker & Frazier, 2009; Li, 2003). Although the rate is especially

high for blue collar workers, fluctuation among qualified employees and managers is even higher nowadays (Zhang, Li, Li & Zhou, 2010; Manning, Massini & Lewin, 2008). The main reason for this development is the employees' opportunity to move easily and quickly to competitors that offer greater overall rewards (Ready, Hill & Conger, 2008). Consequently, university graduates in China are willing to change their jobs after 2 to 5 years and job-hopping is a very common phenomena. (Dickel & Watkins, 2008; Li & Zhang, 2010).

## EMPLOYEE BENEFITS AND REGIONAL CHARACTERISTICS

As a reaction to the high turnover rate among Chinese professionals, companies have started to offer their employees material and non-material incentives to raise their loyalty. These so called "employee benefits" can be defined as the incentives that employees receive in addition to their wages and salaries (OECD, 2007). These employee benefits "are designed to help employees with the many facets of their lives including personal well-being, professional development, and family responsibilities" (Muse, Harris, Giles & Field, 2008). Consequently, companies have to develop broad distributions of social benefits to meet employee's expectations (Sun, Aryee & Law, 2007). Furthermore, in order to achieve the highest outcome of the provided employee benefits, it is important for companies to adjust their incentive systems to the needs of their employees (Manning et al., 2008; Nielsen and Smyth, 2008). As China is a heterogeneous country, it seems advisable to give special considerations to regional differences, in particularly to the development gap between the rich coastal provinces and the poorer interior provinces (Yang, 2002). Therefore, our goal was to find answers for the following research question: *"How do regional differences affect the perception of monetary and nonmonetary employee benefits with regard to company loyalty?"* For this purpose, we decided to focus on three different Chinese regions: Beijing, the capital of China, Shanghai, the financial and economical centre of the country and Xi'an, Shaanxi province, an emerging city representing the less economically developed inner regions of China. Table 1 provides an overview of selected economic key figures of the three regions.

**Table 1: Regional Differences in Development (China Statistical Yearbook 2011)**

	<u>Per Capita Annual Income Urban Households - Wages &amp; Salaries (CNY)</u>	<u>Registered Unemployment Rate in Urban Areas (%)</u>	<u>R&amp;D Expenditure- GDP Ratio</u>		
<u>Beijing</u>	23099.09	1.4	5.82		
<u>Shanghai</u>	25439.97	4.4	2.81		
<u>Shaanxi</u>	12078.35	3.9	2.15		
	<u>Number of Foreign Funded Enterprises (unit)</u>	<u>Total Investment of Foreign Funded Enterprises (100 million USD)</u>			
<u>Beijing</u>	24853	1192			
<u>Shanghai</u>	55666	3394			
<u>Shaanxi</u>	5378	180			
	<u>Gross Regional Product (100 Million RMB)</u>	<i>Primary Industry</i>	<i>Secondary Industry</i>	<i>Tertiary Industry</i>	
<u>Beijing</u>	14113.58	124.36	3388.38	10600.84	
<u>Shanghai</u>	17165.98	114.15	7218.32	9833.51	
<u>Shaanxi</u>	10123.48	988.45	5446.1	3688.93	
	<u>Total Population (10 000 Persons)</u>	<u>Number of Employed Persons (10,000 Persons)</u>	<i>Primary Industry</i>	<i>Secondary Industry</i>	<i>Tertiary Industry</i>
<u>Beijing</u>	1962	1318	65	276	977
<u>Shanghai</u>	2303	925	36	347	541
<u>Shaanxi</u>	3735	1952	856	488	608



After Beijing was awarded the 2008 Olympic Games in 2001, the city enjoyed rapid development. Guided by the games' three ideas ("Hi-tech Olympics", "Humanitarian Olympics" and "Green Olympics") more than 40 billion US Dollars were invested to build the required competition venues, develop the city's infrastructure and tackle pollution and environmental hazards (Dong, 2010). Meanwhile, Beijing has the lowest registered unemployment rate in China, an extraordinarily high research and development ratio and the tertiary sector became the main contributor to the gross regional product of Beijing (China statistical yearbook 2011).

Similar to Beijing, Shanghai has also profited from a mega event, the EXPO 2010. The EXPO 2010 was considered as an opportunity to showcase China as an emerging economic power and attract foreign investments. In order to achieve this goal a total sum of 45 billion US Dollars was used to achieve the goals that were set (Lu, Wang & Seo, 2010). The government also aimed at improving the environmental conditions, promoting the development of infrastructure and boosting the tertiary sector and tourism (Sun and Lin, 2010). Today the per capita annual income of urban households in Shanghai even exceeds Beijing. With regards to foreign investments, Shanghai was able to attract more than twice as many foreign funded enterprises and almost three times as much foreign capital was invested than in Beijing (China statistical yearbook 2011).

In 1999, the Chinese government adopted the "Go West" policy to reduce regional disparities by setting up a special office for the campaign, committing considerable amounts of financial resources and offering favorable policies. The main purpose of the campaign is to support infrastructural construction and environmental protection (Yao, 2009). One of the main beneficiaries is Shaanxi, a central province in China. In particular central Shaanxi, with Xi'an as the capital, was able to profit due to its location, existing industrial base, administrative functions and research facilities (Vermeer, 2004). However, in comparison to highly developed areas such as Beijing or Shanghai, the gap is still wide. The per capita annual income from wages and salaries is only half as big as in Shanghai. The majority of the population is still working in the primary industry and foreign founded enterprises are still rare (China statistical yearbook 2011).

## METHODOLOGY

The theoretical sample consists of managers and operatives from Beijing, Shanghai and Xi'an, Shaanxi. The survey succeeded in integrating companies of various industries such as chemical industry, automotive industry, metallurgical industry, financial services, pulp and paper industry, logistics, and engineering industry. Altogether, 414 employees participated in the survey, 232 (56%) being female and 174 (42%) being male. Eight (1.9%) of the participants did not state their gender. 77 (18.6%) of the participants related themselves as managers and 337 (81.4%) as operatives. Broken down by regions, 130 (31.4%) of the participants worked in Beijing, 199 (48.1%) in Shanghai and 85 (20.5%) in Xi'an. From Beijing, 20 (4.8%) of the participants related themselves as managers and 110 (26.6%) as operatives. From the Shanghainese participants the numbers are 38 (9.2%) for management and 161 (38.9%) for operatives, for Xi'an 19 (4.6%) managers and 66 (15.9%) operatives. As an instrument for the survey a questionnaire was developed and translated into Chinese. The participants were confronted with 15 monetary and non-monetary employee benefits derived from theory. The participants had to evaluate the impact of these employee benefits on their loyalty with the help of a seven-point Likert rating scale, covering a range from "no impact" to "very strong impact". The following data analysis was conducted with the SPSS PASW Statistics 18 software.

## RESULTS

The following tables show the results derived from the evaluation of the statements separated by regions. Table 2 shows the results of the management hierarchical level and table 3 of the operatives. The tables include the number of participants who rated the particular employee benefit item, the means, the standard derivation and the significance. For further differentiation non-monetary employee benefits are italicized. For easier comparison, the results are ranked by descending order of means of Beijing.

**Table 2: Regional Differences - Management**

MANAGEMENT
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Beijing (N=20)				Shanghai (N=38)				Xi'an - Shaanxi (N=19)			
	<u>Employee Benefit</u>	<u>M</u>	<u>SD</u>		<u>Employee Benefit</u>	<u>M</u>	<u>SD</u>		<u>Employee Benefit</u>	<u>M</u>	<u>SD</u>
1	Bonus Payment	6,5	0,76	1	Bonus Payment	6,42	0,97	1	Bonus Payment	6,05	1,51
2	Travel Expenses	6,33	0,58	6	Travel Expenses	5,70*	1,26	9	Travel Expenses	4,71+	1,86
3	Add. Paid Days Off	6	1,22	5	Add. Paid Days Off	5,8	1,08	6	Add. Paid Days Off	5,14	1,92
4	Gong Jijin	5,89	1,1	2	Gong Jijin	6,21*	0,89	5	Gong Jijin	5,32+	2,21
5	Hong Bao	5,78*	1,09	7	Hong Bao	5,6	1,43	12	Hong Bao	4,28*	1,96
6	Add. Insurance	5,61	1,24	4	Add. Insurance	5,96	1,19	4	Add. Insurance	5,53	2,45
7	Housing Subsidies	5,5	0,71	9	Housing Subsidies	5	1,83	3	Housing Subsidies	5,79	2,08
8	Further Education	5,25	1,58	3	Further Education	6	0,82	2	Further Education	5,88	1,58
9	Mobile Phone	5	1,87	15	Mobile Phone	3,93	1,54	15	Mobile Phone	3,07	2,46
	Company Outing	5	1,6	9	Company Outing	5	1,84	8	Company Outing	4,71	1,59
11	Company Party	4,47	1,65	14	Company Party	4,48	1,37	11	Company Party	4,32	1,57
12	Vouchers	4,33	0,58	13	Vouchers	4,5	1,52	10	Vouchers	4,39	2,03
13	Dining Hall	4,12+	1,9	8	Dining Hall	5,55+	1,37	7	Dining Hall	5,11	2,14
14	Leisure Time Activity	4,07	1,79	9	Leisure Time Activity	5,00*	1,08	14	Leisure Time Activity	3,89+	1,59
15	Birthday Cake & Card	3,5	2,26	12	Birthday Cake & Card	4,69	1,42	13	Birthday Cake & Card	4,27	2,12
*Sig. to Xi'an ≤0,05 +Sig. to Shanghai ≤0,05				*Sig. to Xi'an ≤0,05 + Sig. to Beijing ≤0,01				*Sig. to Beijing ≤0,05 +Sig. to Shanghai ≤0,05			

**Table 3: Regional Differences – Operatives**

OPERATIVES											
Beijing (N=110)				Shanghai (N=161)				Xi'an – Shaanxi (N=66)			
	<u>Employee Benefit</u>	<u>M</u>	<u>SD</u>		<u>Employee Benefit</u>	<u>M</u>	<u>SD</u>		<u>Employee Benefit</u>	<u>M</u>	<u>SD</u>
1	Bonus Payment	6,59	0,86	2	Bonus Payment	6,37	1,03	1	Bonus Payment	6,43	1,36
2	Gong Jijin	6,42	1,18	3	Gong Jijin	6,11	1,31	2	Gong Jijin	6,24	1,18
3	Add. Paid Days Off	6,18**	1,37	1	Add. Paid Days Off	6,61**	0,81	7	Add. Paid Days Off	5,31**++	1,88
4	Housing Subsidies	6,11	0,78	9	Housing Subsidies	5,29	1,93	5	Housing Subsidies	5,58	1,67
5	Add. Insurance	5,94	1,53	4	Add. Insurance	5,91	1,41	4	Add. Insurance	5,61	1,58
6	Further	5,89	1,42	7	Further	5,48	1,15	9	Further	4,93	1,84

	<i>Education</i>	**			<i>Education</i>				<i>Education</i>	**	
7	Hong Bao	5,86	1,62	6	Hong Bao	5,68	1,78	8	Hong Bao	5,26	1,47
	Vouchers	5,86	1,18	9	Vouchers	5,29	2,22	6	Vouchers	5,42	1,64
9	Travel Expenses	5,85	1,63	5	Travel Expenses	5,78	1,43	3	Travel Expenses	5,69	1,5
10	Company Outing	5,57 **	1,52	8	Company Outing	5,36 *	1,64	10	Company Outing	4,86 **+	1,80
11	Dining Hall	5,34	1,67	11	Dining Hall	5,18	1,77	11	Dining Hall	4,75	2,09
12	Birthday Cake & Card	5,00 **	1,72	13	Birthday Cake & Card	4,65 **	1,85	14	Birthday Cake & Card	3,67 ***+	2,13
13	Company Party	4,93 **	1,59	12	Company Party	4,89 **	1,61	13	Company Party	4,09 ***+	1,67
14	Leisure Time Activity	4,86 **	1,59	14	Leisure Time Activity	4,51	2,02	12	Leisure Time Activity	4,11 **	1,60
15	Mobile Phone	4,30 **	2,02	15	Mobile Phone	3,5	2,12	15	Mobile Phone	3,09 **	1,87
**Sig. to Xi'an ≤0,01				*Sig. to Xi'an ≤0,05 **Sig. to Xi'an ≤0,01				*Sig. to Beijing ≤0,05 **Sig. to Beijing ≤0,01 +Sig. to Shanghai ≤0,05 ++Sig. to Shanghai ≤0,01			

## DISCUSSION

Independent from different hierarchical levels or regional differences, the results show a general strong tendency to prefer monetary employee benefits. Above all, monetary employee benefits such as bonus payments, additionally paid days off or Gong Jijin (a part of the employees' wages monthly set aside for buying an own accommodation) are on the top of most rankings, whereas Chinese employees show a tendency to regard, non-monetary employee benefits as less important.

### *Few differences on the management level between regions*

In contrast to the results of the operative level, differences between managers of each region are less significant. Bonus payments are considered by managers in each region as the most effective employee benefit. A strong indication that Chinese managers place high value on a performance oriented reward system. Similarly, extensive travel expenses are perceived important in Beijing and Shanghai, however mediocre at best in Xi'an. We argue that the popularity of extensive travel expenses is connected with the importance of status and face in Chinese culture. Extensive travel expenses allow Chinese managers to point out their social position and success. However, managers from Xi'an rated this employee benefit significantly lower. This is not surprising, considering the development gap and subsequent smaller number of first grade hotels. Another significant difference can be observed in the approval of shared leisure time activities between managers from Xi'an and Shanghai. Traditionally, it is custom in China to meet with co-workers on a regularly base in the evening and to share supper. We argue that due to the more competitive atmosphere and high number of working hours in Shanghai, there is less room for old customs. Consequently, managers from Shanghai and to a lesser account from Beijing, rate this employee benefit higher.

### *Non-monetary employee benefits more popular among operatives in the coastal regions*

While non-monetary employee benefits tend to be at the bottom of all rankings, most of them are significantly more popular in the coastal regions. Our results illustrate that with development and connected change of way of life a re-evaluation of employee benefits takes place. Employee benefits which aim at improving the working atmosphere such as company outings or company parties are considered as dispensable in Xi'an, while monetary employee benefits aiming on reducing living costs are considered more important. While

this is true for operatives in Beijing and Shanghai too, being successful at work seems not to be the sole incentive anymore. This is also shown by another employee benefit. While additional paid days off are in the middle of the ranking in Xi'an, this employee benefit is very popular in Beijing and even leads the list in Shanghai, overthrowing the most popular employee benefit, bonus payment. Our results show another significant regional difference with regard to the rating of birthday cake and cards. While Shanghai and Beijing operatives rated this employee benefit more favorably, Xi'an operatives tended to almost deny a positive impact. Traditionally birthdays are not celebrated in China, however, the big number of foreign funded foreign companies in Beijing and Shanghai implemented this custom to their operatives.

## CONCLUSION & IMPLICATIONS

As a reaction to the high turnover rate among Chinese professionals, companies have started to offer their employees monetary and non-monetary employee benefits. As there is a huge development gap between the rich coastal provinces and the poorer interior provinces it seems advisable to adjust a company's employee benefit program. Our results strongly support this consideration. Bonus payments are considered by a strong majority of employees of each region as the most effective employee benefit, a strong indication that Chinese employees place high value on a performance oriented reward system. With regard to non-monetary employee benefits, Chinese employees show a tendency to rate them as less important. However, regarding non-monetary employee benefits such as company outing, company party and leisure time activity, employees from Beijing and Shanghai showed a significantly stronger tendency to rate those employee benefits higher than employees from Xi'an. Consequently, companies should furthermore focus primarily on reward orientated employee benefits. However, as the results of Beijing and Shanghai show, it is most likely that in future non-monetary employee benefits will be more important.

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# **WORKING IN HOMOGENEOUS VERSUS MULTICULTURAL WORK GROUPS: DIFFERENT PERSPECTIVES ON DIVERSITY, LEADER COACHING, GROUP STRUCTURE AND DIRECTION**

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## **ABSTRACT**

*In this article, we investigate how graduates and young professionals with diverse backgrounds experience working conditions, team compositions and leader behavior in an experiment. We review and evaluate current management research on the effects of diversity in various group compositions by investigating the diversity of leaders and followers in terms of culture, gender, race and ethnicity. Furthermore, we diagnose group direction, group norms, and strength and weaknesses of the different work groups. Moreover, we also aim to make a contribution to followers' perception of leadership and leaders' coaching behaviors.*

*This study was conducted in an experimental setting at a large European university. Participants were 80 American, Chinese, Turkish and Austrian business students with a fairly even gender split who had to work on tasks in homogenous and multicultural settings. We assess participants' ratings following a modified version of the Team Diagnostic Survey (Wageman, Hackman & Lehman, 2005) that we enhanced accordingly. Results are analyzed and discussed with relation to diversity, leadership and cross-cultural differences. The author's findings have important implications for future research, teaching and development in this field.*

## **INTRODUCTION**

As the world continuous to globalize many organizations expand into foreign markets and focus on a global business strategy (Knight & Cavusgil, 2004). Thereby, managers and employees are exposed to global strategic decisions and cross-cultural interactions (Bücker & Poutsma, 2010). So, companies face the challenge to adapt quickly to the challenges of their environment to remain competitive on the market (Bartlett & Ghoshal, 2002). They are aware of the fact that they need outstanding employees with excellent competences, skills and abilities to gain a competitive advantage (Mühlbacher, Kodydek, Kovac, Putnová & Novotny, 2012). By globalizing their operations, organizations need people from different countries with diverse backgrounds, different views and positions to understand markets and potential customers (Beechler & Woodward, 2009; Hiltrop, 1999). The heterogeneity of national cultures of group members ultimately brings value to organizations and improves their performance when cultural diversity is properly used (Shachaf, 2008). For this reasons, globally operating firms try to find the best internationally oriented and multiculturally educated staff that generates a substantial output to cope with challenges and complexities of global competitors, different cultures and languages and international business activities (Bachmann, 2006). They focus on workgroups and teams that are composed of people with diverse backgrounds and experiences to deal with the challenges and issues of a competitive environment (Jehn & Bezrukova, 2004).

## **WORKING UNDER DIFFERENT CONDITIONS**

Many globally operating organizations focus on two important trends: an increased preference for group work and a growing influence of diversity and diversity management (Jehn & Bezrukova, 2004). The first aspect of a work group is to determine the appropriate composition and size. One of the most important reasons for groups

and teams is the fact that every member possesses certain skills, abilities and competences that influence processes, quality and outcome of groups (Horwitz, 2005). In this paper, we focus on two different group compositions – homogeneous and heterogeneous work groups. “Groups with all members from the same nationality and ethnic background are referred to herein as culturally homogeneous groups.” (Watson, Kumar & Michaelsen, 1993: 593) Otherwise, groups consisting of individuals from two or more nationalities and three or more ethnic backgrounds underline certain heterogeneity and are known as culturally diverse groups or multicultural groups (Stahl, Mäkelä, Zander & Maznevski, 2010; Watson, Kumar & Michaelsen, 1993). To understand possible differences in group composition it is important to define and emphasize the research topic “diversity”.

Diversity can broadly be illustrated as the differences between individuals that may lead to the interpretation and attribution that certain differences exist (Homan, Greer, Jehn, & Koning, 2010). Moreover, it is an all-inclusive term that incorporates people from many different classifications (Herring, 2009). The wide impact of diversity can be generally found in identity group memberships (e.g. race or sex), organizational group memberships (e.g. hierarchical positions or organizational function), and individual characteristics (e.g. idiosyncratic attitudes, values, and preferences) (Ely & Thomas, 2001). We underline that, in principle, diversity refers to a number of different dimensions – from task skills to relational skills, and from political preferences to sexual liking (van Knippenberg, De Dreu, & Homan, 2004). In any case, diversity is dependent on the context and situation and thus, group and organizational factors have to be considered (Jehn & Bezrukova, 2004; Ely & Thomas, 2001). Cultural diversity comprises different backgrounds of members of work groups and teams related to national cultures (Barinaga, 2007). “National culture acts as the frame of reference, which societal members utilize to comprehend and understand in organizations, the environment, and their relationships with one another.” (Kreiser, Marino, Dickson & Weaver, 2010: 961) The active management and handling with issues such as culture differences and value, interpersonal interaction, bridging differences, or the challenges of leader-member exchange is called “diversity management” (DiTomaso & Hooijberg, 1996). “Diverse organizations possess a wider range of knowledge and perspectives and thus are able to make better decisions and exhibit greater creativity, innovation, and performance than homogeneous ones.” (Gonzalez, 2010: 198) Organizations focus on implementing diversity management to follow strategic advantages of plurality and different views and opinions (Jehn, Northcraft & Neale, 1999). In summary, multicultural work groups are task-oriented groups consisting of individuals of different national cultures (Matveev & Nelson, 2004). “People of different ethnic backgrounds possess different attitudes, values, and norms that reflect their cultural heritages.” (Cox, Lobel & McLeod, 1991: 828) Thus, in a diverse team, all team members have to know the cultures with which they interact. They also have to appreciate the personalities, behaviors, and experiences of all team members (Matveev & Nelson, 2004). Hence, we emphasize the importance of intercultural competence which has been pointed out many times (e.g. Bachmann, 2006).

Individuals as group members interact within a group by communicating, influencing, making decisions, cooperating, and competing. All these processes influence group performance and group dynamics (Hopkins & Hopkins, 2002). In comparison with individual work group processes can lead to greater efficiency (e.g. increasing speed in decision-making, effective brainstorming processes, reducing costs) or greater effectiveness (e.g. making better decisions). Group processes can be influenced by diversity by having positive and negative effects on group cohesion, creativity, innovation, frequency and quantity of communication, or conflicts within the group (Knight, Pearce, Smith, Olian, Sims, Smith & Flood, 1999). Group members contribute to outcomes through social inputs and task inputs. Thus, challenges and issues within groups could lead to interpersonal or relationship conflicts, task oriented conflicts, and agreement-seeking (Yang & Mossholder, 2004). An interpersonal conflict relates to personal or emotional relationships between people whereas some groups struggle with conflicts that are task oriented in nature, such as disagreements about distributions of resources, procedures and policies, and judgments and interpretations of facts (De Dreu & Weingart, 2003; Knight et al., 1999). In addition, the task setting has a substantial influence on the understanding of the situation among members of a work group. Furthermore, a certain level of group information process leads to a better understanding of the task setting (Rico, Sánchez-Manzanares, Gil, & Gibson, 2008). Group work is also influenced by leaders who create and manage groups and foster the integration of subordinate action (Zaccaro, Rittman & Marks, 2001). Researchers in this field have explored how leaders help groups through different coaching-related activities, such as promoting team learning and adaption, managing events that occur in the group context, the role of team leaders in managing team



boundaries, or leadership roles shared in teams (Morgeson, DeRue & Karam, 2010). Leader coaching “can directly affect team members’ engagement with their task, their ability to work through interpersonal problems that may be impeding process, and the degree to which members accept collective responsibility for performance outcomes.” (Wageman, 2001: 561)

In our study, we mainly focus on the different perceptions and attributions of group members to their leaders in an experimental setting. We concentrate on four different groups, participants from Austria, Turkey, China, and the United States of America. Our goal is to find reasons and answers for the following research question: *“How do members of work groups attribute the influence of national culture on group work in homogenous versus multicultural group compositions?”* We also work on the following question about the influence of the leader: *“How do members of work groups perceive the influence of leaders in homogenous versus multicultural settings?”*

## METHODOLOGY

In our study we analyzed the perceptions of students concerning their group work and their attribution of leader coaching during a task in an experimental setting. Participants were 80 undergraduate students from four nations (Austria, USA, China, and Turkey) at WU Vienna University of Economics and Business, Vienna, Austria. Eight work groups consisted of 72 participants while eight students were selected as leaders in this experiment ( $N = 72$ , 33 male and 39 female; mean age = 22.43 years). All participants were full-time or exchange students at WU Vienna at the time of the experiment and could speak English fluently.

At the beginning of the study we divided the participating students into eight homogeneous work groups and selected eight leaders for the task that took two rounds. Every participating nation (Austria, Turkey, China, and USA) was represented by two leaders and an identical number of followers for every group. The subordinates had to work in a homogeneous and heterogeneous work group. In order to prevent learning effects we decided to compose groups differently (e.g. in the first round “American leader A” led a homogeneous team while “American leader B” led a multicultural team). In the second round the leaders remained stable but the followers had to move to a predefined specified group. The experiments took place in different rooms and were observed by experienced instructors. The task was handed over by these people. The assignment was to design and build a tower made of cardboard and predefined tools within 30 minutes. The leadership style and the working process were not specified by the instructors. After 30 minutes the leaders of the work group handed over the output of the group to the observer. The followers adjourned themselves to another specified room and worked on the task within another group. After every round the participants were asked to complete a questionnaire asking them to rank their own personal view of their group performance, the task and the leader coaching.

This questionnaire consisted of 28 items based on selected scales from the Team Diagnostic Survey (TDS) of Wageman, Hackman and Lehman (2005) – an instrument intended for the diagnosis of the strengths and weaknesses of groups and for research on group behavior and performance (Wageman, Hackman & Lehman, 2005). The TDS has been used in numerous studies and was shown to be an ideal instrument to assess group or team members’ perceptions of the group’s socio-structural features, such as compelling direction or enabling structure (Higgins, Weiner & Young, 2012; Wageman, Hackman & Lehman, 2005). We adapted the TDS for our experiment and research context. All items in this questionnaire were rated on a five-point Likert-scale, ranging from “disagree strongly” (response score = 1) to “agree strongly” (response score = 5). Demographic information regarding age, sex, and nationality was also collected. In this study, we measured “clarity”, “challenge” and “consequentiality” using the six-item scale “compelling direction”. Furthermore, group members rated the task design by focusing on sub-scales “the whole task”, “autonomy/judgment”, and “knowledge of results” using eight-item scale “enabling structure”. We also measured direct interactions with groups that usually intend to shape group processes to produce good performance (Wageman, 2001) by using 14-item scale “leader coaching”. We investigated “task focused coaching”, “operant coaching”, “interpersonal coaching” and “unhelpful directives”.

## RESULTS

Tables 1 to 4 show two-sample t-Tests for all comparison groups (homogeneous and heterogeneous) and settings. The analyses outline the differences of attributions and perceptions of group members relating to group work. We also investigate the work and appearance of the leaders.

**Table 1: Analysis of dimensions of TDS – Austrian Leaders**

	Items	Mean_hom	SD_hom	Mean_het	SD_het	p-Value
Clarity	1. There is great uncertainty and ambiguity about what this work group is supposed to accomplish.	3,00	1,64	3,94	0,80	0,038*
Consequentiality	5. The purposes of this work group don't make much of a difference to anybody else	3,28	0,83	2,39	0,61	0,001***
Operant Coaching	20. The leader provides positive feedback when the work group behaves or performs well.	2,72	1,27	3,61	0,85	0,020*
Operant Coaching	21. The leader provides corrective feedback when needed.	3,00	1,28	3,94	0,64	0,010**
Unhelpful Directives	23. The leader instructs the work group in detail about how to solve its problems.	1,83	0,62	2,72	1,41	0,022*
Interpersonal Coaching	24. The leader helps members work on improving their interpersonal relationships.	1,94	0,73	2,61	1,09	0,039*
Task Focused Coaching	26. The leader helps the work group identify and use well each member's unique talents.	1,94	1,06	2,67	0,77	0,025*

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 2: Analysis of dimensions of TDS – Turkish Leaders**

	Items	Mean_hom	SD_hom	Mean_het	SD_het	p-Value
Clarity	1. There is great uncertainty and ambiguity about what this work group is supposed to accomplish.	2,56	0,86	3,89	0,96	0,000***
Operant Coaching	21. The leader provides corrective feedback when needed.	3,5	0,86	2,39	1,04	0,001**
Unhelpful Directives	23. The leader instructs the work group in detail about how to solve its problems.	3,28	1,23	2,06	1,21	0,005**
Interpersonal Coaching	24. The leader helps members work on improving their interpersonal relationships.	3,06	1,16	1,89	0,83	0,002**
Task Focused Coaching	25. The leader keeps the work group alert to anything that might require a change of work strategy.	3,33	0,91	2,56	1,10	0,027*
Task Focused Coaching	26. The leader helps the work group identify and use well each member's unique talents.	3,33	1,03	2,22	0,94	0,002**
Unhelpful Directives	27. The leader tells the work group everything it is doing wrong.	3,28	1,36	1,94	1,11	0,003**

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 3: Analysis of dimensions of TDS – Chinese Leader**

	Items	Mean_hom	SD_hom	Mean_het	SD_het	p-Value
Clarity	3. This team's purposes are specified so clearly that all members should know exactly what the work group exists to accomplish.	2,67	1,14	3,83	0,79	0,001**
Task Design	8. The work of this work group leaves little room for the exercise of judgment or initiative.	2,72	1,07	3,39	0,61	0,030*
Task Design	9. Carrying out our work group's task automatically generates trustworthy indicators of how well we are doing.	3,22	0,81	3,72	0,57	0,041*
Task Design	11. The work itself provides almost no trustworthy feedback about our work group's performance.	3,06	0,80	3,72	0,89	0,025*
Task Focused Coaching	15. The leader helps members learn from one another and from the work group's work experiences.	2,50	0,92	4,00	0,77	0,000***
Task Focused Coaching	16. The leader works with the work group to develop the best possible approach to its work.	3,56	0,92	4,28	0,57	0,009**
Task Focused	17. The leader helps the work group build a high	3,33	0,77	4,00	0,84	0,018*

Coaching	<i>shared commitment to its purposes.</i>					
Unhelpful Directives	<i>18. The leader micromanages the content and process of work group discussions.</i>	2,94	0,80	3,67	1,03	0,025*
Operant Coaching	<i>21. The leader provides corrective feedback when needed.</i>	3,00	1,03	3,72	0,75	0,022*
Unhelpful Directives	<i>23. The leader instructs the work group in detail about how to solve its problems.</i>	2,61	1,14	3,89	0,83	0,001***
Interpersonal Coaching	<i>24. The leader helps members work on improving their interpersonal relationships.</i>	2,22	0,81	3,00	1,14	0,025*
Task Focused Coaching	<i>25. The leader keeps the work group alert to anything that might require a change of work strategy.</i>	2,61	0,92	3,44	0,98	0,013*
Task Focused Coaching	<i>26. The leader helps the work group identify and use well each member's unique talents.</i>	2,44	0,92	3,50	1,04	0,003**

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

**Table 4: Analysis of dimensions of TDS – US American Leaders**

	Items	Mean hom	SD hom	Mean het	SD het	p-Value
Clarity	<i>1. There is great uncertainty and ambiguity about what this work group is supposed to accomplish.</i>	4,17	1,10	2,83	1,20	0,001**
Challenge	<i>2. This work group's purposes are so challenging that members have to stretch to accomplish them.</i>	2,17	0,86	3,00	1,08	0,015*
Consequentiality	<i>6. This work group's purposes are of great consequence for those we serve.</i>	1,89	0,68	2,83	1,04	0,003**
Task Design	<i>7. We do a whole, identifiable piece of work.</i>	4,39	0,70	3,11	0,90	0,000***
Task Design	<i>12. The only way we can figure out how well we are performing is for other people in the organization to tell us.</i>	4,17	0,71	2,78	1,11	0,000***
Task Design	<i>13. The work we do requires the team to make many "judgment calls" as we carry it out.</i>	3,94	0,54	3,33	0,97	0,027*
Task Focused Coaching	<i>15. The leader helps members learn from one another and from the work group's work experiences.</i>	3,78	0,55	3,11	1,18	0,040*
Task Focused Coaching	<i>16. The leader works with the work group to develop the best possible approach to its work.</i>	4,28	0,89	3,56	1,04	0,033*
Interpersonal Coaching	<i>19. The leader helps members resolve any conflicts that may develop among them.</i>	3,72	0,67	2,89	1,02	0,007**
Operant Coaching	<i>20. The leader provides positive feedback when the work group behaves or performs well.</i>	4,11	0,58	3,06	1,21	0,003**
Operant Coaching	<i>21. The leader provides corrective feedback when needed.</i>	3,83	0,99	2,94	1,06	0,013*
Task Focused Coaching	<i>22. The leader helps the work group sustain the motivation of all members.</i>	4,06	0,54	2,67	1,14	0,000***
Unhelpful Directives	<i>23. The leader instructs the work group in detail about how to solve its problems.</i>	3,89	0,76	2,56	1,20	0,000***
Task Focused Coaching	<i>25. The leader keeps the work group alert to anything that might require a change of work strategy.</i>	3,94	0,64	3,00	1,08	0,004**
Task Focused Coaching	<i>26. The leader helps the work group identify and use well each member's unique talents.</i>	4,00	0,91	2,61	1,20	0,000***
Operant Coaching	<i>28. The leader gives inappropriate or undeserved praise or criticism.</i>	4,67	0,49	3,83	1,10	0,007**

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$ .

The analyses of the dimensions show different significances related to the cultural background of all participants. The results illustrate that the responses of group members led by Austrian and Turkish leaders show fewer significant differences than answers of individuals led by Chinese and American leaders. We examine that there exist significant differences for item 1 (sub-scale "clarity") in groups led by Austrian, Turkish, and American leaders. The scales "clarity", "challenge" and "consequentiality" generally illustrate the averaging group member responses that assess the degree to which the direction of a group is clear, challenging, and consequential. The highest significant difference can be identified in groups led by the Turkish participants. Obviously the reasons for the group work and the intention were communicated differently in their homogeneous and heterogeneous work groups that they led during the task. Results for the groups led by Chinese students

show a significant difference concerning the clear communicated purposes what the work group exists to accomplish (item 3). Participants who worked in groups led by American leaders show some significant differences between homogeneous and heterogeneous groups concerning a possible challenge so that group members have to stretch to accomplish the groups' purposes (item 2). Moreover, we also identify significant differences in these groups related to consequentiality (item 6). The results also show significant differences between homogeneous and multicultural groups led by Austrians concerning the proposition that the purposes of the work groups didn't make much of a difference to all followers. In this case, the difference between the attributions of the homogeneous and the heterogeneous work groups refers to the engagement of the full range of the group members' talents.

Significant differences of our analyses for items of the scale "task design" are only identified in groups led by Chinese and American leaders. Participants who worked in groups led by Chinese leaders mainly attribute a difference relating to the knowledge of results. We argue that followers attribute the allocation of knowledge differently on a regular basis. They think that the task design itself was communicated unequally. On the other side, group members led by American students show the most significant differences in item 7 and 12. Obviously, there is lack of motivational leadership and insufficient autonomy to exercise judgment about work procedures. We also argue that the duties and the task itself within the work group were communicated inadequately.

The analyses of our third scale show the most significant differences of our study. We investigate three items of leader coaching that illustrate varying perceptions and attribution of operant coaching (item 21), unhelpful directives (item 23), and task focused coaching (item 26) in all work groups that we investigated. The results show that in every group composition existed significantly different perceptions of leader performance. We argue that leaders provide corrective feedback when needed and coaching that focuses on performance strategies, group effort, and the use of knowledge and skills in homogeneous versus heterogeneous groups differently. Interpersonal coaching focuses on reasonable intervention of leaders concerning challenges of relationships in a group. Significant differences in this aspect of coaching can be identified in homogeneous and multicultural groups led by Austrian, Turkish and Chinese participants. The biggest significant differences concerning leader coaching are shown in groups that were led by Chinese and American leaders. This led to the situation that some leaders found themselves many times excluded from the group, failed to stress out the competitive character of the setting and neglected agreeing upon rules and improvement opportunities.

## **CONCLUSION AND MANAGEMENT IMPLICATIONS**

After interpreting the results of this study we can answer our research questions. The significant differences we identified showed obvious differences of attributions and perceptions of followers with different backgrounds in relation to group direction and leader coaching. The compelling direction of groups is the specification of its overall purpose (Wageman, Hackman & Lehman, 2005). We analyzed that group directions and the accomplishments of group work were communicated and perceived differently in various group compositions. We note that the example of leading homogeneous work groups by American participants was attributed and perceived considerably different than the leadership in multicultural groups under the same leadership. We underline this finding with reference to the behaviors of leaders that are learned and developed in their own culture. We also argue that languages and communication issues can always lead to different interpretation of meanings. Some people find it difficult to understand and follow an English native speaker. Furthermore, some leaders could not motivate the followers appropriately. Our results also show that the influence of leaders in homogeneous versus multicultural groups vary significantly. As mentioned before, leader coaching was also assessed differently. As a result, we underline that some students have more experience in leading and working with people. Moreover, we also emphasize that some participants have more knowledge about cultural differences and are more satisfied with the outcome, direction, and performance of their leaders in this experiment than others. Overall, we argue that different nationalities lead to varied attributions and perceptions of group performance, outcomes, and leader performance.

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# **INNOVATIONS IN TEACHING INTERNATIONAL BUSINESS STUDENTS**

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## **ABSTRACT**

*This paper examines an experiment in team based learning (TBL) undertaken with international undergraduate accounting students studying taxation law. Research indicates that TBL aids educational outcomes and the students' ability to apply content this undergraduate taxation law teaching experiment produced mixed results given the lack of improvement in exam performance.. However, there are clear benefits from TBL. TBL was associated with significantly higher levels of student engagement, participation and attendance. Student satisfaction was high. TBL encouraged student group development, generic skills and this assists employers. Further, there are substantial benefits for university teachers as TBL transforms the joy of teaching.*

## **INTRODUCTION**

Face to face teaching for international business students that involves complex language rich topics such as taxation law at Australian universities poses real challenges given the language and cultural differences. This challenge is exacerbated by large class sizes, diversity of the student population, increasing topic complexity, growing pressures on business school funding and teaching resources and the threat of online competition. The move towards greater accountability for research outputs also places added time pressure on academics to maintain teaching quality. These forces push towards innovation and the acceptance of new teaching methods in Australian university business schools.

In this context, team based learning (herein after referred to as TBL) was trialed by the author in undergraduate tax law tutorials in 2010.

Given that there is no known research into the use of TBL in respect of teaching Australian taxation law to international university business students this study aims to assess its effectiveness. This TBL experiment was conducted on final year international business university students studying an introductory taxation law topic covering taxation policy, goods and services tax and income tax.

First, this paper defines team based learning and examines the mooted benefits. The paper then provides a theoretical underpinning for the TBL experiment. The TBL experiment is detailed and its findings are analyzed.

Research indicates that TBL aids educational outcomes and the students' ability to apply content, however, this undergraduate taxation law teaching experiment with international students produced mixed results. There were certain clear benefits from TBL, being associated with significantly higher levels of international student engagement, participation and attendance. Student satisfaction was high. TBL encouraged international student group development, generic skills and this assists employers. Importantly, there are substantial benefits for university teachers as TBL transforms the joy of teaching international students. The experiment, though, was unable to detect any improvement in exam performance.

## **DEFINING TEAM BASED LEARNING**

There are a number of definitions for TBL in a university context. Team learning can be defined as ‘a particular course structure that is designed to support the development of high performance learning teams and to provide opportunities for these to engage in significant learning tasks’ (Fink 2007). Michaelsen defined team learning as ‘extensive classroom use of permanent, heterogeneous, six or seven member student work teams to accomplish learning objectives’ (Michaelsen et al 1982).

## **BENEFITS OF TBL**

TBL can assist addressing the language difficulties of international students since TBL aids students’ understanding of content, their ability to apply content and suits courses that require analytical thinking skills (Fink 2007). Michaelsen similarly found TBL aids educational outcomes (Michaelsen 1998).

The lack of student participation by international students is a pervasive problem in university accounting tutorials (Keddie & Trotter 1998; Ramsden 2003, Marriot & Marriot 2003). The Accounting Education Change Commission has called for students to be active participants in classes rather than passive recipients of learning (Accounting Education Change Commission 1990). In this context, TBL appears useful since it increases student participation and results in high satisfaction levels for students (Michaelsen 1998).

Another important benefit for international university students from TBL results from the demand by employers for employees that can effectively work in teams. Research indicates that work teams dominate industry since team work leads to better decision making (Guzzo & Shea 1992). Thus, business and government employers rely on work teams to achieve organisational goals and these employers seek employees who can effectively work in teams (Eisenhardt et al 1997). This is particularly the case when team players have good interpersonal and problem solving skills (Bamber et al 1996). Business leaders have concerns about new recruits who are technically proficient but who are socially ill equipped to solve organizational problems (Baily et al 1997; Holt & Willard-Holt 2000).

There are also benefits from TBL in improving the effectiveness of teaching large class sizes (Michaelsen et al 1982). Further, TBL is helpful in other challenging teaching situations such as diverse student groups and courses with extended class durations (Fink 2007). There are also benefits for university teachers as TBL improves the enjoyment of teaching (Fink 2007; Michaelsen 1998).

## **THEORETICAL GUIDELINES FOR TBL EXPERIMENT**

This experiment is based on a model developed by Michaelsen. Under this model, small group or TBL methods can aid educational goals where the teachers motivate the students to prepare and engage in ‘give and take’ discussions (Michaelsen 1998). The following three keys are considered to be important to the effectiveness of such group learning.

First, promoting ongoing accountability is vital to prevent under preparation by students and the group work becoming a social event (Michaelsen 1998). Thus individuals and groups should be set tasks and assessed on their success (Michaelsen 1998). Individuals can be set individual tests, verbal discussions for each individual and be assessed by way of peer evaluations. Groups can be tasked with assignments that require an output that can be assessed so as to facilitate an inter group comparison.

The second key involved using linked and mutually reinforcing assignments at the individual work stage, the TBL stage and the total class discussion stage of the teaching process (Michaelsen 1998). To optimise the impact on learning, assignments should be characterised by three S’s: same problem; specific choice and simultaneously report. (Michaelsen 1998). Under the same problem, individual groups should work on the same issue. For specific choice individual groups should use topic concepts to make a specific choice. Finally, groups should be required to report simultaneously.

Thirdly, practices that stimulate idea exchange should be adopted (Michaelsen 1998). For assignments this can be achieved by providing tasks that require group interaction (Michaelsen 1998). For example, require students to use course concepts to make difficult choices (Michaelsen 1998). Barriers to participation can be alleviated



by using permanent groups, assignments and a grading system that encourages group development (Michaelsen et al 1996). Work in the classroom is preferred given the time constraints and difficulties for students to meet outside of class that will limit any serious group work (Michaelsen 1998). Creating diverse groups of 5-7 individuals exposes students to new ideas (Michaelsen 1998).

## **THE TAXATION LAW TBL TUTORIAL EXPERIMENT**

The TBL experiment involved a comparison in teaching taxation law tutorials to international undergraduate accounting students (primarily Asian) in the 2009 and 2010 years. The tutorials in both of these years involved a diverse cohort of domestic and international students. The 50 minute tutorials for the introductory taxation topic ran over 12 weeks (1 tute per week) during semester one of both years. The author and other tutors presented these tutorials.

In 2009, the tutorials were conducted without TBL and student participation was not assessed. The tutorials were largely tutor based, with the tutor didactically providing answers and with some prompting of students for answers and class discussion. The tutors' dominated the discussion talking for approximately 40 to 45 minutes out of the 50 minute tutorial.

TBL was introduced in 2010 with students allocated in teams of 4-5 students in each tutorial (usually 4 teams per tute group). Students were given leeway to choose their own teams and as a consequence the international students preferred to form their own teams rather than mix in teams with domestic students. The TBL exercise involved approximately four multiple choice questions (hereinafter known as "MCQ"). Ascertaining the teams' MCQ answers and discussion accounted for a further 5-10 minutes of the tutorial. The remainder of the tutorial time (a period of about 20 minutes) involved the tutor providing answers and facilitated significant student discussion.

The group members remained unchanged during the teaching semester. MCQ sheets were handed out to each team at the beginning of each tutorial and the group was given about 15-20 minutes to ascertain answers. The MCQ questions had 5 possible answers A, B, C, D and E. Each group were provided with 5 large cards marked: A, B, C, D and E. The teams were advised that the questions must be handed back to the tutor after the exercise concluded and that they could not write on the questions (so that questions could not be passed onto other classes). Teams who failed to follow this advice were advised that they would lose marks for failing to follow instructions.

At the end of the allocated time, the groups were asked to simultaneously hold up the card with the best answer for each question in turn. The tutor noted the teams' answers and a score of one point was awarded for each correct answer. Over the ten weeks of these tests 37 MCQ questions were provided to teams.

The provision of extensive and timely feedback was a key feature of TBL. After each question the tutor provided an explanation for the correct answer and invited discussion. Further, feedback on the importance of individual participation was stressed during the semester particularly in the first six weeks. For example, students were advised that a high distinction performance would need participation at a high distinction level as well as high distinction technical performance. During tutorials extensive oral feedback was provided at a team level to indicate the participation performance of teams (thereby avoiding individual criticisms that may embarrass students). Teams with low participation were advised that they would receive a lower mark for their ten per cent tutorial assessment.

The teams (without individual member names) were listed on the topic's intranet site which was accessible by all students. The grading system was designed to encourage group development. After week six of semester one, the teams were divided into different leagues. The distinction and above teams were allocated to the Premiership, the other students were allocated to the Championship. International student teams were also listed in an International League. League tables and technical point scores were published in week 6 (a team score out of 21 MCQs) and in week 12 (a team score out of 16 MCQs), totaling a mark out of 37 MCQs. The winning teams of the three leagues received small prizes of blocks of chocolate. Team photos were taken of the winning teams and (with written permission of team members) these photos were published on the intranet. In the last

tutorial in week 12, brief written team feedback was provided and a grade awarded to each team based on the teams' technical performance, team work and participation. After week 12 each individual's grade was confidentially published on the topic's intranet site that took into account their team grade (5 per cent of the assessment) and their individual participation (5 per cent of the assessment).

This experiment generally followed Michaelsen's theoretical guidelines noted above. The experiment promoted ongoing accountability for teams (by the MCQ tests) and individuals (by the participation grades). Also, the experiment involved linked and mutually reinforcing assignments at the individual work stage, the TBL stage and the total class discussion stage of the teaching process. Further, the use of the MCQs meant that the 3 'S's' were followed. Teams were given the same MCQ tests involving groups using topic concepts to make a specific choice. The groups were required to report simultaneously. Students needed to use course concepts to make difficult choices. The experiment used permanent groups, MCQ tests and a grading system. All of the work was conducted in the classroom and diverse groups of 4-5 students were created (albeit slightly smaller than the 6-7 member teams suggested by Michaelsen).

## ANALYSIS OF FINDINGS ON STUDENT PERFORMANCE

### Teachers' Impressions

From the author's observations of TBL it was clear that the international students enjoyed working in teams. Initially the level of team verbal class participation and discussion was rather low but this improved significantly over the semester. The standard of team participation was generally lower than the level of technical performance. The increased level of discussion by students and TBL helped to inject a sense of fun, interest and dynamism into the tutorials. Tutorial attendance was significantly higher with TBL. Prior to TBL, the tutorials were mainly characterized by the one way dialogue of teachers. The student evaluations of teaching also reflected a high level of student satisfaction under TBL (see Appendix). Although, this level of satisfaction was similar to when TBL was not used.

T Trimboli, a tutor in the topic in both years of the experiment observed:

The impact on students was a positive one because the competitive nature of the TBL approach generated more enthusiasm and interest in the tutorial class. It provide a "light" and entertaining relief from the normal procedure which the students enjoyed and looked forward to each week. Students

Also, a good practical learning experience for the students as they have to work as a team and make decisions by discussion and consensus.

There are substantial benefits for university teachers since TBL can transform the joy of teaching. Stress and boredom are greatly reduced by the higher levels of student participation (especially in repeated classes). As discussed previously, the lack of participation has been a perennial issue in teaching international accounting students.

### Student Performance in Team Based Tutorial Assessment

In respect of tutorial assessment, the sound technical performance of the ten international teams during semester 1 in 2010 provides some evidence of the effectiveness of TBL. The following table outlines the performance of international teams in weeks 2-6 and 7-11.

**Table 1: Performance of teams in MCQ tests, weeks 2-6 and 7-11**

Team No.	Weeks 2-6 /21 Score	% Score	Weeks 7-11 /16 Score	% Score	% Change weeks 2-6 to 7-11	Overall score /37	Overall % Score
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1	16	76%	14	88%	+16%	30	81%
2	16	76%	11	69%	-9%	27	73%
3	16	76%	11	69%	-9%	27	73%
4	16	76%	14	88%	+16%	30	81%
5	15	71%	12	75%	+6%	27	73%
6	10	48%	16	100%	+108%	26	70%
7	12	57%	9	56%	-2%	21	57%
8	11	52%	10	63%	+21%	21	57%
9	11	52%	13	81%	+56%	24	65%
10	10	48%	16	100%	+108%	26	70%
Average score	13	63%	12.6	79%	+25%	26	70%

The ten teams engaged in TBL averaged 63 per cent correct MCQ answers over the first five weeks of tests (total of five tests). At the end of the five tests in weeks 7-11, the teams averaged 79 per cent correct MCQ answers, an improvement of 25 per cent compared to weeks 1-5. This suggests that TBL works to improve student performance over the course of the semester. Although, other factors may have resulted in this improvement such as differences in the complexity of MCQ tests and the learning effect from practice in MCQ tests. More research and testing is needed to confirm the impact of TBL on MCQ performance.

## Student Performance in Mid Year Exam

The mid year exam in the 2009 and 2010 years both consisted of an identical 30 question multiple choice test. The following table outlines student performance in the two experiment years:

**Table 2: Analysis of mid year exam performance 2009 and 2010 years**

	<b>Fail %</b>	<b>Pass %</b>	<b>Credit %</b>	<b>Distinction %</b>	<b>High Distinction %</b>
<b>2009 (63 students)</b>	2	24	33	25	16
<b>2010 (63 students)</b>	6	22	25	37	10

The above table shows that the TBL in 2010 appears to have been accompanied by some deterioration in the exam performance as seen by the reduced percentage of high distinction students. The percentage of distinction students in 2010 though was higher but the percentage of credit grades fell. The number of students with pass grades was similar between the two years. The worsening of grades, though, may be explained by a difference in student quality in 2009 and 2010.

## Student Performance in Final Year Exam

The final exam in the 2009 and 2010 years both involved two hour exam papers with similar formats and identical weightings for the components of the exam. The following table outlines student performance in the two experiment years:

**Table 3: Analysis of final exam performance 2009 and 2010 years**

	<b>Fail %</b>	<b>Pass %</b>	<b>Credit %</b>	<b>Distinction %</b>	<b>High Distinction</b>
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					<b>%</b>
<b>2009 (62 students)</b>	31	40	21	6	2
<b>2010 (58 students)</b>	34	55	8	3	0

It appears that the introduction of TBL failed to have a positive impact on exam performance. Only the pass grades percentage were higher in 2010. The 2010 TBL exam was associated with a slight worsening of fail, grades and a more significant reduction in credit, distinction and high distinction grades compared to 2009 exam. This finding is quite tentative given the variances in exam complexity and student quality over the two years.

## CONCLUSION

Whilst research indicates that TBL aids educational outcomes and the students' ability to apply content this undergraduate taxation law teaching experiment using the Michaelsen's TBL guidelines produced mixed results.

TBL appeared to be effective in improving student performance over the course of the semester as seen by the improvement in the in class MCQ results. However, the introduction of TBL was associated with a lower level of achievement in the mid semester exam and the final exam. However, the impact of TBL on student performance in the MCQ tests and the exam performance is inconclusive given the differences between the two cohorts and test / exam complexity. More research is needed to account for these differences so as to verify these findings.

There are, though, clear benefits from TBL. TBL was associated with significantly higher levels of engagement, participation and attendance by international students. Student satisfaction was also high. TBL encouraged student group development, generic skills and this would assist employers. Importantly, there are substantial benefits for university teachers as TBL transforms the joy of teaching. This reduces teacher stress and boredom (especially in repeated classes) and facilitates a more enjoyable learning experience for international students.

## APPENDIX

### Tutorial Student Evaluations of Teaching (SETS) in undergraduate taxation law in 2008 and 2010

<b>2008</b>											
<b>SETS criteria</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>
Mean	6.7	6.5	6.4	6.4	6.4	6.2	6.3	6.5	6.4	6.4	6.5
<b>2010</b>											
<b>SETS criteria</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>
Mean	6.6	6.4	6.4	6.5	6.4	6.3	6.3	6.5	6.5	6.6	6.6

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# **MICROFINANCE STRATEGIES IN SUPPORTING MICROENTERPRISES IN SOUTH AFRICAN TOWNSHIPS - A CASE STUDY OF GAUTENG**

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## **ABSTRACT**

*Since 1994, strategies were put in place in South Africa in an effort to support microenterprises, reduce poverty and underdevelopment. However, these strategies lacked in transparency and have proved ineffective and inappropriate approaches to improve access to financial services (microfinance) by microenterprises. The objective of this paper is to examine and develop an effective microfinance strategy/system that is targeted towards microenterprises and their finance in South African townships. Using the case of Gauteng, South Africa's smallest, but economically most powerful province, the paper examines the existing system of financing strategies for microenterprises and tries to come up with a solution which takes in particular the situation on the interface between first and third world into account.*

## **INTRODUCTION**

With the advent of democracy in 1994, the South African government embarked on drafting its vision on how it would transform the country. The developmental framework focused on achieving macroeconomic objectives, including developing microenterprises, reducing poverty and underdevelopment, through various social and economic policies. The central theme was to reduce the poverty of the majority of South Africans and make services of an economic nature accessible to all as enshrined in the Constitution of the Republic of South Africa (1996) (Du Toit and Neves 2007; Mbeki 2003). The intention was to improve and increase opportunities for redistribution of economic resources and providing a boost to growth (Greene and Berroth 2002). The assumption was that people could be better off if they had reasonable access to resources, job opportunities as well as lending facilities. South Africa was, in 2004, committed to achieving the Millennium Development Goal (MDG) set in the year 2000 of halving poverty and unemployment by 2015 (The World Bank 2002; Development Bank of Southern Africa (DBSA) 2005). The target is reducing the proportion of people living on less than US \$1 a day and the proportion of those who suffer from hunger to halve. However, there are, to date, still large gaps in South Africa in terms of these issues and effective strategies are needed to fill these gaps.

The financial services system plays a pivotal role in financial service delivery and in community, individual and microenterprise development. Financial services include a broad range of financial products like credit and savings (Fourie et al. 1999). However, although a vital component of poverty alleviation, employment creation, enterprise promotion or business development, and although allowing for the opening of new avenues for organising poor people – especially women – and harnessing their potential (Greene and Berroth 2002), according to the *Sunday Times* (2004), 13.2 million of South Africa's population did not have access to banking or financial services, especially credit. In 2006, the Mail & Guardian in collaboration with FinScope, a national household survey of financial services, pointed out that 16.5 million South Africans were unbanked and needed to be brought into the official banking system (Room for growth in microfinance in South Africa. *Mail & Guardian on-line* 28 June 2006). The Micro Credit Summit, held in 2005, emphasised the development of new financial products, strategies and methods to provide financial services, especially credit, to microenterprises and poor households around the world. The purpose for the micro lending industry was to combat poverty by

improving access to credit for 100 million of the world's poor households and 500 million of all the unbanked people (Mathie 2001).

Although there is generally a strong need for financial services, especially credit, on the part of microenterprises (and/or poor households) and the emphasis of The Banking Council (1999) on the need for banks to expand financial service delivery and to reduce operating costs, in fact, financial institutions such as banks and micro lending institutions in South Africa are dominated by the provision of credit with high transaction costs and the need for collateral to secure credit. Asymmetric information also hampers decision-making in financial contracts; that is to say, it becomes difficult and costly for financial institutions, particularly banks, to acquire information about borrowers. The lack of information and the need for collateral, therefore, lead to high transaction costs of extending credit.

Given the situation, circumstances and constraints under which microenterprises operate, which include lack of collateral or assets to secure finance, inadequacy of information regarding microfinance institutions and the financial services offered, and the general marginalisation of these enterprises by financial institutions, a rethinking in terms of support and developing microenterprises becomes necessary. The concept microfinance according to Mashigo and Schoeman (2011; Nelson and Sampat 2001; Meagher and Wilkinson 2001), is derived from numerous examples of traditional informal financial systems that have existed around the world of ages. In its current form it has emerged as an alternative to conventional banking and – including access to credit, savings, and insurance schemes as well as the distribution of small-scale loans to the poor and marginalised households (Meagher and Wilkinson 2001) – has become a major tool of development among the poor segments of society and an appropriate solution to inaccessibility to financial services. The microfinance sector differs from the banking sector on client features, loan portfolio, culture and institutional structure.

## **Microfinance Strategies in Supporting Microenterprises in South Africa**

Several key institutions which were created in the 1980s and early 1990s, most of which are still around in some form today, included state-supported development corporations and a joint government and private sector small business financing institution which were the most active in the market. With the advent of the new political dispensation in the country, and a relaxation of controls combined with increasing lack of employment and the inability of the formal economy to create new jobs, small, medium and micro-sized enterprises (SMMEs) flourished all over the country (Tomlinson 2002). The increase in the number of enterprises thus resulted in an increasing demand for appropriate credit. In the poor market segment, only a few intermediaries or microfinance institutions have been established to act as retailers of the credit required by microenterprises in South Africa. Some of them, just to mention a few, are the Small Enterprise Foundation (SEF) and the Get Ahead Foundation (GAF).

The *Small Enterprise Foundation (SEF)*, for example, established in 1991, is a microfinance institution operating primarily in the Limpopo Province and around 2010 it expanded into other Provinces like Eastern Cape, Mpumalanga and North-West (The Small Enterprise Foundation 2012). It aims towards the elimination of poverty and unemployment through the Micro Credit Programme and the Tshomisano Credit Programme. The first one provides existing, but generally marginal, micro enterprises with micro loans, while the second one strictly targets only women living below the poverty line (an equivalence of \$1 per day (Wilson, 1996)) to provide them with even smaller/micro loans. The majority of loans are for 6 months with repayments due monthly.

To specifically deal with the characteristics of this segment SEF uses a slightly modified group lending methodology pioneered by the Grameen Bank of Bangladesh where people who form small groups apply for loans. It also caters for individuals who are also screened according to character (i.e., how a person had managed debt obligations in the past), capacity (i.e. how much debt a borrower could comfortably manage), and capital (i.e. the borrower's available assets that can be used to repay the debt if income were to cease). The SEF does not provide saving services but requires groups to firstly accumulate regular savings through a Post Office savings account, for example, in order to build up a fund on which they can fall back when faced with financial difficulties.

The *Get Ahead Foundation*, established in 1983, promotes alternative credit for people (for housing or shelter) and for microenterprises who are unable to access conventional credit. Through its Stokvel Lending Program, it targets people operating rotating credit and savings associations (like stokvels) (Tomlinson 2002). However, although situated in Gauteng, the underlying problem is that the GAF, through its Business Loan Program, only benefits well established or high-level enterprises (Sebstad 1992). Many of these microfinance institutions, for example, the GAF, are funded by donors such as the United States Agency for International Development.

Realising that policies and institutions developed in the past have been inappropriate to the challenges of development, particularly with regard to micro/small business development, South Africa, in support of micro- and self-employed entrepreneurs, besides the establishment of the the National Small Business Act of 1996 and the National Small Business Council created new institutions through the Department of Trade and Industry:

- The *Ntsika Enterprise Development Agency* was to implement the strategy for SMMEs through retail service providers. Ntsika basically only provides non-financial support to the SMMEs tackling issues like management development, marketing, business linkages, policy, research and business development services (SA Tourism Research 2007).
- *Khula Enterprise Finance* was to increase access to finance to SMMEs through financial intermediaries (Meagher and Wilkinson 2001). Khula Enterprise as wholesale financial institution is authorised to develop the SMMEs sector's access to funds, mainly through offering assurance to Retail Financial Institutions (RFIs) which in turn loan to the SMMEs with substantial low interest rate.
- Towards the end of 2004, the *Small Enterprise Development Agency (SEDA)* was created to drive small/small business development through development support programs.

Furthermore, the *South African Micro-Finance Apex Fund (SAMAF)* has piloted its apex developmental micro-financing fund model, utilising community based financial intermediaries like financial institutions, Financial Service Co-operatives and Microfinance Institutions to extend their financial services and capacity building, to encourage the mobilisation of savings by the enterprises and the poor who are working in the rural communities.

However, the concern raised regarding this continued establishment of financial support institutions or strategies, however, remains the same: none of them are targeted towards the poor and/or microenterprises operating in the poor communities or townships in South Africa, especially in Gauteng.

## **The Demand for Microfinance in Gauteng and its Townships**

Although, being with 17 010 square kilometers, South Africa's smallest Province (1,4% of its land area), Gauteng's population is the largest (11.2 Million; i.e. 22,4%, cp. Gauteng Online 2011a). It is responsible for 33.9% of South Africa's GDP and even 10% of the total GDP of the whole continent (Gauteng Online 2011b). Despite this economic importance of the Province where the per capital income is the highest in the country, socio-economic challenges like poverty and high unemployment rates remain the most important challenges in the Province: until the last quarter of 2009, unemployment rose to 25,7% (even more than the 24,3% for the whole country). 47% of the households lived below the international poverty line of US\$ 2, 27% even below the minimum living line which is the equivalent of US\$ 1 (cp. Gauteng Department of Economic Development 2011: 23).

However, according to the Provincial Government, Small, Medium and Microenterprises (SMMEs) can contribute to the reduction of poverty and inequality, the creation of jobs and ownership, and the empowerment of the poor (Gauteng Department of Economic Development 2011; Gauteng Department of Agriculture and Rural Development 2010). This should be reached by "focusing on *financial and non-financial support to SMMEs and Cooperatives*" (Gauteng Department of Economic Development 2011: 32, original emphases, cp. also *ibid.*: 26, 76) which is establishing an SMME Agency (Gauteng Department of Agriculture and Rural Development 2010: 24). A financial sector that is proficient in improving access to financial needs of SMMEs is essential in order to assist them in achieving the ability to create self-employment that will uphold the economic activities necessary for their continued existence. However, the lack of access to finance still stands as the



greatest obstacle that hinders their performances (Mutezo 2005: 30; Gauteng Department of Economic Development 2011: 25, 75f.)

Although the main focus was on developing SMMEs, however, many microenterprises operating in Gauteng townships are equally beset with various structural problems serving as a constraint on their ability to play the expected pivotal role. The most notable among them are the inadequate finance from external sources, which has inhibited their development, and that most MFIs projects are means of survival rather than for economic development (Candace 2007). Thus, it is no wonder that the majority of the microenterprises neither have adequate business concepts nor understand most of the financial terms, the different types of financial products, services and credit available for them, and they are unable to understand the loan application procedures, often do not even have the information about where to apply in Gauteng (cp. e.g. Klingelhöfer et al. 2012a; Chiloane/Mayhew 2010). Hence, appropriate information is also needed in order to effectively distribute available resources using the correct channels (ibid.; Mashigo 2011). However, it can be difficult and expensive for financial institutions to obtain accurate information about the credit ability of their prospective microenterprise clients – especially when small or micro businesses are not under obligation to prepare financial statements. This makes microenterprises' financial data less reliable and restricts their comparability (Meagher and Wilkinson 2006), which may lead to increase in processing and administration costs of providing loans to them. In the end, processing only small loans becomes uneconomical.

Together with the lack of collateral (even where funds are provided) and the high risk, these aspects contribute to the difficulty of microenterprises in demonstrating their chances of success and obtaining long-term funds; traditional banks are often not prepared to cater for the special problems involved in financing the SMMEs (cp. also Aryeetey 1998, Onugu 2005, Klingelhöfer et al., 2012a, Mashigo 2011).

## **Challenges/Shortcomings of Microfinance Strategies in Gauteng**

The underlying problem or challenges with the South Africa's microfinance intermediaries/strategies is that in spite of the tremendous growth in the microfinance industry providing micro credit, there was and still is little innovation or variety of models being adopted and the types of credit products being offered. There is also insufficient consideration of different needs among the diversity of small, medium and microenterprises (SMMEs) in poor communities and/or townships. The financial services offered by these intermediaries cannot be sustained because their target market is only clients who possess pay slips as proof of employment and require collateral or assets as security for loans in cases where income ceases, which many township microenterprises in Gauteng do not have (Mashigo 2011; Mashigo and Schoeman 2011). In addition, majority of the microenterprises have never had access to formal financial institutions, for reasons that include the terms and conditions governing the available financial services that are offered, geographical distance from the financial institutions, lack of information about where to apply, complexity of the paper work and the difficult process necessary to make a transaction. This makes most banking and microfinance products and financial distribution channels unsuited to the needs of the microenterprises operating in the townships. An effective strategy for Gauteng is, therefore, to distinguish between established formal SMMEs in predominantly urban settings and emerging SMMEs situated in townships, informal settlements and rural areas. Since most people and microenterprises are active in the informal sector or townships where they have little institutional and financial support, this distinction is instrumental in informing policy and developing financial instruments suited for the township microenterprises.

Majority of microenterprises and people in the townships depend in part or completely on the income they earn as small-scale (or very small-scale) entrepreneurs; most depend significantly for cash income on relatives and friends, while others depend on transfer payments such as pensions and social grants (cp. for Ga-Rankuwa Klingelhöfer et al. 2012a). In addition, some resort to the informal sources of finance such as moneylenders, often associated with high interest rates that may make it difficult for microenterprises and other borrowers to repay the debt (Mashigo and Schoeman 2011).

It is evident (cp. Mashigo 2011, Klingelhöfer et al. 2012b) that the string of intermediaries that have been established in the past to act as retailers for the provision of finance (credit) to microenterprises were unsuccessful and unsustainable in that the type of financial products or credit instruments developed were

inaccessible. As alluded to above, collateral constraints, among others, make microenterprises to be marginalised and continue to be deprived of much-needed finance. The early string of intermediaries benefited only the well-established enterprises over the emerging small/micro ones. The generalisation of support interventions for SMMEs respectfully poses greater challenges to development. The “one size fits all” financing strategy is, in our view, a serious problem. This paper argues that a distinction should first be made between small, medium and microenterprises (SMMEs) which will then inform policy on effective financial support interventions and/or strategy (Mashigo 2010).

The challenge facing South Africa and especially Gauteng is therefore to establish effective financial support institutions and products and develop effective policies and strategies that are targeted towards microenterprises, particularly those in townships and rural areas. With regard to effective financing strategies, the most important challenge is to establish sustainable institutions that support microenterprises and impact positively on sustainable development as well as poverty reduction by ensuring wide access to credit as well as savings. This is different to many other countries because one characteristic of South African townships, especially in Gauteng, is that they reflect the interface between first and third world. This implies that (micro) finance institutions have to pay first world salaries for educated employees but can only provide small credits to third world enterprises with a third world education. However, since financial institutions are often deemed to be profitable and sustainable to uphold their services, they have often established their offices around certain segments of the population in the country (the working class segment, the highly developed industrial areas and the preferred sections of the population) instead of focusing on the microenterprises and the rural poor. Thus, according to a survey answered by 8 of 10 microfinance institutions in 12 townships of Gauteng, only 2 had branches in rural areas, while all the others – as well as the included 2 financial cooperatives and the 2 retail development finance institutions focused on urban areas (Klingelhöfer et al. 2012b), and the vast majority of microenterprises did not even know about microfinance (Klingelhöfer et al. 2012a; Klingelhöfer et al. 2012b).

Therefore, a part of government’s planned efforts to support microenterprises, in addition to developing new and specialised products that are targeted to microenterprises, should be directed to encouraging MFIs to locate their offices in the townships and rural areas. Also important is achieving coordination between government departments and a host of institutions to achieve a positive development impact. Further, political commitment to meeting these challenges is another crucial requirement and significant challenge.

Exploring the information dissemination of both microenterprises and microfinance, Klingelhöfer et al. 2012b found a big lack of appropriate education and training which lead to low staff productivity: most of the loan officers had problems in understanding financial expressions, many were not aware of the programmes offered by their own institution and its marketing strategy. On the other side, also a high level of financial illiteracy between the microenterprises appeared to be a major challenge hindering the performance of microfinance services. As deeper investigations in especially one township revealed, this is not only a single result (Klingelhöfer et al. 2012a: 10-13; for Gauteng Chiloane/Mayhew 2010: 2595-2600): generally, knowledge about microfinance, but also about financial and management aspects seems to be very low among micro entrepreneurs; many have not finished school. This makes it difficult for the staff of microfinance institutions to find an appropriate level of communication and, thus, has impact on the productivity of the loan officers.

## CONCLUSION AND RECOMMENDATIONS

This paper examined some microfinance strategies of supporting microenterprises in South African and the implications, challenges or shortcomings thereof. The review of these strategies provides evidence that due to their ineffectiveness, unsustainability and their inappropriateness as correct vehicles to finance microenterprises, there is a need to resolve these problems by developing effective microfinance system that will be targeted towards improving access to microfinance by microenterprises in an effort to develop and enable them to grow and improve employment opportunities and sustain their businesses and livelihoods.

The majority of the microenterprises in Gauteng cannot access funds either as a result of lack of collaterals to secure their commitment or because of missing knowledge about microfinance. Regarding the lack of collaterals, this leads to a dependence on personal savings or loan from friends for their business survival. Our *first major recommendation*, therefore, is aligned with the Gauteng Employment and Growth Strategy to focus

more on the “financial and non-financial support to SMMEs and Cooperatives” (Gauteng Department of Economic Development 2011: 26, 32, 76) and establishing an SMME Agency (Gauteng Department of Agriculture and Rural Development, 2010: 24) which would contribute to reduce the problems occurring from a lack of co-ordination, supervision and regulation.

Thus, in order to increase the outreach in microfinance finance operations, services need to be more focused on the poor, and more client appropriate lending policies have to be formulated. Furthermore, since financial institutions are often deemed to be profitable and sustainable to uphold their services, they have often established their offices round certain segments of the population in the country (the working class segment, the highly developed industrial areas and the preferred sections of the population) instead of focusing on the rural poor. Therefore, a part of government’s planned efforts to support SMMEs should be directed to encouraging MFIs to locate their offices in the rural areas.

To reach this target, as a *second recommendation*, it seems appropriate that the government extends the use of Development Finance Institutions (DFIs) as it already does for agricultural purposes with the Land Bank. DFIs are established to accelerate sustainable socio economic development through funding. Their purpose is to ensure investment in areas where the market fails to invest sufficiently. Being used to implement political targets and, therefore, without the need to be sustainable, such extended use of DFIs by government not only for agriculture, but also for other SMME support can help the MFIs to establish offices even in regions like rural areas where they normally would not try to offer services.

A *third recommendation* (as suggested in the preceding section), is for government to distinguish between small, medium, and microenterprises (and not generalise them) and thereafter develop effective, appropriate and tailor made policies, strategies and interventions of financing microenterprises in an effort to develop and sustain them.

The *fourth recommendation* is the establishment of community bank (referred to by Nigrini 2001 as village bank). In this approach, a financial institution goes into a township and request microenterprises to classify themselves into groups of 10, 20 or 30 depending on their agreement, which groups then function as banks. Group members themselves select management committee which is then trained to run their community bank.

The *fifth recommendation* which relates to this is an innovative approach in the form of Township Microenterprise Savings and Loan Account which should be established for the purpose of providing micro credit primarily to ventures such as microenterprises. An effective and sustainable strategy that would remove the need for collateral and reduce transaction costs should be to encourage microenterprises to first contribute money into a savings account which is saved for a period of not less than six months and after which a loan of not more than 50% of the savings is advanced upon request or when the need for such loan arises. This strategy deals with the need for collateral as savings amount serves as collateral to secure loans.

It is noteworthy that while these initiatives unfold, the government needs to ensure that these initiatives are effectively implemented through creating conducive legal and regulatory environments. This can be done by developing a favourable policy which has the potential to target township microenterprises and enabling them to sustain self-sufficient operations. This includes creating by-laws which will determine how best to improve access to microfinance by microenterprises.

Regarding the *lack of knowledge* about microfinance. 3 *further possible recommendations* emerge as numbers six to eight:

The *sixth* one is linked to the implementation and development of the country’s Thusong Service Centers, initiated by government to provide rural people and microenterprises with information and to give them access to government services, they could also be used to disseminate information on microfinance and appropriate training facilities. This can be done through identifying and building coalitions to link to financial needs and interests of township microenterprises in Gauteng. Situated near the central places (like the big shopping malls) these Centers would offer easy usable possibility to provide the intended users of microfinance with the necessary information and, hence, to extend the services and improve outreach of MFIs.

Since according to Klingelhöfer et al. (2012b) a part of this lack of knowledge also results from an improper education (especially on the side of their clients, the SMMEs) and communication, this last recommendation should be flanked by the *seventh one* that refers to training and education also of MFI staff, especially loan officers. Only if they really know their programmes and are able to find an adequate level of communication to deal with this matter, they will be able to advise their clients according to their needs. Since this is a structural problem of the microfinance sector whose clients are the SMMEs and the very poor, it should be addressed centrally and via staff education. SAMAF's approach to set a portion of prime loan aside for capacity building seems to be the right way and should be increased for effective training of MFIs staff.

The *eights recommendation* takes into account that the environment in South African townships can be very different from other third world settings: close to important cities (in Gauteng near to the country's capital Pretoria and Africa's business hub, Johannesburg) and often near to industrial areas which need a high quantity of workers, sometimes even housing, an own industrial area and often institutions of higher learning which got much support from the post-apartheid government to develop the previously disadvantaged population, many townships have quite a lot of first-world features, too: partially well-educated people and a broad middle-class give room enough to develop a banking and a microfinance system as well as a market for micro enterprises. This is a form of decentralising microfinance by bringing it close to microenterprises thereby dealing with the distance problem and eliminating the costs of travelling to financial institutions to access financial services. While, normally, the infrastructure for a banking and microfinance system in African rural areas remain course for concern, and especially the townships in Gauteng this clearly calls for such a development. The institutions of higher learning recruit their students broadly from the neighbourhood and, therefore, could serve as a spark of knowledge development and distribution as well as of microenterprise support.

Nevertheless, South Africa's problem of being in broad parts of third world standard, still demands for governmental subsidised MFIs to establish a microfinance and support micro enterprises. However, since this is already part of Gauteng's Employment and Growth Strategy and because South Africa has already installed quite a lot of small and micro business development support, the necessary support infrastructure for such an initial spark is already given, and the small distances to the big metropolitan centres with the opportunities of getting qualified staff, should provide fertile ground for MFIs to reach the state of sustainable operation without further (or only little) governmental funding.

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# **WASTE AND POLLUTION PREVENTION, ENVIRONMENTAL MANAGEMENT ACCOUNTING (EMA) IN SOUTH AFRICAN INDUSTRIES**

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## **ABSTRACT**

*The ever increasing urban and industrial development throughout the world is leading to levels of pollution which seriously threaten the natural resources upon which mankind depend for its survival. The South African Reconstruction and Development Programmes also highlight the sub-optimal use of natural resources and unacceptably high levels of air and water pollution as one of the major problem areas regarding our environment. Conversely, the fragmented and uncoordinated way by which pollution and waste is currently being dealt with in both private and public sectors as well as the insufficient resources to implement and monitor existing legislation, contributes largely to the unacceptably high levels of pollution and waste in South Africa. This paper investigates and explores how companies in South Africa are preventing pollution and waste, and on the basis of the received results, it will furthermore examine how environmental management accounting (EMA) can actually assist in pollution prevention, waste and emission management in South African industries.*

## **INTRODUCTION**

### **Background**

Over the past twenty (20) years, particularly in the last decade international concern about growing pollution worldwide has escalated. This is evident in the many international protocols and conventions. The World Summit on Sustainable Development (WSSD) held in Johannesburg, South Africa in September 2002 was a timely reminder to South Africa and the World of their responsibility towards the environment and the impact we have as a global community (IFAC, 2005:3; CA, 2003:1). Especially in South Africa, substantial economic wealth has been generated at the expense of its natural assets. These assets need to be protected in order to ensure that they continue to generate positive returns for the present needs as well as the aspirations of the future generations. Emerging from a period of unsustainable and inequitable development after the end of apartheid, the focus of government was more on social integration and economical development of the previous disadvantaged what resulted in environmental degradation with significant economic and social impacts. Although South Africa has extensive environment, pollution and waste management legislation, the use of natural resources is still sub-optimal and unacceptably high levels of air and water pollution can be identified as one of the major problem areas regarding the environment (Government White Paper, 2000; KPMG, 2001).

However, pollution prevention and waste management is not the exclusive preserve of government. The private sector and civil society have crucial roles to play too. Thus, the challenge is for all organizations, to find ways to reduce their impacts on the environment. Stakeholders, such as governments, customers, investors, communities etc, increasingly want to see that business is working to reduce the environmental risks and impacts (IFAC, 2005:10). Thus, a number of environmental accounting initiatives are finding ways to make a better link between environmental and financial performance.

In front of this background and of the possibilities given by EMA to deal with these aspects, this paper focuses on how companies in South Africa are preventing pollution and waste. Also, on the basis of the received results, it will furthermore examine how environmental management accounting (EMA) can actually assist in pollution prevention, waste and emission management in South African industries.

## **Linkages Between Pollution Prevention, Waste and Emission Generation and Environmental Management Accounting (EMA)**

The United Nations Environmental Program (UNEP), under the auspices of its Department of Sustainable Development attaches great importance to environmental management accounting (EMA) as a management tool that can be beneficial to both industry and government. UNEP has therefore, embarked on several activities to spread knowledge and encourage the use of EMA in the following ways:

- Proactive participation in the Expert Working Group on EMA.
- Development of training courses and advocacy (Ciccozzi, 2003:6)

Furthermore, the need for EMA has been underscored by various stakeholders' concerns over the negative impact of industrial activities on human beings and the environment as demonstrated in the Kyoto Protocol for greenhouse Gas Emission. Following these international developments, companies in South Africa need to consider environmental issues and factor them into decision-making with respect to their products and processes (KPMG, 2001:2). They also need to consider environmental issues in the context of consumption of energy, raw materials, prevention of pollution and waste generation from their production processes.

To deal with these aspects of environmental impacts in management accounting on a company and/or municipality level, an organization must collect not only monetary but also non-monetary data on materials consumption, personnel hours, pollution, waste and emissions generation, monitoring, prevention and control (IFAC, 2005; Elkington J, 1997; Schaltegger and Burritt, 2000). Thus, environmental management accounting (EMA) places on the one hand particular emphasis on materials and materials-driven costs and on the other hand the environmental impact because of the use of energy, water and materials, as well as of the generation or use of wastes and emissions (IFAC, 2005). Therefore, the company's objective system might be extended for non-profit oriented aspects as well as its decision field which has to include the needs and constraints for an environment friendly behavior.

## **RESEARCH METHODOLOGY**

In front of the described background and of the possibilities given by EMA, this paper investigates and explores how companies in South Africa are preventing pollution and waste. Therefore, in a first step, data was collected from all the 61 companies of the Johannesburg Securities Exchange (JSE) subscribing to the socially responsible investment (SRI) index, analyzed at a whole as well as in cross-sectional according to the 3 major categories (resources, industrial, and commercial) as classified by the Reserve Bank of South Africa, and from 10 major government municipalities located in the Gauteng Province where most of South Africa's industries (mining and commerce) are sited. Above all, these data were obtained from annual reports as well as from face-to-face and telephonic interviews which, among others, covered questions ranging from organisation's environmental policy and its significance in the organisation's objective system to the environmental impacts of the processes and products, the use of environmental management accounting (EMA) and/or other strategies such as instruments to monitor and disclose of as well as to deal with environmental aspects and financial implications of environmental performance.

## **FINDINGS**

The data collected and analyzed revealed the following summarized findings according to 3 major categories (e.g. resources, commercials and industrials):

Resources (e.g. mining, forestry etc):



- 65% of the South African mining sector cannot really estimate their impacts on the environment, such as effect on plant and livestock etc.
  - For over 80% of resources and forestry industries in South Africa, 75% of their activities such as extraction of materials like coal, oil, lumbering, natural gas as well as gold have extreme impacts on the environment surrounding extraction sites as a result of explosion noises and indiscriminate dumping of wastes etc.
  - Over 60% of the mining sectors' mass-balance projects are hindered as a result of lack of capacity to control input-output relationships.
  - Moreover, current applications of environmental management accounting (EMA) in South African SRI Industries remain at a low level of 30%.
  - Over 65% of the mining companies interviewed do not have proper management and control systems over materials purchased and other material-driven costs.
- Commercials (e.g. banks, financial institutions, insurance):
- Over 80% of South African commercial sector record high paper consumption in their operations and 60% of these papers are not recycled.
  - South African financial services industry works towards achieving the economy as a whole towards a low carbon future.
  - South African commercials are striving to enhance its client's value through the provision of green financial products and services.
  - 70% of South Africa commercial industry needs to reduce their carbon footprint
- Industrials (automotive, etc)
- Over 70% of the companies in this category do not have accurate data on the amounts and destinies of the energy, water and materials used to support its activities. Hence effective management of the environmental impacts becomes difficult.
  - Over 60% of the companies interviewed do not have proper management and control systems over materials purchased and other material-driven costs.
  - Over 45% of corporate investment decisions are made on the basis of incomplete information in South Africa
  - 75% products' impacts arise when a physical product ends up in a landfill at the end of its useful life, and over 55% of the companies of our study are reducing these impacts through changes in product design, such as decreasing the volume of paper used in packaging or replacing a physical product with an equivalent service.
  - Industrial pollution accounts for about 70% of South African pollution, waste and emission generation through product design issues/impacts, operating inefficiencies such as imbalances over input and output, quality concerns etc
  - Besides, 70% of the companies have no physical accounting data which can be used to create environmental performance indicators (EPIs) that can help to assess and report the material-related aspects of their environmental performance.
- Municipalities:
- Municipalities have no physical accounting data which can be used to create environmental performance indicators (EPIs) that can help to assess and report the material-related aspects of their environmental performance.
  - 85% of the major South African municipalities face the challenge of service deliveries in terms of energy, water, material and infrastructure etc.
  - 60% of the municipalities lack appropriate environment-related accounting systems and practices.
  - The municipalities do not have adequate information about their sewage system.
  - 45% of their investments are made on the basis of incomplete records.
  - Moreover, current applications of environmental management accounting (EMA) in South African SRI Industries and municipalities remain at a low level of 35%.
- Furthermore, data analysis also suggests that over 60% of the companies as well as the government municipalities are not doing enough to prevent pollution and waste generation in their individual capacity.

## CONCLUSIONS AND RECOMMENDATIONS

Natural resources need to be protected in order to ensure that they continue to generate positive returns and meet the aspirations of the future generations. However, our study shows that, regarding South Africa, there exists still big deficits in protecting the environment and in using tools like environmental management accounting (EMA) to disclose, monitor, control and value the environmental impact of the organizations' activities. Even more: since the data of our study are obtained from companies that are already subscribing to the SRI, one can easily conclude how the results for the environmentally insensitive companies may look like. Although 90% of the companies and municipalities rate the environment as a corporate priority, yet pollution prevention and waste management are not carried out in an effective and efficient way. However, the findings as enumerated above give an understanding on the level and practice of pollution, waste and emission prevention in South African industries and government municipalities. In view of the above, the challenge for all organizations in South Africa as well as the government is to find ways to reduce at source their impacts on the environment. Hence, on the basis of the above findings, environmental management accounting (EMA) can provide some starting points for the reduction of pollution, waste and emission generation in the different categories of South Africa's economy in the following ways:

- The South African *resources sector* is faced with ecosystem disturbances at the extraction sites, input-output imbalances, poor management and control systems regarding the materials purchased and other material-driven costs including inefficiency in processes and product lifecycle costs. Of course, here the implementation of EMA allows for more accurate information on the environmental impact of the activities and for identification of the major sources of pollution and waste production. It also delivers a basis for participating in public debates. However, EMA does not only make sense from an environmental point of view, but will also lead to higher economical efficiency: ensuring that all physical inputs eventually become outputs by putting in place systematic controls and effective management systems (such as material flow accounting process so that no significant amounts of water, energy, or other materials and material-driven costs are unaccounted for) gives the possibility to identify sources of unnecessary waste production and pollution, and – at the same time – to use resources more efficiently. Via this, costs of waste disposal as well as of the inputs of production may be reduced.
- The *commercial sector* and also the *municipalities* have a problem of high paper consumption, challenge for providing green financial products and services including reduction of their carbon footprint. Here, the physical data of EMA allows for both considering the use of more electronical resources for unnecessary paper processes/documentation as well as the identification of possible points in the value chain to install (internal or external) recycling processes. Furthermore, they may have an indirect effect on the use of EMA for waste and pollution reduction in other sectors via offering programmes for environmentally friendly investments and linking the finance to the use of appropriate monitoring control mechanisms as provided by EMA.
- The *industrial sector* overall accounts for over 70% of pollution and waste in South Africa which comes as a result of improper or inaccurate information on the management and destinies of the energy, water and materials used in supporting its activities. Thus, the implementation of EMA does not only make sense from an environmental point of view, but will also lead to higher economical efficiency: in a similar way as already mentioned for the resource sector, EMA may help to identify sources of unnecessary waste generation and pollution, and – by putting in place systematic controls and effective management systems – to ensure an efficient use of resources in the processes. Thus, it contributes to reduce the cost of waste disposal as well as of the inputs of production. Furthermore, having identified the problem areas and delivering physical and monetary data EMA may enhance investment appraisal: environmental investments will be done where it is most necessary, and monetary as well as non-monetary environment-related cost can be considered.
- The physical data of EMA can be used to create environmental performance indicators (EPIs) which will assist South African *municipalities* and *other parties* in assessing and reporting the materials-related aspects of environmental performance such as their level of consumption of natural resources, generation of waste and emissions, total amount of fresh water consumed and the total amount of wastewater generated each year. This information is also needed for proper tariff setting for the service consumption. Furthermore, it allows for political decision making and setting benchmarks. Since government and municipalities sometimes shall provide an example to the private sector, they can demonstrate the use of these instruments, and the big quantities of environmental resources and waste they have to deal with (i.e. they contribute to the realization of economies of scale) may contribute to the introduction of environmental protection technologies.

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# DATA MINING RECREATION VALUES AND EFFECTIVE FACTORS IN ECOTOURISM WILLINGNESS TO PAY: A PERSPECTIVE FROM IRAN'S PARKS

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## ABSTRACT

*Recreational planning, as well as applying various environmental projects and developing diverse recreational and leisure centers for people, are important issues in the macro and regional levels of management in every country. Ecotourism, as nature-based tourism with its special characteristics, is being considered as the impetus and economic investment for natural resources management. To help proper planning in this field, current research uses data mining from the recreation values of Iran's parks and separating influential factors on visitors' willingness to pay (WTP). These estimations can be effective in foreseeing the needs, eliminating the shortages and developing the tourism in the parks. This study delves into the main findings of 31 researches that were applied to assess the recreation value of 33 different parks across Iran from 2004 to 2011. Those researches collected 9216 questionnaires in total. It was conducted using R software, and Rattle and latticist user interfaces to analyze gathered data and information. Results showed that 69% of respondents were male, 54% were married, 35% were employee and 33% business. The averages of age and academic years were 34.4 and 13.7, respectively. The mean household size was 3.74. Although the average respondent's monthly income and their household monthly income were US\$403 and US\$539, respectively, 73% of the visitors were willing to pay money to visit the parks. Variables of occupation, education levels, household size, marital status, and age had an effect on visitors' WTP for visiting, and variables of sex, income, education level, household size, marital status, and the service satisfaction rate affected the general rates of WTP. The average rate of WTP per person was estimated at US\$1.4 and the average annual recreation value for each hectare of the parks was calculated at US\$2313. The results show the parks have considerable entertainment value. This study provides justification for the decision to support the quality of Iran's parks.*

## INTRODUCTION

Tourism and recreation will increasingly use parks and other nature areas, “in developed countries as buffer zones from daily urban life and in developing countries as the setting for nature tourism” (Font and Tribe, 1999). Accordingly, recreational planning, as well as applying various environmental projects and developing diverse recreational and leisure centers for people, are important issues in the macro and regional levels of management in every country.

Environmental resources in today's world are as valuable assets which their protection should be among the fundamental human efforts. Whereas economic considerations generally play a key role in decisions; economic valuation of ecosystem services has been received special attention in recent years. In fact, the idea of economic valuation of environmental benefits of parks and recreation areas was considered from 1947 (Majnonian, 1995). Many efforts have been conducted to determine the benefits of visitors who visit recreation areas of forest and national parks (Amirnejad and Khalilian, 2006). In the last three decades, a range of economic valuation methods for ecosystem services has been developed to determine their values via people's preferences as expressed e.g., by willingness to pay (WTP; Hein, 2007). Such activities are an important part of benefit-cost

analysis in parks management plans (Amirnejad et al., 2006). Hein (2007) supposed that “economic valuation of environmental benefits can contribute to a more sustainable and a more efficient decision-making. Analysis and valuation of ecosystem services can also guide the setting up of mechanisms to compensate the suppliers of ecosystem services for the costs related to providing those benefits in a payment for ecosystem services mechanism”.

Parks, protected areas and other nature areas in Iran and across the world are considered special places that have come to be regarded as natural and cultural assets attracting many local, national and international tourists (Darvishsefat, 2006; Moore et al. 2009). Parks are part of cities or the countryside that visitors enjoy, sometimes the purpose of the visit and other times just the setting for recreational activities, but little tourist revenue reaches park management, despite the fact that this revenue is much needed.

Review studies in Iran show that there are few studies on estimation recreation value of parks. For management of parks’ assets to be effective and successful, it is necessary to obtain information about who the visitors are and what are their opinions. Ecotourism, as nature-based tourism with its special characteristics, is also being considered as the impetus and economic investment for natural resources management. To help proper planning in this field, current research uses data mining from the recreation values of Iran’s parks, WTP, rate of WTP, and separating influential factors on visitors’ WTP and its rate. This knowledge then allows managers to manage parks accordingly. It can be effective in foreseeing the needs, eliminating the shortages and developing the tourism in the parks.

## METHOD

### Study Areas and Data Collection

Due to the extent of Iran, there are a lot of valuable parks across country. We gathered data and information of 31 researches that were applied to assess the recreation value of 33 different parks across Iran from 2004 to 2011. They are Amirnejad et al. (2009), Abedinzadeh (2004a&b), Amirnejad and Rafiei (2009), Amirnejad et al. (2006), Amirnejad and Khalilian (2006), Amirnejad and Khalilian (2004), Daneshvar and Monfared (2010), Dashti and Sohrabi (2009), Emami and Qazi (2008), Fallah et al. (2009), Fazli (2004), Goshtasb et al. (2009), Amirnejad (2007), Hashemzadeh et al. (2011), Hayati(a) et al. (2010), Khaksar et al. (2011), Mojabi and Monavari (2005a&b), Molaei et al. (2010), Monfared (2010), Nakhaei et al. (2010), Piri et al. (2010), Pishkar (2006), Qorbani and Sadeghi (2011), Rosta et al. (2008), Sariesmaeili and Latifioskoei (2006), Shamsi et al. (2008), Tavakoli (2009), Naji et al. (2011), and Hayati(b) et al. (2010). Those researches, which cover near to one million hectare of most important Iran’s parks, collected 9216 questionnaires in total. The questionnaires were about social and economic characteristics of visitors (sex, marital status, academic level, job, age, visitor income per month, income of family per month), their opinions about the park (e.g., amount of facilities), their WTP, rate (amount) of WTP, etc.

### Data Analysis

It was conducted using R software, and Rattle and latticist user interfaces to analyze gathered data and information. Linear interpolation method was used to cover missing values (Mic, 2012). To delve relationships, data were normalized by rescaling between 0-1. It was done by dividing the amount of every variable by the maximum amount of that variable. Visitors’ age was grouped into three levels; “*Age Less than 20*”, “*Age 20-40*”, and “*Age more than 40*”. Their jobs were arranged in six sections; “*Employee*” (who work at government’s offices), “*Business*” (who have private job), “*Student*”, “*Housekeeper*”, “*Other Jobs*” (e.g., retired), and “*Unemployed*”. Depend on the year, amount of visitors incomes were exchanged to US dollars (ICERH, 2012) and classified into three classes; including “*Income less than US\$155*”, “*Income between US\$155-388*”, and “*Income more than US\$388*”. The WTP observations were categorized within two groups. For the group of observations with WTP less than WTP’s average, it was named “*Low*”. For the group of observations with WTP equals or greater than WTP’s average, it was named “*High*”. This categorizing was also done for *Annual Value of Each hectare* of parks which it means the total paid amount of WTP (as entrance fee) per hectare per year by all visitors. Subsequently, two new groups for *Annual Value of Each hectare* were named *High* ( $\geq$  average) and *Low* ( $<$  average). By splitting on these variables, we have made an improvement in the homogeneity of the

targets variable values. It also allows us to observe different distribution of every variable in every group of target variables.

## RESULTS

Graphical overviews, of how the observations of variables are distributed according to categorized *WTP* and *Annual Value of Each hectare*, are presented in Fig. 1 and Fig. 2. We can see much about the relationships between the input variables and the target variables. The width of each plot also indicates the distribution of the values of the target variables. In this instance, we can observe that the median of the values associated with the observations for which it had *High WTP* and *Annual Value of Each hectare*, is significantly different (at the 95% level of confidence) from the median for those observations for which it had *Low WTP* and *Annual Value of Each hectare*.

The interaction graphics show the better behavior of variables (Fig. 3). It shows, for example, “*Employee*” (as an occupation) and “*Bachelor Degree*” (as an academic level) variables, have effected in increasing of “*WTP-Yes*”. Differently, “*Married*” and “*Under Diploma*” have effected in decreasing of “*WTP-Yes*”. Similarity, variables of “*Female*”, “*Income*”, “*Household Size*”, and “*Adequate Facilities*” were most influential factors on “*Annual Value of Each hectare*” variables.

The correlation plot is designed to understand the degree of any correlation between two target variables and others. Those correlation summaries using the 'Pearson' covariance are presented in Table 1. There is a weak correlation, for example 0.01, between *WTP-Yes* and *Under-Diploma*. The correlation between *WTP-Yes* and *Employee* represents some positive moderate correlation. Same distributions can be explained for every variables and *Annual Value of Each hectare* variable.

Other findings show that the cooperation of married women to answer questionnaires, when there is another family's member, are less (17%) than who had “*Husband*” (39%) or “*Offspring*” (44%) roles in family. Respondents much preferred to visit parks by their “*Family*” (47%) or “*Friends*” (41%) on “*Thursday*” (20%) and “*Fridays*” (65%; consider Iran's weekends are Thursday and Friday) at “*Spring*” (23%) or “*Summer*” (43%).

In total, results from comparing of case studies together show that the parks had different WTP and rate of WTP based on their important biodiversity, located in big cities, with nature-based design and satisfactory facilities.

## DISCUSSION AND CONCLUSIONS

Growing population, changing patterns of settlement, environment polluted of cities, and more needs for leisure have increased the importance of recreation places. Meanwhile, lack of financial resources to create or form recreational places, e.g., parks, has been conducted park managements to evaluate economic values of parks. In recent years, payment for park services has emerged as an innovative option to provide incentives for sustainable park management (Hein, 2007). Valuation park services, based on people's preferences (Kumar et al., 2010), can be useful to regulate the transfer of payments from beneficiaries to providers in return for maintaining the supply of the park services.

This study delves into the main findings of 31 researches that were applied to assess the recreation value of 33 different parks across Iran from 2004 to 2011. It was conducted to estimate people's WTP, rate of WTP (entrance fee), annual recreation value of each hectare of Iran's parks, and influencing factors to WTP and its rate.

Findings showed that 69% of respondents were male, and 54% were married. The mean household size was 3.74. The averages of age and academic years were 34.4 and 13.7, respectively. 16% of repliers were less than 20, 62% between 20 to 40, and 22% more than 40 years old. The information provided tells us that 14% of respondents' academic levels were under-Diploma, 31% Diploma, 14% Associate degree, 32% Bachelor degree, and 9% Master or upper degrees. 35% were employee, 33% business, 9% student, 6% housekeeper, 12% other jobs (e.g., retired), and 5% unemployed. Respondents much prefer to visit parks by their family (47%) or friends

(41%) on Fridays (65%) and Thursday (20%; consider in Iran, the weekends are Thursday and Friday) at summer (43%) and spring. 71% believed park's facilities were inadequate. 56% of repliers had less than US\$155 monthly income, 33% between US\$155-388, and 11% more than US\$388. Although Iran is a developing country with low income, which the average respondent's monthly income and their family monthly income were US\$403 and US\$539, respectively, 73% of the visitors were willing to pay money to visit the parks. 77% of respondents were willing to pay money less than US\$1 as entrance fee for parks. Conversely, 23% were willing to pay money more than US\$1 to 10.35 (Fig. 1 and 2). Variables of occupation, education levels, household size, marital status, and age had an effect on visitors' WTP for visiting, and variables of sex, income, education level, household size, marital status, and the service satisfaction rate affected the general rates of WTP (Fig. 3 and Table 1). The average rate of WTP per person, as entrance fee, was estimated at US\$1.4 and the average annual recreation value for each hectare of the parks was calculated at US\$2313.

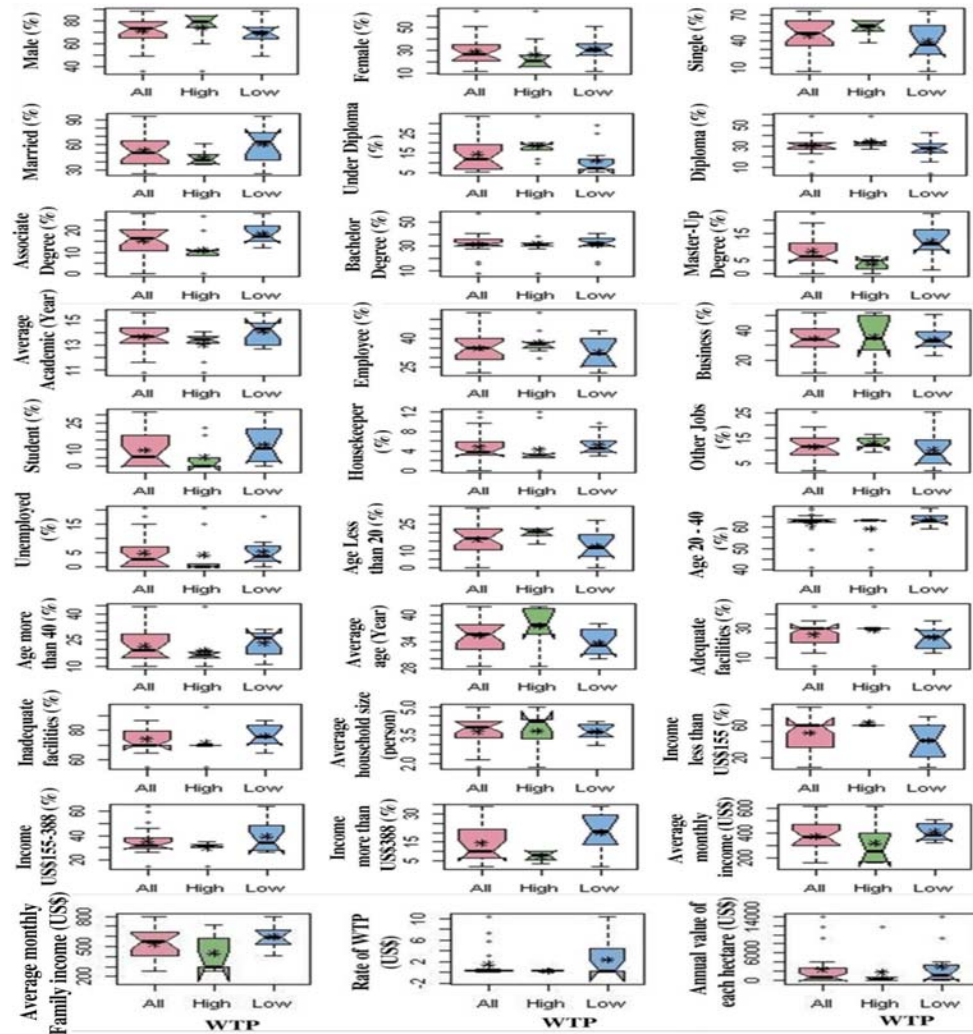


Fig. 1: Distribution of variables according to categorized *WTP* (see details about what the box Plot is in Williams 2011).

The set-up of new payment schemes for economic services is one of sensitive issues. Since, these “schemes are unlikely to be successful if local beneficiaries are poor and have no funds available to pay for the ecosystem services they receive” (Hein, 2007). In other hands, the Contingent Valuation Method (CVM) is the only valuation method to quantify the non-use ecosystem values in monetary terms (Hein, 2007). In the last decade, CVM studies have been widely applied in Iran (Khaksar et al., 2011). It is needed to collect ecosystem economic values information with well designed CVMs to use in legal cases to determine amount of compensation after any destroyed activity in ecosystem.



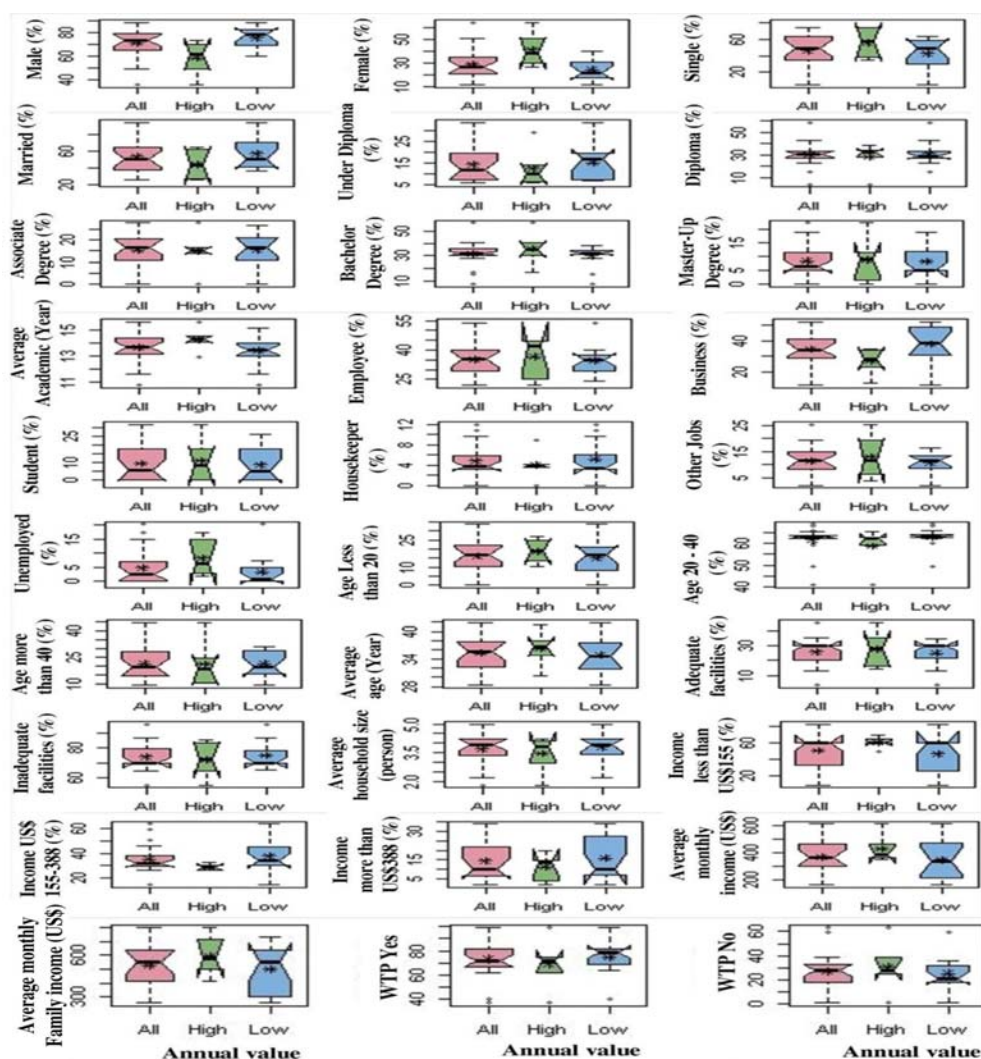


Fig. 2: Distribution of variables according to categorized variable of “Annual Value of Each hectare” of parks.

The results show the parks have considerable entertainment value. This study can support park policy making and implementation in various ways. It increases the awareness of stakeholders and decision makers of the economic benefits resulting from sustainable park management. It also provides justification for the decision to support the quality of Iran’s parks.

Table 1: Correlation

	WTP-Yes	Annual value of each ha
Female	.06	.62
Unemployed	.02	.40
Monthly family income	-.27	.22
Bachelor degree	.31	.33
Student	-.03	.24
Academic Year	-.08	.32
Monthly income	-.07	.34
Age more than 40	-.22	.01
Associate degree	-.37	-.10
Housekeeper	-.26	-.27
Master-Up	-.26	.08
Average age	.64	.32
Adequate facilities	-.08	-.02
Income more than US\$200	-.21	-.19
Single income less than US\$155	.35	.31
Married	.21	.28
Income US\$155-388	-.35	-.31
Employee	-.18	-.33
Age less than 20	.34	.13
Inadequate facilities	.46	.28
Other Jobs	.08	.02
Under diploma	.48	.26
Diploma	.01	-.20
Household size	.12	-.14
Age 20-40	-.41	-.42
Business	-.43	-.49
Male	-.38	-.58
	-.06	-.62



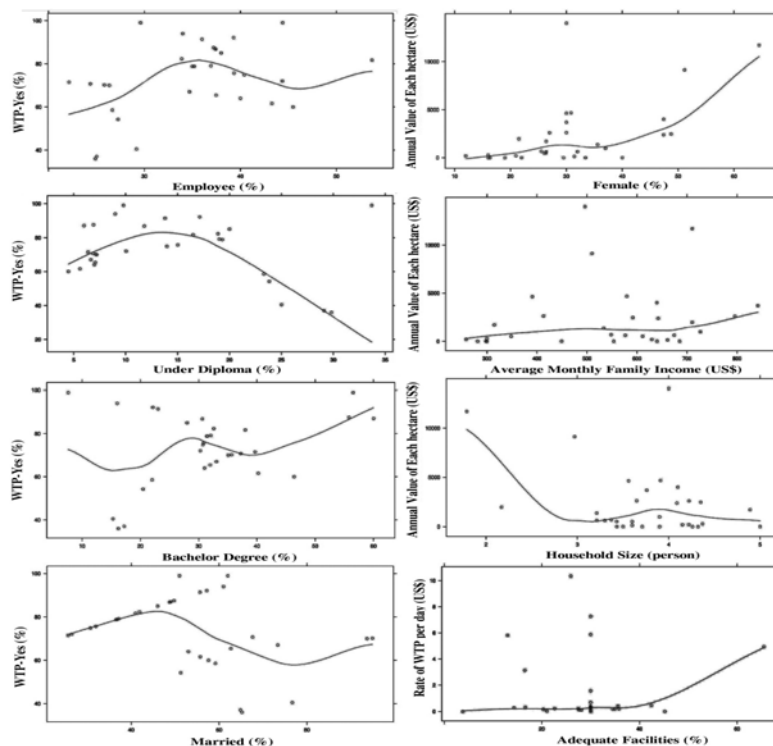


Fig. 3: Interaction graphics between some variables and “WTP-Yes” and “Annual Value of Each hectare” variables, respectively.

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# THE IMPACT OF MARKETING INNOVATION STRATEGIES IN TAIWAN'S ELECTRONIC INDUSTRIES

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## ABSTRACT

*This research is to explore the impact of marketing innovation strategies in Taiwan's electronic industries. The total raw data of 331 firms was based on Taiwan's innovation survey database for the advanced analysis. The main purpose of this study is to apply Ansoff's growth matrix to discover the activity of marketing innovation strategies. The Ansoff's growth matrix includes market penetration strategy, market development strategy, product development strategy and diversification strategy.*

*After data analysis, the results are as follows (1)36% is to use the marketing innovation in Taiwan's electronic industries. And the larger percentage for big firms are to use marketing innovation compared to Small and Medium firms. (2)In average, for the firms who adopted two or three types marketing innovation strategies showed the significant differences in firm scale. (3)Looking at the firms who has earlier involvement in marketing innovation, it leaks out the fact that different marketing innovation types weight differently on innovation scope. (4)The different marketing innovation types influence the different items of firms in electronic industries significantly. Market penetration strategy impacted on firms' repeat purchase rates increasing and results in firms' image changing. Market development strategy has impacts on development of firm market share. Product development strategy impacted on firms' geographic scope expansion. In addition, diversification strategy has impacts on product line expanding, including value added phenomenon on customers'. The future research can focus on product or market innovation in a depth scope to improve the managerial application.*

## INTRODUCTION

The two entrepreneurial functions because its purpose is to create a customer, the business enterprise has two-and only these two-basic function:marketing and innovation.(Peter F.Drucker, 1953)

Nowadays, the marketing mix includes product, price, place and promotion. The innovative products provide the customer value, the place represents different kind of channels for convenience, the competitive price is to attract customers and good communication via promotion. Bloody competitions and rapid environmental changes will be the status quo in electronic industries. It is known that, without marketing mix, companies are unable to survive if they do not align with correct marketing innovation strategies.

Taking a famous chipset vender as an example, Intel uses the marketing innovation strategy, "The Intel inside" to gain the high market share and brand awareness. In Taiwan's electronic industries, the OBM companies and ODM/OEM companies might use the different marketing innovation strategies due reach different purposes. As a result, each electronic industry needs to know which items will be influenced by different marketing innovation strategies.

This research will be based on the electronic industries' definition and scope by Directorate-General of Budget, Accounting and Statistics, Executive Yuan, ROC and analyze the TIS2 (Taiwan Innovation Survey)raw data from the National Science Council. Moreover, the main purpose of this study is to apply Ansoff's growth

matrix to discover the impacts of marketing innovation strategies in Taiwan's electronic industries and start the exploratory research for the relative topics.

Finally, previous studies didn't discuss the issues of marketing innovation in electronic industries, the findings of this study will help the managers to decide the correct marketing innovation strategy based on the firms' targets.

## **CONCEPTUAL BACKGROUND**

### **Electronic Industries**

There is a great diversity of Taiwan's electronic industry if we take computer peripheral products into consideration, electronic industry scope will be enlarged. According to the 2006 industry category standard by Directorate-General of Budget, Accounting and Statistics, Executive Yuan, ROC., the electronic industries could be isolated from the manufacturing industries, especially the category 26 is electronic component industries and the category 27 is Computer and electronic product industries.

The electronic component industries include semiconductor, passive component, PCB board and other electronic components. The Computer and electronic product industries includes computer, computer accessories and communication products. The Taiwanese government's industry category standard is based the component and finished goods.

### **Marketing Innovation**

The two entrepreneurial functions because its purpose is to create a customer, the business enterprise has two-and only these two-basic function: marketing and innovation.(Peter F.Drucker, 1953). The purpose of the enterprise is to create customer's value, therefore enterprise must change the direction and purpose based on customer's needs and questions(Hsiao Fu Feng&Li Tian Shu, 1998). Atuahene-Gima(1996) states two concepts, first is innovation with marketing, which means the enterprise leverage the current marketing capability and resource for new product. For example, sales team, channel, market research, customer service. Second is innovation with technology, which means the enterprise leveraging the current technical degree for new product development. New product will be launched into market more successfully under well collaboration of these two concepts.

Hung Shun Ching(1999) indicated the marketing innovation will come from new product, special promotion, price strategy and new type channel. The marketing innovation plays an important role on enterprise marketing process and discusses the innovation behavior during marketing process. Therefore, the marketing innovation's scope should not overwhelm by its topic.

Cooper & Kleinschmidt(1987) indicated the enterprise's marketing innovation based on collecting, disseminating, understanding and response for market information and create the organization through organization learning. The successful marketing innovation might change the market competitive scope and competitive mode in order to create niche and leading position for firms.

Slater&Narver(1998) stated the marketing innovation is to create the customers' value, the value must satisfy the customer's needs and innovation satisfy the potential needs .And the marketing innovation is the marketing process for three cores to discover the potential needs or create the new needs, including product develop management, supply chain and customer relationship management(Hanvanich et al, 2003).

### **Ansoff's Growth Matrix**

Ansoff(1965) indicated the growth matrix which indicates the direction in which the firm is moving with respect to its current product market posture.Market penetration denotes a growth direction through the increase of market share for the present product-markets.In market development new missions are sought for the firm's

products. Product development creates new products to replace current ones. Finally, the diversification is distinctive in the fact that both products and missions are new to the firm.

## RESEARCH METHODS

This research analyzes the TIS2 raw data from the National Science Council. The National Science authorizes National Chengchi University to integrate six universities to form TIS2 in Taiwan. They cooperate together to finalize Taiwan's innovation survey program. In order to survey the innovation activities in Taiwan's manufacturing and service industries, the telephone investigates and dispatches an official the surface to visit the way.

The main purpose of this study is to explore the marketing innovation strategy impact on Taiwan's electronic industries. The 331 firms comply to the standard from the TIS2 database and start the exploratory research for the relative topics.

This research was used the IBM SPSS Statistics 20 for data analysis. First of all, it applied the frequencies and percentage of descriptive statistics to describe the electronic industries' structure and distribution. Secondly, the Chi-square test will help to verify marketing innovation if there are any significant differences between firm scales. Finally, this method is to apply ANOVA test to discover the relationship between marketing innovation types and influencing items of firms.

## RESULTS AND CONCLUSIONS

### Descriptive Statistics

The Research will focus on electronic industries. Regarding to the firm scale, 57.2% is the top 5000 firms. The percentage of top 5000 firms is quite high compared to other industries in Taiwan. More and more Taiwan firms dedicate in electronic industries based on industry cluster and value chain. This fact leads to the reason for multinational enterprises create the R&D center in Taiwan.

Besides local market, the Taiwan's electronic firms expand to foreign market such as Mainland China, United States of America and European Union due to the weak local demand. The business model is to reserve the R&D in Taiwan and build the factory for mass production in Mainland China due to the comparately cheaper labor cost.

These Taiwanese companies' major customers are enterprises and contribute a significant portion of customer base because high percentage of Taiwan's electronic firms dedicate in ODM/OEM business model. They support the famous brand company to design good quality electronic product, mass production and create efficient global supply chain. In order to sustain competitive advantage for ODM/OEM firms, these companies offer the customized service for product design and package service for global supply chain. Other firms will offer channel or transaction platform such as OBM companies, distribution and e-tailer.

Table 1. Descriptive Statistics (N=331)

Item	Attribute	Frequency	Percentage
Is it the top 5000 firms	No	134	42.8
	Yes	179	57.2
Is it a subsidiary company	No	259	82.7
	Yes	54	17.3
Headquarter location	Taiwan area	37	68.5
	Non Taiwan area	17	31.5
Business types	Offer customerization service	47	15
	Offer selling channel or transaction platform	53	16.9

	Offer package service	49	17.4
	Components or materials production	34	10.9
	Construct customerization system	10	3.2
	Mass production Assembly	8	2.8
	Others	82	26.2
Major markets ( Multiple Choices )	All Taiwan area	183	58.5
	Company Location	21	6.7
	Mainland China	100	31.9
	America and Canada	130	41.5
	Japan and Korea	91	29.1
	European Union	131	41.9
	Others Countries	54	17.3
	No responses	0	0.4
Major customers ( Multiple Choices )	Enterprises(B2B)	258	82.4
	General consumers(B2C)	71	22.7
	Government	27	8.6
	Other subsidiary belong to Group	33	10.5

## Is it appropriate to process marketing innovation in Taiwan's Electronic Industries?

Generally speaking, 36% is to use marketing innovation in Taiwan's Electronic Industries. However, around 64% firms are not applying marketing innovation. Larger percentage for big firms (45.2%) use marketing innovation compared to small and medium firms(23.8%). The reason is big firms have better investment capability and secure the innovation ability to compete in current market with high competition and rapid environmental changes. For example, OEM/ODM firms, their marketing innovation is to offer product differentiation for attracting their enterprise customers. Most importantly, Taiwan OBM companies need to use different marketing innovation based on their purpose. For example, Acer uses the new channel business model to cooperate with their distributors and become the worldwide No 2 for PC market.

The advanced study is to use the Chi-square test to verify marketing innovation if there are any significant differences between two firm scales. As Table 2 indicates that the result is significant as follows: the  $\chi^2 = 15.172$  ( $p < .001$ ). The evidence shows the marketing innovation will be different between the top 5000 firms and non-top 5000 firms. The top 5000 firms might have better financial structure to invest more for marketing innovation. Oppositely, the non-top 5000 firms are seeking to survive and to be the follower. That is the reason why they do not use marketing innovation aggressively.

Table 2.Firm Scale and Marketing Innovation Cross Table

Marketing Innovation Electronic Industries		No		Yes	
		N	%	N	%
Total		200	63.9	113	36.1
Is it the top 5000 firms	No	102	76.1	32	23.8
	Yes	98	54.7	81	45.2
	Chi-square test ( df=1 )	$\chi^2=15.172^{***}$ , P Value=.000			

Notes : \*p<.05, \*\*p<.01, \*\*\*p<.001

## What is the kind of marketing innovation strategies in Taiwan's Electronic Industries?

Looking at the firms who have earlier involvement in marketing innovation, it leaks out the fact that different marketing innovation types weight differently on innovation scope. The advanced exploratory of the marketing innovation strategies.

The firms are to use Market penetration strategy, they will focus on channel and product outlook & image design for innovation scope.

Market development strategy is to use original product that sell to the new market. The firms need to pay more attention to find correct channel for selling their products. Taking HTC as an example, they not only do ODM for brand company, but also cooperate with telecom for product design and have the new location for product demo.

Product development strategy is to expand the product line and selling new product to the original market, The firms prefer more advertisement promotion for attracting their customers. Take another example, acer invests more and more advertisement promotion for attracting customers once they launch the new products. The original customer relationship will help them to increase market share for new product line.

Diversification strategy is to sell new product in the new market. Usually firms will focus on channel, advertisement promotion and Product Outlook & Image Design for innovation scope.

Table 3. Marketing Innovation Strategies and Innovation Scope in Electronic Industries

Firm number	N=113								N=331	
Marketing Innovation Strategies Innovation Scope	Market penertration		Market developmen		Product development		Diversification		Total	
	N	%	N	%	N	%	N	%	N	%
Channel	35	0.310	38	0.336	44	0.389	44	0.389	89	31.7
Advertisement promotion	26	0.230	23	0.204	34	0.301	30	0.265	81	28.8
Product Demo style/location	25	0.221	30	0.265	34	0.301	29	0.257	70	24.9
Product Outlook/Image Design	51	0.451	37	0.327	49	0.434	49	0.434	68	24.2
Payment style	23	0.204	18	0.159	19	0.168	13	0.115	49	17.4
Package	18	0.159	18	0.159	28	0.248	28	0.248	40	14.2

## Do the different marketing innovation types influence the different items of firms in electronic industries?

Our findings are summarized in Table 4.(1)If the firm use the Market penetration strategy , the result are significant to Firms' image changing(  $F = 5.763$  ,  $p < .05$ ) and repeat purchase rates increasing(  $F = 10.497$  ,  $p < .05$ ). (2) If the firm use the Market development strategy , the result is significant to Market share increasing (  $F = 4.365$  ,  $p < .05$ ). (3) If the firm uses the Product development strategy , the result is significant to Geographic scope expanding (  $F = 3.906$  ,  $p < .05$ ). (4) If the firm uses the Diversification strategy , the result is significant to Product line expanding (  $F = 6.629$  ,  $p < .05$ ) and Customers' value added (  $F = 6.515$  ,  $p < .05$ ).

Market penetration strategy impacted on firms' repeat purchase rates increasing and results in firms' image changing. The major product line will be the motherboard in ASUS and the product quality is good in DIY market. As a result, customers will have impressive image for ASUS and repeat purchase for ASUS motherboard. Market development strategy has impacts on development of firm market share. For instance,



ASUS LCD monitor focus not only on consumer market, but also aim on government tender bidding for market share increasing. Product development strategy impacted on firms' geographic scope expansion. For example, the ASUS launch the innovation product EPC in the market and cost will be lower than conventional notebook. They could sell EPC in India and the third world for geographic scope expanding due to lower price. Even in the rich country, the adult will buy EPC for their children. In addition, diversification strategy has impacts on product line expanding, including value added phenomenon on customers. ASUS also launched the transformer tablet; it could be used as tablet or notebook for customers. This is an instance of so called "value added" product.

Table 4. Marketing innovation types impact the different items of firms in electronic industries F test  
(N=113)

Marketing Innovation Strategies Influence Items	Market penetration	Market development	Product development	Diversification
Geographic scope expanding	0.444 (0.507)	2.22 (0.14)	3.906 (0.05)	0.568 (0.452)
Product line expanding	0.899 (0.34)	3.172 (0.78)	3.494 (0.06)	6.629* (0.01)
Market share increasing	0.987 (0.32)	4.365* (0.04)	1.557 (0.21)	3.635 (0.06)
Customers' value added	3.332 (0.71)	2.78 (0.98)	1.756 (0.18)	6.515* (0.01)
Improve production flexibility	0.178 (0.67)	1.261 (0.26)	0.162 (0.68)	2.263 (0.13)
Firms' image changing	5.763* (0.02)	0.002 (0.97)	1.81 (0.18)	1.144 (0.28)
Transcation cost down	2.663 (0.10)	0.569 (0.45)	1.121 (0.29)	3.57 (0.61)
Repeat purchase rates increasing	10.497* (0.00)	2.025 (0.15)	0.624 (0.43)	0.159 (0.69)

Notes : \*p<.05. Numbers not in parentheses denote F value, Numbers in parentheses denote P value.

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# INCREASED IMPORTS AND BRAZILIAN INDUSTRIAL STAGNATION: THE ROLE OF CLASS C IN THIS PROCESS

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## ABSTRACT

*The research that brings you here analyzes the impacts promoted the growth of class C in the freezing process of the Brazilian industry and increased imports. This emerging market, known as Class C, incorporated some of the low income segment, has distinct characteristics and needs, and rightfully so eventually burden in the short term the production of Brazilian companies, who felt the need to opt for imported commodities, semi-manufactured and manufactured in order to maintain market share and return on their investments. This fact is actually part of a trend of global economic transformation, but here is also due to many irregular actions of the Brazilian government against the political need for short-term. From quantitative and qualitative data were sought to better understand the profile of this consumer and draw some recommendations for organizations to better facearem this new demand. It also sought to know the actions taken by a major cosmetics company that has part of its products for the class C.*

## INTRODUCTION

The transformation of the Brazilian economic and social pyramid in recent years, its consequences and impacts on the country's industrial structure are objects of study in this article. The emerging class C, which incorporated part of the low income segment, is a market with different characteristics and needs, which ultimately encumber the short-term production of Brazilian companies, forcing them to opt for imported commodities, semi-manufactured and manufactured in order to able to maintain its market share and return on their investments. While this is part of a global trend of economic transformation, this is due to a series of irregular actions of the Brazilian government regarding the need short-term policy. That said, the research presented here shows the paths found by the business community to confront this new reality, and aims to better identify this segment of low-income and, therefore, propose actions that best meet this new demand, so that these organizations can increase their revenues. The strands of this research were the quantitative and qualitative techniques were employed: bibliographic, documental and field. In field research, quantitative, we used the survey method. As Lima (2004, p.26): "*The method of survey research, is currently the one that best represents the characteristics of quantitative research, and that it corresponds to an approach to the phenomenon under investigation involving the realization of a field survey in which data collection is done by applying questionnaire and / or form with the target population of the survey*". Was applied for this, a structured questionnaire to non-probabilistic sample of convenience. A pretest with 10 people prior to the questionnaire to 200 respondents in a city near Sao Paulo, in April 2011, with the concern that the respondents were categorized in class C segment as criteria Brazil. In addition, there was an interview with the manager of a large company in the area of cosmetics, which had not requested that the full identification of the company in question, however, it is important for this study stress that it is of great company, located in an area representative statewide and nationally. Was employed, in that interview, a structured interview questions. It was conducted also in June 2011, observational research establishments in the three major networks of hypermarkets: Carrefour, Wal-Mart and Sugarloaf to obtain percentage of marks most sought by respondents, are investigating whether imported or not. It follows the theoretical framework that supports the article.

## BRAZILIAN INDUSTRY STRUCTURE: STAGNATION

To speak more properly on the Brazilian industrial structure, it is necessary first of all, to know what types of economic and industrial structures accordingly. According to Kotler and Armstrong (1998), there are the following types of economy:

- Economies of subsistence - economic results come from basic activities such as farming and ranching. The income is low and there is little infrastructure. Offer few opportunities for business and foreign investment attractiveness.
- Economies of export of raw materials. The net profit is derived from the export of natural resources, abundant in the country in general. Offer opportunities in the areas of supplies, tools, machinery, and in some cases, such as Saudi Arabia, luxury products.
- Semi-industrialized economies. Industrial activity is between 10 and 20%, economic output in the country. Gradual increase of the middle class. Need for diverse products such as textiles and automobiles, for example.
- Industrialized economies. Greater participation in international trade; society with well-distributed income from social classes defined and no major changes in the short and medium term. Opportunities for all product categories, including capital and services. Tendency to increase in exports over imports.

Brazil fits in semi-industrialized economies, with the basic characteristic of a rising middle class (Kotler, Keller. 2010). However, as its industrial park is unable to meet the growing demand, opt for the imports. Although it is a natural phenomenon, the big problem was that the federal government did not influence the industrial policies did not encourage the private sector and non-adopted foreign trade policy - attitudes that would facilitate a sustainable manner the natural growth. Furthermore, the distribution of income in a geographic context brings several problems, such as those related to production and logistics, compounded by the size of Brazil. According Dicken (2010, p.549): *“A much-publicized critique of industrialization in developing countries is that their material benefits were not widely broadcast to the majority of the population. Also, there is evidence of highly irregular distribution of income within many developing countries ... In countries like Brazil, Chile and Mexico, for example, the proportion of total household income received by households placed among the wealthiest 20% is much higher than the economies of industrial markets”*.

The process of development and industrial growth is directly associated with economic transformation and growth of income per capita. Thus, factors related to industrial policy, as well as the external environment contribute to the economic advancement of the country, but it also imposes some limitations. The industrial policy of a country should take into account the optimal management of resources, to ensure sustained growth and contextualized with international relations. In this respect, historically, the Brazilian industrial structure has evolved into an intersectoral heterogeneous structure consisting of a large number of economic sectors that have no collective expression, unlike what happens with the U.S. market, where there is the automobile industry, for example, that aggregates and handles other sectors such as finance, tires, video and steel. According to a study conducted by the Getulio Vargas Foundation (FGV, 2011), the Brazilian scene involving the top ten economic sectors was in 2008 and 2009:

**Table 1 - Overview of the 10 largest Brazilian economic sectors in the pre and post crisis**

	<b>Pré-crise (julho de 2008)</b>	<b>Pós-crise (dezembro de 2009)</b>
Pulp and paper	93,2	90,4
Transport equipment	92,5	88,5
Clothing and footwear	86,9	87,1
Non-metallic minerals	89,3	86,6
Products of plastic	85,8	86,3
Mechanical	87,8	83,7
Food products	84,6	81,6
Electrical equipment	83,0	78,7
Pharmaceuticals products	71,7	72,9

General Industry	86,2	83,8
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Source: FGV (2011)

The transformation of the economic pyramid presses the different segments of the economy, considering the value chain, where there are suppliers, producers, distributors and customers with new needs. So, now part of the market - the emerging class C - are consuming more, however, companies are not prepared to meet this sudden change of consumption.

For the above table, it appears that the major economic sectors are working below their level of production, opting not to displace investments but import raw materials and other products. Nestlé, for example, opted to import part of what sells in the country.

The private sector should increase its level of investment in order to respond more timely to different market needs, and not just import commodities, semi-manufactured and manufactured goods, replacing domestic production. Due to the current positions, the country has faced in recent years a significant increase in the imports, proportionally higher than export growth. In 2008, the country exported 197,942 billion, while imported 172,895 billion; the following year, 2009, exported and imported 152,995 127,722 billion dollars, whereas the figures for 2010 show exports at 201,915, against 181,649 billion. Moreover, Brazilian exports in recent years have shown a loss of quality, with increasing participation of commodities at the expense of decrease in finished products. Conversely, there is the import of products increasing and decreasing household products considered basic, according to the Ministry of Development, Industry and Commerce (2011). The country's industrial performance has shown in recent years, impaired reaction of the national productive sector in the face of constant change and international economic changes.

These factors, plus the cost country, are leading to the phenomenon of de-industrialization, hastened by increased consumption of the named class C. Parallel to this, Brazil has imposed over the past eight years a popular discourse in order to ensure stability and political pseudoeconômica, forgetting or omitting other consequences and impacts of their actions. Other economies, for example, Chinese, undergoing the same process. However, the Chinese case, there is a plan that aims to ensure sustained economic growth, combined with practical short and medium term the government, such as exchange controls to encourage production for exports and imports does not motivate. That said, there is now addressing this new market demand, the class C.

## MARKET FORMED BY CLASS C

It is known that the idea that consumers with low purchasing power have very different needs and desires simply because they belong to a privileged social class is less reductionist. In truth, consumers often have different needs and characteristics, but because of other variables, such as, cultural and psychographic. Prahalad (2008, p. 118) has testified that: *"Brazil has a pattern that stratifies patients into five basic economic classes: A, B, C, D or E. Classes C, D and E are considered the 'base of the pyramid.' In 2002, the population in Brazil was 176 million, of which 84% considered as part of the BR"*. According to IBGE, the Brazilian population reached at the last census 190 million people - not only in Brazil but in the world, there was an increase in the number of consumers categorized as low income, from three to four million people. According to research from Ipsos Public Affairs, commissioned by BNG Cetelem, the profile of Brazilian society can no longer be represented by a simple pyramid, but a diamond, most of which is formed by the class C. According to the study, 53%, or 101, 65 million represent this class, then the D and E with 25% or 47.9 million people and class A and B, with 21% ie, 42.2 million people. In other words, there was a gradual increase in PPP (Purchase Power Parity). According to Figueiredo (2008, p.110): *"The purchasing power parity corresponds to the exchange rate between two currencies (usually one of them is the dollar), calculated according to the amount of each currency required to purchase a particular set of identical products and services in the country of each currency. By their nature, the parity of purchasing power can be used to make comparisons of the level of purchasing power and welfare existing in different countries."* It should be noted that, according to research conducted in Latin America in 2004 by Booz Allen Hamilton and Coca-Cola (HSM MANAGEMENT, 2011), Class C consumers are willing to try new products and recognized brands tend to be served by small retailers or high street shopping and informal, especially in Brazil and Argentina. Thus, an office-boy, for example, can save each month or use a credit for the acquisition of brands such as Nike shoes. And companies should be aware of these facts. In addition, products

sold in smaller quantities and lower prices before for a single market, can also be directed at these new low-income consumers, only being careful not to confuse marketing strategies. Below, we present data from research conducted in order to confront them with the above data.

## RESEARCH AND RESULTS

The cosmetics industry was chosen for this approach because it has been one of the fastest growing in recent years. According to research agency Kline & Company (2011), sales of cosmetics and toiletries in Brazil grew at an annual average of 15% in the last three years. For this case study, there was the selection of a company that has a portfolio of products directed to the segment of the class C. Initially, there was an interview accompanied by a script of questions and directed to the Director of Operations, responsible for managing the company in the last ten years, a graduate degree in Business Management with solid experience in the cosmetics, disinfectants and sanitary napkins. According to the director, "We must listen and learn, the implant that is what I see." The company has three factories, one located in a city cosmetic ABCD, another in the state of Sao Paulo and the third of detergent powder in the Midwest region of the country. Restructuring has been in the Brazilian market, which currently has 152 hygiene products and cosmetics. In 2004, went through a consultancy that advised changing the internal strategies to achieve the desired results, ie, all areas of the company should deliver cash. During this period, the number of products was a minor and one of its chief was a car wax. As a new strategy, the company decided to promote new products, since there was a projection of a trend of falling sales of waxes, but without giving up this focus because he noticed that its competitors have chosen to abandon even the media coverage of their products that segment, and this attitude has seen "major" an opportunity to invest further in that niche. As a result, between 2004 and 2005, sold about 70,000 boxes of wax, and now sells an average of 180,000. In 2010, to maintain profitability, defined its demand, the strategy of trend or market behavior, using a concept that has developed itself: mix of work in which there are:

- The so-called hard core, represented by what the company sells without much effort, and
- The so-called Small Challenge, for which there are no investments, but when you know how much you want to earn, it has been a challenge to achieve.

The two categorizations reflect the need to balance efforts to ensure better profitability. The director of the organization points out that there is a need to compete in a sustained manner, and that the class C market has grown in recent years, affecting all consumers interchangeably. If previously the marketing efforts could be directed in a more focused and optimized, currently the company must update and develop more specific actions and strategies, not disregarding any kind of business opportunity. So, the increase in consumption of class C, and their own consumption, also altered other segments of the economy, because there was interference in matters relating to suppliers of raw materials, services, production, employment, marketing, logistics and marketing, as well as need to try to maintain the level of quality in service delivery, for example, in attendance.

At the end of each month, the cosmetics company makes a refinement and evaluate whether to continue to have as main objective to produce for sales volume and variety. As a control evaluation, every effort must have an index for real and there is a need to reduce working capital. Over the past three years, part of their raw material has been acquired from other countries, since domestic suppliers often fail to respond in a timely manner to their needs of raw materials for the growing production of cosmetics. The company has seen, therefore, the diversification of suppliers through imports numerous benefits. Among the most important, consistency in delivery, the ability to increase or decrease in quantities and at lower cost. The import activities are performed on an outsourced basis, using the strategy of indirect import, in which a commercial importer and exporter undertakes the entire operational process of importation. Historically, the company has always associated its brand the characters of novels, but never got the expected results with media on TV. A hydrating oat, for example, accounted for 49% of company revenues in 2004 and 2005, but the goal was to achieve an even greater sales leverage. The operations director believes that the use of sales promoters is more advantageous than investment in TV. The company seeks to motivate these professionals with financial reward, for example, if this effect a sale of a box more of the product, such value in real gains. Consider how the company's direct client market.

To answer in a timely manner the significant growth of the class C, has continued its marketing efforts,

especially those involving the POS (point of sale). Synergistically, has a strong administration budget forecasting, in order to ensure the margins of results involving the commercial, product development, procurement, logistics and marketing. He knows he has lost ground in Carrefour and must therefore create a strategy to re-sell to the Supermarket. Watch the Director that issues related to physical distribution logistics have become a key differentiator in the sales of their products, but notes the need to pay attention to issues such as planning and delivery, due to need to do more intensive distribution in small retail outlets. With rising costs and distribution expenses, realized the need for decentralization of transportation from their outsourcing. In this process, it was necessary to develop a strategy for outsourced logistics with strong management, physical distribution and logistics constantly monitored, the client request to the processing and delivery. The organization believes that the great mass of consumers from the low income classes is unevenly distributed in the country, so the market requires an intensive distribution strategy to reach the widest possible geographic scope. The statements of the company's director of operations in line with the responses from the questionnaires to two hundred people of the city near São Paulo, with a qualification at the discretion of Brazil.

## Research On Consumer

For the following study, a questionnaire was applied, which closed 6/1 and dichotomous questions seek to identify the perceptions of consumption. The seventh and eighth questions relate to the consumption of the product category the company object of qualitative research, with a concern to encourage responses. In the ninth question was asked to indicate spontaneous acquired brands, and the tenth of openness, the results are compiled brought forward. After application and tabulation of results from nine of the question, there was a non-participant observational research, which were identified from the packaging of the brands mentioned, the merits of manufacturing products.

- Of the respondents, 175 (85%) feel that the products and brands have no distinction between different economic sectors and 25 (15%) feel that the products should be marketed at a lower price. They believe that there are popular brands considered, but not necessarily directed at an audience with less purchasing power.
- Of the respondents, 150 (75%) associate brands considered as those of more expensive products daily and 50 (25%) associate most popular brands. Among the brands cited, seen as more expensive, Nestle emerged as the most voted, with 150 (75%), and Twist, best remembered as a brand popular among the (75/37, 5%). It should be remembered that the latter brand is also associated with the public and single males.
- About the media habits, 150 (75%) say they have a preference for Rede Globo, followed by the Record (35/17, 5%) and SBT (6/12%). The rest are sprayed on other media. Globo has been concerned with the growth of low-income segment, and in June 2011, according to the newspaper O Estado de Sao Paulo (PADIGLIONE, 2011), held an exchange of presenters in its main news programs, fitting the profile of each segment for the most popular.
- Products that believe they have had greater access in the last year: cell phones, electronics, clothing and food. Asked what they could improve on the question of products offered to the market for Class C, 130 responded (65%) "good service" followed by "clearer disclosure," "more affordable prices" and "best quality" products in general.
- On whether already acquired imported, 90 (45%) people responded positively. Of those who answered yes, 75 (83%) said they were satisfied in all aspects related to price, quality and logistics. In addition, all who answered yes in the short term plan to acquire other products imported to the detriment of similar national.
- All respondents use the Internet, but 25 (12.5%) never bought products in this media outlet. Among the most popular items purchased are electronic, followed by DVDs and clothing.
- Over consumption of cosmetics, 170 (85%) buy brands they consider reputable and the remaining states make no difference because the price is the main decision variable.
- Of those queried, 60 (30%) would not buy cosmetics brands considered popular, linking them to low quality, 70 (35%) are indifferent and the other buy without any reservations.
- Among the brands mentioned spontaneously and non-stimulated, and in order of recurrence are: Nestle, Union, Sadia, Camil, Coca-Cola, Liza, Lion, Melitta, Hellmann's, Swan, Adria, Nest, Cica, Colgate, Limpol, Girl, Omo, Nescau, Pullman, Boy, Yakult, Danone, Becel, Bordon, Perdigao, Vigor, Gillette, Bic and Snow. Of these, Nestle, Hellmann's, Nest, Colgate, Bic and Girl are imported.

It is noticed that the brands mentioned are not necessarily those directed specifically to the segment studied, but have general consumption. Of the total, 20% of brands were identified as imported. In the three retail chains, such data was recorded from the reading of the phrase 'Made in ... to identify the origin of the finished product. Finally, asked about the recommendations that would make the components of the marketing mix, 4 P's, (the items were explained), from the experiences of respondents. Here are the interpretations of the responses:

**Table 2 - Recommendations relating to the marketing mix**

Product	It should be dimensioned in size or smaller portions. Sometimes the amount identified aims to meet particular needs of the manufacturer or retailer, the consumer not properly. As most cited examples are products such as toilet paper and remedies that are sold in larger quantities they deem to be necessary - although in the latter case, there is legislation governing the sale of smaller quantities, when so prescribed.
Distribution	Can not always find the brands of products they need at certain times of the month, especially in the days immediately following the fifth day, when employees receive their payments. Also realized that many companies in recent years have reduced amounts and sizes, for example, the size of the magazines and makes some bars of chocolate. Perceived shortage of certain products and services.
Price	Still consider that manufacturers and retailers offer prices inconsistent with the quality of the product or service, not corresponding to the purchasing power of the general population. However, respondents would not mind paying a price maybe higher, since the characteristics and quality of the products were compatible with what is offered them.
Promotion	Identify that all communication is conveyed used to meet the expectations of some economic sectors most favored at the expense of more specific needs of the underprivileged. In general, understand that the media tries to sell a lifestyle, but not necessarily of their social class.

Source: Author.

There is, therefore, that the above data, but also relate to consumers in other segments, bring out various deficiencies related to the marketing mix of organizations. So remember as Prahalad and Hart (2002), it is important that companies should be aware of strategies related to the base of the pyramid, such as.

**Table 3 - New strategies for the base of the pyramid**

Performance Price	Quality Visions
New product development	Delivery formats
Manufacturing	Creation of robust products for difficult conditions (heat, dust, etc.).
Distribution.	
Sustainability	Profitability
Reduction in the intensity of resources	Intensity of investments.
Recycling	Margins
Renewable Energy	Volume

Source: Prahalad and Hart (2002)

The table above shows, from the observation of the trend of growth in low-income market, a set of actions aimed at making companies more competitive in relation to this segment. Note that both the consumers (Table 2) as theorists such as Prahalad and Hart (Table 3) converge to the need for improvement on issues such as attendance and new delivery formats. Also according to Bowersox, Closs and Cooper (2008, p.51): *“Traditional marketing strategies are focused on getting exchanges - or transactions - successful with clients to drive increased revenue and profits. In this approach, called transactional marketing, companies often are guided by short-term interaction with their customers”*. In this case, the business community direction your marketing efforts should try to build long term relationships, rather than simple transaction-based processes.

Thus, resources and outcomes should be optimized. Whereas it is an emerging market, one of the strengths is the company's ability to gain economies of scale due to the gradual increase of production and the possibility of bargaining power with suppliers and distributors together, whereas the C-class market is well distributed in the country.

## CONCLUSION

There is a need to address this new market trend in entrepreneurship and innovation at all levels, since this is an important consumer segment in evolution and development in the medium and long term. The big challenge facing business is adapting to the government's actions, which are not linear, nor have specific focus, even as a result of our own industrial structure. If so far the federal government has not created any rules for imports most striking is their knowledge that there may be a domestic supply shortage and consequent price increase, reflecting the rate of inflation. The Brazilian economy is then within a paradox, in that only with time private actions may be imposed for a real sustained growth.

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# LOGISTICS OF SERVICE PROVISION: ADDING TO HOSPITALITY

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## ABSTRACT

*This article intends to present logistics applied to service provisions as an agent for increasing tourist hospitality. With the emphasis on commercial hospitality, this research adopts as its subject: Guarulhos International Airport, São Paulo, Brazil, a place of tourist and commercial transit, thus, responsible for the receiving and boarding of passengers who choose air transport. Besides this, it is a place of arrival (tourists, passengers, travelers, users) that is called receptive tourism. Therefore, the data obtained from interviews and questionnaires are based on empirical, exploratory and qualitative research. The appropriate logistics add value to the services offered and make it possible for the improvement of commercial hospitality. To show the need for treating logistics as an instrument that increases the value of hospitality.*

## INTRODUCTION

There are a large number of books that deal with the theme of logistics and almost all of them are focused on the manufacturing of goods. When the subject is about the logistics on service provision, there are not many bibliographical references and the same happens with the logistics on service provision focused on tourism.

Ribeiro, in the presentation he makes in the book “Supply Chain Management and Logistics” written by Bertaglia (2003), says:

... supply chains have become vital to any segment of economic activity, since its efficiency (large or small) can have a decisive power on the consumer's choice. The purchase is not decided anymore by tradition, fidelity or customer convenience, but by a wider group of attributes that include, among other things, quality, price, agility in delivery, accessibility and, above all, credibility.

The perception is that, as logistics has its appropriate management, the services offered to the users in general will be qualitative, so that, commercial hospitality will be improved and maintained.

With regard to commercial hospitality, Lashley and Morrison (2004, p. 18) declare that

... the offer of commercial hospitality depends on the reciprocity based on money exchange and on the limits on concession of the users satisfaction which ultimately impacts the nature of hospitable behavior and the experience of hospitality.”

It is on the context of the Logistics Service Provision (LSP), quality and commercial hospitality that this research will approach the relation between LSP and commercial hospitality in the provided services, and we have as its main objective, the case study of Guarulhos International Airport (GIA), a place of tourist and commercial transit, responsible for the receiving and boarding of passengers that choose air transport, which is

of fundamental importance for the tourist sector and, it is also a place of arrival for people (tourists, passengers, travelers, users) which characterizes receptive tourism.

The research is empirical and exploratory with a qualitative character and is based on data obtained through interviews and questionnaires.

## **Service Provision Logistics (SPL) and its context**

The greatest historical occurrences have reserved an important notability for logistics, but only a few years ago did the organizations begin to give any real importance to this facilitating process. According to Christopher (1998, p. 22), logistics has the following definition:

...it is the process of strategically managing the demand, movement and storage of materials, parts and finished inventory (and the related information flows) through the organization and its marketing channels in such a way that current and future profitability are maximized through the cost-effective fulfillment of orders.

In fact, during the 20th Century, a large number of concepts on logistics have been produced, but in 1999, the Council of Logistics Management (2008) defined it as part of the management process of the supply chain that deals with planning, implementation and efficient flow control and goods storage, related services and information, from its point of origin to the point of consumption, in such a way so as to fully satisfy customer needs. Using the logistics process, the competitive advantage can be enlarged and this may mean a lasting supremacy in relation to its competitors, with this, the customer's preference is obtained.

However, according to Karassawa (2003, pp. 36-37) service rendered is not a material good, but a group of activities or processes, where consumption occurs simultaneously to its production. It is more difficult to manage quality control, because there is no pre-produced quality to be controlled in advance, that is, before the service is sold and consumed. It is what happens with a tourist product. The tourist does not have any contact with the work done backstage, but evaluates its result, that is, by what he can get from his perception.

Tourism involves activities and diverse aspects. One of these aspects is logistics, defined as the component of the tourist system which keeps up with the demand created by marketing services (Ballow, 1995, p. 49). In the logistics process, Page (2001, p. 189) emphasizes its own dynamics, putting transport as one of the most important components to this process, where aviation stands out due to its dominant effect on the tourist sector. Transportation is the activity addressing tourist dislocation, from their origin to their destination; point of tourist interest and, on returning, from their destination to the origin or the established place of return, including efficient attendance when boarding and at landing points and overflow. The management of accommodations, leisure, recreation and entertainment comprehends the process of planning, implementation and arrival and departure flow control, the tourists' accommodation according to their interest in the tourist activities offered with courtesy and efficiency. The local mobility consists of the facilities offered to the tourists, like group and individual excursions and dislocation from the place of accommodation and around their main interests.

Objectives of logistics service rendered management. The two main objectives of logistics service rendered management are to offer, simultaneously, a high service level and a low total cost on the activities inherent to them. It can be said that the objectives of a system are to add value for the customer and to reduce cost in the production process. Value, in logistics, is expressed in terms of time and place, that is, the products or services have little or no value if the customers cannot have them on time and at the expected place, with the correct specifications. These are the factors that determine the management quality of goods and service flow, which is called the service level.

Some of the main ways to measure service quality are: the time cycle for the order; the rate of mistakes in order documentation; stock availability; delivery time, the condition of the product upon reception, the alternatives for goods delivery, among others. The service level analysis is constituted by a key-factor for the management of the logistic activities. Another key-factor is the analysis of the total cost of these activities for the company. The origin of the total cost concept is based on the fact that some actions to reduce the individual costs of a logistic activity can increase the cost of another one. It is possible, therefore, to have antagonistic behavior

when it comes to diverse logistic costs. For instance: a cut in the price of transportation might be acquired by the purchase of a bigger volume of goods and/or services; but, on the other hand, that can result in a higher storage cost and the anticipation of expenses. In that sense, any decision taken in the logistic process must evaluate the several kinds of costs involved, trying to find the best balance, as a way of having a lower total cost.

- a)       Transportation costs (TC): the cost of external transportation (shipment, distance, kind of transportation needed, and shipment size)
- b)       Storage costs and internal dislocation (SC): the cost of electric installations for the areas designated for storage or the processing of components, equipment for dislocation and security and of the staff in charge of dislocation and security.
- c)       Stock Costs (StC): the costs of capital (opportunity cost), costs with stock risk insurance (damages, robbery, etc), costs of the stock place.
- d)       Order Processing Costs (PC): the administrative cost to turn the acquisition and a more operational distribution process, as well as the information cost to process them.
- e)       Direct costs of the product or service (DC): the cost of acquiring a product or a service.

$$\text{Total Cost} = \text{TC} + \text{SC} + \text{StC} + \text{PC} + \text{DC}$$

The total cost analysis must be associated to the service cost, because better service normally means a higher cost. It is essential to map out the different backgrounds, considering the gains and losses which may occur.

## Service rendered logistics in Guarulhos International Airport

An information system means the organization of the ways for the emission, reception and registration of information. The information system can be faced as a subsystem of the enterprise system, as in the case of, Guarulhos International Airport (GIA). In fact, it is the information subsystem that promotes the interconnection between the several airport subsystems.

GIA provides a vast number of services and, according to its dynamics, below are listed the ones related to land services

- **Parking lot:** capacity, flow and comfort to the users;
- **Internal and external signaling:** signs and internal communication system;
- **Information Services:** places located at the airport where trained personnel give general information to the public;
- **GIA look:** an appropriate and pleasant appearance for the users;
- **Arrival and departure areas:** capacity, comfort and services for the users;
- **Luggage Arrival and departure:** comfort, capacity and security of passengers' belongings;
- **Food services:** capacity, quality, service speed, comfort offered to the users;
- **Drugstores, hygiene services and nursery:** capacity, cleanliness, hygiene and comfort
- **Shops, bookstores and newsstands:** suitability, variety and attention to the users;
- **Banks and bureaux de change:** practicality, safety and comfort offered;
- **Church and VIP lounges :** capacity and comfort
- **Lost and Found:** efficiency and security;
- **Juvenile Dependency Court and Federal Police:** departure of underage children, documentation and luggage declaration;
- **Staff:** competence, training, courtesy and hospitality when dealing with the airport users;
- **Luggage trolleys and rest areas:** functionality, practicality and capacity;
- **Airline Companies:** well-trained, fast and courteous staff

- **Flight connection:** appropriate orientation, speed and hospitality;
- **Flight delays:** infrastructure as support, speed and hospitality to the users;
- **Buses and taxis:** speed, comfort and safety;
- **Customs:** exportation, importation and the release of goods.

## Guarulhos International Airport (GIA)

According to Guarulhos City Hall and Infraero database, the airport has its own transportation system which consists of an extension of 5 kilometers and also has access to the city of Guarulhos through Av. Monteiro Lobato, and Presidente Dutra and Ayrton Senna highways. Recently a construction proposal, already approved by specialists, foresees that, by 2013, an express train will connect the airport and downtown São Paulo and a small beltway (Tavares and Zanchetta, 2008, p.C4).

Located in a flat area, surrounded by nature and next to Serra da Cantareira, the whole airport complex creates a beautiful and pleasant landscape. Just by looking, the care in its maintenance is easily noticed, which makes the airport a truly beautiful sight, making Brazilian people proud. Finally, Guarulhos International Airport is overwhelming and touching at the same time. With huge airplanes coming and going every second, its image will be always the first and the last one seen by a traveler arriving or departing from São Paulo or from Brazil.

Runways for take off or landing, a control tower, radars and aerial navigation auxiliary systems, electric energy, impounding of water and tributaries treatment systems, garbage incinerator, airplane fuel field, a nursery for urbanization and vegetation renewal, aside from cargo terminals, are indispensable components for the functioning of the airport. GIA has two parallel runways for landings and take offs, one measuring 3.000 meters and the other 3.700 meters, which receive around 475 flights daily. The tracking system has ILS instruments - Instrumental Landing System, classes I and II, which allow landing and takeoff operations with extreme precision and high levels of safety even in precarious conditions.

Since its inauguration, 222.3 million passengers, coming from all five continents, have gone through Guarulhos International Airport entrance and exit gates, for 2.9 million landing and takeoff procedures which also include 6,9 million tons of cargo transportation (Infraero, 2008). The airport also has, in its cargo area, nine cold-storage rooms, which have a storage capacity of 3.400m<sup>3</sup>; and in addition there is also a transelevator system having more than 8.000 positions, which make automatic storage possible; there are also six packers, barcode scanners, automatic freight transfers, scanners, etc. (Infraero, 2008).

With the construction of a third passenger terminal, by 2013, Cumbica (GIA) will be able to hold 29 million passengers a year; and with the fourth terminal finished until 2025, its capability will be increased to 40 million passengers a year. (Tavares and Zanchetta, 2008, C4) Guarulhos International Airport registers numbers that are similar to a real city. The commercial network from the passenger terminals has 177 commercial points (Infraero, 2008). They are very diverse concerning the goods and services that can be found: banks, restaurants, post offices, hairdressers, car rental companies, public telephones, lottery kiosk, shoeshine services and so on.

There is also the Infraero Cultural Space, with an area of 50m<sup>2</sup>, which is open 24 hours and promotes painting and sculpture exhibitions. Public organizations are present as well: besides Infraero, there are the Civil, Military and Federal police, Juvenile Dependency Court, the Internal Revenue Service (IRS), State Department of Sports and Tourism, Department of Health (vaccination), Agriculture Ministry and Civil Aviation Service.

## Hospitality aspects domain

Having a concept of hospitality and considering its commercial aspects, Dias (2002, p. 102), quoting Belchior and Poydares, says:

Hospitality, essentially, consists of a free of cost or charge service provision normally obtained by people inside their own home, but because they do not have it, temporarily, they do not have it at their service. Basically, these services are bed and/or food. When hospitality provides accommodations for resting or pleasure,

it will be called lodging, including or not meals. If just meals are offered, there will be hospitality, but not lodging

Hospitality, as an interaction factor, essential for the communities' socialization and people's relationships, in a way of integrating them and satisfying their needs, is studied in classes or classified into social, private and commercial domains. It is characterized by the interaction between the host and the guest, highlighting the relative aspect of "result/profit", resulting in the idea of commercial hospitality.

According to Lashley and Morrison (2004, pp. 4-23), hospitality is basically present in three backgrounds: the social domain of hospitality, the private domain and the commercial domain. The importance of hospitality on the social domain is related to the necessity to study the social context in which it specifically happens, according to Lashley and Morrison (2004, p.6). In the same text, Lashley and Morrison (2004 ) quote Heal (1990), who presents the fact of hospitality being expressed many times in a series of private actions and by a particular host. It is articulated in a matrix of shared beliefs and publicly articulated.

Hospitality in its private or domestic domain establishes the basis for a relationship between guests and hosts, the circumstances in which these relations occur and the physiological or psychological needs. It is important to consider, in this topic, other factors besides the guest reception, like: food, drink and domestic environment accommodations. Lashley and Morison (2004, p. 16) conclude that it is possible, for example, being a good host is not really enough for being hospitable, because his or her actions can have ulterior motives, and a hospitable person may not be as capable as the host with non pertinent reasons; a hospitable person has reasons connected to hospitality in which the worry related to guest satisfaction and his or her well-being is predominant.

The commercial modality of hospitality infers that the service provided (reception, accommodation, food and drink) is reciprocal to the guests in general. These guests pay for the services that they receive. This situation provokes a deep change in the relation between guest and host; it is different from the other modalities of hospitality not only because the guest pays for the service provided, but also because he is not an invited person. He simply decides to travel to wherever he wants and, stays in a place where he thinks it will be more appropriate for him or her, seeing that he or she will pay for the services provided. In the tourist activity, commercial hospitality considers the aggregation of actions, in which hospitality is essential and fundamental for the guest's perception. There is an interrelation of the services provided between the receiver, the guest and the provider, which evolves a diversity of services, such as travel agencies, operators, transporters, lodgings, events and other possible services through appropriate reimbursement.

The commercial domain of hospitality is perfectly characterized, even as a tourist place, due to the beauty and fascination presented to the guests, most of them go to these places only to walk around and shop. It is perceptible that the commercial domain spreads itself out of the reserved space to the accommodations, restaurants and other similar establishments. So, there is a necessity of a perfectly appropriate logistics service provision, so that this guest or tourist, even on a business trip, can be received, on arrival or departure, in a hospitable way and the service quality is present and perceived by him.

This fact is of relevant importance, once; it is not always true that the services have the desired quality. When this situation happens, it is called inhospitality, determined by the lack of quality of the services perceived by the guest or tourist. It is not necessarily about hostility demonstrated by people - employees of a certain establishment where there is a commercial hospitality domain - but the "hostility of the service provided", even if the employees evolved have the best intentions. The reasons for frustration are clear. In a commercial hospitality domain, the guest or tourist is not invited; he pays for the chosen service which is, therefore, bought. And the expectation is to receive a highly qualified service along with hospitality. There is a necessity for preparing or training people to be hospitable, putting aside, in this way, the possibility of hostility or inhospitality for the services provided to the guest. In other words, the importance of logistic quality and service provision is evident. It seems to be the best way to manifest hospitality in commercial domains.

## **Hospitality and quality**

Karassawa (2003, p. 46) declares that to the tourist system, the most important component is the tourist, so it is to him or her, to the guest and the travelers in general, considering Guarulhos International Airport, that hospitality must be pointed out to assure total quality in logistics and in service provisions.

According to Campos (1992, p.1), Deming declared that quality improvement causes productivity increase. This fact is well known by a selected minority. This principle can be extended and adapted by saying that “commercial hospitality is increased by quality improvement” once the workforce and services provided reach the total quality so emphasized. Campos (1992, p. 2), when conceptualizing quality, does it, not by saying what it is, but by what it is not: “quality is not only the absence of defect”; exemplified by “it is not hard to imagine an automobile without defects, but a model or a price that nobody wishes to buy”. He establishes as a quality criteria “consumer preference” because it is this feature that will guarantee business survival; it is the consumer preference for the product or service in relation to the competitor.

Finally, Campos (1992, p. 2) conceptualizes quality or, actually, product or quality of service in the following way: A product or service of quality is the one that perfectly attends, in a reliable, accessible and safe way and at the right time the customer needs. Proceeding with the thought, Campos (1992, 9. 6) introduces the concept of competitiveness. He says that “being competitive is to have the greatest productivity among all the competitors”. This competitiveness is what really guarantees business survival, but he calls the attention to the fact that there is an interrelation between these concepts: the guarantee of survival comes from competitiveness; competitiveness comes from productivity which comes from quality or added value. It is of great value to remember that hospitality is not just to treat the customer well. Just like in the quality aspects, there is a necessity to add value or benefits to the services provided, particularly at Guarulhos International Airport, entrance and exit gates for guests, tourists and travelers of all kinds. The necessity to prepare or train people to be hospitable is crucial, excluding, in this way, the possibility of hostility or inhospitality on the service provisions obtained by the tourist. In other words, the importance of logistics quality and service provisions is evident, not just in its technical aspects, but mainly in its humane aspects. It seems to be the best way to manifest hospitality in commercial domains.

## **The research**

The main objective of this field research is to articulate the conceptual and practical aspects related to the subject, containing a theoretical and practical approach, carried out at Guarulhos International Airport (GIA) through this case study. The field research was conducted and based on specific questionnaires applied to GIA guests and employees, with the purpose of amplifying the understanding of operational hospitality aspects and its functionality. Semi-structured questionnaires were applied to freely identify the GIA public and to characterize a representative sample of each “segment” in the research.

Three models of questionnaires were handed out:

- to boarding passenger, with six questions;
- to landing passenger, with six questions;
- to employees, with six questions.

The interviews occurred with employees from companies located inside GIA. The interview goal was the same as the questionnaires’, however, specifically with the employees; it is possible to see coherence among their declarations about a number of common problems at the airport.

The declarations unanimity is important because of the following aspects:

- The price of the parking lot, especially for the employees of the companies located inside the GIA. The declarations say that “it is the most expensive parking lot in the world”.
- The lack of training of airport employees and the airlines companies that end up not informing their own users appropriately.
- Precarious internal signs, related to the airport accommodations, such as flight connections, departures and arrivals and areas for the departure and arrival of passengers.

- Absence of basic support services, such as a nursery for families who travel with young children, besides a shower and lodging for passengers who need to stay at the airport for the night while waiting for a connecting flight.
- Lack of more chairs for the users at the leisure area in the airport. According to the declarations from the interviewed ones, the organization responsible for the management of these resources has removed a great deal of them, in such a way that, at the rush hour, in the mornings or at night, there are not enough seats for the users. So, they use their luggage as seats. This fact was recurrent during the research. The result of these interviews was very important and it was possible to realize the existing coherence throughout the questionnaires.

Kurassawa's ideas (2003, p. 36-37) were taken into consideration that, seeing that the service is not a material good, but a group of activities and processes, of which the consumption happens simultaneously with its own production, it is more difficult to manage quality control, because there is not a pre-produced quality to be controlled in advance, that is, before the service is sold or consumed. In this context, the logistics service provision has an important highlight, once it guarantees to the passenger, tourist or user in general, the availability of the services that he or she obtained at the right time and with quality. As a result, this will add value to commercial hospitality.

Some hypothesis and commentaries can be drawn:

a) The greater the efficiency in Service Provisions Logistics, including the quantitative aspects, the greater the value added to the commercial hospitality.

- The logistic parking lot localization adds value to commercial hospitality, providing comfort and facility to the user.
- The access to GIA is another logistic factor that determines facility to the user when it comes to their dislocation.
- The information services are average, diverging from the logistics and quality, and they should be equally efficient.
- The passenger elevators are used by the cleaning and maintenance staff all at the same time. It characterizes a lack of efficiency in GIA logistics service provisions.
- The lack of more chairs for the users, in the areas for rest and leisure, causes discomfort.
- The lack of a specific place for the passengers to spend the night causes discomfort and commercial inhospitality.
- A shower would provide better conditions and comfort for GIA passengers. It would add value to commercial hospitality.
- The passengers, mainly the ones in transit with children, suffer from the lack of a nursery, causing inhospitality.
- The luggage release services are seen by the interviewed users as a qualitative factor on GIA relations.
- The food services are seen by the employees who work in companies located inside GIA as logistically well situated and appropriate.
- The security and the environment promote a better integration and hospitality with the physical space for the employees.
- The check-in services were considered by the users in general as regular, instead of being considered excellent or qualitative; they do not add value to commercial hospitality.
- The price charged by the parking lot administration is considered very expensive by the users. It does not add value to commercial hospitality and damages logistic aspects, since it tries to find alternatives.
- The strike movements, like the public security employees and the legislation over the taxis from São Paulo, in transit through GIA, are inhospitality factors, according to the users in general.

b) The lack and/or limit of official signs of GIA leave dislocation and understanding more difficult for users in the local context.

- In a general way, GIA signs were considered by the users that participated in this field research as regular, because they can lead to some disorientation..
- The sign related to departure and arrival of flights has caused many problems, including missing a plane, according to the user and employee declarations.



- The airline companies have different areas for boarding and landing. This situation of little signaling causes misleading interpretations. As a result, passengers and people in charge of their reception (relatives, friends or company, hotel or tourist operator or agencies employees) have difficulty finding each other; these are declarations from the employees of companies located in the airport.

c) The information in general, public or tourist must be present and accessible to the user, stimulating commercial hospitality.

- The information services were considered regular by the users, thus not appropriately fulfilling commercial hospitality.
- The tourist information booth is not used by the absolute majority of GIA users, according to the field research.
- The services of airline companies, car hire companies, taxi services and others are not appropriately publicized and signaled, causing, as a result, inhospitality.
- The support services, such as luggage trolley availability, check-in, information booths, airline companies support, lost and found, medical services, bureau de exchange, banks, flight schedule information and alike, are not accessible in an easy and visible way, not enhancing commercial hospitability.
- The food service, with regard to the main restaurant, is not signaled in an easy and way visible, leading the user to snack bars and cafés, demonstrating inhospitality.

It is perceived, in the market, that the best service providers establish high-quality standards. A great number of authors who deal with quality and logistics declare that “quality must be built during the whole process and not just at the end”. In this way, logistics, as part of the management process of the service provision net, approaches the planning, the implementation and efficient control of the service flow. It satisfies customer needs, and adds value to commercial hospitality. It is important to reinforce an excellent service provision which comes from great logistics and qualitative services, having in mind:

- Appropriate training of the employees at GIA and of the companies located inside it;
- Good quality signaling;
- Great information services of infrastructure and support;
- Flight information board (departures and arrivals) working perfectly;
- To have as a priority the user and employees’ comfort, offering appropriate and hospitable installations;
- To take care of the operational equipment maintenance, such as escalators, restroom installations, electric light installations, elevators and so on;
- To install services such as a nursery in the (departure and hall area), showers, accommodations for spending the night and other services that offer the users better commercial hospitality;
- To use and/or install more elevators for disabled passengers and user access, not allowing, the simultaneous use for material transportation/cleaning staff;
- To install in the parking lot the airline company signs;
- To set up a monthly parking lot charge with appropriate and fair prices for the GIA employees and the other companies placed inside it;
- To make Infraero’s offices public and visible to the user in general, in such a way that they can address their suggestions and complaints.
- To guarantee that the legal aspects, such as the law that determines the taxis vehicles can only be from Guarulhos, do not interfere with the hospitality to the users.
- To make sure that the strike movements do not affect the employees, the users and commercial hospitality;
- To make the tourist information stand visible and active, receiving the guests and passengers who are boarding or landing.
- To keep and improve the services which already exist, provided with quality and hospitality.

Here there is an item to emphasize because it is very easy to use, and also of vital importance, once it is taken into consideration by the management responsible for GIA:

- The periodical application of questionnaires and interviews to users and employees in order to diagnose the organizational, logistic and commercial hospitality environment inside GIA.

From a process like this, it will be possible to maintain the quality in the service provision logistics in general, perfectly appropriate and adding value to commercial hospitality.

ANAC (2008) has its own data related to the years of 2005 and 2006 that point out the level of passenger satisfaction who travel by Tam, Gol and Varig; however it is believed that it is necessary to enlarge this research to all organizational environments, as was said before.

## SUMMARY AND CONCLUSIONS

This study case has stemmed from a very simple vision of the relation between service provision logistics, quality and commercial hospitality, because it was believed that in Guarulhos International Airport, everything worked efficiently, qualitatively and that, from those circumstances, commercial hospitality was implicit and guaranteed. Through the development of this research, it was possible to verify how much GIA has progressed through the years, showing that its dynamics improve every day. However, there is still more to be done.

It is known that the research has not approached all the aspects pertaining to the airport services. Even so, it is possible to have an overview of the current situation because of the matters pointed out. It was important to emphasize and confirm the hypothesis deriving from the described problem, characterizing the logistics service provision as an agent that adds value to the commercial hospitality in an airport, in this case, Guarulhos International Airport, a place of tourist and commercial transit, which characterizes what is called receptive tourism. It was felt that the tourist product depends basically on the quality of the services provided and a whole logistics which allows the tourist to be treated with hospitality. After the use of this product, the customer can have a feeling of hospitality or inhospitality. To add value to commercial hospitality means to understand how to provide for the user services with more quality and more efficiency than the one offered by the competitors in a similar market, in this case, other international airports.

It demands a better quality in the processes and an emphasis on the necessities of the provided services to the customer, improving substantially the cost structure through the process of shortening the deadlines. In this way, this research contributes to point out some alternatives to improving the services.

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# MEASURING COMPATIBILITY GAPS IN STRATEGIC RELATIONSHIPS

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## ABSTRACT

*Organizational change on a global level has arrived. Competition is no longer constrained by borders, industry parameters or geographic considerations. In order to face this level of competition, firms are focusing on their core competencies and outsourcing the rest to strategic partners. This intense level of competition will require firms to rethink how they can leverage these relationships to bring innovation into their firms rapidly to sustain their market advantage. The problem now facing them is: what criteria should be used to identify with whom to develop long-term strategic partnerships? On the surface this may seem to be an easy task, but becomes rather challenging as one considers the hundreds to thousands of global suppliers many firms have today. Even if the largest suppliers are identified as being top candidates for strategic partnerships, what assurance is there that there is a compatible fit between the two organizations? John Nash quantified long term advantage of cooperation between firms/parties. Oliver Williamson envisioned transaction cost economics and acknowledged the lack of quantifiable relationship models in firms' interactions and partnerships. In addition, the evolution of Kraljic's strategic partnership model requires a relationship model to dovetail the work of Nash, Williamson and Kraljic into a cohesive whole. This paper intends to develop the relationship dynamics view of strategic partnerships while integrating cooperative game theory, transaction cost economics and market dynamics into the package of constructs with regard to strategic relationships among firms.*

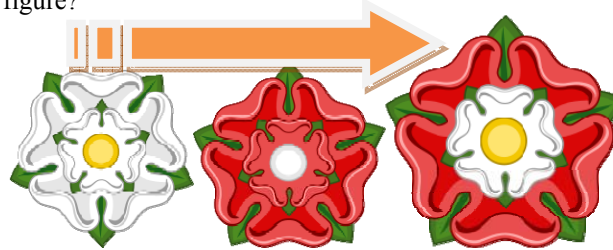
## INTRODUCTION

“With the increasing significance of the purchasing function, purchasing decisions become more important. As organizations become more dependent on suppliers and direct and indirect consequences of poor decision making become more severe. Globalization of trade and the Internet enlarge a purchaser's choice set. New organizational forms lead to the involvement of more decision-makers.” (de Boer, Labro and Morlacchi, 2001, pg. 75). Have firms evolved to adapt to these modern realities or do firms reenact the medieval ‘War of the Roses’ when negotiating strategic relationships? Are finding and selecting outsourcing partners a ‘battle’ for the ‘throne?’ Do traditional models and concepts of strategic outsourcing rest on tenets of ‘War’ rather than long term mutual reward? Is a new integrative model required for modern and dynamic environments?

“The Wars of the Roses were a series of dynastic civil wars fought between supporters of two rival branches of the royal House of Plantagenet: the houses of Lancaster and York (whose heraldic symbols were the "red" and the "white" rose, respectively) for the throne of England . They were fought in several sporadic episodes between 1455 and 1485, although there was related fighting both before and after this period. The final victory went to a relatively remote Lancastrian claimant, Henry Tudor, who defeated the last York King Richard III and married Edward IV's daughter Elizabeth of York to unite the two houses -” (Wikipedia, 2012).

In many situations, traditional thought, concepts and models perpetuate the ‘War of the Roses’ between firms just as the Houses of York and Lancaster perpetuated a power-based, competitive/muscular style, uncertainty and risk reduction approach to a long term strategy. Henry Tudor solved the conflict with an approach that mutually benefited both ‘Houses’ or ‘firms’ and became King of England. The strategic relationship lasted one hundred and seventeen years. Could the lessons from the ‘War of the Roses,’ and the solution and subsequent success of Henry Tudor and both royal ‘Houses,’ apply to strategic outsourcing

relationships? A simple historically accurate figure may be best to supply the answer. What approach can you deduce from the following figure?



**Figure 1. York White Rose, Lancaster Red Rose and the Solution, the Tudor Rose.**

Strategic relationships, networks of outsourcing arrangements, and partnerships are commonplace for businesses given the increasing complexity of globalization, competition and financial implications. Strategic relationships have grown in number and complexity over the past two decades. Given these realities, have traditional models of strategic relationships, outsourcing arrangements and partnerships that mimic tenets of the ‘War of the Roses’ become less ecologically valid? Have these traditional models with focus on power, uncertainty reduction, risk and leverage lost their viability and reliability in contemporary business arrangements? With support of literature in the area of Vested Outsourcing, strategic outsourcing as well as market and relationship dynamics and compatibility assessment, we have developed a set of constructs within a dynamic model that will attend to concerns of globalization, dynamic forces, mutual benefit and compatibility. The new model also integrates the work of Nash and Williamson, both Nobel Prize recipients. In essence, presented is an application of a ‘Tudor Rose’ for strategic outsourcing relationships and partnerships.

The journey begins with John Nash in his game theory based ‘Win – Win’ cooperative theory to more recent work by Oliver Williamson in his work with ‘Transaction Cost Economics’ or TCE. The traditional model of Kraljic, used for decades from an industrial age mindset, tends to be one sided and less than mutually beneficial for both strategic relationship entities. Carter and Easton (2011) write “that the traditional purchasing portfolio matrix developed by Kraljic is not effective within the realm of SSCM.” (SSCM is Sustainable Supply Chain Management). Likewise, Caniels and Gelderman (2005) offer, “... the conditions determining the choice for a specific purchasing strategy within a quadrant are yet unclear [concerning the Kraljic Model]” (pg. 141). This is most likely due to the lack of clear measurement in the Kraljic Model. Williamson (2008) provides a broad framework with which the CAAVE© model partially solidifies. Some of his more pertinent queries for supply chain management, and relationship management are below.

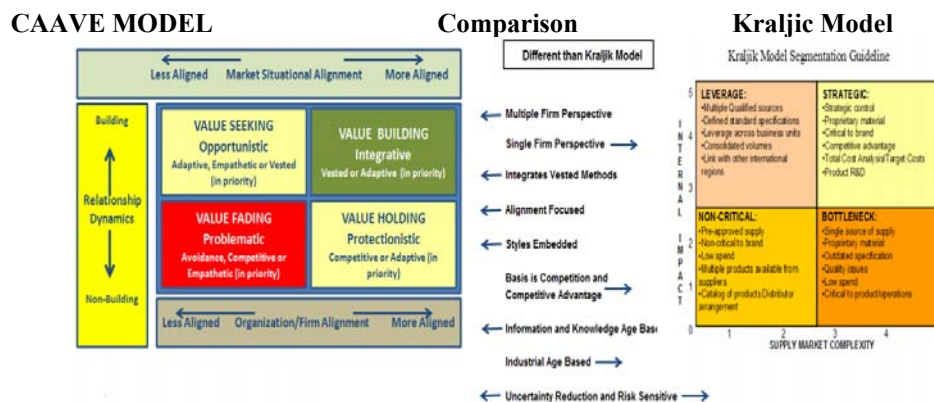
- #1: “TCE subscribes to pragmatic methodology. What is the methodology of SCM?,”
- #2 “What views of human nature are associated with SCM? What are the ramifications for the research methods and research agenda of SCM?” (pg. 14); #6 “TCE views governance as the means by which to infuse order, thereby to mitigate conflict and realize mutual gains. TCE also describes governance structures – mainly markets, hybrids and hierarchies – as discrete structural alternatives that possess distinctive strengths and weaknesses in autonomous and coordinated adaptation respects. What purpose does SCM ascribe to governance? How are alternative modes of governance described?” #7: “The operationalization of TCE is accomplished by naming the key attributes with respect to which transactions differ, describing governance structures similarly and invoking the discriminating alignment hypothesis – according to which transactions which differ in their attributes are aligned with governance structures which differ in their costs and competencies in a transaction cost economizing way. How is SCM operationalized?” (pgs 14 – 15).

Considering the integration with Nash and Williamson, a key premise of any new model is to answer and tangibly validate Williamson’s queries to the supply chain domain but specifically to embed organizational behavior and theory (namely relationship dynamics and compatibility of firms based on organizational culture constructs) into the framework of Nash’s and Williamson’s constructs. Tate and Ellram (2009) suggest and support the analytical and measurement approach, “the strategic sourcing process consists of a number of formal steps: identification of need, analysis, sourcing, negotiation and contracting, implementation, measurement and management.” (pg. 257). Compatibility and the measurement of compatibility and relationship dynamics between firms are the tangible evidence necessary to validate the integration of these theories and models into a

cohesive whole. These tenets support a long-term and mutually beneficial approach as supported by Cannon, Doney, Mullen and Petersen (2010), in that long term relationships allows firms to be patient and focus less on short term gains in favor of beneficial long term mutual benefits. “Existing articles on methods for supplier selection do not sufficiently address this contextual issue [that methods are not useful in all purchasing situations]. Often they assume, explicitly or implicitly, that their method is applicable in all purchasing contexts.” (de Boer, et al., 2001, pg. 87). The integration of the constructs across these three theories and models can improve success of long term, modern, mutually beneficial and financially rewarding strategic relationships.

## LITERATURE REVIEW

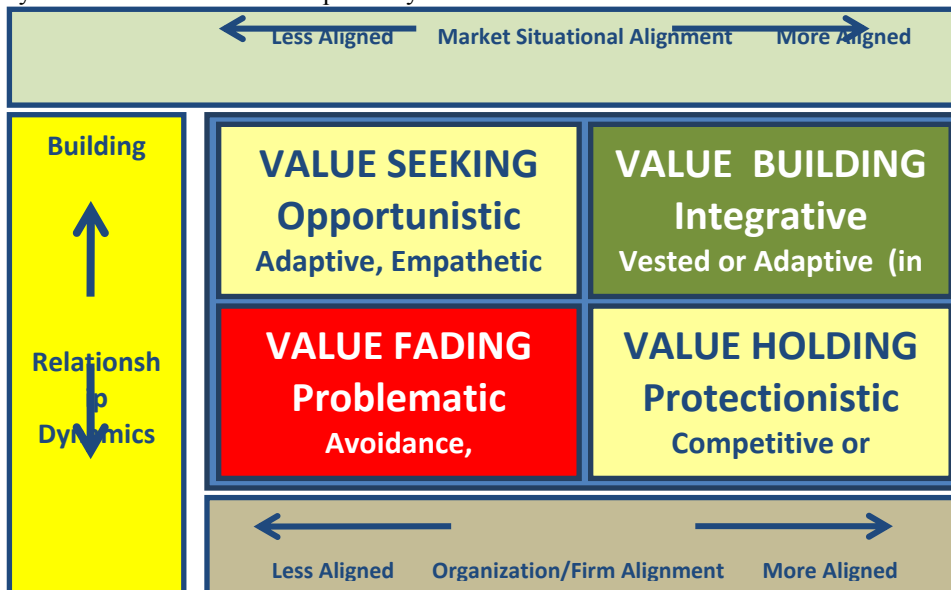
A more systematic and transparent approach is needed in strategic sourcing. (de Boer, et al., 2001). Although the evidence is substantial, select scholars’ were used to present the situation, issues, problems and resolution we propose. First, an overview of the model is presented followed by compatibility and measurement of compatibility constructs. The higher order model is a migration from the Kraljic Model to a more modern and dynamic structure. The model also proposes strategic partnership or relationship styles; these styles are matched with Williamson’s styles to show the evolution of thought in the CAAVE Model and the focus on Nash’s ‘Win-Win’ concepts.



**Figure 2. CAAVE Model Compared to Kraljic Model**

In comparing the two models, several concepts are presented to support the need to evolve to a more contemporary model. “Following these elaborations of Kraljic’s model, another line of development can be observed. This second wave focuses on classifying the content of buyer-supplier relationships as opposed to the initial focus set by Kraljic.” (Dubois & Pedersen, 2002). In addition, the results of research findings by Cousins and Spekman (2003) offer, “the interviews highlighted two clear relationship clusters, which we called ‘Opportunistic’ and ‘Collaborative.’ Opportunistic relationships are focused mainly on short term price reduction technique; the strategy is to create a competitive advantage via leveraging the supply market but only on the ability to extract a price concession. This approach usually utilized Kraljic’s Strategic Positioning matrix and was in most cases initiated by the use of corporate consultants. The problem, as the majority indicated, was that in the medium to long term this strategy could not be sustained. Interviewees who wanted to sustain cost reduction used the collaborative relationship model. This model clearly shows that there are ranges of aspects that are important when looking at how a firm deals with its relationships.” (pg 23) Dubois and Pedersen (2002) offer, “...we argue that using ‘given’ [power-dependence models] products as a port of departure, in addition to a dyadic perspective on purchasing management, may be counterproductive when purchasing efficiency is concerned. First, the object of exchange is not ‘given’ when firms interact, but may be subject to continuous joint development. Second, the dyadic perspective may obscure potentials for enhancing productivity and innovativeness since both parties have other relationships that impact on the collaboration between them.” (pg. 35 [abstract]). Lastly, “How could one deduce strategies from a portfolio analysis that is based on just two dimensions.” (pg 208). Often the supplier’s side is disregarded with the Kraljic model (Gelderman and Van Weele, 2003). Considering the current evidence, the CAAVE approach minimizes the concerns raised and incorporates contemporary constructs necessary for thorough evaluation of strategic relationships in a

parsimonious framework. The CAAVE Model rests on four quadrants while integrating market and relationship dynamics as well as firm compatibility based on assessment of each the set of axes' constructs.



**Figure 3. CAAVE Theoretical Model: Styles are Competitive, Avoidance, Adaptive, Vested and Empathetic.**

In support of these quadrants, DuBois and Pedersen (2002) offer, “we argue that these problems [using Kraljic as compared to the industrial network approach] and solutions may lead much further, as they are not concerned with optimization, or resource allocation, but with ‘total’ cost considerations and joint value creation.” (pg. 41) Integrating TCE and ‘Win – Win’ approaches in strategic relationships, the operational issue of sourcing and supply chain evidently come to light. “It is encouraging to note, however, that there is a very strong trend toward integrating theory in SSCM research.” (Carter & Easton, 2011, pg. 55)

However, it is necessary to validate the inclusion of organizational theory, human dynamics, communication and leadership into the genre of outsourcing as firms strategically seek relationships for purposes of contracts and partnerships. Williamson (2008) supports that strategic relationships need development and evolution to incorporate relationship constructs, “James Buchanan advises that economics as a science of contract is underdeveloped and that this should be rectified” (pg 5) and “...additional gains can be realized if order-preserving mechanisms are devised that enable the parties to preserve cooperation during contract execution.” (pg 6). Carter and Easton (2011) support the inclusion of constructs of strategy (sustainability), organizational culture, and transparency (stakeholder engagement) with the goal of sustainability into the evolution of the ‘Tudor Rose’ model supported by the CAAVE© Model. The strongest guidance offered by Williamson (2008) follows:

“Interestingly, both the economist Friedrich Hayek and the organization theorist Chester Barnard were in agreement on this point, albeit with differences. Hayek (1945, pp. 526 – 527) focused on the adaptation of economic actors who adjust spontaneously to changes in the market. Upon looking ‘at the price system as... a mechanism for communication information,’ the marvel of the market resides in ‘how little the individual participants need to know to be able to take the right action.’ By contrast, Barnard (1938, p. 9) featured coordinated adaptation among economic actors working through administration (hierarchy). The latter is accomplished not spontaneously but in a ‘conscious, deliberate, purposeful’ way with the use of administration. Thus, economic theory meets organizational theory in the real world. Adaptation of autonomous and coordinated kinds are both evidently important. But if autonomous adaptation is the province of economics and coordinated adaptation is the domain of organization theory, and if economics and organization theory are as oil to water, how can these two be joined? Look for common ground. Can markets and hierarchies (more generally alternative modes of economic organization) be examined through a common lens?” (pg. 7)



It is worth noting that, as a ‘backwards’ argument, TCE has had a similar problem integrating into supply chain practices. “Interestingly, transaction cost economics is one of the lesser used theories in the SSCM literature that we reviewed. This suggests an opportunity for future research. One particular relevant facet of transaction cost economics is that of the bounded rationality of actors, which occurs due to limits associated with communication and information processing capabilities and relatedly, the potential for opportunistic behavior (see Williamson, 1975, 1985)” (Carter & Easton, 2011, pg 56). Additional support is clear that purchasing, outsourcing, relationships and supply chain are connected; “some firms are recognizing that in order to accommodate the evolution of PSM [purchasing and supply management] to becoming a strategic corporate function, professionals need to change their skill sets from completing transactions and expediting orders to managing their supply chains.” (Zsidisin, Smith, McNally & Kull, 2007, pg. 165). For this new reality to emerge, the integration and inclusion of TCE, organizational theory, human dynamics (coupled as relationship dynamics and compatibility of firms) and supply chain practices and principles into an amalgam of a model based on mutually beneficial ‘win – win’ ‘Tudor Rose’ tenets is at hand in the modern strategic outsourcing and relationship environment.

What Contract & Partnership Style Should I Use in a Specific Situation?	
MARKET SITUATIONAL ASSESSMENT	
This intends to assess the situational context of the contract or partnership between organizational parties	Place a capital
Example: To What Level is this Assessment Easy to Use?	
1. The Transaction Costs Are Understood at What Level? (Contract activity cost, logistics cost, storage cost, pilferage cost, security cost, etc...)	
2. At What Level is the Dollar Value (Volume) of the Contract or Partnership? (Total value/worth of the relationship under consideration)	
3. Did You Have a Prior Relationship with the Other Party and What was the Worth of That Relationship? (Use 'Low' if No Prior Relationship)	
4. Are the Items, Material, Supplies, Knowledge, Networks, etc... Substitutable and to What Degree?	
5. To What Degree is this Contract or Relationship Critical to Your Organization?	

**Figure 4. Linking Market Dynamics in the CAAVE Model for Style Selection.**

Critical for relationship dynamics and compatibility determination, communication theory must also be integrated into the discussion. Tate and Ellram (2009) provide, “while decision makers often intend to act rationally, they are limited by their own information processing and communication ability.” (pg. 258) Additionally, “...a learning supply chain could be seen as a response to uncertainty, which drives partners to collaborate and increases the value of information. However, they also state that the same uncertainty that motivates firms to collaborate also offers the partners a chance to behave opportunistically. It follows that risks and benefits in supply relationships can be connected to each other.” (Hallikas, Puumalainen, Vesterinen, & Virolainen & Veli-Matti, 2005, pg 72) “Fundamentally, or perhaps ideally, a great part of managing supply chains essentially has to do with communicating and negotiating effectively with supply chain members. Without this communication and negotiating, the supply chain ceases to exist, as its *modus operandi* has gone” (Zachariassen, 2008, pg 764).

Integrating organizational theory, human dynamics, communication and leadership as relationship dynamics and compatibility constructs in the evolution of strategic relationships into the Nash and Williamson framework are evident. However, operationalization is key; “talking about the ‘black box’ of transaction cost economics, ...prioritization, conceptualization and operationalization are needed.” (Williamson, 2008, pg 6). Hallikas, et al. (2005) strongly supports this view.

Two broad models of supplier classification: Continuum Approach which is based on transaction cost economics, core competencies and governance structures where suppliers are classified into market based (adversarial) relations, partnership relations and joint ventures or hierarchy based relations; second approach is the portfolio approach (such as used by Kraljic) where suppliers are classified according to the strength of the relationship and relative supplier attractiveness (Olsen and Ellram, 1997) while Kraljic (1983) uses purchasing power and supply risk as their criteria. “Finally, most portfolio frameworks neglect the supplier’s perspective.



The main driver in terms of entering long-term relationships with customers is often the added value of the supplier rather than reduced purchasing costs.” (Hallikas et al., 2005, pg 73)

For relationship dynamics and compatibility, in the recognition of human actors, “Herbert Simon contends that ‘Nothing is more important in setting our research agenda and informing our research methods than our view of the nature of the human beings whose behavior we are studying’ (1985, p.303)” and “...the effect of which is to facilitate adaptation, preserve continuity and realize mutual gain during contract implementation.” (Williamson, 2008, pg 6). From this direction, relationship dynamics and organizational (culture otherwise called compatibility) alignment can be established as essential constructs for measurement of strategic relationships between firms. However, a simple yet accurate model is suggested by Williamson (2008) as the need for “useful parsimony to pull out central forces and remove the rest and data matters.” (pg 7) In addition, “Ignoring or de-emphasizing the relationship between an organization and its suppliers creates conflict when each firm behaves in a way that maximizes its own interest. Involving the right people and clearly defining roles, responsibilities and accountability across the two organizations could minimize opportunistic behavior, thereby improving the relationship.” (Tate & Ellram, 2009, pg. 259)

Relationship or ‘negotiating’ or ‘posturing’ styles are also an issue to evolve the traditional ‘War of the Roses’ approach to a modern application of a flexible yet efficient model. Styles must be selected and used as dynamic forces change the situation or environment; “If organizations do not adapt to changes, poor alignment with supply chain partners will result” (Tate & Ellram, 2009, pg. 258). Williamson offers muscular, benign/dysfunctional, and credible styles to the argument, however “the cumulative forces of competition nevertheless serve as a check upon excesses of muscular contracting” (Williamson, 2008, pg 10). Competitive/muscular as well as avoidance styles can damage relationships, thus more collaborative styles are required.

In support of collaborative styles, especially a vested style, “Relationships tend to be more stable and mutually beneficial when both parties will experience a loss if the relationship fails.” (Tate and Ellram, 2009, pg. 258) Caniels and Gelderman (2005) also support a value building approach; in that both buyer and supplier dependence in the relationship are important. “Our findings suggest that relatively high levels of both buyer’s and supplier’s dependence constitute conditions for engaging in a partnership and thereby follow a strategy aimed at moving to another quadrant [of the Kraljic model].” (Caniels & Gelderman, 2005, pg. 152). Cousins and Spekman (2003) offer, “...purchasing is moving from a clerical function towards a strategic process.” (pg. 19) In essence, firms should move away from ‘arms-length’ relationships and adopt ‘obligation’ based approaches. (Cousins & Spekman, 2003).

## MODEL DEVELOPMENT

An overview and application context of the CAAVE© model styles follows. These five styles are: competitive, avoidance, adaptive, vested and empathetic.

### Competitive

- When quick, decisive action is vital to the organization (e.g., emergency situations such as a
- 1 disaster or terrorism incident or accident).
- On important issues where unpopular actions need implementing (e.g., cost cutting, enforcing
- 2 unpopular rules, discipline).
- 3 On issues vital to company welfare and survival when you know you're right.
- 4 Against people who take advantage of noncompetitive behavior.

### Avoidance

- 1 When an issue is trivial or more important issues are pressing.
- 2 When you perceive no chance of satisfying your needs.
- 3 When potential disruption outweighs the benefits of resolution.
- 4 To let people cool down and regain perspective.

- 5 When gathering information supersedes immediate decision.
- 6 When the relationship could be damaging to the organization and is not critical.  
When partnering or contracting seems rushed or pushed as a result of other issues; short term
- 7 strategy to buy time.

### **Adaptive**

- 1 When goals are important, but not worth the effort or potential disruption of competing since the situation does not allow a collaborative approach.
- 2 When opponents with equal power are committed to mutually exclusive goals; you adapt to the contract/partnership situation and create the most advantageous position.
- 3 To achieve temporary settlements to complex issues.
- 4 To arrive at expedient solutions under time pressure.
- 5 As a backup when a Vested or Competitive style is unsuccessful.

### **Vested**

- 1 May not always work (takes two to make this style work) and requires trust between parties
- 2 Requires the identification of a broader range of strategies, transaction costs and longer term goals
- 3 Points for the Vested Style
  - a Both parties must have a vested interest in the outcome (the resolution)
  - b Both parties feel a better solution can be achieved through problem-based collaboration
  - c Both parties recognize the problem is caused by the relationship, not the people involved
  - d Focus is on solving the problem, not on accommodating differing views
  - e Both parties are flexible
  - f Understanding that all solutions have positive and negative aspects
  - g Both parties understand each other's issues
  - h Problem is looked at objectively, not personally
  - i Both parties are knowledgeable about conflict management
  - j Allow everyone to "save face"
  - k Celebrate successful outcomes openly.
- 4 To find an integrative solution when both sets of concerns are too important to be compromised.
- 5 When your objective is to learn and mutually benefit from the relationship.
- 6 To merge insights from people with different perspectives.
- 7 To gain commitment by incorporating concerns into a consensus.  
To work through organizational issues, like transaction costs, service levels, etc... that could harm a
- 8 relationship.

### **Empathetic**

- 1 When you find you are wrong; to allow a better position to be heard, to learn, and to show your reasonableness.
- 2 When issues are more important to others than to you; to satisfy others and maintain cooperation.
- 3 To build social capital for later issues.
- 4 To minimize loss when you are outmatched and lack any competitive advantage.  
When harmony and stability are especially important; when you are building up a weaker partner in
- 5 the market.
- 6 To allow subordinates to develop by learning from their mistakes.

The CAAVE Model enables assessment, initially based on market dynamics (includes consideration of TCE) and basic relationship dynamics. This assessment offers recommendations of styles for firms to utilize within the buyer-supplier relationship.

Style			Score (Higher Score Preferred)	
SITUATIONAL ASSESSMENT PREFERRED STYLE:	Competitive	C	✗	5
	Avoidance	A	✗	4
	Adaptive	A	!	9
	Vested	V	✓	13
	Empathetic	E	!	9

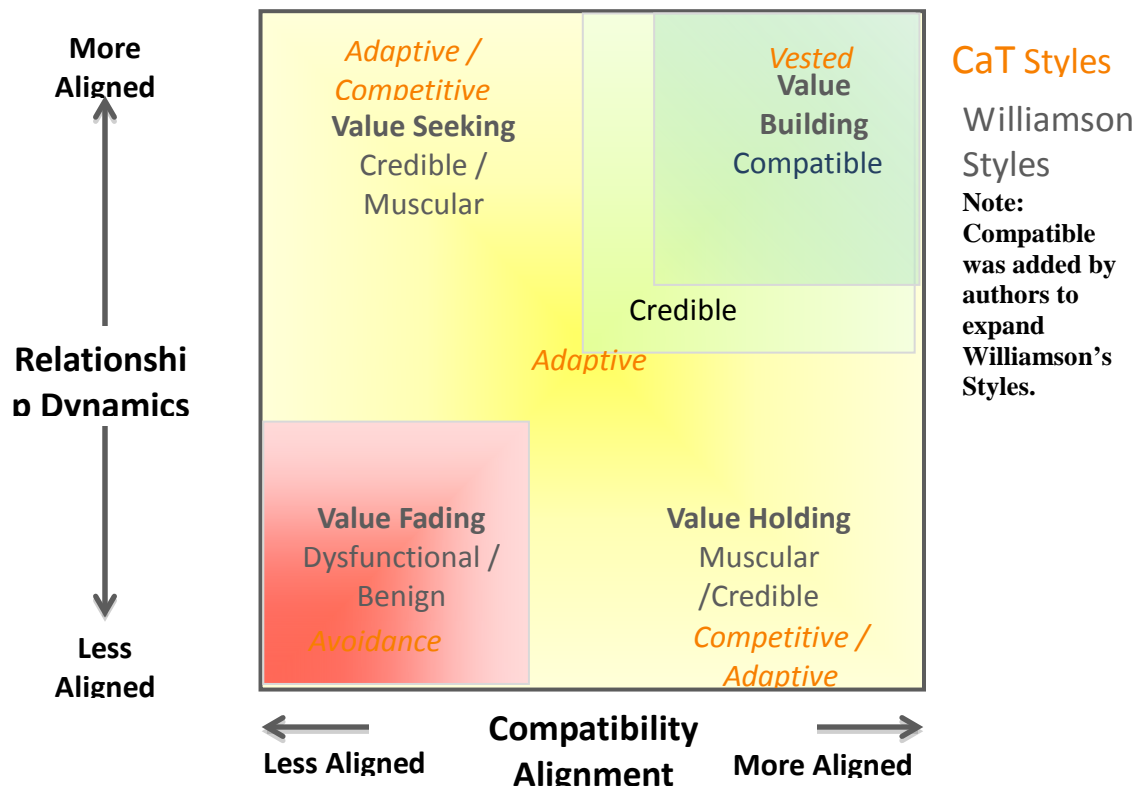
**Figure 5. Style Selection for CAAVE: Market (TCE included) & Relationship Dynamics**

The strategic alignment model shows how important it is to align strategies (Cousins & Spekman, 2003). However, it is also equally important to develop these approaches by aligning both the performance measurement systems and the skills and competencies of the individuals involved within procurement.” (Cousins & Spekman, 2003, pg 21). Alignment of compatible strategies enables the more thorough assessment of relationship dynamics and compatibility between firms.

Assess alignment of the contract and partnership factors with applicable styles from the CAAVE Model					
Relationship	Non-Building		Building		
	Competitive C	Avoidance A	Adaptive A	Vested V	Empathetic E
Market & Situational Assessment					
Relationship Dynamics Assessment					
Party A Organizational CAAVE Profile					
Party B Organizational CAAVE Profile					
Party C Organizational CAAVE Profile					
ASSESSMENT (type in Yes or No for each style)					
	Competitive C	Avoidance A	Adaptive A	Vested V	Empathetic E

**Figure 6. CAAVE Assessment Style Alignment by Firms.**

Integrating CAAVE© Model styles with Williamson’s styles within the quadrants (with suggested styles for each quadrant) is the next focus of the model. Style migration within quadrants is expected in the model. It is important to note that Nash’s ‘Win – Win’ model integrates in the CAAVE© Model only in the upper right half of the model (Value Building quadrant specifically).



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**Figure 7. Evolution of CAAVE Model with Williamson Styles and CAAVE (CaT) Styles.**

The CAAVE© Model integrates Nash's and Williamson's concepts within a flexible framework. Once firms assess their strategic outsourcing relationship of alignment between styles, deeper relationship dynamics and compatibility, as well as trust, assessments can be conducted. As firms are assessed either in the 'Value Building' quadrant or close to that quadrant, the integration of Nash's 'Win – Win' situation is realized. The next section will overview this step in the sequence within the CAAVE© Model.

## COMPATIBILITY MEASUREMENT

The constructs of relationship dynamics and compatibility between firms have been provided in earlier discussion and are clearly important. Trust, likewise, becomes a key issue in style selection and movement toward a 'Value Building' (upper right quadrant) or 'Tudor Rose' approach. "Trust is essential to relationship building." (Cannon, et al., 2010, pg. 508) "Awareness or suspicion of opportunistic behavior causes diminished levels of trust in buyer-supplier relationships. The lack of trust, opportunistic behavior and uncertainty in offshore outsourcing increases the inability to effectively align incentives across the supply chain. It also creates increased purchasing complexity and higher transaction costs." (Tate & Ellram, 2009, pg. 259) Bringing styles to the forefront of the CAAVE© model, Cannon, Doney, Mullen and Petersen (2010) suggest, "the success of this 'global sourcing' strategy depends, in part, on the ability of supply chain partners to create appropriately focused value-adding buyer-supplier relationships." (pg. 506). Supporting both trust and communication, "similarly, where trust was examined it was evident that professional services and motor service relationships were characterized by a lack of trust evidenced by a general lack of information sharing, poor levels of communication and non co-operative behavior" (Doran, Thomas & Caldwell 2005, pg. 276).

Considering the previous evidence, relationship dynamics, compatibility between firms, and trust can be parsimoniously measured by sub-constructs of Trust, Innovation, Communication, Team Orientation, and Focus as attributed to a successful strategic relationship. Trust is the performance to promise and meeting

innovate by sharing risks and rewards, investing in each other's capabilities and collaborating to achieve common goals. Communication refers to the open and timely sharing of all information that is relevant to a partner's decision-making ability. With team orientation, both sides of a relationship must believe in the relationship. Efforts are made to view decisions from the partner's perspective to mitigate opportunism and promote collaboration. Finally, the dimension of focus means that there is common purpose and direction on both sides. When the five dimensions of compatibility and trust are cultivated, relationships can prosper due to greater collaboration and better performance.

Measuring compatibility for a successful 'Tudor Rose,' Vested Style, 'Win – Win' long term strategic relationship is completed by key stakeholders of the dyadic or triadic or quadratic relationship within an interactive survey tool that examines the key constructs from multiple angles. An example between a large firm buyer and large firm supplier are illustrated.

Cousins and Spekman (2003) heavily suggest that relationship assessment and development include relationship assessment within the realm of performance measurement for strategic relationships. "Unquestionably, the supplier's side should be included in any strategic thinking on the field of purchasing and supply management." (Gelderman & Van Weele, 2003, pg 215). Unfortunately, more managers have fallen back to qualitative methods of supplier selection [for lack of a better approach] (Luo, Wu, Rosenberg & Barnes 2009). "Key to this research would be placing meaningful measurements on the effect of relationships on a company." (Parry, Graves & James-Moore, 2006, pg 303).

The firms' assessment is plotted on the CAAVE© Model quadrants to evaluate the potential success of a 'Vested Style' and long term strategic relationship. The beginnings of a compatibility index for firms can be derived from this assessment. This illustrates the integration of relationship dynamics and compatibility between firms with market dynamics, TCE and 'Win – Win' situations. Once firms engage in strategic partnerships, performance is added to the equation with ongoing relationship dynamics and compatibility assessments.

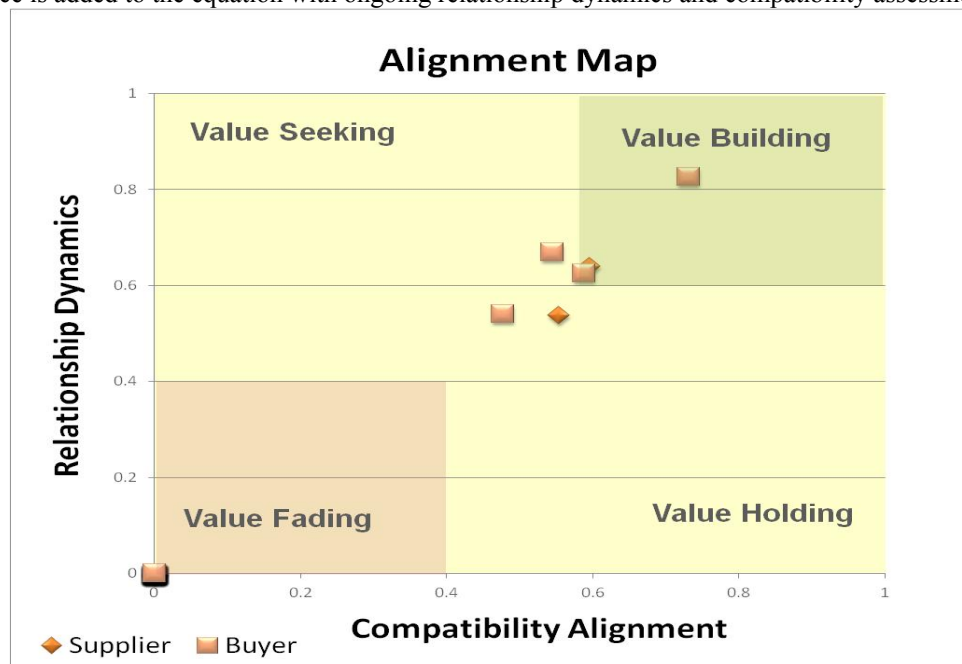


Figure 8. Measuring and Plotting Compatibility: CAAVE© Model.

## MANAGERIAL IMPLICATIONS & CONCLUSION

As outsourcing and strategic partnerships become more critical to the success of the organization, it will become imperative to select the right firm with which to partner. Failure to do so could lead to reduced service levels, increased costs, lost market share and profitability. In many cases, selecting the right strategic partner has led to increased innovation, along with lower costs, increased service, market share or profitability.

One example of a Vested strategic relationship is that between Microsoft and Accenture. Microsoft outsourced all of their procure to pay processes for 95 countries to Accenture. As a result of this relationship Microsoft has achieved significant cost reductions and process standardizations. When asked how it was possible for Microsoft to trust Accenture so much, the Microsoft response was “How can I not trust them?”

These relationships also thrive when there are compatible goals, beliefs and objectives. Managers should work to determine the level of compatibility between organizations as it enables a joint commitment to a shared vision and to a set of Desired Outcomes. Compatibility improves your ability to have empathy for your partner and builds trust. This then gives each party comfort to invest in transformational work and grow the size and number of opportunities both firms can obtain together.

With support and evidence, the CAAVE© Model offers a contemporary approach to evaluation of strategic partnerships. From the literature, it was necessary to develop the relationship dynamics view of strategic partnerships while integrating cooperative game theory, transaction cost economics and market dynamics into the package of constructs with regard to strategic agreements and partnerships among firms. In addition, research was presented illustrating the evolution of the CAAVE© Model and the development of a compatibility index, its theoretical underpinnings, and how researchers are using the tool to identify gaps in perceptions in the relationship dynamics view of strategic partnerships. The ‘Tudor Rose’ for contemporary and dynamic, global strategic relationships was presented with hopes of further development, research and refinement for increased efficacy for firms stuck in the ‘War of the Roses’ environment.

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# AN EU FINANCIAL TRANSACTION TAX: A THREE-FOLD ASSESSMENT

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## ABSTRACT

*In the paper we discuss the proposal from the European Commission to introduce in 2014 a European financial transaction tax (FTT). The assessment is three-fold. First, we do assess an FTT with the criteria the Commission has come up. Second, we do assess an FTT from the point of view of public finance. Third, we do assess an FTT from the point of view of entrepreneurship. On all three criteria, we do get a negative verdict: (1) the choice for an FTT is an ad hoc one, (2) an FTT is not intended to be a future-oriented quid pro quo, and (3) entrepreneurship is stifled.*

## INTRODUCTION: EU BUDGET REFORM

At the start of the European Union (EU) in 1958, direct Member States' contributions financed the EU. The goal of the EU, however, has always been to have sources of finance separate and independent of the Member States. The EU, indeed, got its own resources; in the beginning of the eighties of the last century, the EU was financed by agricultural levies, custom duties and a percentage of a harmonized VAT-base. At present, because of a growing budget and dwindling custom duties due to free trade, the EU is financed for 15 percent by own resources. EU's revenues are mainly Member States' contributions: a percentage, 1.12 percent, of their Gross National Income (GNI). The total budget for 2012 is 147.2 billion euro.

Direct contributions, however, stimulate the Member States in so-called *juste retour* behavior (Richter, 2008). They look at what they get and what they give to the Union. Expenses with a real added value to the EU as a whole are stifled, e.g., energy security, European infrastructure, and a knowledge-led service economy. The bulk of the expenses, almost 80 percent, are agricultural subsidies and income redistribution among Member States. The last is done by the so-called structural funds and the cohesion fund. They aim to reduce regional disparities in terms of income, wealth, and opportunities. Europe's poorer regions receive most of the support. In general Member States tend to favor instruments that improve their net position rather than those with the greatest value added for the EU as a whole.

To curtail the Member States' focus on their net contributions, the EU wants new, so-called, true own resources. The European Commission (2004), or simply Commission, the executive arm of the European Union, which proposes and disposes, and the European Parliament (2007), which exercises legislative and budgetary functions jointly with the Council, do endorse the idea of a European tax. In 2010, on the list of proposed EU taxes, were six taxing options: (1) taxation of the financial sector; (2) revenues from auctioning under the greenhouse gas Emissions Trading System; (3) a charge related to air transport; (4) VAT; (5) energy tax; and (6) corporate income tax (Commission, 2010, cp. Open Europe, 2011). In 2011, the Commission (2011a) selected a financial transaction tax (FTT) and a European VAT as the two most likely candidates for a Euro tax. An FTT (Commission 2011b, cp. Henkow, 2012) is a tax on stocks, bonds, derivative products, and possible also currencies. The last is also the reason an FTT is also called, after its intellectual roots, a Tobin tax. James Tobin suggested in 1972 to tax all spot conversions of one currency into another. Financial institutions, at both sides of the transaction, do pay the tax. They are collected nationally but transferred to the Union budget. The Commission suggests an indicative reference tax rate for bonds and shares of 0.1% and of 0.01% for derivative products. With an FTT, countries will contribute 2/3 of the nationally-collected revenue to the EU budget,



which will reduce their contribution based on GNI (Commission, 2012a). Just as, based on a single EU rate, an EU VAT would require national tax authorities to transfer a share of national VAT receipts to the EU budget. The Commission suggests a 1% rate, which would lead in 2010 to revenue for the Union of about 50 billion euro. This amount is the same as an FTT would raise.

## EU CRITERIA AND AN FTT

Over the years, the EU has developed criteria to assess new EU taxes, so-called own resources (Begg et al., 2008; Commission, 1998 and 2004; European Parliament, 2007). The criteria can be rubricated as budgetary: sufficiency, stability; efficiency: visibility, operating costs, efficient allocation of resources; equity: horizontal and vertical, fair contributions of the Member States; and political: will consensus be possible among the Member States?, will the fiscal sovereignty of the Member States be maintained?, does an EU tax create a Leviathan? Though it could also be maintained the EU budget is just the oil that makes other more important decisions possible (Figueira, 2008). In a cynical sense, we also do have to add this criterion to the list. All the, often contradicting, criteria, the Commission has to add-up somehow for an overall assessment. With the shopping list of criteria, the probable result of the choice for a new EU tax will be an *ad hoc* political one.

### Visibility

As an example of the just-said, we look at the visibility criterion. With an EU tax, a visible link between citizens and the EU should be established. Over the years, the Union has evolved from a bond between states to a bond between states and the citizens thereof. The tax should be the expression of this idea. In all just-mentioned EU studies, however, the lack of visibility of an FTT, as an implicit tax, for EU citizens is noted. Its invisibility for EU citizens should also be a reason not to assign an FTT to the Union. Moreover, of a FTT, it is unclear who in the end does pay (Worstell, 2011). An FTT also does not create a bond between the EU and the citizens. As was to be expected, the Commission chose an FTT with an *ad hoc* argument: to let the financial sector pay for its part in causing the financial crises in 2008 (Commission, 2011b; Gapper, 2012). Hence, it is called a fair, so-called ‘Robin Hood’ tax.

Opinions, however, differ if invisibility is a disadvantage. For governments it could be the opposite. Because an FTT is an implicit tax, it may be politically easier for Member States to assign the tax to the EU than to do this for a more overt tax (Begg and Grimwade, 1998: 135). Of all the proposed EU taxes, only an EU VAT, able to be seen on every sales slip, will be clearly visible to all EU citizens. It is also fair to say the EU shows courage if it wants to introduce a visible tax. For centuries the goal and wisdom of governments was to collect taxes as invisible as possible. Indirect taxes not direct taxes were to be preferred. Custom duties and a contribution that depends on the GNI of a Member State, the current way of EU financing, are the old ideal. Both revenues are unrelated to daily life. Also, an FTT is based on the wisdom of the past. This would give a hidden assessment criterion, notwithstanding the Commission’s public rhetoric stating the opposite. In sum, an FTT for sure has nothing to do with creating a visible link with EU citizens.

### Policy conclusion: back to theory and politics

To solve the situation of the unworkable, long list of criteria and to make possible a systematic choice, the Union has to come up with a manageable list. In addition, the manner in which the criteria are defined and (explicitly or implicitly) weighted predetermines analytical results (Heinemann et al. 2008: 4). For that reason, Friedrich Heinemann et al. do come up with a more systematic list related to four explicitly stated theories: fiscal federalism, public choice, European Integration and more traditional principles of taxation (Heineman et al., 2008: 143-153). Another possibility, as is suggested by Ian Begg (2011: 8), is to introduce a two-stage methodology for choosing. “This approach would depart from the conventional one of identifying a potential instrument and then assessing its merits. Instead, it is proposed that the first stage should involve a political discussion about the characteristics that a revenue source should exhibit. Such a discussion would culminate in a set of weights for the different criteria against which the various contenders would be judged. In a second stage, potential resources would be scored on the criteria and the weights applied to determine how much each criterion mattered in the overall assessment.”

## FTT AND PUBLIC FINANCE

Even if the Commission solves the problem of the many criteria, what does it mean to introduce direct EU taxes? Is the just-mentioned *juste retour* thinking blameworthy, in other words *quid pro quo* thinking, and what really involves a link between citizens and the EU? First, we look at the history of the EU budget. Not solidarity but looking at national net positions made the start of the EU in 1957 possible. Second, we look at an EU tax not from a collective but from a more individualistic perspective. *Juste retour* thinking was not only the workable thing for Member States in the past to do but is also for sectors of society and citizens the natural thing to do in the present (Leen, 2011).

### Collective net positions in the past

At the start of the Union from 1957 until the late sixties, planting a national flag on expenditures and then setting up the balance between contributions to and expenditures from the EU was the institutionalized practice. Otherwise, it was generally accepted, States would have been unable to agree. The goal was not to deny interests, but to make use of them. There was an administrative budget, a social budget and a separate budget for research and development of the European Atomic Energy Community. In addition, there were distinct budgets for development programs in the former colonies and a separate budget of the European Investment Bank (Druker, 1975).

As history shows, to think in costs and benefits does work. To trust solidarity, on the other hand, is no solution. Notwithstanding that in the preambles of the Treaty of Rome of 1957 and that of Lisbon of 2007 solidarity is confirmed and desired to be deepened. For current net contributors, however, it wrings that, given the structure of the present expenditures, a reciprocal solidarity is never to be expected. Conversely, current net recipients do say their solidarity will subside if the solidarity of the present net contributors falters. Probably, as is said of love, we have to minimize the use of that scarcest of all resources (Buchanan, 2001: 96).

### From collective net positions to the net positions of the financial sector

*Just-retour* thinking, as a political justified thing to do, is not a new idea. In 1896, Knut Wicksell argued that taxes in principle should never be assessed without the spending that goes with them. The same is upheld in modern times by James Buchanan ([1967], 1999). Paying taxes is not, as Italian authors wrote, similar to a hailstorm, of which the government must distribute the injury as fairly as possible. In the last vision, it all comes down, to a need for funds that are exogenously determined and are funded by minimizing the effects on the allocation. Expenditures relate to the overall outcome for society, not to the direct benefit of a particular individual or group of people. However, regardless of the technical difficulties of dividing the common benefit, to justify public expenditures the last must be done.

It will not work to leave the balancing act of costs and benefits to governments, i.e. the Commission, or to the European Council, which comprises of the heads of state or the government of the Member States and provides overall political direction to the Union. For Wicksell it became clear the government lacks the knowledge thereof. Besides that, the government is no benevolent ruler working for the general welfare. “[T]he members of the representative body are in the overwhelming majority of cases, precisely as interested in the general welfare as are their constituents, neither more nor less”. (1896, 87). A tax must become like a market price: each individual voluntarily pays to get. The fiscal process is a *quid pro quo*.

### The *quid pro quo* perspective on an FTT

In sum, we should not contest the *juste retour* behavior. “It is not the business,” says Wicksell, “of the science of public finance and of tax legislation to do away with the egotism of the social classes, but to assign it its proper place as a safeguard of legitimate particular interests” (1896: 118). Wicksell argues for a system of earmarked taxes and expenditures. Also, to let the financial sector pay for the bailout money of the past is in line

with *quid pro quo* thinking. The point, however, is the EU, in the future, wants to have an FTT as a stable new revenue but not wants to help anymore the financial sector. Though, at least once, the Commission (2011b: 3) did mention as a specific objective of an FTT to cover the budgetary costs of potential future financial crises. However, see, e.g., in the U.S. where the explicit aim in view of the implementation of the Frank-Dodd legislation, is that no future, taxpayer paid, bail-outs are necessary any more (Volcker, 2012). Just as this is the aim of the EU's regulatory reform programme for the financial services sector (Commission 2012b).

## **Policy conclusion: a future *quid pro quo***

As history shows, to think in costs and benefits not only works for Member States but also for sectors of society and individual citizens. For a bond between citizens and the EU it is the natural thing to do. "It would," says Wicksell, "be strange indeed if taxation by interested parties should not result in taxation according to interest." (1896: 77). We conclude an FTT, *mutatis mutandis*, puts the EU, in principle back to the workable first years of its existence. However, what, at present, does the financial sector get back for an FTT---a future no-bailout clause; to be consistent, a *quid pro quo* (bailout) would be necessary. This, since, an FTT is no one-time tax for past wrongdoing of the financial sector.

## **FTT AND ENTREPRENEURSHIP**

In what way does an FTT influence the perception of entrepreneurial profit to be gained by a financial transaction? In other words, "What tax system suits entrepreneurial entry in the market process, a decision to buy or sell, the best?" We do answer the question from the Austrian perspective. The perspective is to be contrasted with the mainstream neoclassical point of view. If the market—as the Austrians do say—is a process of discovery, the first effect of a tax system is not its effect on the relative preferability for the decision-maker of already-perceived alternative courses of action. The effect we have to take into account is, first and foremost, the possibility that the tax may have significant impact upon the very perception by the prospective taxpayer of what array of opportunities are available for his choice.

## **The core of Austrian economics**

We look at tax systems in the tradition of Ludwig von Mises, Friedrich Hayek, and Israel Kirzner. In other words, we examine a tax system that fits the market economy. This, since the essence of the market economy—from the perspective of the modern Austrians—is that it is a system of *competitive-entrepreneurial discovery*. What characterizes the market economy is competition, what drives the market is entrepreneurship, and what constitutes the steps in the market process are discoveries (Kirzner, 1997). In the market process we discover new ends and means. We look at the ultimate unseen: we even do not know what we do not know. Accordingly, we have to assess a tax with respect to the ability to promote creative acts of entrepreneurship.

Mises and Hayek made it possible to describe market adjustments as a systematic sequence of decisions. Mises describes the individual decision unit not only as maximizing, but also as finding out the relevant ends-means relationship. This opened the way for incorporating learning into our understanding of market processes. Hayek describes the process as one of learning by discovery: competition as a discovery procedure (Hayek, 1982: 67-69). Endogenous change in the ends-means relationship—says Kirzner—is possible with the entrepreneurial element in each individual market participant: alertness. Alertness is "the propensity [...] toward fresh goals and the discovery of hitherto unknown resources" (1973: 34). A disequilibrium situation points to market ignorance, from it emerge profitable opportunities that are exploited by alertness. Alertness gives a more realistic image of human action (and hence real choice) and makes possible the description of the market as a unified discovery process. "[The] 'alertness' view of the entrepreneurial role rejects the thesis that if we attribute genuine novelty to the entrepreneur, we must necessarily treat entrepreneurially generated market events as not related to earlier market events in any systematic way. The genuine novelty [...] attribute[d] to the entrepreneur consists in his spontaneous *discovery* of the opportunities marked out by earlier market conditions (or by future market conditions as they would be in the absence of his own actions)" [...] "[These] entrepreneurial discoveries are the steps through which any possible tendency toward market equilibrium must proceed" (Kirzner, 1985: 11-12).

## The un- and counter expected

Modern Austrianism, defines entrepreneurship as the perception of the ends-means framework within which allocation and economizing is to take place (Kirzner, 1973: 33). A neoclassical defines entrepreneurship as combining individual-specific ability with an up-front investment to generate an uncertain return (Gentry and Hubbard, 2000: 283). The risk neoclassical economists do speak of is the risk of a known alternative. Indeed, if that is the situation, to look at relative preferability is the right (economic) thing to do. We, e.g., look at the changing relative gains of higher taxes on buying and selling. However, if it is utter ignorance (uncertainty) we are speaking about, taxation robs the entrepreneur of the incentive to come up with promising investments (with or without a high risk). In other words, for Austrian economics fundamental uncertainty is of the essence of the situation the entrepreneur faces. His situation is not one of uncertainty over given alternatives. The entrepreneur has, first, to come up with those alternatives. He has to come up with a framework of ends and means (Kirzner, 1973: 82-84). Afterwards he can assess the riskiness of the ends and means. The influence, also, of taxation on risk is a different one for each of these two problems: known uncertainty of “given” means and ends versus fundamental uncertainty as far as what are the means and ends in the first place. Neoclassical economics hints at the influence of taxation concerning the first form of risk. Austrian economics hints at the influence of taxation concerning the second. Fundamental ignorance and hence an ultimate error stands against a situation of given alternatives involving risk: a situation we do know of the probability distribution of incomes attached to each alternative.

Also, what influence does the tax system have on the market’s competitive-entrepreneurial discovery process? If the market is a process of discovery, the first effect is not its effect on “the relative preferability for the decision maker of already-perceived alternative courses of action” (Kirzner, 1985: 94) as the neoclassical tells us. The effect we have to take into account is “the possibility that the tax may have, perhaps, significant impact upon the very perception by the prospective taxpayer of what array of opportunities are available for his choice” (o.c.: 94). To answer our question, we do have to distinguish between the truly unexpected and the counter-expected. For Austrians uncertainty (risk) is first and foremost illustrated in the appearance of something completely unexpected. “[T]he situation holds unknown possibilities unconstrained by known constraints. It is the entrepreneur’s awareness of the *open-endedness* of the decision context that appears to stimulate the qualities of self-reliance, initiative, and discovery” (o.c.: 109). For the neoclassical, however, only counter-expected things do happen. He thought to be 99 percent sure the sun would shine tomorrow. But the counter-expected did happen: it rained! In other words, in neoclassical economics the entrepreneur is “the ultimate bearer of irreducible, non insurable risk” (Kanbur, 1982: 2).

## Why an FTT is wrong

Why are entrepreneurs not to be taxed? For the Austrian, the entrepreneur spots a new opportunity that is available for choice. Something we did not even know it existed. This is something completely different as to speak of an uninsured idiosyncratic risk. An error (utter ignorance) in a market economy does unveil itself by showing up as an opportunity for monetary profit. To stimulate the discovery process it is the producer-entrepreneur we do have to look at. If this is the case, we can say any form of taxation that lowers prospective profits goes against the market’s entrepreneurial process of discovery. For in this way an error shows itself and provides the incentive that inspires entrepreneurial discovery of unnoticed opportunities: the bread and butter of the producer-entrepreneur. This is our first reason to exempt the producer from taxation.

A second reason to exclude the entrepreneur from taxation is that demand is not the desire of the consumer, i.e. other traders who do buy the financial products, for a hypothetical product not yet produced. “[T]he demand that is expressed in the demand curve for a product means the quantities of it that consumers will be prepared to buy, at given prices, when offered the opportunity of doing so” (Kirzner, 1973: 178). Consumer sovereignty means that production patterns are dictated by the pattern of consumer demand. To be more specific “production decisions are determined by entrepreneurial anticipation of the patterns of demand that will be evoked by alternative production plans” (o.c. p. 176). Consequently, if the distortions of taxation—that is the impact on the discovery process—should be minimized, taxes should not be levied on the entrepreneur. Since he is the first, the *conditio sine qua non*, to come up with something new (correcting an error) in the causal market process.

The third reason is that if it is entrepreneurship we do focus on, profits have to be as visible and as promising as possible. Entrepreneurship has to be stimulated. Entrepreneurship involves fundamental uncertainty in general but also, and of particular relevance of here, uncertainty as far as the complexity and instability of the tax code goes: legislative changes and tax court rulings. Often, because of either the sheer size or instability in the tax code, it is impossible to predict (there is fundamental uncertainty) the tax consequences of a particular activity. This uncertainty leads to a loosening of the entrepreneurial grip on pure profit. This since profits or losses arising from tax changes, by a fortunate or unfortunate change in the tax system, do appear after the entrepreneur has taken up his position. A potential and in fact superior vision may be highly stifled. We do remove much of the incentive—to “purposeful alertness, the alert purposefulness” (Kirzner, 1999: 39)—for paying attention to the unknown. Hence a tax system has to be as simple and predictable as possible.

Fourth, Austrians emphasize the division of knowledge and its growth. Entrepreneurial opportunities tend to appear within the context of a specific time and place. A decentralized economy allows individuals to act on their entrepreneurial insights, and rewards them for doing so (Hayek, 1960). The institutional setting of the market is especially fitted to stimulate discovery. It produces an environment where entrepreneurship is stimulated. And since entrepreneurial insights lay also the foundation for additional entrepreneurial insights the growth process of the economy is sustained. The market system encourages the full use of (decentralized) human knowledge. There is no efficient non-market, e.g., governmental, resource allocation. This was the insight the Austrians tried to bring to the fore in the socialist-calculation debate that raged in the interwar period in the last century. A debate that began with the question, “Is an efficient non-market resource allocation possible?” For the Austrian, market based prices are necessary to signal scarcity, to transmit knowledge, and to stimulate discovery. Hence, the government cannot be trusted to do this job for society: guiding the discovery process, by changing the relative preferability of outcomes and means of production. As Mises concludes: “Inasmuch as money prices of the means of production can be determined only in a social order in which they are privately owned, the proof of the impracticability of socialism necessarily follows. [...] [T]his proof is certainly the most important discovery made by economic theory” (1981: 15). A discovery (that is using decentralized instead of centralized knowledge) a consumption tax tries to live up to. Hence, a simple uniform consumption tax system comes up as a logical corollary. There simply is no efficient governmental resource allocation by means of taxation.

## **Policy conclusion: no EU FTT but an EU VAT**

By taxing pure profit, the discovery process is hampered. By lowering profits (especially since risk is at hand), impeding on the first one—that is the producer-entrepreneur—in the discovery process, and changing by a central government relative preferences with unknown consequences, discovery is seriously stifled. Taxing consumers without changing relative prices seems to be the least intrusive way to collect taxes in the competitive-entrepreneurial discovery process of the market. An EU-VAT is, next to being a visible tax for almost all EU individuals, the preferred new EU tax. Just as Milton Friedman said: “...the ideal tax system...ought to be a flat rate tax on consumption” ... “it has a great virtue which is also the reason it will never exist, [it] limits what Congress can do to mess things up from year to year” (Friedman, 2005).

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# VALUE OF TRADE OR BUSINESS RECORDS: WOULD COMPUTER GENERATED PRINT-OUTS BE LEGALLY RECOGNIZED AS DOCUMENTS OF PROBATIVE EVIDENCE?

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## ABSTRACT

*Documents are used almost daily by businesses as a form of evidentiary proof of its business dealings. Arguably, most of these documents are computer generated print-outs. This being so, it looks apparent that managers do not, for a moment, ask themselves a question about whether or not these documents containing the records of their dealings would ever be construed as evidence of probative value? Quite unfortunately, this would normally happen only when the matter of admissibility of these documents is already being determined during court proceedings. To respond to this kind of concern, this article investigates the question whether the computer generated print-outs would legally be construed to be of probative value by providing a detailed description of how the law courts go about this challenge following the reasoning of the court decision in *S v Ndiki S v Ndiki et al.* 2008 (2) SACR 252 (Ck). Thus, the article will use the court ruling after which the reasoning behind the decision will be intensely discussed in order to illuminate the results. It will also explore a few literatures and contextualize them with the court decision concerning this question but most significantly, provide the interpretation of a few pieces of legislation in this regard. The findings would have taught management and entrepreneurs a thing or two about being cautious with computer generated documentation.*

## INTRODUCTION

Computer generated documents are used by every trade or business most daily as a form of evidentiary proof of its business dealings with others. Arguably, it does not seem like managers within these businesses, including, but not limited to entrepreneurship (Harding, Brooksbank, Hart, Jones-Evans, Levie, O'Reilly & Walker, 2006), ask themselves about whether or not computer generated print-outs are legally recognized for purposes of evidence before the law courts. This is so in that, within these businesses, it happens very often than not, that they are indeed confronted with this situation unawares. Unfortunately, this normally happens only when the matter of admissibility of these documents is in issue and is already brought before law courts (Cooperrider, 2008). To respond to these concerns, this article will investigate and then illuminate, through description, how the law courts go about this challenge following the reasoning of the court decision.

To lay the foundation of this investigation (Atuahene-Gima & Ko, 2001) as the basis for the concomitant interpretations and discussions in this article (Burns, 2007), it is thought appropriate to start with the facts of *S v Ndiki et al.* 2008 (2) SACR 252 (Ck). The facts were as follows: During the course of a criminal trial the state sought to introduce certain documentary evidence consisting of computer-generated print-outs designated as exhibits D1 and D9. The accused objected to the admission of these exhibits, as a result of which the court conducted a trial-within-a-trial to determine the true nature of the print-outs, the class of document into which they fell and whether their admission was sanctioned by the provisions of any legislation dealing with the admission of documentary evidence. The accused argued, inter alia, that admission of evidence would offend the presumption against retrospectively; and that the documents failed to comply with the "requirements of personality", in that the information contained therein had not emanated from a person and could not be regarded as evidence given or confirmed by a person. It was argued, further, that the admission of the documents



was not sanctioned by s 3 of the Law of Evidence Amendment Act (Act 45 of 1988), or by s 34 of the Civil Proceedings Evidence Act (Act 25 of 1965), or by s 221 of the Criminal Procedure Act (Act 51 of 1977). The accused submitted that the Electronic Communications and Transactions Act (Act 25 of 2002) did not apply in casu because it had come into operation after the commission of the alleged offence (Rehn & Taalas, 2004). To the extent that this Act (the ECT Act) allowed the admission of evidence that would not otherwise constitute 'legal evidence', unless it was brought within the provisions of the Law of Evidence Amendment Act, or one of the recognized exceptions to the evidence rule, there was merit in the argument that it affected the substantive right of the accused to a fair trial, and so should not operate retrospectively. However, since the document in question might be admissible in terms of the laws relating to hearsay, it was not necessary to make a positive finding in this regard (paras 2 and 10 at 256g-h and 258e-g). Having provided the facts, it is necessary to now turn to the research methodology.

## THEORETICAL FOUNDATIONS

### Overview

As indicated, *S v Ndiki et al.* is the decision that is used as a unit of analysis in this article. Thus, the ratio of this decision will help, as an aid, to investigate and illuminate the response to a concern which provides a whole description of how the law courts go about the challenge following the reasoning thereof. The research question in this paper is whether computer generated print-outs would be legally construed as documents of probative value. To start answering this question, one would start at the time of the commencement of the trial when the accused gave notice that they (the accused) objected to the admissibility of certain documentary evidence which the State intended to use in the trial (Ketchen, Hult & Slater, 2007). To refresh, the documents (Exhibits D1 to D9) consisted of computer-generated print-outs. The issue the court was in essence called upon to determine was the true nature of the computer print-outs in question. This included the class of documents they represent and whether the admissibility thereof is sanctioned by any of the provisions in the relevant legislation dealing with the admission of documentary evidence. As a result the admissibility trial was held to determine the issues raised. The State called two witnesses whilst the accused elected not to present any evidence. To clarify this from here, this article will start by looking at, interpret and discuss legislation dealing with computer evidence.

### Interpretations and Discussions

#### *The Legislation Dealing With Computer Evidence*

Regarding the interpretation, as indicated, pieces of legislation are used as the second unit of analysis in the investigation. In other words, there are two units of analysis that this article uses to investigate its concern, namely, whether or not the computer generated print-outs are legally recognised or sanctioned as documents of probative value within business organisations. Within this context, it should be noted that the admission of computer generated evidence is regulated by the Computer Evidence Act (Act 57 of 1983) and s 15 of the Electronic Communications and Transactions hereinafter, the ECT Act. In the given facts, the parties were *ad idem* (in agreement) that the former Act (Act 57 of 1983) does not apply the criminal proceedings, as is clearly evident from the preamble thereto (Zeffertt, Paizes & Skeen, 1989 at 393). Counsel for the accused submitted that the ECT Act similarly does not apply because it came into operation after the alleged commission of the offences with which the accused are charged. It was accepted that if it was a matter of procedure it may constitute an exception to the presumption against retrospectivity and the provisions of the Act (Act 57 of 1983) may thus apply (*Curtis v Johannesburg Municipality* 1906 TS 308 at 312).

In *Tregea and Another v Codart and Another* 1939 AD 16 at 30, Stratford CJ deals with this distinction and stated that substantive law lays down what has to be proven in any given issue and by whom, and the rules of evidence relate to the manner of its prove. Whether or not a provision in an enactment is a procedural matter falling to be decided from the terms of the provision as read in context (*S v Heita and Others* 1987 (1) SA 311 (SWA) at 316A-B). A provision is considered 'procedural' and may affect pending litigation, not only if it deals with a new procedure to be followed, but also with new rules relating to proof (*S v Heita* (supra) at 316B-C; *S v Stieler* 1978 (3) SA 38 (O) at 41A-C). That the ECT Act deals with the admissibility of computer evidence and

the rules of evidence applicable thereto, are clear from the reading of s 15 of Act 25 of 2002. The relevant portion thereof, reads as follows:

- (1) In any legal proceedings, the rules of evidence must not be applied so as to deny the admissibility of a data message, in evidence –
  - (a) on the mere ground that it is constituted by a data message; or
  - (b) if it is the best evidence that the person adducing it could reasonably be expected to obtain, on the grounds that it is not in its original form;
- (2) Information in the form of data message must be given due evidential weight, and thus, probative value.
- (3) In assessing the evidential weight of data message, regard must be had to –
  - (a) the reliability of the manner in which the data message was generated, stored or communicated;
  - (b) the reliability of the manner in which the integrity of the data message was maintained;
  - (c) the manner in which its originator was identified; and
  - (d) any other factor.

It does not follow of necessity that a statute deals with procedure, it must be treated as retrospective in its operation. It is also clear from the reading of the case law that it is nothing more than a *prima facie* rule (proof at first sight) of construction and primarily the enquiry in each case must focus on the language of the enactment and the purpose and intent of the legislature as it emerges therefrom (*Euromarine International of Mauren v The Ship Berg and Others* 1986 (2) SA 700 (A) at 710A-J). It was submitted on behalf of the accused that one of the strong considerations against retrospective operation of a statute is whether unfair consequences might result or it might interfere with existing rights (*Van Wyk v Rondalia* 1967 (1) SA 373 (T) at 375). The basis of the presumption against retrospectivity is consideration of fairness (*National Director of Public Prosecutions v Carolus and Others* 1999 (2) SACR) 607 (SCA 2000 (1) SA 1127; [2000] 1 ALL SA 302) at para 36). It was here argued that to admit evidence would operate unfairly and be contrary to the right of an accused to a fair trial. This right, it was submitted, is a substantive right in terms of the Constitution (*S v Thebus and Another* 2003 (2) SACR 319 (CC) (2003 (6) SA 505; 2003 (10) BCLR 1100) at paras 53, 106 and 108. See, also, s 35 of the Constitution of the Republic of South Africa 108 of 1996). As it shall be shown, the computer evidence which falls within the definition of hearsay evidence in s 3 thereof may become admissible in terms of provisions of that Act. Evidence, on the other hand, that depends solely upon the reliability and accuracy of the computer itself and its operating systems or programs, constitutes real evidence. Real evidence means tangible evidence. It can be argued in this case, and thus submitted, that real evidence refers to computer generated print-outs. What s 15 of the ECT Act does is to treat a data message in the same way as real evidence at common law. It is admissible as evidence in terms of ss (2) and the court's discretion simply relates to an assessment of the evidential weight to be given thereto (ss (3) read with ss (2) of Act 25 of 2002). The ECT Act is therefore inclusionary as opposed to exclusionary. Section 3 of the Law of Evidence Amendment Act, on the other hand, operates exclusionarily in that evidence falling within the definition of hearsay is not automatically admissible but is made subject to what is in the interests of justice (*S v Ndlovu and Others* 2002 (2) SACR 325 (SCA) (2002 (6) SA 305; [2002] 3 ALL SA 760 at 335b-336d (SACR)). The definition of 'data message' in s 1 of Act 25 of 2002 appears to be sufficiently wide to not only to include real evidence but also hearsay evidence (data generated, sent, received or stored). This raises the question whether s 15 overrides the provisions of s 3 of the Law of Evidence Amendment Act when the evidence in issue consists of data message. There is nothing specifically in the Act that says that it does not. In *Ndlovu v Minister of Correctional Services and Another* (above) Gautschi AJ, however, stated (at 173f) that 'there is no reason to suppose that s 15 seeks to override the normal rules applying to evidence'. A contrary view is held by Sshwikkard & Van der Merwe (2009 at 385). The question of how evidence of probative value should be determined should here be examined.

### ***Determining the Probative Value***

The above view determines the probative value of the computer generated print-outs. This is what forms the crux of this paper in this whole investigation, which is to determine whether or not the computer generated print-out would be construed evidentially probative. This discussion raises an interesting point of law which the court does not decide, because it is unnecessary to come to a finding in the present case. Academics are as divided on this point as the courts seem to be. A good synopsis of viewpoint may be found in Van der Merwe et al. (2009), where the following opinion by Hofman J (2007) is a quoted and approved of by the authors:

‘[E]xcept where the ECT Act changes it, the ordinary South African law on the admissibility of evidence applies to data messages’.

In other words, one may assume that the present system of evidence in South Africa, as laid down by s 3 of Law of Evidence Amendment Act, still applies. This is also borne out by the decision of the court in *Ndlovu v Minister of Correctional Services and Another* (op cit) as mentioned above. It should be hoped to be accepted that the ECT Act must be read in the light of the Constitution (op cit) and as giving effect to its fundamental values (s 39(2) of the Bill of Rights of the Constitution). It was further contended that the admissibility of the documents is also not sanctioned by s 3 of the Law of Evidence Amendment Act, s 34 of the Civil Proceedings Evidence Act (Act 25 of 1965), and s 221 of the Criminal Procedure Act (Act 51 of 1977). This objection is primarily based on the submission that the documents do not comply with the requirement of personality. In support of this submission, reliance was primarily placed on the decision in *Narlis v South African Bank of Athens* (supra); *S v Harper and Another* 1981 (1) SA 88 (D); and *S v Mashiyi and Another* 2002 (2) SACR 387 (Tk). Cutting away the frills, the suggested approach, based on the foregoing decisions, is that a computer is not a person and if it carried out active functions, the disputed documents are inadmissible. For the same reason the provisions of the Law of Evidence Amendment Act relating to evidence are also of no assistance because evidence only extends to oral or written statements, the probative value of which depends upon the credibility of a ‘person’. (*S v Mashiyi*, op cit, at 390d-39a and 393a-b) Accordingly, a statement in the *Narlis* case such as ‘well, a computer, perhaps fortunately, is not a person’, must be seen in the context of a particular section in the legislation considered by the court at the time. In addition, certain statements in the *Harper* case op cit, which are being relied upon, are based on a misreading of the judgment of the court.

## MANAGERIAL IMPLICATIONS

Having used and applied both the *S v Ndiki* (op cit) decision as one unit of analysis to this article and the interpretations of pieces of legislation as another, it will now be turned to analysis of the latter to articulate and then contextualize with the research argument. Regarding the ‘requirement of personality’, that what was being suggested was that, a computer not being a person, if it carried out active functions, over and above the mere storage of information, the documents produced in accordance with such functions were not admissible. For the same reason, it was argued, the provisions of the Law of Evidence Amendment Act were of no assistance because hearsay evidence extended only to oral or written statements, the probative value of which depended on the credibility of a ‘person’. This approach to computer-generated evidence was incorrect and might result in otherwise admissible evidence being ruled inadmissible. It was not desirable to attempt to deal with admissibility of computer print-outs as documentary evidence simply by considering the general characteristics of a computer (Paras 10-20 at 258b-261e). But certainly for the managers and entrepreneurs out there, it would be ideal to take note of the following implications based on these analyses:

Concerning the Criminal Procedure Act, management practitioners ought to reasonably know that computer print-outs produced by a computer that had sorted and collated information would be admissible under s 221 of this Act if the foundational requirements thereof had been satisfied. In casu, the print-outs were the documents within the ordinary meaning of the word ‘document’, and they fell squarely within the four corners of the category of a record relating to a trade or a business. Section 221(id) did not require the record to be compiled by a person who had personal knowledge of the matters dealt with in the information. Again, applied to the present matter, the statements the State wished to introduce in exhibits D1 to D4 had been obtained from persons who had personal knowledge of the contents thereof. The information contained in those statements had then been sorted and collated by a computer in order to produce exhibits D5 to D9 (Paras 50-52 at 269f-270c). These implications also go hand-in-hand with the lessons learned, that follow. (Infra)

Within an international arena, the first managerial implication is that the regulation and, thus the governance, of electronic communication is internationalized because the ECT Act is based on the UNCITRAL Model Law. Second, there is a considerable degree of similarity between the ECT Act, foreign law and the Model Law. For example, the key terminology is the same (pars 66-70). The third implication is that the shift to paperless communication has well been on its way (par 71). In the Model Law and South African law, concepts such as ‘writing’, ‘original’ and ‘signature’ include electronic records and signatures (par 71; see also s 11

(‘legal recognition of data messages’), s 12 (‘writing’), s 13 (‘signature’), s 14 (‘original’) of the ECT Act); see also *Jafta v Ezemvelo KZN Wildlife* ([2008] 10 BLLR 954 (LC)). at pars 74-7, where the Court also referred to court cases in Singapore and the United States of America in which recognition of computer generated documents were held to lead to perfectly valid written contracts.) To this end, what would then be learned by managerial and entrepreneurial practitioners?

## LESSONS LEARNED

What the managerial and entrepreneurial practitioners and practicing managers and/or public policymakers would then benefit from this case study is the fact that the ‘probative value’ of the computer print-out lays in its capacity to function as proof that a phone-call had been made at a specific time. It was perhaps a pity that the provisions of the ECT Act were held not to be applicable to this case as the facts would have constituted an excellent test for the evidential provisions relating to a ‘data message’ in terms of the ECT Act. The courts should be complimented, however, on making such a clear distinction between real and documentary evidence in the case of ‘written’ evidence.

As pointed out elsewhere in this article and also by O’ Linn J in *S v De Villiers* 1993 (1) SDACR 574 (Nm) at 577f-j, the dictum of Milne J has been misread and that a general statement based on the *Harper* case, to the effect that ‘in other words a computer print-out produced by a computer that stored and collated information would be inadmissible’, is not correct. This resulted in the issue regarding the admissibility of computer generated documents being approached from the wrong premises (Hoffmann & Zeffertt, 1984 at 142; Skeen, 1984 at 688; Paizes & Skeen, 2003 and *S v Mashiyi* (supra) at 391a-c.). In the *Mashiyi* case (ibid) and also in *Ex parte Rosch* [1998] 1 ALL SA 319 (W) the respective courts found that the provisions of s 3 of the Law of Evidence Amendment Act dealing with probative value of evidence were not applicable to the computer print-outs presented as evidence. It was therefore not probative within s 3 of the Act (*S v Mashiyi* (supra) at 391i; and *Ex parte Rosch* (ibid) at 327f-g). In the *Rosch* case (ibid) the court went on to consider whether the document did not constitute real evidence. In *Mashiyi* (ibid) the court failed to consider the effect of its finding that the value of documentary evidence in question was probative. At common law the answer to this depended upon the application of the rule against hearsay and its various exceptions (Zeffertt et al., 1989 at 685-6). In the Annual Survey (1998) Bilchitz expressed the view that a broader approach should have been adopted by the court in the *Rosch* case (op cit) to the computer print-out in question. The author says the following in this regard (Zeffertt et al., 1989 at 393-4):

Finally, it should be agreed that the admissibility of this evidence, and thus, the probative value, is dependent upon the accuracy and reliability of the computer, its operating system and its processes as opposed to the credibility of a natural person.

To summarize, the *ratio* of the *Harper* decision is, similar to the *Harlis* case, that where it is sought to make a document admissible under s 221, the requirements of the relevant Act must thus be satisfied. To that extent the extended meaning of ‘a document’ in s 221 does not include a computer because it is more than a device ‘by means of which information is recorded or stored’. Further, a computer print-out is for purposes of s 221 a document within the ordinary grammatical meaning of the word.

## RESEARCH FINDINGS

The findings of this investigation is that the court regarded the computer as the maker of the statements contained in the documentation, and secondly, the statement regarding the nature of the computer was made in the context of the wording and the foundational requirements of s 34, where it is sought to make an electronic document, thus, a computer generated print-out, admissible under s 34, the requirements of the Act have to be satisfied and one of these requirements is that the maker of the statement must be a natural person. Given all above, what would then be the rationale for this enquiry on document vis-à-vis the computer anyway?

Concerning the question just raised, the rationale why this is so is threefold, first, that the court firstly considered whether the computer itself would fall under the extended meaning of a ‘document’ under ss (5). The court assessed this question against the background of the general working of a computer and concluded that a

computer did far more than the mere recording and sorting of information as envisaged by ss (5). Another reason is that the extended definition of 'document' in s 221 of the Criminal Procedure Act op cit, is accordingly not wide enough to include a computer 'at any rate where the operations carried out by it are more than the mere storage or recording of information'. That he was dealing with the machine itself, as opposed to a print-out produced by the computer. Second, the computer was simply a tool used to perform the relevant task and create the documentation in support thereof. Exhibits D5 to D9, however, stand on a different footing by reason of the fact that those documents were created without human intervention or assistance. Perhaps finally, a statement in a document shall not for the purposes of this section be deemed to have been made by a person unless the document or the material part thereof was written, made or produced by him with his own hand, or was signed or initialed by him or otherwise recognized by him in writing as one for the accuracy of which he is responsible (Maswanganyi, 2010). How then were all these accomplished?

## RESEARCH METHODOLOGY

This article, in its investigation, has discussed, described and then provided comment on the court ruling and interpreted a few pieces of legislation as units of analysis. In achieving this, this article first assumed qualitative research paradigm being both descriptive and interpretive (Corbin & Strauss, 2008). It was descriptive in that it explored a few literatures and contextualized them (Massey, 2006) with the court decision concerning the research question (the question of whether or not the computer generated print-outs would be construed to be of probative value) through descriptions, but has most significantly; provide the interpretation of a few other pieces of legislation in this regard. In order for this paper to contribute to the knowledge of the International Business/Technology discipline and orientation, it has also illuminate the reasoning of the court decision based on its argument that global management should at all time be cautious about official documentation, specifically, of the computer generated nature (Grant & Perren, 2002). In doing all these, as Olivier (2009) indicated, this article would have highlighted a number of important reasons for the decision (Cambell, 2007) as it were.

## CONCLUSION

In conclusion, in case there is indeed no manager within trade or business fraternity who has not as yet asked him or herself a question about whether or not computer generated print-outs are legally recognized or sanctioned for purposes of evidence, this opportunity is for grabs. Although documents are used almost daily by businesses as a form of evidentiary proof of its business dealings, arguably, most of these documents are computer generated print-outs. This serves to present the opportunity for managers who do not seem to bother concerning themselves about whether or not these documents containing the records of their dealings would ever be construed as evidence of probative value, until when the matter of admissibility of these documents is already being determined during court proceedings. To respond to this kind of concern, this article investigated the question whether the computer generated print-outs would indeed legally be construed of probative value by providing a detailed description of how the law courts go about this challenge following the reasoning of the court decision in *S v Ndiki et al.* 2008 (2) SACR 252 (Ck). It has explored literature and contextualized it with the court decision concerning this question but most importantly, provided the interpretation of a few other pieces of legislation in this regard. The findings arrived at point to the fact that evidentiary records relating to a trade or business regarding computer print-outs are provisionally sanctioned business documents of probative value. It would be reasonably hoped that this finding will alleviate the hardships businesses used to encounter when dealing with computer generated print-outs. The idea of taking all this trouble of investigating about computer generated print-outs within businesses is to ensure that these businesses are evolving towards global economic future through innovation and excellence through certainty as to the value of trade or business records within the South African e-commercial context.

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# **E-CONTRACTS: THE BASIS OF LEGAL PRECEDENT AND PROMOTION OF MANAGEMENT AND ENTREPRENEURIAL EXCELLENCE AND EFFICACY THROUGH NIMS**

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## **ABSTRACT**

*Although Web-based electronic communication networked systems (SMS and e-mail messaging systems, hereinafter SMS and e-mails) have been used within entrepreneurship and proven so efficient over quite a while now, there still prevails legal uncertainty concerning the conclusion of e-contracts in this regard. This creates much turmoil during litigation after contracts have been concluded using this technology as to whether or not these contracts do indeed form the legal basis of contractual relationships. In order to promote management and entrepreneurial excellence and efficacy through innovation, this article, as a qualitative literature review, will thus explore the impact of this uncertainty. This will be articulated through the use of common-law principles and SMS and e-mail messaging systems as the Web-based communication networked systems (NIMS). As an original contribution, it will also express its investigation through organised reviews of previous literature on this subject to indicate pervasiveness of the use of these messaging systems which hopefully will inform organizational management practitioners at all levels. It will be based on the argument that, as NIMS have long been pervasively and ubiquitously used within entrepreneurial circles, it should thus be construed the recognized medium of entering into legally enforceable e-contracts. In order to address this argument, it will illuminate this by describing, interpreting and then applying both a decided court decision as its related court case that informs legal precedent in these matters.*

## **INTRODUCTION**

Although, as stated elsewhere in the abstract, every aspect of e-commerce has turned electronic with some other aspects within business organizations having been virtually excluded. This being the case, technological entrepreneurial strategy acceptance, and thus, perspectives on management for creation of e-contracts does not seem to be part of this package at all. This is so owing to the fact that the use of common-law principles of contract and the NIMS, in every business organization, do not seem to be recognized as acceptable modes of creating legally enforceable contracts. Although the NIMS have been in use for so long and proven ubiquitously pervasive and thus prevalent, they have not been declared to be the recognized media of concluding contracts. NIMS is the acronym for networked instant messaging systems that includes SMSs and e-mails. These technologies, as they are already embraced within entrepreneurial substratum, should be legally accepted into conformity with the demands of e-commerce. This is in order for entrepreneurship within the e-commerce environment to logically enhance the evolution of these businesses into the economic future through innovation and excellence. This new approach will introduce human capital development as subspecies of entrepreneurship into web-based communication networked systems (Schultz, 1993). The question then is – how would entrepreneurial management be assured of legal certainty regarding enforceability of concluded e-contracts through NIMS? This paper argues that, because of the proven record of their ubiquitous pervasiveness, NIMS, should be legally recognized media of e-contracting in order to address the sustainability challenge within entrepreneurship (Collier, 2008).



## PROBLEM INVESTIGATED

New electronic communication systems have [just] been ‘introduced’ within the entrepreneurship and have proven so efficient and prevalent over quite a while now. These include SMSs and e-mails forming part of the gist and integral part of technological entrepreneurial strategic management of every business. This has been so until the question was raised as to whether or not the use of these systems can be construed by the law courts and thus, be utilized for legal purposes, such as in cases of litigation, for instance. In order to address this concern, this article delves deeper in examining the general principles of the law of contracts as developed from common law in order to accommodate the NIMS, which broadly encompass the requirements for a valid contract. This is done by the application of the principles of common law of contract and cyber-legislation through Labour Court judgment of *Jafta v Ezemvelo KZN Wildlife* ([2008] 10 BLLR 954 (LC)). Cyber-legislation, which also forms part of review in this investigation, is nothing more than just the laws or statutes regulating human interactions within the Web-based environment. The following section entitled theoretical foundation will review literature on the creation of e-contracts as indicated within the limits as indicated in the introductory section above. Every aspect of e-commerce has turned electronic with business organizations having been virtually excluded. In every business organization, technological entrepreneurial strategy acceptance as perspectives on management for creation of e-contracts, does not seem to be part of e-commerce owing to the very fact that the use of common-law principles of contract and the NIMS, do not seem to be recognized as acceptable modes of creating legally enforceable contracts. Although these systems have been in use for so long and proven ubiquitously pervasive and thus prevalent, they have not been declared to be as such. These technologies should be construed and legally accepted [into conformity with the demands of e-commerce] as the modes of concluding e-contracts. The research problem is thus:

***“Legal uncertainty as to whether or not e-contracts concluded through NIMS are recognized as legally valid impacts business innovation through excellence.”***

The investigative questions in addressing the research problem are then as follows: Does acceptance of an offer of employment sent by SMS or e-mail result in a valid contract? When is an acceptance of an offer sent by SMS or e-mail received? What is an electronic communication? Is an SMS an electronic communication? In showing how this problem is ultimately sorted out, the following section entitled theoretical foundations reviews literature indicating how the said systems are now indeed accepted and recognized as modes of concluding e-contracts within entrepreneurship.

## THEORETICAL FOUNDATIONS

The previous two sections have respectively introduced and formulated an over-arching problem that goes to the heart of this investigation. This section shows how this problem should ultimately be sorted out by reviewing literature indicating how the said systems are indeed accepted or not and recognized [or not] as modes of concluding e-contracts within entrepreneurship. This review entails a detailed discussion based on common-law principles and NIMS. It further interprets and applies pieces of cyber legislation in conjunction with Labour Court judgment of *Jafta v Ezemvelo KZN Wildlife* ([2008] 10 BLLR 954 (LC)). This review also extends to human capital development.

### Common-Law Principles

Before interpreting the case, it is desirable to mention the requirements for the formation of a valid contract at common-law. These are as follows: (1) There must be agreement (consensus) or ostensible agreement between the parties; (2) The parties must have capacity to act. The capacity of persons to enter into contracts relates specifically to the law of persons and is therefore not dealt with in this paper; (3) The performance must be possible at the time the contract is entered into; (4) The conclusion of the contract, the performance and the object of the contracting parties must be lawful (the contract must, in other words, be legal); and (5) constitutive formalities must be complied with. The requirements are in turn discussed (Christie, 2006):

### *Requirements of Valid Offer and Acceptance*

- **Valid Offer**

The following are the requirements of a valid offer at common-law. A valid offer: (1) must be definite and complete; (2) must contemplate acceptance; (3) must come to the attention of the offeree; (4) must, as a rule, be directed at a definite person or persons. Legal consequences of an offer are that, in general, a contract is a bilateral juristic act and liability, and therefore based on agreement between the parties. An obligation will thus not arise where an offer has been made but not accepted. The offer therefore does not *per se* lead to contractual liability. This is precisely the reason why the offeror may unilaterally revoke his offer. An offer lapses in the following circumstances: (1) after the expiry or lapse of the prescribed time, or of a reasonable time; (2) upon the death of either the offeror or the offeree; (3) upon being rejected; or (4) upon revocation (Quinot, 2006).

- **Valid Acceptance**

The following are the requirements of a valid acceptance at common law. Acceptance (1) must be clear, unconditional and unequivocal; (2) must correspond with the offer; (3) must be made in the mode prescribed by the offeror; (4) must be communicated to the offeror and (5) must comply with any formalities set by law or by the offeror (Quinot, *ibid*).

## **INTERPRETATION AND DISCUSSION**

### **Application of Labour Court Decision**

Before applying the Labour Court decision, the facts of the case and the legal questions of the judgment should first be considered. In applying Labour Court decision, the reasons for the decision, the so-called *rationes decidendi* to be discussed, were given. In this discussion, the Labour Court considered the ECT Act and the common law to answer the above questions. To refresh, the questions are: Does acceptance of an offer of employment sent by SMS or e-mail result in a valid contract? When is an acceptance of an offer sent by SMS or e-mail received? What is an electronic communication? Is an SMS an electronic communication?

### ***The Facts of the Case***

The Jafta (hereinafter, the plaintiff) applied for a job advertised by Ezemvelo KZN Wildlife (hereinafter, EKNW). The interview was on 5 December 2006, and at the interview, EKNW offered the plaintiff the position of general manager human resources. The plaintiff explained to the interviewers that he would be on leave from 22 December 2006 to 8 January 2007. He also told them that he was obliged to give two months' notice to his then current employer and would be able to do so only after he returned from leave in January 2007. The plaintiff explained that he could not rearrange his leave without incurring losses for himself, because the leave had already been approved and he had paid for his holiday in Maputo. EKNW's human resources officer e-mailed the job offer to the plaintiff on 13 December 2006 and stated that they required the plaintiff to start working on 1 February 2007. He received a further e-mail from EKNW on 28 December 2006 strongly advising him to respond to the offer before the end of December 2006. The chief executive officer (CEO), the author of the letter, emphasised that the commencement date was non-negotiable. As the plaintiff was on leave, he used his laptop to respond, but it malfunctioned, and on 29 December 2006 he went to an Internet café in Pietermaritzburg where, with the help of an employee of the café, he sent his response via Web-based e-mail to the CEO of EKNW. EKNW denied that it received the e-mailed response from the plaintiff. On 29 December 2007, the plaintiff received an SMS from EKNW's human resources officer informing him that he had to start working on 1 February 2007, urging him to respond to the offer, and advising him that if he failed to do so, the position would be offered to another candidate. The plaintiff alleged that he replied to this SMS by informing them, also via SMS that he had 'responded to the affirmative through a letter e-mailed to you this evening for the attention of your CEO'. The human resources officer admitted that she had received the SMS but she could not recall seeing the word 'affirmative' in the SMS, which she deleted the same day. However, the plaintiff kept the message on his cellular telephone (cell-phone) for a while and read the SMS before the cell-phone was stolen. The plaintiff obtained a printout of his cell-phone records from his network provider's forensic services division and confirmed that he had in fact sent the SMS at the time he alleged. EKNW then appointed another candidate.

The plaintiff alleged that he had accepted the offer of employment and therefore claimed damages for losses suffered caused by EKNW's alleged breach of contract.

## ***Legal Question***

The Court had to determine in the first place, whether the plaintiff's communications were valid acceptances of the offer made by EKNW in terms of common law. Second, the Court had to determine whether EKNW had received the plaintiff's acceptances in terms of the ECT Act. Third, the Court had to determine whether an SMS is an appropriate mode of concluding a contract. Here are the reasons for the decision referred to as *rationes decidendi*.

## **Rationes Decidendi**

### ***Were Communications Valid Acceptances?***

As contended that EKNW denied that it had received the plaintiff's e-mail and further contended that if it had received the plaintiff's e-mail, his e-mailed response could not have contained a clear and unequivocal acceptance that corresponded with its offer. On EKNW's denial that the SMS was an unequivocal acceptance of the offer (par 30), Pillay J held that to determine whether the plaintiff had met the requirements for a valid acceptance of an offer, he had to show that the contents of his responses satisfied the common-law requirements of a valid acceptance (par 32). If he proved that it was a valid acceptance, it had to be proved by the plaintiff that EKNW had received it in terms of the ECT Act (ibid). The Court therefore needed to decide whether EKNW had received the acceptance sent via e-mail and/or SMS. Receipt of electronic communications such as e-mail and SMS is regulated by the ECT Act (ibid).

- **The Acceptance Must be Clear, Unambiguous and Unequivocal**

Regarding acceptance, common-law requires that an acceptance of an offer be clear, unequivocal and unambiguous, as a general rule. In the plaintiff's first e-mailed response to the job offer, which was sent to the human resources officer on 22 December 2006, the plaintiff was uncertain. He indicated that the information that he had was not sufficient for him to commit himself, but that he accepted it in principle. However, in his second letter on 29 December 2006 the uncertainty disappeared, and he confirmed unequivocally that 1 February 2007 would be his starting date, if the Wildlife Board did not accept his counterproposal to start on 15 February 2007 (pars 34-5). The plaintiff also wanted a copy of the contract, not as a precondition but to secure his new job before he resigned from his former job (par 36). In the circumstances, the Court held that the contents of the e-mailed letter of 29 December 2006 were an unequivocal acceptance of the offer of employment. The Court had to decide whether the word 'affirmative' in the text of the plaintiff's SMS was indeed an acceptance of the offer. The plaintiff responded to the human resources officer's SMS that informed the plaintiff that he would have to start working on 1 February 2007 and that urged him to respond to the offer. It was held that this confirmation by the plaintiff was therefore an implicit and unequivocal acceptance of the offer (pars 38-40).

- **Must Correspond with the Offer**

Second, the common law requires that an acceptance of an offer correspond with the offer. Neither of the parties disputed that EKNW validly offered the plaintiff the position of general manager human resources and that the details of the remuneration package were disclosed. The e-mail of 29 December 2006 did not include counterproposals or preconditions, and it therefore corresponded with the offer (pars 42-3). It was also well within the time stipulated for acceptance. By accepting the starting date at EKNW by way of SMS, the plaintiff's SMS resulted in the acceptance of all the terms of the offer within the stipulated time (pars 43-5).

- **Must be made in the Mode Prescribed by the Offeror**

Third, common law requires that the acceptance be made in the mode prescribed by the offeror. As EKNW made the offer by e-mail, the contract would have been concluded if the plaintiff had accepted it by e-mail, and therefore the plaintiff's e-mail would have been an appropriate mode of accepting the offer, provided that EKNW had received it (pars 49, 100). EKNW signalled that the mode of acceptance of the offer could also be e-mail and SMS by using e-mail and SMS itself (par 101). Although counsel argued that the human resources

officer of EKNW had no authority to conclude contracts by way of SMS, this was not relevant to the facts, and the Court therefore held that the plaintiff had responded in the same mode (via SMS) that EKNW had used. The plaintiff's positive response to the single outstanding issue of the starting date led to an agreement on all the terms of the contract. When EKNW made use of SMS communication, this step implied that the plaintiff could use SMS or e-mail as a mode of acceptance (pars 48-9, 101).

- **Must be Communicated to the Offeror**

Fourth, common law requires that the offeree communicates acceptance of the offer to the offeror. It is a general rule that a contract is not concluded until the offeree (in this case, the plaintiff) has communicated his or her acceptance to the offeror (EKNW). As requested, the plaintiff e-mailed his letter of acceptance to the human resources officer and therefore his acceptance was communicated to the offeror. EKNW denied that the human resources officer was authorised to conclude a contract via SMS (par 30). Although the plaintiff's SMS was addressed to the CEO of EKNW and was received by the human resources officer, she was authorised to receive the SMS on behalf of the CEO. the plaintiff had to respond to the human resources manager and no one else, because she had sent him the SMS. So, in sending the confirming SMS to the CEO, the plaintiff correctly communicated his acceptance of the offer through the human resources officer as the intermediary. It was within the human resources officer's mandate to receive and secure any responses from the plaintiff as a potential employee (pars 51-4). After the Court had applied the common-law requirements for a valid acceptance, it held that the plaintiff's e-mail and SMS constituted valid acceptances of the offer (pars 32-55). Therefore, the Court then needed to decide whether an SMS was an appropriate mode of concluding a contract.

## **IS SMS AN APPROPRIATE MODE OF CONCLUDING A CONTRACT?**

EKNW denied that an SMS was an appropriate mode of communicating acceptance of an offer (par 30). 'E-mail', but not 'SMS', is defined in the ECT Act (Ruuska & Vaananen-VainioMattila, 1998). 'E-mail' is defined in s 1 of the ECT Act as 'electronic mail, a data message used or intended to be used as a mail message between the originator and addressee in an electronic communication' (see *Jafta v Ezemvelo KZN Wildlife* supra in par 109). However, 'electronic communication' is defined in s 1 of the ECT Act as 'a communication by means of data messages', and 'data message' as 'data generated, sent, received or stored by electronic means' (see *Jafta v Ezemvelo KZN Wildlife* supra in par 109). An SMS is capable of being generated or created, sent, received or transmitted and stored. Thus, the Court held that an SMS is an electronic communication that is transmitted from an originator to an addressee by applying the ECT Act (Tiessen et al., 2001), which states in s 24 that, as between the originator and the addressee of a data message, an expression of intent or other statement is not without legal force and effect merely on the ground that it is in the form of a data message (see *Jafta v Ezemvelo KZN Wildlife* supra in pars 111-2). Therefore the plaintiff's acceptance by SMS was not without legal force merely on the ground that it was in the form of an SMS (par 112).

### ***Did EKNW Receive the Plaintiff's Acceptances?***

*Held*, in terms of common law the plaintiff's e-mail constituted a valid acceptance of EKNW's offer, it then needed to decide whether EKNW had received the acceptance sent via e-mail. Section 22(2) of the ECT Act stipulates that electronic contracts (including contracts via SMS and e-mail) are formed at the time when and place where the offeror receives acceptance of the offer. However, unlike the common law, s 23 of the ECT Act does not require an acceptance of an offer to come to the knowledge of the offeror for a contract to arise. The Act provides as follows (see *Jafta v Ezemvelo KZN Wildlife* supra in par 80):

The ECT Act provides for time and place of communications dispatch and receipt of data message –

- (a) used in the conclusion or performance of an agreement must be regarded as having been sent by the originator when it enters an information system outside the control of the originator or, if the originator and addressee are in the same information system, when it is capable of being retrieved by the addressee;

- (b) must be regarded as having been received by the addressee when the complete data message enters an information system designated or used for that purpose by the addressee and is capable of being retrieved and processed by the addressee; and ... (S 23 of the ECT Act)

*Further held*, it is clear that the information theory is not suitable for contracts concluded electronically, because the acceptance of the offer might not even come to the attention of the seller if the thing sold is packaged and delivered automatically or through a despatch service (par 81). Another reason for applying the reception theory as an exception to the information theory in instances where contracts are concluded electronically is that the offeree will be disadvantaged by not knowing whether the offeror knows about the acceptance, as the offeree will have to wait until the offeror acknowledges receipt of the acceptance (par 82). Section 23(a) of the ECT Act, like the law of other countries, requires that the message should enter an information system outside the control of the sender and that the sender should lose and the recipient acquire control (see *Jafta v Ezemvelo KZN Wildlife* supra in par 84): s 23(b) requires that the data message both enter into the addressee's information system and be capable of being retrieved by the addressee (*Jafta v Ezemvelo KZN Wildlife* supra in par 90). The plaintiff's e-mailed letter of acceptance was a data message, which he sent via a World Wide Web-based information system that was outside his control. Because his e-mail did not bounce back, the Court accepted his evidence that his e-mail had been sent and that it had entered the World Wide Web-based information system (par 104). However, the evidence showed that the plaintiff's e-mail neither entered EKNW's information system nor was capable of being retrieved and processed by EKNW (par 28). Accordingly, EKNW could not be regarded as having received the plaintiff's e-mail under s 23(b) of the ECT Act (*Jafta v Ezemvelo KZN Wildlife* supra in par 105). Therefore, the Court found that the plaintiff had not communicated his e-mail accepting the offer to EKNW (par 113). *Further held*, that EKNW had not received the plaintiff's e-mail as one or other information system probably malfunctioned (par 106). The ECT Act and foreign law do not cater for situations in which communication systems malfunction (par 106). Therefore the Court hinted that, because of the absence of law catering for situations in which communication systems malfunction; parties can or should apply self-regulation to counteract the potentially harsh consequences of malfunctioning systems (par 107). *Further held*, an SMS is as effective a mode of communication as any written document or e-mail, and that the plaintiff did communicate his acceptance of the job offer via SMS. Accordingly, a contract of employment came into existence (par 113), which EKNW repudiated by denying receipt of the plaintiff's acceptance (ibid).

## MANAGEMENT IMPLICATIONS

The lesson learnt on the part of management practitioners is that the common-law right of parties to a contract to decide on the applicable formalities was retained in the ECT Act and the Model Law because self-regulation is permitted. This is a form of infringement called plagiarism. As stated above, these implications can be applied to avoid the harsh consequences of the reception theory (*Jafta v Ezemvelo KZN Wildlife* supra in pars 92-5, 99; ss 21 and 26 of the ECT Act permit self-regulation). Therefore, one can safely deduce that s 23 of the ECT Act sets the default rules, and that anyone who wishes to exclude specific forms of communications and specific sending and acceptance theories must expressly contract out of them (see *Jafta v Ezemvelo KZN Wildlife* supra in par 98). Electronic commerce (SMS and e-mail contracting) brings many advantages: contracts can be concluded transnational and with ease and speed. But contracting parties should be cautious about sending and receiving electronic offers and acceptances (par 99). Since commercial practice increasingly requires predictability and legal certainty, self-regulation in electronic contracting should be utilised to accomplish these objectives more easily than legislation can do, as shown in this case (OECD, 2001). But paramount, is the fact that this paper through its findings has explored into a discovery of Labour Relations Practice through the Creation of employment e-contracts using Common-Law principles of contracts and the NIMS (Mishra, 2007; Basson et al., 2005). This article will now turn to research design and methodology adopted.

## RESEARCH DESIGN AND METHODOLOGY

Just to refresh, this paper argued that, because of the proven record of their ubiquitous pervasiveness, communication systems, namely SMS and e-mail massaging systems should be legally recognized media of e-contracting. In contextualizing this argument, this paper delved deeper in examining the general common-law fundamentals of contracts and cyber legislation to accommodate IT and the Web-based communication

networked systems, namely the SMS and the e-mail massaging systems (Olivier, 2009). These have then been contextualized by addressing these questions - (1) Does acceptance of an offer of employment sent by SMS or e-mail result in a valid contract? (2) When is the acceptance of an offer sent by SMS or e-mail received? (3) What is an electronic communication? (4) Is an SMS an electronic communication? In addressing these questions, It considered and applied the recent Labour Court decision of *Jafta v Ezemvelo KZN Wildlife* [2008] 10 BLLR 954 (LC) to note how the decision was arrived at. To fulfill this sustainability challenge in the end, it has been shown how management as human capital development would have been revamped to conform to e-commerce demands. In doing this, this qualitative paper adopted a descriptivist and interpretive research methods (Olivier, 2009) as unit of analysis. It also described, through discussions and reviews, scholarly contributions and, interpreted Common-Law principles and cyber legislation (Wilson, 2006).

## CONCLUSION

This paper argued that the NIMS should be legally recognized media of e-contracting. To see how these answers were met and how the finding was arrived at, this paper examined the general common-law fundamentals of contracts and the ECT Act to accommodate the NIMS. In this way, human capital development will indeed be revamped to conform to e-commerce principles for competitive advantage as the SMS and e-mail data messaging systems are now surely legally recognized media of e-contracting. This is also hoped to have addressed the sustainability challenge within e-commerce on these perspectives, thus making this an entrepreneurial management strategy and technological acceptance, and thus a practice, to be recognized globally through the International Labour Organization (Youndt et al., 2004). The idea of taking all this trouble of establishing legal certainty is to ensure that businesses are evolving towards global economic future through innovation and excellence. Most certainly, legal uncertainty should now be seen to be established on e-contracts concluded through NIMS and are now recognized as legally valid and the impact will thus be alleviated through excellence and thus hoped that the subject of this research is timely and important as it should also have been seen to have had international orientedness. Having said all the above, the promotion of management and entrepreneurial excellence and efficacy will hopefully be alleviated in this manner.

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# ENHANCING EXECUTIVE MANAGEMENT PERCEPTIONS ON IP PROTECTIONISM: A SOUTH AFRICAN RESEARCH ORIENTED PERSPECTIVE

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## ABSTRACT

*Most members of executive management of any business and academic organization are usually faced with multifaceted tasks to carry out. Some of these tasks require intense knowledge sometimes far beyond their expertise. Amongst the expectations the executive management should leave up to, include amongst others, the ever-changing technology, trends towards protectionism, etc. These expectations mentioned, are amongst the most disturbing. For the ever-changing technology to apply more efficiently there should be some form of generally accepted trends on business protectionism against copyrights infringement. This paper will thus focus on the trends towards Intellectual Property (IP) protectionism for business and educational protection against digital plagiarism on copyright protected works within the cyber-world. Most business and academic executive management have perceptions on copyrights protection going parallel to the doctrine of fair-use and provisions of Copyrights Act. This paper argues that in order to enhance this perception going astray on this area of management, executive personnel should adequately acquaint themselves rather with the provisions of Copyrights Act 98 of 1978, without just reading between the lines, but to have it correctly interpreted for them. Thus, this paper sets out most of what executive managerial staff ought to reasonably know within their respective areas of their operational functions, as will be apparent. In this way, the mapping of global future and evolution through innovation and excellence shall have been enhanced.*

## INTRODUCTION

Speaking generally, the objectives of this paper, within the perception of management at all levels within education and business environments, are to examine the relationship between corporate success and investment layer of their institutions and organizations into services management and marketing, leadership, human capital strategic planning, as well as, into technology. The aim here is to assess the service science from an interdisciplinary perspective to link the elements of business strategy, business process and service management. This paper examines an area of IP protectionism within the South African context. IP is an incorporeal and mental possession of a person which, as much the same as any other tangible property, should be respected and thus, protected, moreover when it appears in its electronic format. This will enhance executive management perceptions on IP protectionism within a South African research oriented perspective. In order for these bodies to be able to reliably contribute to the common body of knowledge through their research contributions and dynamic knowledge management methods, although admittedly to some extent there is some kind of professionalism on their part, there still need to be some sort of guidelines as to the manner in which to achieve avoidance of unauthorized electronic copying. If this standard is not met, then there is definitely irreversible conundrum to the general body of knowledge through research contributions made in this manner. To achieve this standard, it should be made clear from the outset that digital information, in the form of literary work, at least for purposes of this paper within the service science research, strategy and innovation, is protected by cyber-law of copyright legislation. Although governments such as that of South Africa (SA) for instance, have been implementing standards and strategies aimed at the encouragement of research and development in their policies, the promotion of innovation and IP protection involves complex incentives for the copyright holder and has great consequences for research in academic institutions and the libraries within the Web environment (Lehobye, 2011b). This paper looks therefore into such matters including fair-dealing, infringements and substantial copying, pro and con.



This paper argues that the misinterpretation of electronic or digital information on the use of copyright protected works may impact negatively to IS research. The paper first, provides a brief history of the problem. Second, this introduction, describes the paper topic and its intended meaning. Third, it answers the three main questions posed in the abstract through discussion of issues, problems and controversies. Fourth, it supplies solutions and recommendations by providing a brief but narrow analysis of the entire main discussion. Fifth, it describes and pronounces future research, trends and directions. And lastly, the paper summarizes the overall discussions already covered, by providing narrowed answers to the three questions (Olivier, 2009). The paper articulates this by illuminating briefly that the unauthorized use of copyright protected works should be sufficiently and properly attributed and cited, as will be apparent also in the conclusion. All these sections will be followed as set out and what now follows is, first, brief history of the problem.

## THEORETICAL FOUNDATIONS

The previous and thus, the first section, introduced aims and objectives of this paper and set out the structure of the paper in its entirety to be followed. This section then describes the paper topic and its intended meaning. For purposes of this paper, Woods et al., (1999) explain copyrights generally as a set of exclusive subjective rights granted to the author or creator of an original work within the digital environment through the Web. This description seems fair and somewhat straightforward the rationale of which is that it speaks of the main important requirement (Prytherch, 2000), namely ‘granting of a set of exclusive rights’ (Deazley, 2006). To understand plagiarism vividly, two questions must be considered: (1) how is plagiarism like or unlike theft (Marcel, 1992), (2) Why plagiarism is considered wrong; *why should we acknowledge the originator of an idea*. Credit for authorship is so undetectable that even the reverse of stealing, falsely attributing one’s own work to another, is also wrong; it constitutes forgery (Skom, 1986). Yet taking someone else’s idea and changing the wording is like stealing a car and changing its colour and thereafter claiming ownership.

Fair dealing or fair-use can be defined by the six criteria model provided for by both the Digital Millennium Copyrights Act (DMCA 98 of 1978), and the Australian Digital Agenda of 2000 (Lahore, 2004). These Acts, including the South African Copyrights Act of 1978 collectively form cyber legislation in this paper upon which the paper discussions are based. These criteria are: (1) how much of the work was used? (2) What was the importance of the infringed work? Quoting trivial or small amounts may alone sufficiently establish fair dealing as there would not be copyright infringement at all. In some cases even quoting the entire work may be fair dealing. The amount of the work taken must be fair in light of the purpose of the dealing. (3) Was a ‘non-copyrighted equivalent of the work’ available to the user? (4) Was the dealing ‘reasonably necessary to achieve the ultimate purpose’? Copying from a work that has never been published could be fairer than from a published work in that its reproduction with acknowledgement could lead to a wider public dissemination of the work - one of the goals of copyright law. If, however, the work in question was confidential, this may tip the scales towards finding that the dealing was unfair.’ (5) Is it likely to affect the market of the original work? (6) ‘Although the effect of the dealing on the market of the copyright owner is an important factor, it is neither the only factor nor the most important factor that a court must consider in deciding if the dealing is fair’ (D’Agostino, 2009). This brings the paper argument in that the misinterpretation of electronic or digital information on the use of copyright protected works may impact negatively to IS research. In order to address this concern, I now turn to unpack answers to these questions seen as hypothetical resolutions.

## HYPOTHETICAL RESOLUTIONS

To what extent should fair-use be considered fair? This question encapsulates quite a number of aspects which may certainly not be practically possible to accommodate in this paper, however, only the most burning issues have been preferred for an overwhelming discussion embracing critical aspects pertaining to information integration impacting on management. One of the key factors to determine whether or not fair dealing is fair, namely the amount copied, relative to the whole work, is to assess the quantum or percentage of the original copyrighted work that has been imported into the new work (Peters, 2003). This is by far the most important part which is clarifying the thematic conflict of the argument of this paper seen broadly other than narrowly. In general, the less that is used in relation to the whole, for an example, a few sentences of a text for a book review, the more likely that the sample will be considered fair-use. In *Sony Corp v Universal City Studios* (464 U.S. 417, 451 (1984)), it was held that for a case in which substantial copying—entire programs for private viewing—was

upheld as fair-use. Likewise, in *Kelly v Arriba Soft Corporation* (336 F.3d 811(CA9 2003)), the [Ninth Circuit](#) held that copying an entire photo to use as a thumbnail in online search results did not weigh against fair-use, ‘if the secondary user only copies as much as is necessary for his or her intended use’. To answer the question of what extent fair-use should be considered fair; one would then consider circumstances in each particular case. Small copying appears not to present problems. However, original author should and must be cited. Failure to do this constitutes infringement and thus, plagiarism. Fair-use will only be fair provided therefore that substantial portion of the work has not been taken. If it was, permission must have been granted otherwise this would constitute infringement.

What is to be protected? (Cotter, 2008) has observed that in cases in which fair-use is justified by the presence of positive externalities flowing from the individual user’s use, the asymmetry between the individual user’s gain and the copyright owner’s loss may result in systematic copyright over-enforcement. Put another way, the fair use doctrine suffers from an ‘appropriability’ problem similar to that which is often cited as a justification for copyright protection itself. What is germane here is to know within the original computer programs and literary works what the subject-matter is protectable by copyrights as to whether it is ideas, expressions or both (Matheson, 2002).

Something apparently a bit questionable is the controversy that, considering digital ideas, the law does not protect something which is not as yet produced out of the mind of a person. Is this not someone’s property? It would appear that it indeed needs to first be produced out of human mental cranium and its presence be sensed in the real world. If this was not so, then how would the law then protect such mental properties as IPs if not produced out of their minds first? Everyone would then also have to claim copyrights infringement and the law would also be faced with the task of setting criteria to claim. Looking at the introduction of computers, writings were digitized and became accessible and capable of manipulation. In as far as the IS research specifically is concerned, the Web, as Loundy (1995), contended, has become an unexpectedly popular medium of distribution of copyrightable content leading to scepticism and therefore also *conflict* amongst traditional publishers and researchers. S 1 of the Copyrights Act (Act 98 of 1978), defines a computer program as a set of instructions fixed or stored in any manner, and which, when used directly or indirectly in a computer, directs its operation to bring about a result. This definition is in line with the US’s DMCA and the Australian Digital Agenda. Databases are protected by South African law as literary *works* (Nielsen, 2001). Consequently, the unauthorized reproduction of such works constitutes copyright infringement (Duboff, 2007).

This is not to claim that unpublished works or, more specifically, works not intended for publication, do not deserve legal protection, but that any such protection should come from laws about privacy, rather than laws about copyright (S 14(d) of the Constitution). The statutory fair-use provision was amended in response to these concerns by adding a final sentence which reads as: ‘The fact that a work is unpublished shall not itself bar a finding of fair-use if such finding is made upon consideration of all the above factors’ (Anderson, 2009). Unlike with digital ideas, expressions are the objects of protection for literary works (Bartow, 2003), whether the work is published or not. Important developments on copyright at international level in the 1990s include the 1994 Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement (Leval, 1990a). TRIPS were negotiated at the end of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) and contain a number of provisions on copyright. Compliance with the TRIPS Agreement requiring of states wishing to be members of the World Trade Organisation (WTO) to register. States need to be signatory of the Berne Convention or even the Geneva Convention, for instance and comply with all its provisions, except for the provision on moral rights (Article 9(1) of the Geneva Convention; Carlos Fernandez-Molina, 2003).

## Consequences on Unauthorized Use

Before looking into the legal consequences on the unauthorized use of cyber-digital copyright protected material, is deemed appropriate to first consider limitations. Copyright does not prohibit all copying or replication. If this be the case, there will be an imbalance of the copyright holders with those of the society subjecting the former’s subjective rights to the constitutional challenge, as indicated. The Constitution as the supreme law of SA (*Lex fundamentalis*) limits the rights under similar circumstances. In the United States the Copyright Act of [1976] 17 U.S.C. S 107, permits some copying and distribution without permission of the copyright holder or payment to same (Yu, 2007). The concept is sometimes not well defined; however in Canada, private copying for personal

use has been expressly permitted by statute since 1999. In Australia, copyright exceptions under the Copyright Act are a limited set of circumstances under which copyrighted material can be legally copied or adapted without the copyright holder's consent. Copying without permission is referred to as fair dealing. Fair dealing uses are research and study; review and critique; parody and satire; news reportage and the giving of professional advice. Other technical exemptions from infringement may also apply, such as the temporary reproduction of a work in machine readable form for a computer. On legal penalties as forms of protectionism, our cyberlaw of copyrights, Act 98 of 1978 hereinafter, the SA Act, has provided for a number of legal penalties based on the subjective infringement of copyrights. Once caught plagiarizing, the punishment, or rather the injunction in the case of juristic persons (companies and close co-operations), the fine is astronomical. The legal penalties for infringement in terms of s 24 of the Act for copyright infringement are that the:

- infringer pays the actual amount of damages and profits;
- law provides a range from R1 400 to R1 050 000 for each work infringed (Okediji, 2001);
- Infringer pays for all legal costs;
- Court can issue an injunction to stop the infringing acts;
- Court can impound the illegal works; and
- infringer can go to jail. This indicating that, plagiarism is not necessarily a civil matter but a criminal matter.

All these remedies are set out and made available to the copyright holder in the event of copyright infringement and that relief would be available to the plaintiff as would be the case in any corresponding proceedings in respect of infringements of other proprietary rights pursuant to the provisions of the Act (s 2(1)(c) of Act 98 of 1978; Okediji, 2001). The following summarizes the remedies as relief made available to the copyright owner in the event of infringement of his or her rights (Ferrera et al., 2001):

Copyrights are protected in the judicial notion of IP systems which systems being therefore developed to protect the moral rights of authors, recognize and protect the right of fair-use for the creation and distribution of information products, and enhance, to the benefit of common good, the creation and accessibility of new knowledge.

Cotter (above) contends that economic analysis has long suggested that there are two distinct categories of cases in which the fair use defence, which permits the unauthorized reproduction and other use of copyrighted materials, should apply. First, fair use should apply when the transaction costs of negotiating with the copyright owner for permission to use exceed the private value of the use to the would-be user. Second, fair use should apply when the individual use is thought to generate some positive externality—such that the net social value of the use exceeds the value to the copyright owner of preventing the use—which in turn may exceed the value of the use to the individual user. Some parts of this section are condensed from the Purdue University USA policy on infringement, retrieved October 28, 2010 from <<http://www.thepress.purdue.edu>>. From the above it can now be seen how such a seemingly small “crime” expensive it can prove to become. From this it can also be argued that plagiarism, as stated elsewhere in this paper, is a whole conglomerate of violations into one, for example, theft, fraud, unjustified enrichment, and so forth, but what about the relief itself? Injunctive relief: this is simply that very kind of relief or exemption from penalty accorded by the law to the secondary user brought by the provision of SA Copyright Act (Act 125 of 1992). It extended to accommodate the use of computers and reads as follows: The copyright in a computer program shall not be infringed by a person who is in lawful possession of that computer program, or an authorized copy thereof, if he

- makes copies thereof to the extent reasonably necessary for back-up purposes;
- such a copy so made is intended exclusively for personal or private purposes; and
- such a copy is destroyed when the possession of the computer program in question, or authorized copy thereof, ceases to be lawful (Ginsburg, 2000).

Section 2 of the Act, literally reads as follows:

A literary work shall not be eligible for copyright unless-

- sufficient effort or skill has been expended on making the work to give it a new and original character; and
- the work has been written down, recorded or otherwise reduced to material form.

While within the same breath, s 5 of the Act provides that copyright subsists in a work, which has been made by or under the direction of the State. Pursuant to Government Information Systems (GIS), the SA Government Printer has been designated as a juristic person in whom copyright vests for administrative purposes (Weeks, 2008). This right is absolute as it does not extend to official legislative text of administrative and legal nature, official translations of such texts, to speeches delivered in the course of judicial proceedings or to the news of the day that are mere items of press information (Loader, 1997). It would then appear from the facts stated above; that there is that element of conflict pronounced in this research study in this regard as fair-use exemption (ss 13-19 of Act 125 of 1992; Copeling, 1978). This brings us to the use that looks fair.

## Is any Use that Seems Fair a Fair-Use?

In the law, the term fair-use has a specific meaning that only partly overlaps the plain English meaning of the words. While judges have much leeway in deciding how to apply fair-use guidelines, not every use that is commonly considered 'fair' counts as fair-use under the law. Fair-use interpretations, once made, are static forever. The same act or conduct done by different means or for a different purpose can gain or lose fair-use status (Lehobye, 2010a; 2010b). Fair dealing itself is described in section 12(1) of the Act, whereas sections 13 to 19 explain various exceptions to copyright. Section 20 deals with the author's moral rights, which, if infringed, may also impact on a fair dealing ruling. Moral convictions should be viewed to be the backbone to this paper mentioned elsewhere in this research study as moral ethics (Ackermann & Britz, 2006; Masango, 2007). According to s 12 of the SA Act, copyright shall not be infringed by any fair dealing with a literary work for

- the purposes of research or private study by, or the personal or private use of, the person using the work;
- the purposes of criticism or review of that work or of another work; or
- the purpose of reporting current events in a newspaper, magazine or similar periodical (s 12 of Act 125 of 1992).

In the United States, the DMCA 98 of 1978 has not been anything new in this paper in as far as the legal principles relating to cyberlaw of copyrights are concerned. The point here is that the DMCA and Digital Agenda operate on the same footing. The same is no exception to the Australian Digital Agenda (Lahore & Rothnie, supra). In New Zealand, fair dealing includes some copying for private study, research, criticism, review, and news reporting. Sections 42 and 43 of the *Copyright Act* of 1994 (the 1994 Act) set out the types of copying that qualify. The criteria are perhaps most similar to those applying in the UK, although commercial research can still count as fair dealing in New Zealand. In deciding whether the use is a fair dealing, the following factors will be considered:

- purpose and character of the dealing, including whether such dealing is of a commercial nature or is for non-profit educational purposes;
- nature of the work or adaptation;
- amount copied, relative to the whole work;
- effect of the dealing upon the potential market for the work, and effect upon its value; and
- the possibility of obtaining the work or adaptation within a reasonable time at an ordinary commercial price.

In other cases, a fair dealing for the purpose of criticism or review; for the purpose of reporting of news; for the purpose of judicial proceedings or professional advice would not constitute an infringement. In the case of criticism or review and the reporting of news, a sufficient acknowledgment of the work is required. The reporting of the news could be by any means of communication to the public. It is not an infringement if a person makes a copy from an original copy of a computer program which he or she owns for the purpose of using that duplicate copy as a back-up. Retrieved October 28, 2010 from <[http://www.experiencefestival.com/a/Fair\\_dealing\\_Fair\\_dealing\\_in\\_Singapore/id/5038873](http://www.experiencefestival.com/a/Fair_dealing_Fair_dealing_in_Singapore/id/5038873)>. The Canadian concept of fair dealing is similar to that in the UK and Australia. The fair dealing clauses of the *Canadian Copyright Act* Act R.S., 1985, c. C-42 allow users to engage in certain activities relating to research, private study, criticism, review, or news reporting.

In the 1980s, the European Community (EU) started to regard copyright as an element in the creation of a single market. Since 1991 the EU has passed a number of directives on copyright, designed to harmonize

copyright laws in member states in certain key areas focused by this dissertation, namely computer programs, databases and the internet (Mick, 2008). In these areas of IS research the directives aimed to reduce obstacles to the free movement of goods and services within the European Union, such as for example in rental rights, satellite broadcasting, copyright duration and resale rights. Key directives include the 1993 Copyright Duration Directive, the 2001 InfoSoc Directive, also known as Copyright Directive, and the 2004 Directive on the enforcement of intellectual property rights. After all these establishments, the criteria for evaluating fair-use are hereunder examined.

## Copyrights Duration and Public Domain

On copyrights duration, the general rule says copyrights, like any other rights, do not last indefinitely. They must come to an end at one time or another. The aim here is to establish how long copyrights subsist. S 3(2) (a) of the SA Act provides that ownership of literary work, vests in the author of original works. Under current law, the length of protection offered by copyright is the *life* of the author plus *fifty years*. Copyright in computer programs, subsists for a period of 50 years from the end of the year in which the work was made available to the public with the consent of the owner of the copyright, or in which it was first published. In some countries, for example, the United States and the United Kingdom, copyrights expire at the end of the calendar year in question. International treaties establish minimum terms for copyrights, but individual countries may enforce longer terms than those in terms of the Sacred Text Technologies (STT) and the DMCA 98 of 1978. When copyrights terminate, they automatically become a public property. This is what is legally termed *res nullius* (property belonging to no one) or colloquially, the work falls in public domain.

On public domain, the phrase ‘fall in the public domain’ can be traced to mid 19<sup>th</sup> century to indicate the end of copyright term (Sprigman, 2002). Copyright term is the length of time copyright subsists in a work before it passes into the public domain. The term *public domain* did not appear in early copyright law which was first established in Britain with the Statute of Anne 1709 (Rimmer, 2004). Though the concept did exist and 18<sup>th</sup> Century British and French jurists used terms such as *publici juris* and *propriété publique* respectively to describe works that were not covered by copyright law. Copyright law was created by statute, namely the Act and all works created and published before copyright law was first established are in the public domain. (ibid) It is not always true that the lack of copyright notice (©) means the work is public domain. This brings us to the end of the section on hypothetical resolutions. This section resolved that any amount of original copyright protected works in its electronic format should be properly attributed. The next section provides possible solutions and recommendations.

## CONCLUSION

The lack of proper or adequate acknowledgement would normally create problems as the secondary users would now be pretending to be the original author, something which amounts to theft or fraud, when using digital copyright protected works of other authors. This paper focused essentially on intellectual property protectionism; information integration for the benefit of the improvement of knowledge management as a function of every business entity within the e-commerce operational environment based on e-legislation and has to this end pointed out the importance for the above discussions on copyrights, fair-use and plagiarism and has been narrowed and contextualized within the gist of this paper topic. The above discussions are regarded as pervasive dynamic knowledge management tools. This is so in order to benefit practitioners including academics, as an innovative source and reference for developing strategies, policies, teachings and research in service sciences.

But then finally, the problem currently facing management at present is that the consumer pays by all sorts of hidden levies by the government of making copies and all sorts of digital storage systems. The point here is whether copyright is still worth protecting. It is always, as if it is an agreed principle, about the protection of it by law. But it also strangles the fundamental principles of privacy, freedom of information, free expression and innovation. Although this would seem to enhance executive management perceptions on IP protectionism within a South African research oriented perspective, would the protection of copyrights worth this price anyway?

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# MAPPING CREATIVE SPACES: ON VALUE CREATION, INNOVATIVITY, AND KNOWLEDGE

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## ABSTRACT

*We now know that some cities and their districts are considered more creative than others and scholars have been theorizing extensively on creativity from the perspective of a human individual and recently from the perspective of cities as creative spaces. What is missing, however, are studies dealing simultaneously with the individual and the space. With this conceptual paper we wish to bridge this gap by presenting how these levels can be studied through cartographic means. We illustrate our conceptual contribution with data and knowledge collected from Carlsberg Byen, a creative space in Copenhagen, Denmark.*

## INTRODUCTION

Global hotspots are places and spaces where individuals and companies create and boost their creativity, and create knowledge and value. Silicon Valley, for example, has been pioneering technological developments, and Tokyo's Shibuya district has become synonymous for its particular style of top-notch fashion. In this paper, we make an attempt to model these hotspots as ecosystems that are spaces for birthing and breeding information, knowledge, wealth, happiness, spaces where these go through their particular life cycles, and places where these are also exploited (Cohendet, Grandadam, & Simon 2010; Nobuoka 2010; Nonaka, Toyama, & Hirata 2008; Florida 2002; Nonaka & Takeuchi 1995).

On the one hand, we now know that some cities and their districts are considered more creative than others (Cohendet et al. 2010; Nobuoka 2010; Rosted, Josiassen, Ebdrup, & Lempel 2011). On the other hand, scholars have been extensively theorizing on creativity from the perspective of the human individual (Amabile & Mueller 2008; Paulus 2008; Drake 2003; Amabile 1988). As previous research has shown, creativity does not exist in a vacuum (Cohendet et al. 2010; Drake 2003), but it seems to stem from various interactions between people and spaces. Despite the acknowledged importance of the interplay between spaces and individuals, studies taking these both perspectives simultaneously into account are scarce. Hence, we need to study creativity and creative individuals together with systems in which they are embedded.

With this conceptual paper we wish to highlight and address two research problems. First, management literature has so far looked at ecosystems from the perspective of value that is created within and between companies, but we are arguing for a shift towards interrelated webs of value creation that surpass companies and include also consumers and non-paying and non-contributing users. Second, and building on the first point, ecosystems have been conceptualized as comprising only sets of companies and consumers, but here we are broadening the definition to creative ecosystems that consist of value creation outside the boundaries of what can be any traditional conceptualization be considered economic exchange. Thus, to explicitly formulate our research question we will be looking at:

*how does a visualization of a creative hot spot look like and how does it help us to see the interplay between individuals and spaces?*



# LITERATURE REVIEW ON CREATIVITY AND (CREATIVE) ECOSYSTEMS

## Literature on creativity

In a brief perspective to the history of creativity research, Amabile and Mueller (2008) illustrate how in the 1960s creativity researchers were not seen as ‘proper’ scholars, as studying something as soft as ‘creativity’ simply cannot lead to solid theorizing. Developments in the field, however, have proved this assumption wrong and today there are both theories of creativity (Amabile 1988 in Amabile & Mueller 2008) and outlets to publish research on creativity. Quite interestingly, as research on creativity has increased, so have the (creative) definitions of creativity, too. Some scholars have approached creativity as an ability to produce novel intangible or tangible solutions (Amabile & Mueller 2008: 35), while others have focused on personal traits (Baer 1993 in Paulus 2008). As such, creativity is a concept that in itself invites creativity: how do we pin down something that does not exist in a way tangible objects do? Taking a process approach to creativity, Amabile and Mueller (2008) understand creativity as an ability to come up with novel solutions to open-ended tasks, while Paulus (2008) takes a more psychological approach by drawing on various traits and skills individuals possess.

Research on creativity has taken remarkable leaps since 1960s and it will most likely continue to do so, as scholars from other disciplines are participating to the discussion. Although the field has been exposed to theories on creativity, we still have not paid enough attention to the question ‘where does creativity stem from’. In psychology we can uncover parts of the truth, but we as individuals do not exist in a vacuum. On the contrary, we are always embedded in a space (be it virtual or physical, [Belussi & Sedita 2008]) and at the same time we are engaged in making sense of the space (Weick 1995) and participating in crafting the space. With this assumption in mind, how could we study creativity in situ and how does it contribute to our understanding of creativity?

## Literature on creative ecosystems

Taking the discussion towards systems and spaces, what can be said about the current discussion on ecosystems and creative spaces? Especially in management literature, there are three prevailing paradigms in terms of ecosystem research: company perspective, finance rules, and one-dimensional analysis. First, ecosystem literature has focused almost solely on firms (Basole 2009; Moore 2006; Adner 2006), thus implicitly suggesting that firms exist in a vacuum where there are no other actors in the ecosystem. One exception comes from Nonaka and his colleagues, however, as they have addressed ecosystem more holistically in their discussion on knowledge creating firms (Nonaka et al. 2008; Nonaka & Toyama 2005). Taking a knowledge-creating approach, Nonaka and his associates have argued that knowledge – and thus value – are created in systems spanning organizations, governments, and universities.

Second, with finance rules we mean that value creation in ecosystems has been looked at only from the perspectives that have inherently included considerations of economic exchange. Or in other words, non-economic values such as happiness, creativity, or knowledge have been left out from the picture. The apparent challenge we are facing with non-financial values is a tricky one, as they require transparent and well-argued argumentation.

For many scholars, following the definition of creative industries set by the UK government (DCMS 2001) has almost become the easy way out. Adopting this path, however, is not unproblematic, as some definitions of creative industries are more applicable than others in certain contexts (Pratt 1997 in Drake 2003). What makes the DCMS definition of creative industries problematic is the fact that it is static and somewhat political in its inclusion of industries. The list currently comprises twelve creative sectors ranging from advertising to radio and television (DCMS 2001), but what is notable with this classification is the notion that everything else excluded from the list is implicitly recognized as *uncreative*. Given that we are living in post-modern information or knowledge economy (Ainamo & Pantzar 2000), it seems dubious to exclude so many creative activities from the picture. Taking aesthetic attributes as the point of departure is not unproblematic, but

we see it to be a step towards the right direction, as creativity has not been locked to any certain industries. In fact, the definition laid out by DCMS (2001) seems to echo a certain political agenda that originally was targeted to legitimize cultural industry's relevance for the society at large (Garnham 2005; Hesmondhalgh & Pratt 2005). In line with Pratt (1997) and Drake (2003), we take a more nuanced approach to creative industries than the one taken in earlier studies and look at creative activities in various (eco-)systems and spaces. This allows us to investigate activities taking place in industries that are excluded from the DCMS list, as our data also supports this claim.

To synthesize, in our reading of studies dealing with situated creativity (e.g. Cohendet et al. 2010; Drake 2003) it seems that they take a somewhat painless approach to how spaces spur creativity – the problem here, however, is that scholars have not described tensions between different spaces and individuals, thus implicitly suggesting that if certain preconditions are met, creativity will follow. Creative cluster or system cannot be confined to a single space – it is messy with people being connected to other people within *and* outside the same context, and physical spaces possessing agency like individuals (Latour 2005). Building on this assumption, we propose that a way to understand and theorize on situated creativity results from interfaces between individuals, structures, and physical objects that are “breached” (Nonaka & Konno 1998; Cohendet et al. 2010); that is, interfaces that are brought together and mixed or mashed up. Generally, interfaces operate on a dimension such as physical, visual, mental, structural, or institutional dimension. When the system architecture behind such an interface is seriously shifted, new interfaces may function only when it is created on multiple dimensions at once, so that what results is new knowledge, creativity, and innovations (Nonaka & Konno 1998; Nonaka et al. 2008; Drake 2003).

## RESEARCH CONTEXT AND METHODOLOGY

Arguments presented in this paper are mainly based on the empirical data collected from Carlsberg Byen in Copenhagen, Denmark, that used to be a brewing district till 2008, after which it was decided to turn into a district that in the next 20-25 years would house residences, commercial spaces, and public institutions such as schools, and kindergartens. Currently the area houses some thirty companies from diverse industries and the properties are still owned by the Carlsberg Group – the company that had been brewing beer in the same location for about 150 years. Since 2008, after the brewing operations had finished, the area – known as Carlsberg Byen (Carlsberg Town) – started to attract mainly creative companies (such as architects, artists, event managers, dancers, and so forth) but today there are also cafés, a grocery store, and a printing press to cater for various needs that the people located in the area might have. The picture below shows how the companies are located in the area.

**A map of Carlsberg Byen ([www.carlsbergbyen.dk](http://www.carlsbergbyen.dk))**

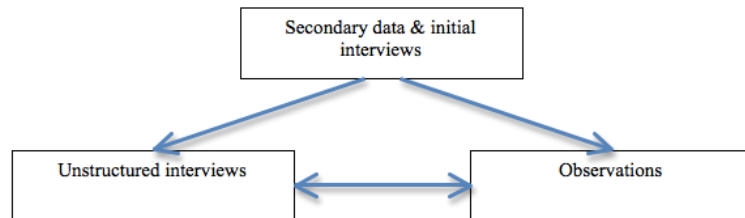


The buildings falling inside the yellow circle are the main locations (Dansehallerne, Ny Tap, Tap 1, and Tap 2) where the companies are located, while the blue circle signifies the location of Carlsberg offices (the

brewing company still has their headquarter in the area). Finally, the red circle shows where the grocery store is located.

As this experimental project was about mapping creativity and creative people, we have utilized interviews, secondary data (e.g. reports, newspaper articles, and social media), and observations to gather empirical material. This approach is well in line with the interpretivist paradigm (Moisander & Valtonen 2011) as we set out to study contextualized creativity. Or in other words, we do not see creativity as being ‘out there’, but instead meaning is attached to it during the interviews and observations. The following figure visualizes our approach to data collection.

#### Approach to data collection



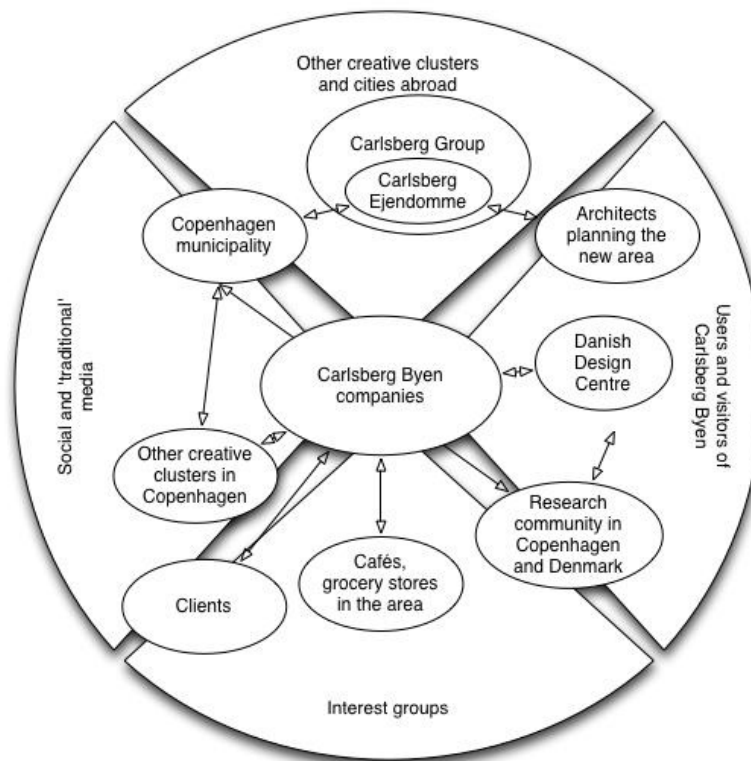
Initial understanding of the research context was acquired through initial interviews with respondents who were involved with Carlsberg Byen from the municipality and research side. Afterwards, the first author started familiarizing himself with the context by reading reports, newspaper articles, and material found from social media (e.g. Twitter, Facebook, and blogs) that dealt with Carlsberg Byen and creativity in Copenhagen in general. List of companies located in Carlsberg Byen, for example, was obtained from their web site and maps of the area were also acquired from there. Secondary data in this project could be seen as a canvas that we fill with primary data – interviews and observations. Second, the interviewees were contacted based on the snowballing technique that we believe is well in line with mapping connections and networks within the research context. We conducted three initial interviews (one from the municipality side, one representing the management of the facilities and buildings at Carlsberg Byen, and one working as a consultant at Carlsberg Byen) and from each of these interviewees the first author asked whom he should interview next. We kept track of the network unfolding through snowballing and it will be further elaborated in the analysis section of this paper. Third, the first author has been observing people in various places at Carlsberg Byen. The places have been public places within Carlsberg Byen, and they were selected based on the places the interviewees mentioned as either inspiring or important for them. For example, one of the cafés, Café Elefanten, located right in the middle of Carlsberg Byen, was often mentioned as a place where the respondents gathered, enjoyed their lunch, or had meetings with their clients or partners. Thus, after it was revealed that spaces are of importance for people working at Carlsberg Byen (Drake 2003), the first author visited these critical spaces to gain an understanding of what is going on in these spaces.

To conclude, the way we are utilizing cartographic and other methods in studying creative spaces and ecosystems is formulated as follows: mapping a creative space is done collectively by the researchers and the respondents situated in the space by crafting a collective ‘window’ to the space as it unfolds through different research methods that are utilized on the way.

## MAPPING CREATIVITY – BREACHED INTERFACES

Creativity takes place in a certain physical or digital environment and based on our findings tensions between individuals, structures, and physical objects serve as foundations for creativity. As noted earlier in this paper, creative clusters are complex systems as individuals interact with diverse people inside and outside the cluster, which is why visualizing the networks related to Carlsberg Byen serves as the starting point for presenting our findings.

#### Cartography of activities and connections (note: not drawn in scale) between spaces and people at Carlsberg Byen



The cartography presented above should not be taken as a pure representation of the reality, but instead as a visual representation of connections, people, and organizations related to creative activities at Carlsberg Byen. The four sectors beneath the map show how the Carlsberg Byen ecosystem is connected to broader groups and structures both nationally and globally through individuals and organizations. Based on this visualization of Carlsberg Byen, we have identified three types of interrelated breached interfaces: mental, structural, and physical.

Examples of a mental breached interface at Carlsberg Byen are the ones illustrated by some of the respondents when they mentioned one of the reasons they enjoyed working at Carlsberg Byen was because they were surrounded with different types of people, not only those representing the creative class. Having actual contact or collaboration with other people, however, was not seen as a prerequisite for a breached interface, as already being physically in the same space was seen sufficient from the inspiration's perspective. One of the respondents working in the event management sector, for example, mentioned that they enjoyed working in the same physical location with professional dancers as that was something they regarded as fresh and surprising. Moreover, another respondent referred to another area in Copenhagen, Kødbyen (or the Meat Town), that they felt suffocating because there were no other people but only those working in the creative industry, such as advertising or design. Thus, the sense of being physically located in the same area with different types of people were seen as a source for positive tensions, and thus mental interfaces could be breached as the individuals came into contact with difference.

Structural breached interfaces, on the other hand, were located between the people working in the area and those who set up rules and regulations regarding the area. The Copenhagen municipality, for example, has fire regulations governing the use of public spaces and this meant that the buildings in the Carlsberg Byen had to be modified in order to be in line with the municipality's fire regulations. As most of the buildings in the area were not meant to be used as office spaces, they had to be altered so that they would have adequate fire exits and spacious areas in order to prevent fire from spreading. Another example is related to spaces where people can park their bikes in the area. Instead of placing bicycle stands at random, the management at Carlsberg

Ejendomme, the company within the Carlsberg Group managing the area, decided to wait and see where people would place their bikes and then they would place the stands there.

The third type of breached interface, physical ones, tensions in the physical realm: old meets new, open meets closed, and defined meets undefined, for example, were identified during the interviews and observations. Temporal dimension is also closely connected to physical breached interfaces, as the area used to be closed from the public during the brewing days whereas now as a creative space it is open to public. The defined – undefined dichotomy, on the other hand, was evident in terms of the area containing places that could be either easily identified (e.g. a café, parking lot, and Carlsberg Museum) or that opened up room for interpretation (e.g. Ny Tap that houses creative companies that had transformed the building to fit their needs). Although the physical breached interfaces could be seen by anyone visiting or frequenting the area, they alone do not mean that everyone experiencing them could instantly feel a rush of creativity. Like all the other types of breached interfaces, physical breached interfaces per se do not guarantee creativity, but instead it is up to the individual experiencing them to harness their creative potential.

What we have argued so far is that creative cities and people are not physically bound to only one space, and we wish to take this argument even further by claiming that people working in the creative industry are also connected to people outside their own industry. Some of the respondents, for example, explicitly mentioned that they enjoyed working at Carlsberg Byen because there were many kinds of people working there, not only those who refer to themselves as ‘the creative class’ (Florida 2002). One of the main reasons behind this is that people could draw inspiration from each other’s work, thus acquiring novel perspectives to their own work. For example, an old building previously used for bottling beer, called Ny Tap, now houses artists, designers, and other people working within the creative industries. Not only did they closely interact with each other, but they were also in close contact with people who were not working within the creative industry.

One of the ways in which the breached interfaces manifested themselves in the context of Carlsberg Byen emerged from the interviewees as they mentioned one of the reasons they enjoyed working there was because it was not too defined. Or in other words, having an undefined space both mentally and physically enabled the individuals to explore and experiment within the environment, thus giving them the possibility to try out new things. By not defining Carlsberg Byen too explicitly (e.g. who can work there, what one can do there, and where activities are supposed to take place) the owners of the area have made it possible for the people working in the area to try out new things, such as establishing a race track for children or organizing various events (e.g. the Distortion music festival).

In our understanding of breached interfaces, the way our respondents talked about them seems to have common trajectories with exploration and exploitation (March 1991). Undefined spaces seem to make it possible to both explore new possibilities and exploit current capabilities in a new situation. For example, one of the respondents – a person working at Carlsberg Byen – mentioned it is important to be able to try out new things without knowing what might come out of it. In terms of exploitation, on the other hand, constructing a racetrack for children in an existing space illustrates how spaces can be utilized in novel fashion to target new users (in this case, the users changed from people working in the brewing industry to children and their parents).

## IMPLICATIONS

The challenge with creative spaces and clusters is that they are filled with paradoxes, both structural and mental. For example, is it possible for the municipality to create a space that is undefined yet manageable? Furthermore, given that money or financial growth are not the most important drivers for many working in the creative industry, is it possible to create growth in such environments? It seems that there is no quick solution to turn creativity into profit, although the importance of the creative industry for national growth is and will continue to be important in the future. Regardless, even if financial growth is not important for small creative companies, there are still possibilities that can be monetized through breached interfaces. One possibility especially at Carlsberg Byen would be to breach the interface between the Carlsberg Group and the numerous companies located in the area.

Despite the apparent difficulties in boosting creativity in creative clusters, and hence innovations and economic growth, we can still provide managers and policy makers with two relevant insights on what to do with creative industries and clusters. First, through policies and managerial actions, decision makers can explicitly aim at creating possibilities for breached interfaces. People working in different sectors or industries, for example in health sector and design, could be located in the same physical area and thus make it possible for people to inspire each other. Second, especially policy makers can ensure that physical city spaces are not too strictly defined. Building a start-up incubator only for IT companies, for instance, is too well defined and it does not allow room for breached interfaces. Thus, although managers and policy makers cannot force people to be creative and produce innovations, what they can do, however, is to provide and nurture spaces that allow creativity to occur.

## CONCLUSION

The two-fold purpose of our paper has been to challenge prevailing assumptions about ecosystems and creativity, and to introduce a methodological approach to studying creative ecosystems. We have argued that the methodological lens currently adopted to studying firm ecosystems has given a rather narrow picture of ecosystems, while at the same time discussion on situated creativity has been scarce. To bridge these two gaps, we have proposed to utilize cartography in mapping creative ecosystems in order to study value creation, knowledge flows, and critical spaces in them.

As we have shown during the course of this paper, creative industry does not function and organize in the same way as other industries (e.g. agriculture, construction, and biotechnology), which is why we need to adopt a different theoretical approach to studying them. Creative industries are messy, power relations vary, and the outputs – creative processes – are difficult to manage and predict, which leads us to look at creative companies and ecosystems as systems encompassing other actors than just companies. Furthermore, we cannot limit our analysis only to actors, as technologies and spaces are of equal importance. With this paper we hope to have contributed to discussions on creativity and creative industries by offering an alternative method and theoretical lens for studying situated creativity in creative clusters.

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# MEA SURING CAPABILITY IN EXPORT OF FINANCIAL SERVICES

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## ABSTRACT

*Objective of the current research is working out a set of instruments which enable to measure country's potential in export of financial services. In order to reach the set objective the author put forward some tasks of conceptual defining of capability in export of financial services, as well as constructing a model for its measuring. One mostly used methods of econometric analysis based on statistical reports and database of such world organizations as UNCTAD Services Trade Database, World Databank and World Competitiveness Report, etc. As a result of the given research a gravity model of financial services export was created. Financial industry of Latvia was used as an example of potential evaluation in export of financial services.*

## INTRODUCTION

During the whole period of the development of world trade in financial services a trend in growth of its volumes was preserved. Actually all countries of the world are engaged in financial service trade, to a greater or lesser extent (WTO, 2010), and some of them specialized in it as a main kind of foreign economic activity and achieved impressive results in it. Despite the fact that foreign trade in financial services can acquire a specific negative role under conditions of global crisis, export of financial services as a component part of international trade, in author's opinion, is less exposed to the risk of detriment to financial stability of country.

During the last 30 years export of financial services increased approximately 100 times (UNCTAD, 2010). For all this, its rate of growth outstrips the increment of world export of both all services and world export of goods. At the same time geographical distribution of financial services exporters undergoes considerable changes nowadays (Z/Yen Group, 2011). Progress in means of communication, information technologies, computerization of processes and new ways of delivery (Skinner, 2007), in conjunction with removal of national restrictions on transnational capital flows provide a possibility even for countries with a rather small population and territory with scarce natural resources to achieve a high living standard only by providing financial services to the world market.

Country's intentions to stimulate export and re-export of financial services must be substantiated by the availability of sufficient potential for that. It's just on its basis that one ought to form complete country's strategy of the development of financial services export. But the problem lies in the fact that it is difficult to define this potential. One needs a special set of instruments that indicates in what direction, in what volume and even what kind of financial services one ought to export. However, neither the widely used analysis of Porter's five forces, STEP-analysis, SWOT-analysis and their varieties (Ungson, Wong, 2008), nor risk analysis and the other ones (Koch, MacDonalds, 2009; Volkova, 2010) are able to settle the fundamental problem regarding the way of combining heterogeneous parameters in a general assessment of possibilities. "Export capability" is difficult to yield to definition. As a rule, in analytical articles one quotes one or another market potential but without any substantiation of the cited "concrete" figures. Most authors are proficient in avoiding concrete examples and calculations. Some of the few researchers who, in any case, are engaged in this passing matter linked it with market capacity. Market capacity gives the possibility of showing what volume of financial services calculated in currency can be realized at a certain price level, demand, etc. The methods of evaluation differ depending on



definition of the market level: the whole market, real or potential, admissible, target, main, territorial one, and so on. When one speaks about market capacity, at the same time one also includes in this concept 'sales volume', 'sales potential', 'market capacity', 'market potential' proper, as well as 'economic potential' (Hausmann, Hidalgo, et al., 2011). Some of the authors speak about possibilities of realization under invariable circumstances, while the others mention time changes, and the third ones ponder over some factors essential for realization of goods/ services and the necessity of coefficients taking into account the importance of one or another factor (Brandicourt, Schweltnus, Wörz, 2008; Melchior, Zheng, Johnsen, 2009).

In view of the fact that at the present moment none of the officially accessible researches provide the calculation of capability of country's financial industry in export of financial services in monetary value, consecutive targets of the current research proved to be:

- working out conception of capability's notion in export of financial services;
- creating a set of instruments for measuring capability of country's financial sphere in export of financial services;
- calculating potential for financial industry of a certain country (financial industry of Latvia was taken as an example in view of the intention of this country to develop export of financial services) (Latvian Ministry of Finance, 2012)).

For realization of the given tasks one mostly used methods of econometric analysis. Statistical information used for construction of set of instruments of potential's evaluation was limited by database of international organizations – The World Bank, UNCTAD.

## CONCEPT OF CAPABILITY IN EXPORT OF FINANCIAL SERVICES

Capability is something possible but not yet actual. In authors opinion, from economical point of view *potential means possibilities of sufficient resources under maximum improvement of the existing state of influencing factors*. In mathematical terms one can express *potential* in the following way (1):

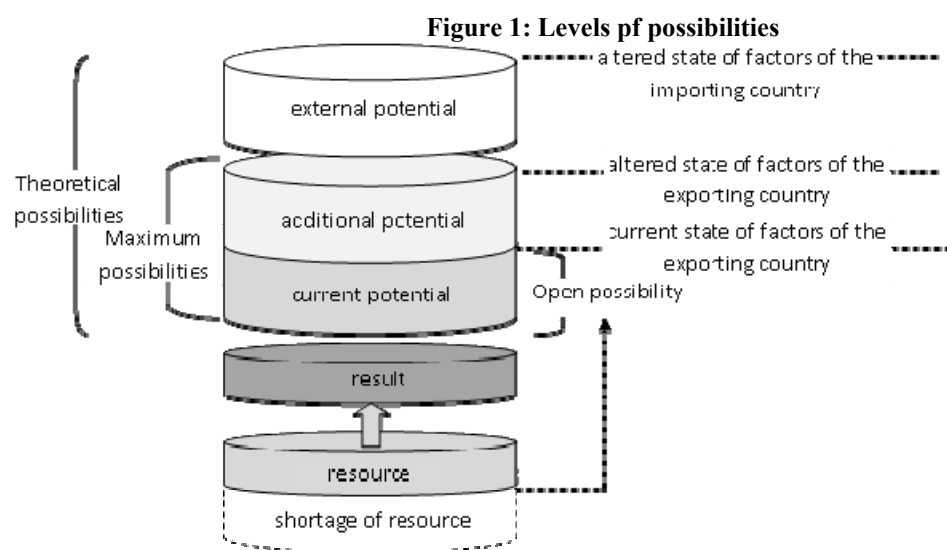
$$(1) \quad \text{Capability} = \text{theoretical possibility} - \text{actual result}$$

where *theoretical possibility* is a maximum result that can be achieved using sufficient resources under conditions of the most favorable state of *influencing factors*. *Influencing factors* (or *factors of influence*) are those environment factors whose impact limits *theoretical possibility*. In some cases one can exert an influence on the state of factors in order to improve their impact. Then one can speak about *maximum possibility*, i.e. maximum result that can be achieved using sufficient resources on condition of maximum improvement of actual state of *influencing factors yielding to influence* (fig. 1). In other cases influencing factors are actually beyond the zone of influence. *Maximum possibility* can be roughly forecasted. As regards to resources, they are undoubtedly important. One can imagine a situation when possibilities actually available under the existing state of influencing factors or opening as a result of its maximum improvement are not realized in full measure through insufficiency of resources. Incomplete use of even surplus resources can be regarded as insufficiency of resources.

In author's opinion, on the whole one can present *potential* in the form of *current potential* and *additional potential* (fig. 1). *Current potential* is characterized by the situation when under the existing state of influencing factors available resources don't allow to achieve the result equal to the *open possibility*. And vice versa, current potential is considered exhausted when with the help of the available resources and under actual state of influencing factors one achieves the result that is equal to the primarily assumed possibility or even exceeds it.

Potential can be higher than the *current* one in case there is a possibility to improve the state of influencing factors, so that they could stimulate the growth of possibilities. Thus, the actions favoring the improvement of influencing factors are leading to the increase of possibilities of using *additional potential*. Theoretically potential can be even higher if one can succeed in improving the state of influencing factors in other countries (or that may happen without our interference) and get the possibility of using *external potential*.

Potential is indicated schematically in figure 1.



Source: compiled by the author.

Potential in export of financial services is income in excess of the achieved result gained through sale of financial services to non-residents that might be received on account of sufficiency of resources under maximum improvement of the current state of those factors influencing export on which one can exert influence. In the frames of a individual financial institution one can relate to its resources qualified personnel, technical equipment of the organization, company's capital and other resources connected with rendering services. In the frames of international trade one can consider the whole financial industry of every country as its resource. In the context of financial services export the author tends to consider as resources that part of financial industry which includes resident parent financial companies due to the fact that subsidiary companies and branches of foreign banks represent individually their mode of international trade in financial services on the territory of host country (commercial presence). As a rule, they are not intended for further export of financial services to the markets of other countries. However, in the current work the author leaves out of account resources in order to calculate potential in export of financial services. The main consideration is given to calculation of additional capability of country's financial industry in export of financial services the importance of which for the country lies in:

- ascertaining the volume of its benefit for both country's national economy and resident financial institutions (owners and employees) in case of realization of potential;
- substantiated re-orientation of business strategy or a considerable concentration of the efforts of financial institutions towards rendering service to non-residents;
- well-considered decisions of government administrative bodies regarding stimulation of financial services export;
- choice of the most appropriate country's strategy for the development of financial services export.

As an example the author made calculation of capability of financial industry of Latvia. Separate aspects of potential were also analyzed in a number of other countries. In the given research one did not consider potential of a concrete financial service or an individual financial institution in export of financial services but the financial industry of Latvia as a whole because, in author's opinion, it is just at the level of a country there is a possibility of altering influencing factors which form the environment level that is favorable for the development of export of financial services.

## GRAVITY MODEL FOR MEASURING CAPABILITY IN EXPORT OF FINANCIAL SERVICES

For making research of *maximum possibilities* (fig. 1), the author went on using mathematical methods of econometric analysis. When choosing the model type the author decided in favor of *gravity model* as, in author's opinion, under conditions of the suggested conception it suits best for making calculations. Theoretical basis of working out *gravitation models* is founded by analogy with Newton's law of universal gravitation where the degree of gravitation between two objects is defined by their size and distance between them. Among all kinds of gravitation models of macroeconomic level the most popular is *gravity model of international trade* which, in its essence, is an adaptable regression model. The gravity model of international trade specifies trade as a positive function which attracts "masses" of two countries whereas the distance between them is regarded as a negative function that pushes them away. Defining total trade between countries "i" and "j" as  $TRADE_{ij}$ , the distance between both of them as  $DIST_{ij}$  and considering as gravitation mass the product of gross domestic products GDP of countries "i" and "j", then the classical gravity model of trade is as follows (Lewer, Van den Berg 2008) (2):

$$(2) \quad TRADE_{ij} = f[(GDP_i \cdot GDP_j) / DIST_{ij}].$$

Transformed into natural logs, the regression equation is commonly specified as (3):

$$(3) \quad trade_{ij} = a_0 + a_1(gdp_i \cdot gdp_j) + a_2(dist_{ij}) + u_{ij}.$$

Researches have a right to adapt the model for their purposes on their own including, for example, variables to control for demographic, geographic, economic and other conditions. Having studied peculiarities of adaptation of gravity models in economics (Lewer, Van den Berg, 2008; Krempel, Plumper, 2002; Kenneth, 2011), the author modified the classical gravity model of international trade to calculate country's additional potential in financial services export. Having taken obligatory elements of gravity model of international trade – distance and GDP of two countries, the author supplemented the given classical model by two of the formerly disclosed by her key factors – total business tax rate (as % of profit) and financial market sophistication (Lindemane 2011):

$$(4) \quad FSE_{ij} = a_0 + a_1(gdp_i \cdot gdp_j) + a_2(fms_i \cdot fms_j) + a_3(tax_i / tax_j) + a_4(dist_{ij}) + u_{ij}$$

$FSE_{ij}$  – volume of financial services export from the country i to the country j (UN Service Trade, 2008);

$gdp_i \cdot gdp_j$  – gravity factor that reflects product GDP of both countries. Besides the fact that GDP of every country is a classical gravity factor by itself there is a synergy effect of their interaction that is explained by the fact that the size of GDP can be also defined, among other factors, by international trade. The higher and more successful it is, correspondingly, the higher are capital flows between the countries one has to serve, and that (factor) increases export of financial services. That is why the author applied multiplication of countries' GDP and did not use GDP of every country as a separate factor.

$fms_i \cdot fms_j$  – financial market sophistication (World Economic Forum, 2011) of country i and country j is a key factor of gravitation. The product of factors of both countries was used due to the fact that in case financial market is developed in one country, then the participants of that market come to know well the particulars in financial services. This fact, in its turn, means that, when importing services, they will tend to accept services from more developed markets where one understands their demands. In that way one can expect the more considerable export/import of financial services between the countries with most sophisticated markets of financial services.

$tax_i / tax_j$  – difference between tax burden for business between countries i and j (The World Bank, 2011). The given factor is attractive as customers aspire to get from jurisdiction with high taxes to jurisdictions with lower taxes, and that factor is reflected in export of financial services. As this factor works with reverse traction, i.e. the higher the taxes the weaker attraction, it is calculated with reverse motion – from importer to exporter. The power of attraction is defined through division of total tax rate for business in importing country by analogous parameter in exporting country. Calculation of power of attraction for countries with privileged (low) taxation, "grey and black off-shores", is an exclusion. Specific character of these countries lies in re-export of capital. That is why these countries not only export but also import in large quantities financial services accompanying capital flows. Proceeding from such a specific character, the author considers it correct to apply

division so that the rate of the given off-shore is always in denominator, irrespective of the fact whether it is an exporter or importer of financial services regarding the partner country.

$dist_{ij}$  – distance between capitals of countries as usual places of most financial activity. The factor is repulsive. The author holds the opinion that the factor of distance, to a certain extent, will also work in modern conditions of transition to remote service. It can be explained by 1) lack of convergence of working hours due to difference in time zones, 2) customer's necessity to visit, at least rarely, the residence country of financial services supplier for identifying oneself or settling some urgent problems, 3) a number of other minor reasons (mutual understanding, language, peculiarities of mentality).

Gravity model is intended for calculation of additional capability of a certain direction of export. For defining additional capability of country on the whole it is necessary to summarize additional potentials of all its directions in export of financial services.

When creating gravity model for export of financial services there exist a number of restrictions:

- 1) for dependable parameter  $FSE_{ij}$  one used statistics presented by *United Nations Service Trade Statistics Database*, section 6 «Financial services» (UN Service Trade, 2008) where one indicated not only total export and import of financial services of countries but, in many cases, they are subdivided into partner countries. However, in subdivided into countries statistics the volume of export from one country to another often greatly differs from the volume of import of the second country from the first one. In these cases the author used in her calculations the biggest of the two volumes assuming that the smaller volume is a consequence of omission of some data when compiling statistics.
- 2) in the model one used statistics of Austria, Germany, Poland, USA, Russia, Denmark, Czech Republic, Netherlands, Luxemburg and Cyprus in all directions of their imports. The data of these ten countries were used due to establishing the fact that only they imported financial services from Latvia. In their turn, the data of Latvian export of financial services for concrete countries were inaccessible. Thus the data of Latvian import to each of these ten countries were used as indices of export from Latvia to each of these ten countries.
- 3) this model was created according to the data of 2008. The access to the data of subsequent years was restricted on the moment of carrying out the research.

The author created gravity models (by the type of linear regression) for each of the ten importers. In author's view, the models indicated rather similar parameters. On their basis the author created an integrated gravity model of financial services export of Latvia. The used for construction of the model data mass which includes definition of export flows from the whole world to the ten above mentioned importers made 475 combinations. To construct a more sensible gravity model on the basis of the regression model, the author used logarithm function (natural logarithm) (5):

$$(5) \quad \ln(y) = \ln(a) + \ln(b_1) + \ln(b_2) + u; \quad y = ax_1^{b_1} \cdot x_2^{b_2} + u; \quad b_1 = e^{\ln(b_1)}$$

by adapting it for the case under consideration in the form of (6):

$$(6) \quad \ln(FSE_{ij}) = \ln(a_0) + a_1 \ln(gdp_i \cdot gdp_j) + a_2 \ln(fms_i \cdot fms_j) + a_3 \ln(tax_i / tax_j) + a_4 \ln(dist_{ij}) + u_{ij}$$

After processing the data by program SPSS, gravity model of financial services export was received with the following parameters (see. tab. 1):

**Table 1: Parameters of gravity model of financial services export**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.636 <sup>a</sup>	.404	.399	2,317172

a. Predictors: (Constant), Dist (ij), FMS i \* FMS j, Tax i / Tax j, GDP i \* GDP j

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1713,895	4	428,474	79,801	,000 <sup>a</sup>
	Residual	2523,564	470	5,369		
	Total	4237,459	474			

a. Predictors: (Constant), Dist (ij), FMS i \* FMS j, Tax i / Tax j, GDP i \* GDP j

b. Dependent Variable: FSE (ij)

Coefficients <sup>a</sup>					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	-17,221	1,346		,000
	GDP i * GDP j	,708	,052	,587	,000
	Tax i / Tax j	2,003	,286	,289	,000
	FMS i * FMS j	3,768	,364	,371	,000
	Dist (ij)	-1,040	,106	-,380	,000

a. Dependent Variable: FSE (ij)

As it is seen from table 1, the level of significance of all factors *Sig.* does not exceed 10%, i.e. one cannot accept a zero hypothesis. Determination coefficient *R Square* is equal to 0,404, and that indicates the fact that the proportion of variance of dependent variable  $FSE_{ij}$  can be fully explained (more than 40%) by the influence of the chosen factors. Verification of the hypothesis as regards determination coefficient indicated its statistical significance. One should note that the power of influence of every key factor on dependable parameter is not equal, as it is indicated by coefficients *Beta*. The strongest influence is exerted by GDP of two countries. Further, with practically equal level of influence, follow “distance between capitals” and “financial market sophistication”, for all that the factor “distance between capitals” as a repulsive one has a negative meaning correspondingly. The list is completed by “difference in taxes” as the weakest of the factors. The formulated by the author regression logarithm model looks as the following formula (7):

$$(7) \ln(FSE_{ij}) = -17,221 + 0,708 \ln(gdp_i \cdot gdp_j) + 3,768 \ln(fms_i \cdot fms_j) + 2,003 \ln(tax_i / tax_j) - 1,04 \ln(dist_{ij}) + u$$

Inserting factor parameters into the given formula, the author calculated theoretically possible volume of financial services export for each of 475 directions. For visual proof of the result the author made use of the program for visualization of modeling results – *GEPHI* (<http://gephi.org>). Visualization of the data received with the help of the model on ten importers and all of their exporting partners is indicated in figure 2. In the given scheme countries are designated by spheres, their diameter depends on the amount of country's GDP. The ten chosen importing countries are marked in green, and the red ones are the countries which are engaged in financial services export to these countries. The flow of financial services export is marked by arrows, and the width of an arrow corresponds to the volume of the delivered financial services calculated on the basis of the model. The wider the arrow the larger export of financial services is. The location of the countries in space approximately corresponds to their situation on geographical map of the world.

## CAPABILITY IN EXPORT OF FINANCIAL SERVICES

The indicated in fig.2 flows of financial services export are not yet additional potential as such but calculated export of financial services based on four main factors of the model which make up 40,4% of all factors creating actual result. Additional potential of the country under study is calculated as the difference between maximum possibilities and calculated export of financial services in the direction of a certain country. For getting maximum opportunities one ought to improve at most the state of those key factors (on not all of which there is a possibility to exert an influence). In the first place, there is no opportunity to alter the condition factors of the importing country. In the second place, from the factors of the exporting country it is most difficult to exert an influence on the distance due to its physical essence, the existence of time zones, language and mental differences. Probably, only the development of information and communication technologies and the transition to serving in the regime 7x24x365 are in a position to smooth over these barriers. Another classical factor, GDP, is a mirror of economics whose change is also a rather slow process. It is easier to change the tax burden on business, but only in the frames of EU, where Latvia is a member country in the given case, whereas to change it radically for a tax-free harbor seems hardly probable.

The only chance to gain *additional potential* proves to be maximum improvement of the factor of *financial market sophistication*. To define maximum level of its improvement, the author took as a reference-point the best condition of this factor achieved in the period under research. Switzerland had the best parameter – 6,8 points on a 7-point scale (World Economic Forum, 2011). Thus, instead of Latvia (4.5 points), this

**Figure 2: Directions of financial services export**



Financial services

Compiled by the author.

## CONCLUSIONS

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between a maximum possible income and actual result of export. It can be roughly prognosticated by orientating oneself on the state of factors of the leader of financial services export. *Current potential* is characterized by the situation when due to insufficiency or non-activation of resources one failed to obtain possible income under actual condition of influencing factors. *Influencing factors* are environment factors the influence of which restricts maximum possibility of financial services export. Maximum improvement of the state of influencing factors provides *additional potential*. Calculated with the help of modified gravity model that is adapted for the needs of financial services export, *additional potential* of Latvia in export of financial services in the direction of Austria, Germany, Poland, USA, Russia, Denmark, Czech Republic, Netherlands, Luxemburg and Cyprus, under improvement of the factor of *financial market development* to the level of Switzerland, makes up 474% of the calculated result for the period under research.

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# INVESTIGATING CONSUMERS' PURCHASE BEHAVIOUR OF ORGANIC FOOD IN AUSTRALIA

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## ABSTRACT

*This research aims to investigate the dimensions important to Australian consumers during their pre-purchase evaluation of organic foods. Data was collected from a representative sample of Australian consumers using an on-line survey. Factor analysis of the data revealed that Australian consumers of organic foods perceive the following six dimensions to be important: quality and convenience, price, local production, chemical free, imported food and certification. Additionally, a cluster analysis categorised consumers into three distinct groups, which we named pro-organics, reluctant organics and organic sceptics. Beneficiaries of this research include various stakeholders in Australia and globally, such as consumers, vendors and local and international government agencies.*

## INTRODUCTION

Over the last decade, there has been a significant increase in interest in organic foods. New food technology, growing health awareness, busier lifestyle and global environmental issues have triggered an awareness of organic foods in many developed countries. Consumers have started to question what they eat and the food production processes, as well as question whether food is safe. This research aims to investigate the determinants of consumer buyer behaviour relating to the procurement of organic food products in Australia. The term 'organic food' has many different connotations and interpretations, and is sometimes used interchangeably with the term 'green' food. This has caused confusion in the minds of consumers worldwide. Some of the reasons consumers have indicated for the non-purchase of organic food include their perceptions of it being expensive (McEachern & Willock 2004), limited in availability and choices, unsatisfactory in appearance, misleading labelling and certification and lack of perceived value (Essoussi & Zahaf 2008). It is debatable whether organic food production is an opportunity or just a hype. Many developed countries have set stringent standards to ensure quality of their organic food products.

There are several reasons why consumers are motivated to purchase organic food products. These include their perceptions that organic foods are more nutritious and healthier, safer, environmentally friendly, contain few chemical residues and they taste better than conventional food (Tsakiridou et al. 2008). As a result, consumers are willing to pay a premium price for them (Krystallis & Chrysosoidis 2005). We have evaluated relevant extant research studies, which have been well developed in North America and Western Europe. These studies related to consumer attitudes and behaviour toward organic food have provided evidence that consumers consider health concern and environment issues as the most important factors that influence their purchasing decision-making process. Only a handful of studies have been conducted in Australia, which investigate the perceptions of consumer attitudes toward organic food.

## Product

Consumers consider sensory characteristics to be one of the key factors in the choice of organic food (Magnusson et al. 2003). For most, organic food purchase motivations arise largely from product-specific characteristics directly benefiting the consumers (Wier & Calverley 2002). Obviously, taste is one of the important elements which influence consumers' choice of organic food, followed by appearance and price

(Stobbelaar et al. 2007). However, non-sensory attributes such as absence of food additives and residuals and nutritional value (Torjusen et al. 2001) are increasingly important.

Steptoe, Pollard, and Wardle (1995) found that sensory appeal, price and convenience are mechanisms in the selection of food at the individual level. The statements related to appearance, smell and taste contribute towards sensory appeal. Food attributes such as price, taste and nutrition are referred to as measures of product involved factors when making food purchasing decision. Accordingly, different consumers can be associated with different food attributes (Drichoutis, Lazaridis & Nayga Jr 2007; Steptoe, Pollard & Wardle 1995). A Greek study reveals that organic food purchase is motivated by consumers' sensory appeal and concern for health (Arvanitoyannis, Krystallis & Kapirti 2003), and a New Zealand study (Wong 2004) discloses that participants considered the taste of organic food to be better and to possess superior flavour as compared to conventional food. However, organic food is not always aesthetically appealing due to its shorter shelf life. Its physical appearance is sometimes considered as a hindering element to its consumption.

## **Regulatory**

A US study (Bellows et al. 2008) suggests that the use of organic labelling information normally increases the organic label familiarity. A certification stamp or logo provides a guarantee to the consumer that the product has been produced organically. Some food industry stakeholders argue that labels are often confusing and open to misinterpretation by the public. However, if a product is certified as organic by an accredited organisation and its logo is displayed on the label, it is a guarantee to consumers that it is the closest thing to what nature intended. Lea and Worsley's (2005) Australian study concedes that about half of the participants did not find organic food labelling as being trustworthy. Other study (Hughner et al. 2007) further contends that there is lack of trust in the organic product certification process. As a credible product, organic food quality can influence positive attitudes on consumers who have greater knowledge and experience with the product. A European study highlighted the lack of organic product knowledge and confusion among European Union consumers. Many were unsure, even dubious, about the concept of organically farmed salmon and were distrustful of the regulatory process (Aarset et al. 2004). Labelling seems to be one of the important issues in relation to the purchase of organic food. There are also many organic certification bodies in the market, and it is debatable as to which certification stamps or logos are genuine and can be trusted by consumers.

## **Lifestyle**

A study conducted in the Netherlands suggests that the consumption of organic food is part of lifestyle of people who may have related interests regarding nature, society and the environment. (Schifferstein & Oude Ophuis 1998, p. 119). Health and environmental consciousness which are de facto lifestyle expressions have become some of the motivations for Dutch consumers to buy organic food. A US study based in Boston reinforces the findings that organic food consumers (compared to purchasers of conventional foods) saw this as a lifestyle choice (Williams & Hammitt 2000). Yang (2004) categorises consumers into three distinct lifestyle groups on the basis of their lifestyle characteristics: experiencers, traditionalists and self-indulgents. Experiencers seek variety and novelty, and prefer trendy and fashionable products. Typical traditionalist shoppers conform to norms and are less experimental. Self-indulgents are risk takers and self-centred individuals. The LOHAS (Lifestyle of Health and Sustainability) lifestyle which evolved in the US is seen as a trend for some consumers to follow.

## **Ethnocentrism**

Some consumers may be willing to purchase organic food to support local producers, hence they tend to prefer shipments from locally grown organic produce compared to products shipped from other areas. Locally produced goods involve short food miles, implying lower fuel costs. This concept motivates consumers who are concerned for the environment. Williams and Hammitt (2000) found that organic food buyers were twice as likely as conventional buyers to rate locally grown produce as an important factor influencing their purchase decision. Studies demonstrate that country of origin is an important issue for organic food consumers. Norwegian consumers, for example, trust locally produced organic food as being safer than imported cheaper organic food. This then influences purchasing locally produced organic food and supporting local businesses (Torjusen et al.

2001). Greek consumers' willingness to buy organic products is affected by their attitudes towards country of origin, and this also reflects the perceived organic food quality attributes. Greek consumers, though they might be aware of organic food, will still remain 'traditional' in terms of their cuisine and restaurant selection. Country of origin of a food product seems a powerful component of the promotional mix, since Greek organic buyers exhibit a very strong ethnocentric tendency (Fotopoulos & Krystallis 2002).

## RESEARCH OBJECTIVES

From the consumers' perspective there are three stages associated with the purchase of goods and services, i.e. pre-purchase, purchase and post-purchase (Blackwell, Miniard & Engel 2001). The pre-purchase evaluation of organic products is dependent on the following four main elements which influence consumers' attitudes and motivations:

- a) Product – appearance, sensory appeal, perceived benefits and price
- b) Regulatory – government regulations and certification
- c) Lifestyle – self indulgent and variety seeking
- d) Ethnocentrism – domestic versus imported products

This research aims to investigate dimensions that are important to consumers in Australia during their pre-purchase evaluation of organic food. More specifically, the research objectives are to:

- i) Evaluate attributes important to consumers in their decision making for the purchase of organic food;
- ii) Determine the dimensions which are important to consumers of organic food;
- iii) Perform a broad segmentation analysis of Australian consumers of organic food;
- iv) Provide managerial implications for the organic food industry and government agencies in Australia.

## METHODOLOGY

A thorough literature review in relation to consumer buyer behaviour of organic products was undertaken, following which a valid and reliable survey instrument was developed. This instrument comprised a section on demographic and psychographic profile of the respondents. Elements of consumer buyer behaviour including price, perceived benefits, lifestyle, country of origin, certification and product-related attributes were included in the 35 items survey as shown in the *Appendix*. Respondents were required to rate their perceptions of each item using a likert-type scale which was anchored at 1 for "strongly disagree" to 5 for "strongly agree". This instrument was administered on-line using the services of I-View, which is Australia's leading market and social research data collection agency. I-View uploaded this survey on its custom-made on-line platform. The survey was relayed to I-View's consumer panels in Australia using a highly experienced team, focused on the proper conduct of research. I-View has run many of Australia's largest social research projects over the past ten years, as well as major social research studies in the United Kingdom. I-View's reputation for reliability, quality and exemplary client service makes them the partner of choice for government agencies, academia and researchers. I-View have approximately 104,000 participants Australia-wide. This is certainly a representative sample size of the Australian consumer population of approximately 23 million. The entire data collection took approximately one week and yielded 839 usable responses. Table 1 depicts the demographic profile of the respondents.

Demographics	Segments and percentages
Gender	male 54%, female 46%
Age Group	18-24 yrs= 5.5%, 25-44 yrs = 21.2%, 45-64 yrs = 38.9% and 65+ yrs = 34.4%
Educational Level	non-school = 1.9%, year 7 to 11 = 22.9%, Year 12 = 19.7%, TAFE = 29.8%, bach.degree = 17.2%, PG = 8.6%
Work status	student = 2.9%, employed FT = 24%, employed PT = 11.8% employed casual = 5.6%, own business = 6.8%, unemployed = 7.3%, retired = 41.7%

Marital status	single = 18.4%, married = 56.1%, de-facto = 8.8%, widowed = 16.3%, refused = 0.4%
Income Level	Less than \$ 20,000 = 22.4%, between \$ 20,000 and 50,000 = 37.7%, between \$ 50,000 and 80,000 = 15.4%, above \$ 80,000 = 11% , refused = 13.6%
Household type	living by oneself = 18.4%, with partner = 54.5%, with parents = 5%, with young children = 11%, share household = 7.6%, other = 3.6%

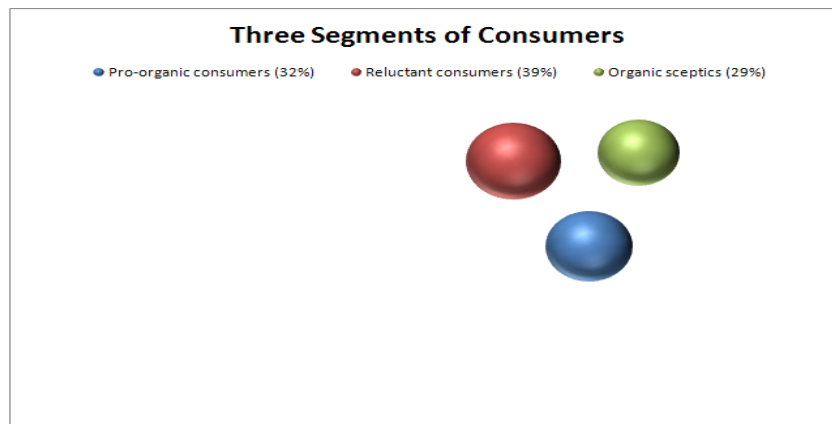
**Table 1: Demographic profile of respondents**

## RESULTS

Firstly, we calculated the mean ratings of the 35 items of the survey instrument. These ratings revealed consumers' perceptions to the attributes of Health, Price, Sensory appeal, Convenience, Environment protection, Regional products, Fair trade, Certification and Imported organic products. We then evaluated the usage pattern of the consumers which answered questions relating to the what, why, where and when they purchase organic food products.

A factor analysis of the items of the survey instrument was undertaken, as a result of which 6 factors were generated. Essentially, 20 items of the original 35 items were retained when using the Principal component method with Varimax rotation. These factors were named Quality, Price, Local production, Chemical free, Imported products and Certification and the factor loadings for the 20 items is shown in Table 2.

Next a Cluster Analysis (K-means) was used to segment respondents into distinct, but homogeneous groups, based on their perception ratings of the 6 factors. The 3 segments obtained were named: Pro-organic, Reluctant Organics and Organic Sceptics and these segments are shown in Figure 1.



**Figure 1: Cluster Analysis**

### Profile of the 3 segments:

#### 1. Pro-organic consumers (32%)

Consumers in this segment strongly believe that organic food is good for their health. They hold positive attitudes toward the nutritional value of organic food and also believe that they do not contain preservatives and chemicals. Hence according to them, organic food is ideal for children.

#### 2. Reluctant consumers (39%)

Reluctant consumers have somewhat moderate attitudes towards health and nutritional values of organic food. Unlike pro-organic consumers, reluctant consumers and organic sceptics (segment 3) are price sensitive when it comes to their acceptance and purchase of organic food. Reluctant consumers believe that organic food is too expensive and they cannot afford to pay more. However, as compared to the organic-sceptics, they believe that people should buy organic food (which cost more than conventional foods).

### 3. Organic Sceptics (29%)

Organic sceptics have somewhat negative attitudes towards organic foods. Compared with other consumer segments, organic sceptics have the lowest mean ratings with regards to health attributes of organic foods. Similar to reluctant consumers (segment 2), organic sceptics believe that organic food is too expensive and they cannot afford to pay more. Compared to other consumer segments, organic sceptics do not believe that organic food tastes better and they feel put off by their unappealing looks.

1. Quality and Convenience	Loading
Organic food is healthier than conventionally grown food because it is grown without the use of harmful pesticides and other chemicals	0.710
Chemicals used in conventional farming are dangerous to the consumer	0.658
Organic foods taste better than conventionally grown foods	0.664
I would buy more organic food if it was easily found in the food outlets near my home/work	0.627
Organically grown foods are better for the environment than conventionally grown foods	0.726
More government support should be given to organic farming	0.791
Buying certified organic food is as important as buying fair trade labelled food	0.688
2. Price	
Organic foods are not too expensive	0.823
I can afford to pay more for organic foods	0.826
Organic food prices are fair and reflect the real cost of food production	0.647
3. Local production	
It is important to me to support local farmers when making purchases	0.719
I prefer to buy fresh food only when it is in season	0.602
I would buy imported organic foods if they are cheaper than their Australian counterparts	0.635
4. Chemical free	
Organic foods do not contain preservatives	0.756
Organic food is not processed with any harmful chemicals	0.725
5. Imported food	
My choice of imported organic foods would depend on the countries where they are produced	0.813
My choice of imported food would depend on their certification logo	0.845
6. Certification	
I do believe that all foods claiming to be “organic” are really organic	0.640
Organic certification programs have credibility	0.776
Organic certification labels are not confusing	0.787

**Table 2: Results of the Factors Analysis**

## DISCUSSION AND MANAGERIAL IMPLICATIONS

Based on the findings of this research study, we recommend that the various stakeholders target the three identifiable categories of pro-organics, reluctant consumers and organic-sceptics as follows:

1. Pro-organic consumers possess positive attitudes toward nutrition and health values of organic foods. They do not mind paying higher prices for organic products. In order to maintain and enhance their high level of support, campaigns promoting the nutritional value and chemical free attributes of organic products should be used. To ensure increasing sales of organic food products their distribution or convenience factor is the key. In this respect strategies aimed at improving the overall supply chain network should be developed. The government and certification bodies have an important role to play in terms of improving the credibility and promoting organic labelling and logos.

2. Reluctant consumers have moderate perceptions with regards to health attributes of organic products. Integrated communication campaigns with regards to attitude changes are needed. The focus of integrated communication campaigns could be aimed at the nutritional and health benefits as well as the shorter food miles associated with regional products. The awareness level with regards to organic foods is reasonably high among reluctant consumers. However, two of the main hindrances are price and labelling of organic products. Here the government and certification bodies have key roles to play in terms of improving the credibility and promoting organic labelling and logos.

3. Organic Sceptics have somewhat negative attitudes toward organic food. Approximately one third of them have indicated that they never purchase organic products. The main hindrance tends to be their perception of relatively high prices. Integrated communication campaigns aimed at creating awareness and trial of organic food are paramount. Educational campaigns focusing on the health benefits versus economic costs may be desirable.

## CONCLUSION

The findings of this study revealed that the six dimensions important to Australian consumers of organic food are quality and convenience, price, local production, chemical free, imported food and certification. The representative sample has revealed several attributes that are important to consumers and it has categorised them into three major segments, i.e. pro-organics, reluctant consumers and organic-sceptics. Their buying and usage pattern has been identified as also their demographic profiles. Strategies have been proposed for stakeholders to consider, all of which would serve to retain existing consumers and acquire new consumers. The Australian Government agencies and the industry need to be aware of the necessity to regulate the organic food market. They also need to enhance the inspection and certification of organic food labelling as well as to ensure that the labelling and logos of organic food are a signal of actual quality. Campaigns need to be organised to raise their awareness in this respect. Also there is a need to publicise the overall quality process of organic food with regards to food safety. There certainly needs to be an increase in the availability of distribution channels of organic food.

Although organic food is perceived as being good for the environment, consumers may prefer to buy less travelled organic products from local rather than from distant sources shipped from overseas (Williams and Hammitt 2000; Bonti-Ankomah and Yiridoe 2006). This concept is related to food-miles which results in support for locally produced organic foods. Hence ethnocentric attitudes may develop through organic food consumers' desires to support local industry (Fotopoulos and Krystallis 2002). The results of this study revealed that ethnocentrism did not significantly influence consumers' pre-purchase evaluation of organic food.

Beneficiaries of this research study include various stakeholders in Australia and globally such as consumers, vendors both local and international and government agencies. Another major outcome of this study would certainly be the future design and development of initiatives aimed at enhancing the sustainability of the environment. Additionally, it would be beneficial to investigate changes in consumers' attitudes and their purchase intentions over time by conducting a longitudinal study.

## APPENDIX – SURVEY ITEMS

### Health

1. Organic food is healthier than conventionally grown food because it is grown without the use of harmful pesticides and other chemicals.
2. Organic foods have more vitamins and minerals than conventional foods.
3. Eating organic food is risky for one's health
4. Organic foods do not contain preservatives
5. Organic foods are ideal for children
6. Organic food is not processed with any harmful chemicals
7. Organic food helps to reduce the risk of diseases
8. Chemicals used in conventional farming are dangerous to the consumer

#### **Price**

9. Organic foods are too expensive
10. I cannot afford to pay more for organic foods
11. Organic food prices are fair and reflect the real cost of food production.
12. People should buy organic foods even though they cost more than conventional foods

#### **Sensory appeal, appearance etc.**

13. Organic foods taste better than conventionally grown foods
14. I am put off organic foods because they look unappealing

#### **Convenience**

15. I would buy more organic food if it was easily found in the food outlets near my home/work
16. Organic foods should be made available at most food stores

#### **Environment protection**

17. It is not important to me whether the produce was grown organically or conventionally
18. Organically grown foods are better for the environment than conventionally grown foods.
19. Organic farming decreases soil degradation.
20. More government support should be given to organic farming.

#### **Regional products**

21. It is important to me to support local farmers when making purchases
22. I prefer to buy fresh food only when it is in season.
23. I support the concept of shorter food-miles, i.e. food should be purchased from producers who are geographically nearer to the consumer.

#### **Fair Trade**

24. Buying certified organic food is as important as buying fair trade labelled food
25. I would be willing to pay a higher price to support small organic farmers.

#### **Certification**

26. I do not believe that all foods claiming to be "organic" are really organic
27. I look for the certified organic logo when purchasing organic food
28. Organic certification programs lack credibility
29. Organic certification labels are confusing
30. I am aware of the different organic food certification logos displayed on the packaging.

#### **Imported foods**

31. We should always buy organic foods produced in Australia
32. Only those organic foods not produced in Australia should be imported
33. I would buy imported organic foods if they are cheaper than their Australian counterparts
34. My choice of imported organic foods would depend on the countries where they are produced.
35. My choice of imported food would depend on their certification logo

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# ASSESSING THE STRATEGY OF FIRMS THAT COMPETE GLOBALLY IN ALLIANCES IN THE COSMETICS INDUSTRY: THE CASE OF L'ORÉAL IN LATIN AMERICA

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## ABSTRACT

*The cosmetics industry, especially in Latin America, was hardly affected by the recent global recession. As consumer goods that do not require significant investments and offer well-being to their users, cosmetics tend to remain on consumers' shopping lists, even during recessions. However, the increasingly competitive global scenario drives firms to sustain their efficiency by way of strategic alliances, so as to better meet their customers' requirements. Even leading multinationals, such as L'Oréal, face challenges to maintain their competitiveness and have to reassess regularly their strategies. This article presents the results of research that sought to assess the adequateness of the strategy of L'Oréal Latin America, considering the opportunities and threats of the cosmetics industry, of the firm's alliances and given the global competitive strategy of the L'Oréal Group. The results confirmed what had been verified in other sectors: global alliances create more opportunities than threats, and, in many cases, global relational opportunities, i.e. pertinent to global alliances, mitigate global non-relational threats. Latin America is a potential market for the strategic objective of L'Oréal to conquer one billion consumers, and its transnational strategy ensures coherence of its products launched in this geographic region with its targeted consumer requirements. Its strategic alliances contribute to responding better to market demands and ensure a better exposure of the products launched. The study thus adds value to research on strategic management from a global relational perspective, by complementing findings of similar investigations into other sectors. From a business administration viewpoint, the case of L'Oréal offers insights on how strategic alliances can help sustain competitive advantage in firms that compete globally.*

## INTRODUCTION

The cosmetics industry in Latin America was hardly affected by the global economic recessions of the past few years. Cosmetics sales tend to remain stable even during times of crisis. An article in Valor Econômico (2010), Brazil's leading financial newspaper, revealed that the beauty industry grew 15% in Brazil in 2009, showing that this market had remained practically immune to the 2008 economic crisis. Worldwide, results were weaker but still positive. As consumer goods that do not require significant investments and provide their users with well-being, cosmetics tend to remain on consumers' shopping lists even during recessions. However, the increasingly competitive scenario in various sectors has made evident the volatility of the consumer market's needs, driving firms to sustain their flexibility and efficiency by forging strategic alliances so as to better meet their customers' requirements. Even leading multinationals in this sector, such as L'Oréal face challenges to maintain their competitiveness and have to regularly reassess their strategies.

The aim of the present article is to share the results of a study that analyzed the adequateness of L'Oréal Latin America's strategy, considering the opportunities and threats faced by the cosmetics industry, of the firm's alliances and the L'Oréal Group's global competitive strategy. As well as seeking to draw lessons for L'Oréal itself and other firms in the sector from the adoption of a global relational perspective, i.e. pertinent to alliances,

the research attempted to contribute to strategic management theory regarding firms that compete globally in alliances. L'Oréal is an important case because, despite its world leadership position in the cosmetics sector and presence in 130 countries, sustaining this advantage in an increasingly competitive global environment is not an easy task. This explains why it is always seeking out new markets either to undertake complementary activities or reinforce its global presence (Valor Econômico, 2010). This study concentrated on L'Oréal Latin America because of the region's specific challenges such as the demand for products that are more in tune with local cultures. In addition, the L'Oréal Group's strategic objective is to conquer one billion new consumers, especially among the middle classes of emerging markets (Cosmetics Business, 2011). It should be noted that the L'Oréal Group's activities are divided into four divisions: Consumer Products Division; Professional Products Division; Luxury Products Division; Active Cosmetics Division.

## RESEARCH METHODS AND THEORETICAL FRAMEWORK

The present research was essentially exploratory due to the small number of studies of strategic alliances in the cosmetics sector. It was decided to adopt the case-study method as the most appropriate in light of the research's two-fold objective of performing an in-depth analysis of a contemporary phenomenon in its real context and of contributing to the relevant theory (Yin, 2010). The main criticism leveled at this method – that it does not allow a statistical generalization of the case-study data to other cases – did not apply, as this was not the research's objective. The data was collected by means of documental investigation, a survey of the perceptions of L'Oréal Latin America executives (using a structured questionnaire) and interviews. It was then interpreted in accordance with the principle of data and method triangulation so as to assure the consistency of results and limit any possible biases.

The adequateness of L'Oréal Latin America's strategy was assessed with the support of Macedo-Soares' (2011) Global SNA - Strategic Network Analysis – Framework which was adapted to the objective of focusing at the level of the industry. This framework includes a set of tools that permits a systemic, integrative and dynamic analysis of the strategic fit of firms that compete globally in alliances and other linkages (e.g. mergers and acquisitions). It considers all factors that are strategically significant in the case of this type of firm: in other words, not only organizational, structural and macro-environmental factors, but also relational and global ones. It is comprised of three components: i) methodology – series of steps for carrying out the strategic analysis; ii) reference lists of factors and their constructs in order to develop tools for collecting relevant data and interpret it; iii) a conceptual model to map the ego-net of the focal firm, constituted by the firm at issue and its main alliances and other ties within its value-net. Brandenburger & Nalebuff (1996) define the latter as a network that includes all strategic actors – partners and non-partners – in the firm's competitive arena, and its interdependencies, that contribute to the creation and capture of value that is significant for the focal firm's competitive advantage.

The next part of this article presents the main results of the research following the steps of the Global SNA methodology. It begins by characterizing the firm's strategy, using Mintzberg's (1988) typology, which distinguishes between differentiation (through price, image/brand, support, quality or design/packaging) and non-differentiation. Based on Harzing (2000) and Koza, Tallman, Attay (2011) strategy is classified into four types: – i) Global – the offering of standardized products/services in the world's key markets, through integrated operations that follow global directives established by the parent company ii) Multi-domestic – the development of products/services to meet the needs of domestic markets; iii) Transnational – seeking both global efficiency and local responsiveness to the specific demands of markets in which they operate (Hitt, Ireland, Hoskisson, 2009); iv) Global Multi-business Firms – similar to Transnationals but in which certain firms incorporate different added value activities, divided into distinct businesses, and therefore should be considered multi-business firms.

## RESULTS

### Characterization of strategy

According to 84% of the respondents to the survey questionnaire, the L'Oréal Group pursues a strategy of differentiation by image or brand. Indeed, the name L'Oréal stands out in the world cosmetics market.

Most (73%) respondents also stated that the Group's strategy was Transnational. In recent years, L'Oréal has been setting up hubs that concentrate product development, marketing and launch conception teams in different geographical regions, in order to optimize each region's operations by better meeting the specific needs of its local markets. The hub concept is presently a reality at L'Oréal Latin America, whose headquarters are in Brazil, the region's most important country. L'Oréal's hub in Brazil has the Group's fourth most important laboratory outside Europe (Exame, 2009). The L'Oréal Group's research and innovation officer made an important statement as to how the company intends to obtain one billion new consumers.: "Our capacity to innovate for new markets is based on a deep knowledge of the habits and preference criteria of Chinese, Indian and Brazilian consumers...In order to achieve this we have created an International Consumer Studies and Insights Department. In addition, we have created specific expertise platforms – the "Research & Innovation Hubs - that join all research activities" (interview published in *L'Oréal Rapport Annuel* 2010). Even though only a small number of respondents to the questionnaire (15.4%) characterized L'Oréal as a Global Multibusiness Firm, the research classified the company in this category because it treats its product divisions like multi-businesses, thus permitting greater strategic diversification and differentiated global businesses. The next section describes the results of the application of the second step of the Global SNA methodology adapted to the objectives of the research at issue in this article. Note that the factors referred to in the second and third steps of this methodology are of the global traditional, i.e. global non-relational kind.

## Strategic implications of macro-environmental factors

Using Austin' (1990) constructs, the research identified the most important macro-environmental factors in the sector and analyzed their strategic implications for L'Oréal, as described below:

- Political factors: instability of trade policies governing imports of different industrialized products between Argentina and various Latin American countries currently represents a real threat for L'Oréal (e.g. of aerosol deodorants from Argentina). Another policy factor that represents a threat for L'Oréal is constituted by sanitary registration requirements for some kinds of products because of the tedious bureaucracy involved (e.g. in Brazil, the National Sanitary Inspection Agency, requires all anti-age skin products and deodorants to be registered)
- Economic factors: cosmetic product sales tend to remain stable even during economic recessions. This represents a real opportunity during recessions.
- Socio-cultural factors: the cosmetics market makes it possible to establish a close relationship with consumers, so these factors represent a real opportunity to launch products that are positively associated with the social and cultural reality of their target audience.
- Demographic factors: as most of the L'Oréal Group's sales revenue derives from less than 15% of the world's consuming population, there is a potential opportunity for conquering new consumers.
- Environmental factors: the world cosmetics industry is starting to make use of natural ingredients in its formulas. Thus, environmental factors were identified as an opportunity for firms to stand out in this market.

The next section presents some results of the strategic analysis of the company, in accordance with the third step of the Global SNA methodology.

## Strategic implications of the main global actors

Based on Porter's (1980) typology of strategic actors/roles and his list of factors that determine an actor's force/strength in his/her strategic role, as well as the complementor construct proposed by Brandenburger & Nalebuff (1996), the research identified the main opportunities and threats constituted by the sector's most significant global actors as they play their strategic roles in L'Oréal's global value net, as described below.

In the consumer products category, final customers, due to their price sensitivity, were identified as a real threat to L'Oréal given that its products, even in this category, tend to be more expensive on account of their quality and brand identity. However, this threat was considered to open up an opportunity related to consumers who increasingly want products that offer many different benefits. Another potential consumer-associated threat was constituted by the low cost of changing to other cosmetics products.

As regards suppliers, the L'Oréal Group is highly demanding when analyzing potential suppliers who are only qualified after audits performed to ensure their quality. The time taken to qualify suppliers may have a

negative effect on the company's ability to react to competitors' actions. Also, the high degree of dependence on suppliers was seen as a potential threat because it increases supplier bargaining power. On the other hand, the fact that different product divisions buy from the same suppliers was viewed as an opportunity as it increases the company's weight in suppliers' order books while contributing to L'Oréal's centrality in its relationship with these suppliers.

As regards competitors, at the global level, the L'Oréal Group is constantly competing with multinational groups like Unilever, Procter & and LVMH that represent a constant real threat due to their size and worldwide recognition. Additionally, local cosmetics firms in various Latin American countries have adopted an initial strategy of conquering consumers in low income markets, but are already showing that they are capable of also competing with premium products. Another negative strategic implication of this fierce rivalry in the consumer cosmetics segment is constituted by the popular door-to-door sales model which, in Latin America, is exploited mainly by Natura and Avon. At the same time, this competitor diversity was considered a real opportunity because of L'Oréal's capability of differentiating its products by using innovative formulas, attractive packaging or advertising that is creative and resonates with target audiences.

In the consumer cosmetics industry, mainly in the case of shampoos and conditioners, new entrants represent a real threat for L'Oréal because of the low barrier to entry and the large number of new entrants. As to substitutes, beauty salons were classified as possible buyers of some cosmetic products such as nail varnishes and hair treatment products, in the consumer products segment, constituting a real threat to L'Oréal's Consumer Products Division, as they may reduce sales of certain products in pharmacies and supermarkets.

Finally, in the case of complementors, the research identified a real opportunity for the development of new cosmetic products, by joining the competencies of different industries. Examples of complementors identified were dermatologists and fashion brands (e.g. Giorgio Armani, Ralph Lauren). In the next section, the research begins to present the results pertinent to the steps of the Global SNA methodology in which the analysis was conducted from a relational perspective.

## Strategic alliances and the L'Oréal Group's ego-net

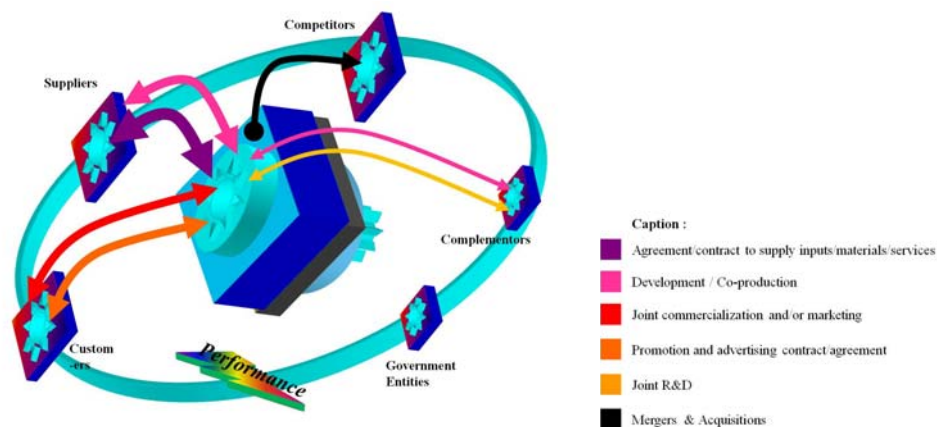


Figure 1: Ego-Net of the L'Oréal Group

According to L'Oréal Latin America's employees, the strategic actors cited as the Group's main partners were its suppliers, customers and complementors. Government entities were also often mentioned as being partners of the L'Oréal Group, but less so in the case of the types of alliances and ties established. Among the factors that motivated the establishment of alliances by the L'Oréal Group, the most cited were the sharing of resources and complementary competencies, the reduction in the costs of entry to new markets/segments, economies of scale and access to information capital provided by new relationships.

Based on the replies to the questionnaire and interviewee opinions regarding the characteristics of alliances and other ties, the research mapped L'Oréal Group's ego-net, as shown in Figure 1. It should be highlighted that Figure 1 depicts only the main types of alliances with each actor. As in the case of the Global SNA model, arrow colors and formats, as well as the thickness of lines, reflect alliance characteristics (one-way arrow – opportunistic tie; two-way arrow - collaborative; lesser or greater thickness indicates lesser or greater tie strength). The size of the blocks representing the actors is proportional to their strategic importance for the L'Oréal Group. The actors with the strongest and most independent alliances in relation to the L'Oréal Group are its suppliers, especially those alliances involving the supply of inputs and services. Joint development and co-productions are also important examples of alliances with suppliers. L'Oréal also engages in joint product development and co-productions with complementors but these ties are much weaker than those with suppliers. Joint R&D projects also constitute an important element of L'Oréal's relations with its complementors. Customers are strategic partners of the L'Oréal Group mainly in joint commercialization and marketing projects and in promotion and advertising. Although the research identified other types of alliances between the L'Oréal Group and its customers, it was decided to represent only the most significant ones. The ties with competitors represented in the figure correspond to acquisitions made by the L'Oréal Group over the years, as most of them involved competing firms. As the ego-net is represented in the model within the firm's value-net, the figure also includes government entities, even though their ties with the L'Oréal Group cannot be characterized as strategic alliances.

## Strategic implications of the L'Oréal Group's alliances

The identification of the relational characteristics of the L'Oréal Group's global ego-net made it possible to analyze their strategic implications at the cosmetics industry level in terms of opportunities or threats. Tables 1, 2, and 3 present the results of this analysis that corresponded to one more step in the Global SNA methodology.

Dimension	Constructs	Values (Result)	Industry Level	
			Opportunities	Threats
Alliance Network Structure	Density	- <b>High</b> with customers and suppliers. - <b>Average</b> with complementors.	- Ease of access to informational and technological resources of important global partners.	- Risk of sharing confidential information with common suppliers and customers.
	Scope	- <b>Wide-ranging and global</b> with customers and suppliers. - <b>Wide-ranging and local</b> with complementors	- Opportunities for global partnerships that tend to enhance the importance and strength of the partnership for both global actors. - Agility in the replication of work in other geographical areas.	
	Position and Centrality in the Network	- <b>Central</b> with customers and supplier. - <b>Intermediate</b> with complementors.	- High centrality permits more access to key information and resources.	- Intense competition in the industry because the centrality of competitors is also known.

Table 1- Structure of L'Oréal's network of alliances with customer and suppliers

The research revealed that the structure of the L'Oréal Group's network of alliances with customers and suppliers is different from its alliances with complementors. In the former case, the evidence was of high density, wide and global scope and of L'Oréal centrality, thus constituting more opportunities than threats (Table 1). In the case of alliances with complementors, the results indicated average alliance density, wide but local scope and L'Oréal occupying an intermediate position in the network. The research also revealed that few complementors participated in alliances with the L'Oréal Group and therefore that these alliances were not so significant.

Dimension	Constructs	Values (Result)	Industry Level	
			Opportunities	Threats
Global Network Members	Identity/ Status of global firm	- <b>Strong and successful</b> (world leader in cosmetics).	- Tendency for good overall industry performance.	- Risk of excessive demands by the focal firm in partnerships, due to its industry leadership position.

<b>Identity / Status of partner</b>	- <b>Rich</b> in distinct resources; <b>global</b> customers and suppliers and <b>local</b> complementors.	- Opportunity for access to distinctive resources from partners with global experience.	
<b>Ease of access to and volume of partner resources</b>	- <b>Abundant and average</b> with customers. - <b>Abundant</b> and <b>easy</b> with suppliers. - <b>Satisfactory and easy</b> with complementors.	- Opportunity for the development of more enduring relations and innovations.	
<b>Complementarity of global partner resources</b>	- <b>High complementarity</b> with customers, suppliers and complementors	- Positive exchanges for both sides of the partnership.	

Table 2 –Members of L’Oréal’s Global Network

The analysis of the members of the L’Oréal Group’s global network also evidenced a predominance of opportunities for L’Oréal and the industry as a whole, based on the exchange of information and knowledge between strong and globally experienced partners (Table 2). The threat identified in this sphere refers to the risk that the focal firm’s stringent requirements for establishing alliances may hamper their realization.

Dimension	Constructs	Values (Result)	Industry Level	
			Opportunities	Threats
Tie/Link Modality	Strength of Connections	- Strong	- Opportunity for greater industry productivity.	- Risk of locking firms into unproductive relationships.
	Nature of Ties	- <b>Collaborative.</b>	- Opportunities for positive long-term actions that benefit not only partner firms but also the industry and the external environment.	
		- <b>Explorative</b> with customers and complementors. - <b>Exploitative</b> with suppliers.	- Explorative partnerships explore new opportunities and create an environment that favors innovation.	- Exploitative partnerships can hinder or impede innovations.

Table 3 – Modality of the L’Oréal Group’s Global Network Ties

In the analysis of tie/link modality the research also identified significant opportunities, revealed by L’Oréal’s strong and collaborative connections with its main partners which tend to create opportunities for long-term and productive actions for the cosmetics industry. In terms of the nature of ties, explorative types of alliances with customers and complementors aim at developing and discovering new competencies jointly with partners, thus creating a favorable environment for innovation. On the other hand, most alliances with suppliers could be characterized as exploitative and thus represent a threat by reducing the possibility of generating innovations through this type of alliance. However, the research discovered that, in practice, some innovations were in fact produced in the context of the L’Oréal Group’s relations with its suppliers. The next section presents results regarding the Group’s performance, a critical factor for the analysis of L’Oréal Latin America’s strategy and thus the object of yet another step in the Global SNA methodology. .

## The performance of the L'Oréal Group

The L’Oréal Group’s 2010 annual report showed that the company maintained its world cosmetics leadership position of 2010 with consolidated annual sales revenues of approximately 19.5 billion Euros, 11.5% greater than revenues generated in 2009. An analysis of the 2010 results from a geographical region perspective shows that Latin America accounted for 8.4% of Group cosmetic product sales (1.518 billion Euros), a 17.5% growth over 2009, the highest of all the Group’s geographical regions. Note that three of the L’Oréal Consumer Products Division’s six strongest countries are emerging countries: Brazil, China and Russia. The next part of this article first of all performs a general assessment of L’Oréal Latin America’s strategic fit and then compares the results

that are relevant for global relational analysis with those revealed by non-relational analysis (so-called global traditional analysis –steps 2 and 3).

## DISCUSSION

### Assessment of the adequateness of L’Oréal Latin America’s strategy

Latin America constitutes an attractive potential market that can contribute to L’Oréal Group’s strategic objective of conquering a billion new consumers and its transnational strategy enables it to launch products in this geographical region that are increasingly coherent with the specific requirements of the regional target audience. The research evidenced that the strategic alliances with customers and suppliers were aligned with this strategy by enabling the company to react more effectively to the market’s specific demands and achieve a better exposure of the products launched for the target audience. It also revealed that the L’Oréal Group’s global presence contributes to the formation of more solid alliances with global actors that are seeking to expand their operations. In sum, the results of the research strongly suggested that L’Oréal Latin America’s strategy was adequate to the global context in which the L’Oréal Group operated, considering the strategic implications of its alliances, the actors that comprised this context and the macroeconomic factors that characterized it. The global relational perspective was fundamental for achieving this strategic assessment. It also illustrated the importance of the Global SNA Framework, which encompasses both traditional and relational global dimensions, for strategic analyses of firms that compete globally in significant alliances/ties. In the next section, the research seeks to evidence this point.

### Comparison of analyses from global traditional and global relational perspectives

The following section analyzes the strategic implications shown in Table 4 from both the global traditional and relational perspectives and infers the resulting implications if the results of both were considered.

The real threats numbered 1 and 2 in the traditional analysis refer essentially to policy issues inherent to the production and commercialization of cosmetics products in different countries of the world that could be mitigated by alliances with government entities such as, for example, commercial treaties between countries. As the research was unable to identify cases of this type of alliance, it maintained the real threat identified in the traditional analysis as the final implication, though considering that there was a potential relational opportunity.

Threats 3 and 4, on the other hand, refer to socio-cultural factors related to consumers and the large amount of information they currently obtain through digital media. The real opportunity identified for mitigating these threats is constituted by the potential for establishing close contacts with customers in the digital media, a growing trend in the world consumer goods market. The research verified that the L’Oréal Group has websites for its various brands and has been investing in Facebook pages with promotional actions for connected consumers.

Threats 5 and 6 are related to consumer price sensitivity, especially in the case of consumer products, and cosmetic products’ low cost of change. These threats are being neutralized by the development of products at the company’s Latin America hub. As well as enabling products to be developed specifically for the region’s consumers with a lower price tag, the hub facilitates the organization of regional industry and the formation of alliances mainly with suppliers, thus constituting a real relational opportunity. The Latin America Procurement team possesses an overall view of the region’s different countries’ needs and is in contact with other regions’ procurement teams, thus enabling alliances to be expanded in order to obtain supplies from countries in other geographical regions. Drawing on the concepts developed by Johanson & Vahle (2003, 2009), the business relations engendered by development hubs offer potential for learning and trust building but also for entry into new markets and the development of new relationships that can open the way to new markets.

	Global Traditional Analysis	Global Relational Analysis	Resulting Implication
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1	<b>Real Threat:</b> Product imports depend on stable foreign trade policies on the part of exporting and importing countries.	<b>Potential Opportunity:</b> Alliances with government entities that may facilitate bureaucratic processes.	<b>Real Threat</b>
2	<b>Real Threat:</b> Time needed for sanitary registration of cosmetics products may delay product launches.		
3	<b>Real Threat:</b> When socio-cultural factors are not taken into account in the development of new products.	<b>Real Opportunity:</b> Establishment of alliances with opinion-forming customers or groups (e.g. bloggers who evaluate cosmetics products) in order to understand target audiences better.	<b>Real Opportunity</b>
4	<b>Potential Threat:</b> High level of consumer information which is increasing due to digital media.		
5	<b>Real Threat:</b> Consumer price sensitivity.	<b>Real Opportunity:</b> Development of products with lower price tags by establishing regional development hubs and global partnerships.	<b>Real Opportunity</b>
6	<b>Potential Threat:</b> Consumers' low cost of changing to other products.		
7	<b>Potential Threat:</b> Lack of agility in the selection of suppliers due to the L'Oréal Group's stringent qualification requirements.	<b>Real Opportunity:</b> Establishment of long-term alliances with suppliers to ensure the product quality and safety and socially responsible behavior required by L'Oréal.	<b>Real Opportunity</b>
8	<b>Real Threat:</b> High degree of dependence on certain suppliers.	<b>Real Opportunity:</b> Diversification of alliances with suppliers and the possibility of being supplied by other geographical regions.	<b>Real Opportunity</b>
9	<b>Real Threat:</b> Market diversification through door-to-door sales which is not exploited by L'Oréal.	<b>Potential Opportunity:</b> Establishment of alliances to exploit the door-to-door market.	<b>Potential Opportunity</b>
10	<b>Real Threat:</b> Fierce competition in the industry at global and local levels.	<b>Real Opportunity:</b> Hub for the development of products aimed at specific treating opportunities for new regional and global alliances.	<b>Real Opportunity</b>
11	<b>Real Threat:</b> Low barriers to entry in terms of industry costs and complexity.		
12	<b>Potential opportunity:</b> Most of the L'Oréal Group's sales revenues are obtained from less than 15% of the world's consuming population/from the less than 15% of the world's population that consumes its products+B10		
13	<b>Potential Opportunity:</b> Possibility for exploiting competency complementarities with other industries for the development of innovative products.	<b>Real Opportunity:</b> Establishment of new alliances with diverse industries, such as the food or service industries, in order to increase the number of new launches.	<b>Real Opportunity</b>

Table 4- Comparison of results using global relational and global traditional analysis

Potential threat 7 refers to the lack of agility in the definition of suppliers due to the L'Oréal Group's stringent requirements for validating a supply contract. The real opportunity identified by the research that neutralizes this threat lies in establishing long-term alliances with suppliers to ensure compliance with L'Oréal Group requirements. This opportunity, however, can turn into a real threat 8, constituted by L'Oréal's dependence on specific suppliers, which, in turn, can be mitigated by the real opportunity constituted by supplier diversification, not just in the sense of seeking different partner firms but also firms that operate in different geographical areas. Real threat number 9 is constituted by the modality of door-to-door sales in the cosmetics sector, which is widely used in Latin America and is not exploited by L'Oréal. An evident potential opportunity would be provided by L'Oréal's entry into this market which could be engineered by forming alliances with specialized direct sale associations. When this research was concluded the company still expressed its lack of interest in exploiting this niche. Even so, the research considered that the final implication could be a potential opportunity.

Threats 10 and 11, constituted by fierce competition in the cosmetics industry and low barriers to entry, were considered in the light of potential opportunity 12 (low number of L'Oréal Group consumers as a proportion of the world population) given the real opportunity of conquering new markets. The development hubs of the Latin America Zone and other geographical regions are designed to meet the needs of specific markets, aiming their product launches at local target audiences, besides creating opportunities for stronger alliances with suppliers

and customers due to the fact that they group the needs of the region's different countries. Thus, they are considered to be capable of neutralizing the threats posed by increasing competition and the industry's low barriers to entry and as drivers of the potential opportunity of conquering additional consumers. Thus, in the case of items 10, 11 and 12 the resulting implication was considered to be a real opportunity.

Finally, potential opportunity 13 refers to the possibility of exploiting competency complementarity between the L'Oréal Group and its partners in order to develop innovative products, as already exploited by the company in cases like Inneov, the so-called "beauty pills". The research identified a real opportunity constituted by new complementary alliances with diverse industries, leading to other examples of successful alliances.

## CONCLUSION

Although the research showed that L'Oréal Latin America's strategy was adequate in terms of its global context, considering the strategic implications of its alliances and other ties at the level of the cosmetics industry, there appears to be room for taking better advantage of some potential opportunities identified but still not exploited by the L'Oréal Group. This is especially so in the case of alliances with complementors and government entities which, although mentioned by executives who took part in the research, were not included in many concrete examples. As regards complementors, forming new strategic alliances with actors in different industries can lead to innovations in the cosmetics market. Potential opportunities identified by the research for alliances with government entities referred mainly to the reduction of bureaucratic difficulties inherent to the activities of global companies, such as those involving imports of products or components. Moreover, it should be highlighted that it is very important for the L'Oréal Group to become more aware of the potential opportunities offered by the formation of strategic alliances. Even though L'Oréal is currently able to sustain its position, the market's increasing dynamism poses a series of challenges for all competitors in this sector that strategic alliances may help confront.

Indeed, one of the most important results of this research at L'Oréal was to verify a fact evidenced in other sectors (e.g. telecommunications, see Macedo-Soares & Mendonça, 2010): global alliances create more opportunities than threats, and in many cases, relational global opportunities, that is, pertinent to global alliances, serve to mitigate and even neutralize non-relational global threats. Another important result was to provide new information by illustrating this fact with examples that are specific to a company in the cosmetics sector that competes globally in alliances.

Thus, one may conclude that the research presented in this article fulfilled its two-fold aim of i) providing lessons for firms in the cosmetics industry by means of an analysis of the adequateness of the company's strategy and ii) contributing to investigations into strategic management, from a relational perspective, in the case of companies that compete globally. The application of the Global SNA Framework to the case of L'Oréal Latin America, in light of the L'Oréal Group's global strategy, illustrated how the inclusion of the global relational perspective in the strategic analysis process provides relevant insights that ensure more complete strategic analysis and, consequently, also more accurate strategic decision-making in the case of a global firm involved in alliances. Thus, the research confirmed how important it is for these firms to consider this perspective in their strategic management. The article also made a theoretical contribution by verifying the usefulness of the tools and constructs developed to undertake such a more complete strategic analysis. It is recommended that new studies be conducted of global firms that take part in alliances in this and other sectors, replicating the application of the analytical framework used, in order to refine and consolidate it further.

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# THE IMPACT OF THE THIRD PARTY PAYMENT ON THE INSURED'S RIGHT TO BE COMPENSATED BY THE INSURER

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## ABSTRACT

*The objective of this research is to find out whether insurance companies in South Africa are justified in demanding that they be reimbursed from the insured's settlement proceeds from the third party who caused damage to the insurable interest even though the companies took the insured's premiums to assume just such a risk. In other words, should not a balance be struck between the insured's right to protect his economic interest and the insurance company's obligation to compensate or indemnify the insured for the risk or loss insured against as per their insurance contract, while making sure that the insured does not claim full amount of his damages from both parties.*

## INTRODUCTION

If one thinks about it, an insurance policy is nothing but a bet. When an insurance company accepts a premium, it assumes the risk that it may have to pay in the event of a loss of the insurable interest. It looked at the odds, and made a calculation on the likelihood that such an event may or may not happen. If the risk is more likely to occur, one will, assuredly, be paying higher premium than when it is not likely to occur.

A distinction is customarily drawn between two main types of insurance contract; firstly, indemnity insurance (such as fire, theft, loss at sea) in which the insurer promises to compensate or indemnify the insured to the extent of his actual loss occasioned by the specified risk and secondly, non-indemnity insurance (such as life and some sickness and accident policies) in which the insurer undertakes to pay an agreed sum (which may bear no relation to the actual loss sustained ) on the happening of the event insured against.

This dissertation is about the first type of insurance, which entitles the insured to compensation for actual loss suffered as a result of a stipulated peril. The relation between the insured and insurer is one of contract in nature. The contract relates to the transfer of a specific risk or risks. In exchange for the transfer of the risk the insured undertakes to pay premiums, which will of course, activate the insurance cover. The insurance company takes the insured's premium to assume the risk insured against.

But like any craft Vegas crapshooter, insurance companies have a hedge – a fallback- a less risky position. It is called Subrogation. This is the method by which insurance companies make sure that the insured does not get double compensation for the same loss or damage to his insurable interest.

Though the doctrine of subrogation is part of the South African law, its application leads us to a floodgate of questions: Whether insurers are justified in including a subrogation clause in insurance policies, and whether the clause violates public policy, and also whether the insured is justified to demand the exclusion of the clause from the insurance contract?

The objective of this research is to find out whether insurance companies are justified in demanding that they be reimbursed from the insured's settlement proceeds from the third party who caused damage to the

insurable interest even though the companies took the insured's premiums to assume just such a risk. In conclusion, recommendation will be made regarding the justified means to protect the insured's economic value settlement from third parties.

## INDEMNITY INSURANCE

In an indemnity contract the insured is entitled to recover the actual commercial value of what he has lost through the happening of the event insured against. Indemnity insurance includes all insurance against damage or damage to property by fire, motor vehicle accident, burglary, public liability and marine insurance. In **Nafte v Atlas Assurance Co Ltd** it was held that the insurer's liability would be limited to the 'real and actual' value of the loss suffered by the insured through the materialization of the risk insured against. The liability cannot exceed either the amount insured against or the amount of the insurable interest, and that if it exceeds either or both these items, it must be reduced to correspond with the smallest of them. KRAUSE J.: (241) concluded that the insured should not be allowed to make a profit out of his loss.

GIBSON (510) makes the point succinctly: 'The underwriter is not liable beyond the real value of the goods insured against'. The reason for this being that indemnity contract was introduced only to indemnify the insured, and by no means to make him richer. The insurer may free himself by paying the exact value of the goods insured against and will not be liable to compensate any further than that'.

In a leading South African case of **Nafte v Atlas Assurance Co Ltd**, a distinction was made between complete and partial indemnity. KRAUSE J said: (243) "The amount recoverable under a policy of insurance in the event of fire must not exceed the sum necessary to indemnify the insured fully against any loss which he may have actually sustained in the consequence of the fire". He further stated that the insured is only entitled to complete compensation of the amount specified in the policy if that amount represents his actual losses. The insured is, therefore, entitled to a full indemnity within the limits of his policy, for the loss which he has sustained in respect of the subject matter of the insurance.

The trial Judge further held that the terms of the policy may, apart from the specifications of the maximum amount, restrict insurer's liability, such as where there is a two-thirds clause or an average clause or similar limitations.

The fundamental rule in indemnity policy is that if a person insures less than the insurable value, he is deemed to be his own insurer for the uninsured balance and is to bear a ratable proportion of the loss accordingly. The indemnity afforded by most policies is by virtue of their terms limited in scope. The limitation may relate to the nature of the loss or to the amount recoverable from the insurer. Thus, policies usually either expressly or tacitly exclude consequential loss. In other words, as a rule, policies do not insure all possible interest or interests. Limitation of the amount may take many forms but a clause simply limiting the insurer's liability to a certain amount is common.

If an insured brings a claim for damages, he must prove the amount of his loss. This means that the insured must prove what the impairment of his insurable interest is, which constitutes his loss, in money. This onus does not arise where the loss complained of, is a loss of money as such or where the loss takes the form of liability (contractual or otherwise).

## THIRD PARTY PAYMENTS

### Foundation of The Claims

The fundamental premise in law is that damage or harm rests where it falls, that is, each person must bear the damage he suffers (*res perit domino*). If someone drives his car carelessly and collides with a tree, or clumsily drops and breaks his watch, or lightning kills his horse, he has, in principle, no legal ground for complaint.

However, damage does not always rest where it falls. There are indeed certain legally recognized instances in which the burden of damage is shifted from one individual to another, with the result that the latter incurs an obligation to bear the former's damage to provide compensation thereof. For example, the insured is entitled to recover the actual commercial value of what he has lost through the happening of the event insured against from the insurer.

Furthermore, if the damage arises from a delict, the wrongdoer is legally obliged to compensate the aggrieved party. In general terms the law of delict thus determines the circumstances in which a person is obliged to bear the damage he has caused another or, in other words, when he may incur civil liability for such damage. The fact that the insured has covered the insurable interest against loss does not preclude the insured from recovering from the third party who has caused damage to the insurable interest. The fact that the third party is liable to bear the loss insured against does not preclude the insured from recovering from the insurer on the ground that he has a remedy against the third party.

This now poses the question: What should now happen in a case where an insurable interest is destroyed by a delictual conduct of a third party? Can the insured take with both hands, that is, can he recover more than his loss by being allowed to claim contractually from the insurer and also delictually from the third party who has caused him the loss? To answer those questions Ward J in **Ackerman v Loubser** held that the insured might recover from the insurer, leaving the latter to exercise its right of subrogation. He further held that the effect of payment of the insurance money will shift from the insured to the insurer the equitable right to receive compensation from the wrongdoer without affecting the fact that the legal right to compensation remains with the insured and that the action proceeds in his name.

This is where all the problems start. We are now faced with a big Question: whether the insurance company is justified to take into account payment by the third party in reimbursing the insured for the loss insured against even though the company took the insurance premium to assume such a loss? Are they not (insurance companies) making sure that the injured party (the insured) bears the brunt of the risk and not them?

To answer these questions, the Subrogation Doctrine is discussed below.

## **SUBROGATION DOCTRINE**

### **Introduction**

In its literal sense the word 'Subrogation' means the substitution of one party for another as a creditor. In the context of insurance, however, the word is used in a metaphorical sense. Subrogation as a doctrine of insurance law embraces a set of rules providing a right of recourse for an insurer, who has indemnified its insured. It simply means that a contract of insurance creates a personal right for an insurer against its insured in terms of which it is entitled to recoup itself out of the proceeds of any rights the insured may have against third party in respect of the loss. This right of reimbursement cannot be for more than the amount paid out by the insurer as an indemnity to the insured. It is also subject to the insured's receiving a full indemnity in respect of the insurable interest.

Subrogation, therefore, does not denote an actual transfer of the insured's right against third parties in favour of the insurer; it is neither a cession nor a transfer by operation of the law. Unless cession occurs, the insured remains the holder of his rights against the third party. Should the insured, for example, release the third party from liability (whether before or after indemnification by the insurer), the third party's debt will be discharged. Consequently, an insurer will be unable to effect recovery of compensation from the third party. Subrogation, in other words, in effect requires an exchange between the insurer and insured if the insured's claims against the third party turns out to be successful. Subrogation is concerned solely with the mutual rights and liabilities of the parties to the contract of insurance. It confers no rights and imposes no liabilities on third parties who are strangers to the contract. However, because the insurer is, as against the insured, entitled to be reimbursed out of the proceeds of the remedies against third parties, the insured may not actively deal with his rights against third parties to the detriment of the insurer, for instance by releasing the third party from liability.

The doctrine of subrogation confers on the insurer primary and secondary rights. The insured's right to reimbursement is seen as the insurer's primary right of subrogation.

In support of this primary right to reimbursement, an insurer is entitled to its insured's consent to bring an action against a third party in the name of the insured. This is termed the insurer's secondary rights of subrogation. This right to proceed against the third party in the name of the insured only arises where the insured has lost all interests in the outcome of the proceedings in that he has received full compensation for all losses (whether insured or not) caused by the event insured against. The insurer then becomes *dominus litis* although the action proceeds in the name of the insured. The advantage for the insurer of being *dominus litis* is that it can ensure that an action is brought against the third party and that the proceedings are properly conducted. Where payment by the insurer is not sufficient to cover the insured's total loss, the insured remains *dominus litis* and therefore entitled to decide on the steps to be taken against the third party. If the doctrine of subrogation does not cast on the insured a positive duty to safeguard the interests of the insurer, the possibility of harm to the insurer can be very real where the insurer is not *dominus litis* and therefore not entitled to take steps against the third party. However, the insured may cede to the insurer his rights against the third party. Once cession has taken place the insurer must sue the third party in his name.

## Scope of Subrogation

Since one purpose of the doctrine of subrogation is to prevent the insured from receiving a double indemnity, subrogation applies to every form of indemnity insurance, such as fire insurance, liability insurance and motor insurance.

Subrogation has, however, no application in non-indemnity insurance unless the parties have expressly agreed to grant the insurer rights to subrogation.

## Requirements of Subrogation

The insurer cannot automatically rely on the doctrine of subrogation in claiming reimbursement from the third party after compensating the insured for the damage caused. There are requirements which have to be met before the insurer can successfully rely on subrogation.

The first requirement is that a valid contract of indemnity insurance must exist. Since an insurer's right to subrogation is derived from the contract of insurance, no subrogation can take place where the insurer has paid in terms of an invalid agreement of insurance. Where an insurer pays a claim in terms of a voidable contract (for instance on the ground of fraud) payment is effected in terms of a valid and existing contract. The insurer's right to subrogation is therefore beyond doubt. However, no right of subrogation exists where the insurer has made an *ex gratia* payment (in other words, payment in the knowledge that the insured has no right to claim payments in terms of the policy). If, on the other hand, payment is effected in the bona fide belief that there is a duty to pay, it has been suggested that the right to subrogation exists despite the fact that the insurer does not admit liability by payment.

Secondly, insurer must have indemnified the insured. That means that, although the insurer's right to subrogation vests upon conclusion of a valid contract of insurance, it becomes enforceable only when the insured has been fully indemnified. This means that the insurer must, in order to claim subrogation, both admit and pay everything in respect of the particular claim of the insured. The insurer must have paid the insured for the damage caused and payment should be per insurance policy. Furthermore, the insured remains *dominus litis* until the insurer has effected payment unless the parties have agreed otherwise in the policy or afterwards.

Thirdly, the insured's loss must have been fully compensated before the insurer can rely on subrogation. However, it often occurs that a policy does not protect the insured fully in respect of the loss suffered. The insured may, for example, be under-insured or he may have to bear a proportion of the risk himself (for example, in terms of the excess clause). In these circumstances the insured is not deprived through subrogation of his right to exercise his remedies against the third party for his own benefit. Accordingly, the insured remains *dominus*

*litis* unless the parties have agreed otherwise, whether in the policy or afterwards, and the insured may satisfy himself first before handing over anything to the insurer.

In short, where the insured has not received full satisfaction for his insured loss from the insurance money, the insurer's right to subrogation is kept in abeyance until full indemnification of the insured has been achieved. In a case where the principle of average applies (whether by operation of the law or because of a clause to this effect), an insured who has been under-insured is entitled to retain whatever he recovers from third parties until he has been fully indemnified. The principle of average merely restricts the insurer's share of the loss suffered and does not purport to regulate the insurer's share in the proceeds of the insured's remedies against the third party.

The fourth requirement is that, the right of action against a third party must exist before subrogation can operate. In **Simpson v Thomson**, it was held that subrogation can only operate if the insured in fact has a remedy (qualifying for subrogation) against the third party. Where the insured receives a donation from a third party consequent upon the event insured against, such a benefit is *prima facie* subject to subrogation although no right to receive the benefit may have existed when the loss occurred. However, in order to qualify for subrogation the gift must have been made in reduction of the loss (that is, must be a partial or total substitution for the interest lost) and the intention of the donor must not be repugnant to it.

It would then seem that an *ex gratia* payment by another insurer in respect of the loss may fall within the class of a deductible donation. Be that as it may, the above requirements will have to be satisfied before the insurer can claim anything from the insured under subrogation.

## Effects of Subrogation

An insurer's right to recoup itself out of the proceeds of the insured's right against a third party vests upon the conclusion of a valid indemnity contract, but it is not enforceable until all the requirements for subrogation have been fulfilled. Prior to that fulfillment the insurer's right is dormant. Nevertheless, the insured cannot disregard this dormant right when exercising his remedies against the third party. The insurer's right to subrogation is merely subject to the fulfillment of the requirements. This contingent right must therefore be respected; the insured may not act in a manner that will cause prejudice to the insurer. Thus, if an insured releases a third party from liability before he receives payment from the insurer, the insurer may exercise its remedy for breach of contract.

Subrogation does not become fully effective where the payment by the insurer does not result in compensation of the insured for all losses caused by the event insured against. In a case where the compensation does not fully cover the damage caused by the event insured against, the insurer is not entitled to be *dominus litis* in respect of the insured's rights against the third party. Nor is the insurer entitled to enforce in part only the insured's rights against the third party by claiming no more than that part of the loss for which the insurer is liable.

The insured retains full control of his rights and may enforce his claim against the third party unless he chooses to leave the enforcement of his claim to the insurer. Although the insured remains *dominus litis* in these circumstances, he must, when enforcing his claim against a third party, take care to do nothing that may prejudice the contingent rights of the insurer. Any legal costs incurred by the insured without the consent of the insurer must be borne by the insured but he may deduct reasonable expenses from the proceeds of his rights before accounting to the insurer.

The insurer's conditional right to recoup itself out of the proceeds of the insured's remedies against a third party apparently does not imply a duty on the insured to take positive steps to prosecute a claim against the third party. There is, for instance, no duty on the insured to interrupt the running of prescription. Normally this does not result in any hardship to the insurer, because the insurer can effect payment at any time and prosecute the claim in the name of the insured.



However, where the insurer cannot achieve the above result because full performance by him or her or it will be insufficient to cover all the insured's losses, there may be a duty on the insured to take positive steps to safeguard the position of the insurer. Policies frequently contain a clause expressly requiring the insured to take all necessary steps to protect the insurer's rights. It is not certain whether the insurer's conditional right to subrogation entails a duty for the insured not to contract (after conclusion of the insurance contract but before a loss occurs) in such a way that the liability of a third party for damage to the object of the risk is curtailed or excluded, for example agreeing with a friend who borrows the insured car that he is excluded from any liabilities in the event of damage to the car.

From the above analysis, it is now clear that the basic principle of subrogation is therefore that, provided the insured has been fully indemnified, a settlement must be effected in order to compensate the insurer out of the proceeds of the insured's right against the third party for the amount spent by the insurer in indemnifying the insured.

The reason for this is simply that no man should be paid twice over for the same loss. The insured should not be allowed to retain indemnity from both his insurer and a third party after the damage on the insurable interest. Insurance policy is not to benefit the insured but to substitute the loss suffered by the destruction of the insurable interest.

## **CONCLUSION AND RECOMMENDATIONS**

As stated above, the problem questions in this research have been to determine when the insured is entitled to compensation, that is, whether third party payment should be taken into account in deciding whether the insured should be compensated for the damage caused on the insurable interest; whether the insurer is justified in including a subrogation clause in the Insurance Contract.

Though suggested answers to those questions have been given above, it is appropriate to make some suggestions on the consideration of justice and fairness under subrogation.

First and foremost, as to when the insured is entitled to compensation, this question can only be answered by considering the indemnity contract itself. Since the relationship between the insured and the insurer is contractual, to determine when compensation is to be paid to the insured for the insured risk, the contract of insurance is the starting point in answering that question. Obviously, it would not be fair for insurance companies to refer the insured to the wrongdoer who has caused damage to the insured interest before they compensate him.

Insurance companies fulfill their contractual obligation to indemnify the insured and could then rely on whatever rights they have to recoup whatever proceeds they paid in line with their obligation to indemnify the insured against the damage caused, from the third party. Assistance can also be derived from subrogation doctrine, which regulates the position after the insurer has indemnified the insured.

The inclusion of the subrogation in the insurance contract now leads us to the second question: whether insurance companies are justified to include subrogation clause in insurance policies? Thus, by including a subrogation clause, are insurance companies not shifting their contractual obligation to indemnify the insured to the insured himself? Considering all the explanations of how subrogation is applied above, it is submitted that though it might seem unfair for Insurance Companies to take the insured's premium yet at the same time the insurance companies are entitled to demand the insured's settlement rights from the third party who has caused the damage on the insurable interest, it is for just cause. It is because of subrogation that the public can afford insurance policies. The costs of insurance are reasonably low because insurance companies are enabled to recoup the losses of indemnifying the insured from a source other than premiums.

However, there is one concept regarding the application of subrogation that should be looked into. It is its non-applicability in non-indemnity policies. If the purpose of the doctrine is to reduce insurance costs so that the public can afford to pay reasonable insurance premiums, why can't it be applied also to non-indemnity policies? There is no apparent reason why the insurer should not be allowed to recoup itself in case where the

ultimate death of the insured was caused by the conduct (intentional or negligent) of the third party. Though it might be impossible to find a culprit where the insured died of natural causes.

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# EMPLOYEE SATISFACTION: THE CASE OF MUNICIPAL SPORT OFFICERS IN SOUTH AFRICA

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## ABSTRACT

*This paper examines factors that influence the employee satisfaction of municipal sport officers. A quantitative approach was employed in which a questionnaire was administered to a sample composed of 185 municipal sport officers in the Gauteng province of South Africa. To analyse the data, a combination of descriptive statistics of the sample and Principal Component Analysis (CPA) were used to identify factors that influence employee satisfaction among municipal sport officers. Five factors, namely working conditions, skill utilization, teamwork, creativity, and autonomy, with working conditions were identified, with ability utilisation contributing the most to the satisfaction of municipal sport officers.*

## INTRODUCTION

Municipalities operate in a highly unstable economic climate that is characterised by factors such as increased globalization, highly competitive and increasingly unpredictable markets, critical skills shortages, increased workforce diversity, and technological innovations, among others. The pressures exerted by these factors compel municipalities to find ways of enhancing value as well as the quality of their services. The employment of a highly satisfied workforce is one way of ensuring that municipalities are able to perform optimally. Sport is among the various services that are provided by municipalities. The past two decades have seen South Africa hosting several successful sporting events such as the 1995 IRB World Cup, the 2007 T20 Cricket World Cup and the FIFA Soccer World Cup. Consequently, awareness, interest, and demand for satisfactory performance in sport has increased significantly. Government institutions, including municipalities, are thus required to address the increased demand for sport in terms of infrastructure and human resources.

The central role of a municipal sports officer is to promote participation in various sports within the municipality and the community. In order to achieve the objectives and goals set for their sports departments, it is important for municipalities to satisfy the needs of their sports officers. Studies conducted by Green and Chalip (1998) and Silverberg, Marshall and Ellis (2001) found that if employees in a sport setting perceive that their needs and expectations are not satisfied, they will leave the organization, resulting in a new cycle of employees that have to be recruited and trained. The economic and service quality consequences of such situations are severe to the organization. To prevent this from happening, it is important to examine the levels of employee satisfaction of municipal sports officers with the prime intention of meeting their needs and expectations. This will effectively promote and sustain the competitiveness of municipal organizations in the area of sports.

The concept of employee satisfaction has been widely studied over the past several decades of organizational research (Currivan, 1999). Scores of scholars have defined employee satisfaction using different dimensions. Price (2001) defined employee satisfaction as the effective orientation that an employee has towards his or her work. It may also be perceived as a global feeling about the job or as a related cluster of attitudes about various facets of the job (Lu, While & Barriball 2005). Schneider (1975) appears to be in agreement with this view, as the author defines employee satisfaction as a personal evaluation of the current conditions of the job or the outcomes that arise as a result of having a job. In an earlier study by Lockie (1969), employee satisfaction is defined as a function of the perceived relationship between what one wants from one's job and what one

perceives it as offering. In simpler terms, job satisfaction is the degree to which people like their jobs (Oshagbemi, 2003). A common thread among these definitions is that job satisfaction pertains to what people, specifically management and employees feel about their jobs.

Several scholars (e.g. Mottaz; 1985, Kristof, 1996; Brief 1998) underscore that most explanations of employee satisfaction have been dominated by the person-environment-fit paradigm. This gives a hint to the fact that the individual's satisfaction is likely to be enhanced when the job environment fulfils the needs, values, or personal characteristics of that individual, while the opposite is also true. Furthermore, traditionally, most scholars perceived that unmet expectations were the major antecedent of employee dissatisfaction (Giannikis & Mihail 2011). Recent research has however, challenged this view. For instance, researchers such as Irving and Montes (2009) and Lambert, Edwards, and Cabic (2003) found no relationship between met expectations and high levels of job satisfaction. It is interesting to note that these studies found that exceeded expectations stimulate over-fulfillment in employees, which actually decreases the levels of employee satisfaction. Consequently, most contemporary scholars have adopted the view that employee satisfaction is influenced by the interplay among multiple factors (Lent 2008). In support of this view, Spector (1997) opines that employee satisfaction is associated with a constellation of organizational aspects that include; appreciation, communication, co-workers, fringe benefits, job conditions, nature of the work itself, the nature of the organization itself, an organization's policies and procedures, remuneration, personal development, opportunities for promotion, recognition, security and supervision. This denotes that employee satisfaction is both highly complex as well as multidimensional.

## **AIM OF THE STUDY**

The aim of the current study was to identify and describe factors influencing the employee satisfaction among municipal sport officers in the Gauteng Province of South Africa. Although scores of researchers have examined the concept of employee satisfaction in different sports contexts, it is interesting to note that there is a paucity of research that deals specifically with employee satisfaction among municipal sport officers in South Africa. In a study conducted by Ellickson and Lodgsdon (2001) it was found that employee satisfaction among municipal employees has received little research attention when compared to that of other public employees. There is therefore a need to address this imbalance. In addition, Perry and Wise (1990) stress that many studies tend to wrongly assume that the attitudes, motivations and job requirements of employees in the public sector are the same as those who work in the private sector. In agreement, Vasu, Stewart and Garson (1998) argue that there is a vast difference between public and private employees in terms of their motivation and organizational behavior. The dearth of research that deals with the employee satisfaction among municipal sport officers coupled with the perceived variation in the attitudes and behavior of public employees and private employees presented an impetus for conducting the current study. The significance of the study lies in the fact that this study may be a source of knowledge to municipal managers on issues pertaining to the improvement of the working conditions of municipal sports employees.

## **RESEARCH METHODOLOGY**

### **Instrumentation and Procedures for Data Collection**

Using a quantitative approach, a questionnaire was constructed and administered to a conveniently selected sample of 185 municipal sport officers. The questionnaire was divided into two sections. Section A requested the respondents to provide their demographic information and in section B respondents were requested to indicate their level of job satisfaction on a 5-point Likert scale which ranged from 1 (very dissatisfied) to 5 (very satisfied).

An accompanying letter and an explanatory statement highlighting the purpose of the study were attached to the questionnaire. In order to assess the content validity of the data collection instrument, the questionnaire was reviewed by two experts in the human resource management field. A conveniently selected sample consisting of 8 sports officers was used in the pretesting of the questionnaire. This enabled the researchers to identify and eliminate problems as well as to ascertain its content validity thereby ensuring that the

questionnaire used in the main survey would validly capture the information sought by the researchers (Sudman & Blair, 1998). Contacts at various municipalities who assisted in the collection of data were established. Ethical considerations such as the participants' right to anonymity, confidentiality, privacy or non participation, informed consent and protection from discomfort, harm and victimisation, among others, were adhered to during the data collection process.

## RESULTS OF THE STUDY

### Demographics

The demographic characteristics of respondents indicate that there were 107 (approx 58%) male respondents and 78 (approx 42%) female respondents. The largest group of respondents (40 %) was in the 26-35 age group. With regard to employment status, approximately 68% of the respondents were permanent. In terms of employment period, approximately 28% of respondents had been employed for periods ranging between 2 and 5 years. The largest percentage; 36% of respondents, were in possession of a diploma.

### Data analysis

Frequencies were used to report on the data captured from section A of the questionnaire. The employee satisfaction items in Section B of the questionnaire were subjected to Principal Component Analysis (PCA). Initially, the Bartlett's test of sphericity was conducted on the data and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was undertaken to establish whether the data were suitable for a multivariate procedure. The extracted factors were ranked in accordance to their means (Table1) in order to determine the levels of satisfaction experienced by respondents.

**Table 1: Employee Satisfaction Dimensions**

Position in Rank order (highest to lowest)	Factor	Mean	Cronbach Alpha	Number of Items
1	Ability utilization	3.935	0.872	7
2	Creativity	3.816	0.853	6
3	Teamwork	2.955	0.758	4
4	Working conditions	2.798	0.804	5
5	Autonomy	2.467	0.703	3

Arising from the analysis the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was calculated at (0.854) which is regarded as marvelous by Kaiser (1974) and a Bartlett's test of sphericity at (Sig = 0.000) indicated that the data was suitable for factor analysis. Subsequent factor analysis yielded five factors, namely working conditions, ability utilization, teamwork, creativity and autonomy) which accounted for 61% of the variance. This outcome is consistent with Maholtra and Birks' (2007) prescription that the cumulative percentage of variance extracted by the factors should be at least 60%.

Individually, the factors accounted for 24. 6% (*Working conditions*), 21.6% (*Ability utilization*), 5.7% (*Teamwork*), 4.8% (*Creativity*) and 4.1% (*Autonomy*). *Working conditions* are described as the conditions under which an individual works. These include amenities, physical environment, and degree of safety and noise levels. It also includes the surroundings that influence an individual. *Ability utilization* refers to the individual's opportunity to do something in the organization that makes use of his/her abilities. *Teamwork* refers to the way the individual gets along and performs tasks with other individuals in the organization. *Creativity* refers to the individual being able to use his or her own initiative, innovativeness and methods in the task allocated to him or her while *autonomy* refers to the level of freedom and discretion an individual enjoys in his or her job. It also refers to an individual's ability to make decisions regarding the tasks allocated to him or her.

## DISCUSSION

An analysis of the mean scores (Table 1) shows that municipal sport officers were more satisfied with **ability utilization** ( $\bar{x} = 3.935$ ) than the other four factors. The mean score of 3.935 indicates an inclination towards the 'very satisfied' level on the Likert scale used in the study. According to Hartline and Ferrell (1996), ability utilization is a form of employee empowerment, and has a positive influence on the attitudes and behaviour of employees. The findings of a study conducted by Green and Chalip (1998) indicate that ability utilization facilitates best practice implementation in the recruitment and retention of staff, leads to enhanced employee motivation and improved business performance. In the context of the current study, this factor appears to be one of the major contributors to employee satisfaction. Clark (2001) stresses that if a job is interesting and provides the opportunity of an individual to utilise his/her skills, the individual is bound to enjoy the job and the possibility that the individual will attrite from the organization is reduced significantly.

The **creativity** factor achieved the second highest score ( $\bar{x} = 3.816$ ). This indicates an average scoring between 'agree' and 'strongly agree' on the Likert scale, which implies that municipal sport officers are satisfied with the degree of creativity that is offered by their jobs. Creativity has been recognised as the basis for innovation and attracts a number of benefits such as improved communication, promotion of learning and development of new ideas and solutions (McFadzean, 1998). Cocks (1990) also sustains that in an era of global competition, creativity produces fresh ideas which are the most valuable raw materials. With the evolution of sports organizations from being primarily not-for-profit organizations to becoming profit generating organizations (Surujlal, 2004), there is heavy dependence on creativity (Martins & Martins, 2002). Clegg and Birch (1998) advocate that creativity, which is considered by many to be of critical importance, provides the single greatest prospect for any organization to improve its performance. Since ideas are conceived by individuals within an organization, giving these individuals the freedom to unleash their creative abilities may enhance chances of the sport organization to succeed and create competitive advantage. Creativity leads to better performance and greater productivity, which eventually translates into higher employee satisfaction. Kinzl et al. (2004) also impress upon the fact that an individual's satisfaction will be high if his/her job is compatible with his/her creativity style.

**Teamwork** ( $\bar{x} = 2.955$ ) achieved the third highest score. This score indicates an inclination toward the 'neutral' point on the Likert Scale used in the study, which denotes that municipal sports officers are not sure whether they are satisfied or not with the level of teamwork offered in their jobs. Turman (2003: 65) defined team cohesion as, "an individual's sense of belonging to a particular group and his or her feelings of morale associated with membership of the group". Teamwork involves employees working cooperatively to achieve the objectives of the organization. Siverberg et al. (2001) argue that effective teamwork contributes to an enhanced motivational climate within the organization which ultimately increases the employee satisfaction of employees. In addition, effective teamwork contributes to greater team cohesion which, according to Turman (2003), develops in individuals a sense of belonging. This implies then that if municipal sport officers experience a sense of belonging to the organization, it is highly likely that their level of employee satisfaction will be higher.

The **working conditions** factor achieved the second lowest mean score ( $\bar{x} = 2.798$ ) among the five factors. This mean score implies that to a large extent, municipal sport officers are dissatisfied with the prevailing working conditions at their workplaces. Notably, working conditions contribute immensely to employee satisfaction, as indicated through the fact that 24.6% of the variance is attributed to them. A report compiled by Kinzl et al. (2004) indicates that the working environment has the potential of influencing employees' level of pride in themselves and the work they do. Luthans (1998) also argues that people who work in clean, friendly environments are more likely to be satisfied and look forward to their jobs and are likely to find it easier to accomplish their tasks. Hall (2003) also supports the notion that working conditions determine the level of satisfaction that an individual experiences. The author further contends that employees prefer to work in environments where lighting, temperature, noise and other environmental factors are safe and comfortable. Krueger et al. (2002) describe employee satisfaction as a product of one's evaluation of one's workplace and context. This presupposes then that one's perception of the workplace contributes to the level of employee satisfaction that one experiences.

The **autonomy** factor attained the lowest mean score ( $\bar{x} = 2.467$ ), signifying that respondents are dissatisfied with the degree of autonomy experienced in their jobs. Jobs that have a high degree of autonomy

engender a sense of responsibility which contributes to high levels of employee satisfaction and motivation (Parker & Wall, 1998). Research in settings outside the sport context has shown that while there was an increase in the level of employee satisfaction of employees when they were given more autonomy in the workplace to determine their routines, there was also a corresponding stronger need for frequent communication and adjustment (Brunetto & Farr-Wharton, 2004). The degree to which a job provides substantial freedom, independence and discretion of the employee in his/her job influences the level of employee satisfaction that the employee experiences.

## CONCLUSIONS AND IMPLICATIONS FOR FURTHER RESEARCH

The purpose of this study was to examine factors that influence the employee satisfaction of municipal sports officers in the Gauteng province of South Africa. In the study, five factors, namely working conditions, ability utilization, teamwork, creativity and autonomy were found to influence the employee satisfaction experienced by municipal sports officers. The implication of the findings of the current study is that municipalities could enhance the satisfaction of their sports officers by making improvements on the five employee satisfaction identified in the study. This will effectively enable municipalities to meet the increased demand for sport services in their respective areas of jurisdiction.

The findings of this study can be further refined by examining the specific influence of the employee satisfaction factors identified in this study. The employee satisfaction of municipal sports officers can also be investigated along the dimensions of variables such as gender, employment period, type of employment, level of education, and age group. Further studies can also be conducted to determine the satisfaction of other sport professionals in different organizations.

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# INCREASING THE PERCENTAGE OF FEMALE BOARD MEMBERS BY MANDATE

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## ABSTRACT

*In response to the frustration of women in associations and movements throughout Europe, the European Union is proposing that a mandate be given to corporations to ensure greater female membership on corporate boards. Since 2002, the increase in membership has not produced as much as desired. By 2020 there are hopes of increasing the membership of women on boards to forty percent. This paper will discuss the overall factors contributing to the resistance to such and will highlight the outstanding differences among countries in the European Union.*

## INTRODUCTION

On March 5<sup>th</sup>, 2012, Vivian Reding who is the European Union justice commissioner, challenged public corporations to make a pledge to increase the number of female board members to a proportion of 30% by 2015 and to 40% by 2020. As she stated, "I don't like quotas, but I like what quotas do" (Economist, March, 2012). Thus far, only 24 firms have complied. Ordinarily, one would say, well that's typically Europe, different cultures, traditions and languages are factors that would affect the number of women who would be able and willing to take a leadership role. Noting this, the next question would be well, what can they do to effect gender equality in business when there does not seem to be gender equality socially? In the United States, racial equality was addressed by enacting law, but has it really led to equality in all regions of the states? Can law or mandates really accomplish gender equality?

### The Problem

In studying the member nations that belong to the European Union, there are different trends in both the education and business orientation of women in general. These differences seem to be reflected in the present membership on boards throughout the member nations. Only 13.7% of board membership in large corporations are women. This number has increased from 8.5% in 2003. This lack of gender equality is reflected in the political, economic and business scene as well. In parliaments throughout Europe only one in four members are women and in the European Parliament women represent three in ten members. The social scenario does not bode well when it reflects the hesitancy that is prevalent in giving women a chance to enhance their careers despite the fact that they are so qualified.

Century old concepts and the culture of male dominance are no doubt the rationale for the hesitance that is seen in accepting women in dominant roles in business. Nevertheless, in assessing what women bring to the board room, is seen in the company profits that have been enjoyed. "Having more women in top jobs can contribute to a more productive and innovative working environment and improved company performance overall" (European Commission report, April 15, 2012)

This observation has been enjoyed by Norway, which does not belong to the European Union. Evidently Norwegian companies recognize that women are essential since they have the highest percentage of women on boards as compared to the European Union. Self-initiated to increase female membership, Norwegian

corporations reflect a 40.3% of female board members. Many of the women that they chose were imported from other countries in order to increase the numbers.

## Reflections and Some Solutions

Advanced education seems to lead to better positions in business yet we know that according to recent research Sixty percent of University graduates in the European Union are women yet very few are evidenced at the top of corporations. According to the European Foundation for Management Development (EFMD) there are some 3500 women able and ready to assume directorships and board memberships. These women have both advanced degrees from prestigious universities in Europe and valuable business experience. They are literally waiting to be called to participate as board members. The European Foundation for Management Development has been instrumental in urging change and has been very effective in raising the consciousness of European corporations, as well as supporting the very able business women who wish to be part of corporate leadership.

Gender differences have been cited as a reason for the diminished number of females on boards. Studies indicate that women are different in their choices and preferences as compared to men. They are more inclined to take risks as compared to men. They also seem to be less tradition and security-oriented. Female directors are more benevolent and concerned about effects. They are less inclined to be power oriented than male directors (Adams and Funk, 2012). In a study of newly appointed corporate board members in the United Kingdom, gender differences were studied. They found that women were most likely to bring international diversity to the boards as well as being most likely to have an MBA degree. Male directors were most likely to have had corporate board experience and/or CEO or COO experience. Women were most likely to have had directorships with smaller firms. The latter fact merely reflects that males have always had better opportunities offered to them in general, underlining the necessity for change.

Volunteerism on the part of firms could help bring better gender distribution to the boardrooms. That is precisely the direction in which the European Commission is leaning. Any kind of mandate might lead to tokenism and result in having less qualified women being appointed to boards. The hopes of the Commission is to gain an increase of at least 40% by 2020 but in view of all the complex factors which are involved counting numbers will not solve the overall hesitation of firms to work towards equal representation. Mandates do not work well as people are less likely to be enthused when ordered to do something. Such creates resentment and causes hostility.

The very fact that there is a consumer base that reflects a huge number of women consumers for all companies should be impetus to have better representation on boards. Corporate governance, if reduced to just male governance runs the risk of “group think”. Having women on corporate boards “makes good business sense: (Ford, 2011). Women tend to exhibit different leadership attributes than men. They tend to be holistic rather than linear thinkers, they tend to negotiate in a win/win rather than a win/lose manner. They are sensitive to subliminal cues and comfortable with ambiguity” (Rosener, 2011)

Today, there is increasing evidence that companies with more than three women on their board have a higher return on investment. Nearly 25% of Fortune 500 companies still do not have one woman on their board. Sad, but true it will take many years before the talents and skills of women will be duly rewarded and recognized in board rooms.

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# **RISK MANAGEMENT IN COMMERCIAL BANKS: A PERSPECTIVE ON INDIAN AND GLOBAL BANKS**

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## **ABSTRACT**

*In modern economic environment, Risk has become a part of business existence and each individual business entity, whether offering a product or a service, is subjected to certain risks in accordance with its nature and scale of operations. Commercial Banks, a key component of financial services sector, are no different in this regard. Commercial Banks are majorly used by the market participants towards gathering market knowledge as well as in lieu of their transaction efficiency and funding capacity. In process of the rendering such services commercial banks are exposed to multifaceted risks which are absorbed, transferred or eliminated by the concerned banks based on internal cost considerations. This paper highlights the proactive and superior regulatory sanctions put in place by Reserve Bank of India, India's central bank, towards ensuring sound and risk free commercial banking operations in the wake of global financial crisis. Credit risk, a major variant of bank's financial risk has been discussed, along with proposed ways of managing it. In addition, a perspective on global banking developments has been provided.*

## **INTRODUCTION**

Banking as an activity primarily involves the intermediation of supplier of funds with the seeker of funds. Commercial Banks provide a platform whereby the parties having surplus funds are provided with an option to park their money with the bank for a reward in terms of rate of interest. On the other hand, banks also give an opportunity to the borrowers to access credit at a regulated rate of interest using the deposits received from the supplier of funds.

During the financial crisis, commercial banks and other financial institutions in USA which had engaged in the activity of indiscriminant sub-prime credit lending were forced to shut shop when the mass of sub-prime borrowers started defaulting and filing for foreclosures. Though, the effects of financial crisis, which originated in USA, was felt in varying extent globally, Indian commercial banks and financial institutions faced a negligible impact of financial crisis inspite of having sizeable international credit exposures. The savings and loan crisis in the United States took two decades plus serious regulatory ineptness and legislative cupidity to develop into the debacle it became (Pyle, 1997). Indian economy was least affected by the financial meltdown for which one of the key reasons has been the prudential regulatory framework for commercial banking operations as laid down by India's central bank i.e. Reserve Bank of India (RBI).

## **REVIEW OF LITERATURE**

Credit risk in some form exists throughout commercial banking activities, both on and off balance sheet. However, the major part of the credit risk primarily arises from the loans and advances that constitute almost 60% of the total assets. "The taking of credit risk is a principle function of banks. The heart of banking business is not necessarily taking credit risk but assessing credit risk" (Kumar *et al.* 2011). Credit Risk Management (CRM) involves a systematic analysis of various forms of risks that influence or are likely to influence the repayment of loan given by the bank (Kumar *et al.* 2011).

The recent global financial crisis has brought in focus the issue of effective credit risk management in banks. It is imperative for a bank in particular and for banking system in general to regularly monitor and review the CRM practices (Kumar *et al.* 2011). A single value measure that represents an evaluation of credit risk management framework for a commercial bank can be useful in such monitoring. Though Basel II norms and guidelines issued by various central banks in different countries (which have been further strengthened under Basel III norms) provide a fairly comprehensive regulatory framework for this purpose, the CRM framework in commercial banks continue to differ widely.

Just during the period preceding the collapse of Lehman Brothers, one would have found difficult to predict the impact of Global Financial Crisis on the Indian Economy. This was primarily because the Indian commercial banks did not have any direct exposure to subprime assets or major exposures within the failed institutions, and the recent growth had been the result of domestic consumption and investment (Sinha, 2009).

As the global financial crisis intensified in September 2008, RBI enforced a slew of both conventional and unconventional policy measures towards mitigating the adverse after-effects of the global financial crisis on the Indian economy. These policies primarily attempted to provide ample rupee liquidity, ensuring ideal levels of dollar liquidity and maintaining a market environment which results in continuous flow of credit to productive sectors. For achieving the above mentioned purpose, RBI used a variety of instruments at its command such as the Repo and Reverse Repo Rates, the Cash Reserve Ratio (CRR), the Statutory Liquidity Ratio (SLR), Open Market Operations (OMO), including the Liquidity Adjustment Facility (LAF) and sector-specific liquidity facilities (Sinha, 2009). In addition, the Reserve Bank used prudential tools to modulate the flow of credit to certain sectors consistent with financial stability.

The provision of multiple instruments and tailored usage of such instruments towards implementation of monetary policy enabled RBI modulate the liquidity and interest rate conditions in the wake volatile global macroeconomic conditions. As a part of its LAF facility, the Repo Rate was reduced from 9% to 4.75%. The policy reverse repo rate under the LAF was reduced from 6% to 3.25%.

## ASSET QUALITY AS AN INDICATOR OF CREDIT RISK

In absence of adequate information regarding credit risk indicators for banks, non-performing advances (NPA) ratios have been used by earlier researchers as credit risk indicators (Kumar *et al.* 2011). Use of ratios instead of absolute values also helps in making comparison. It can be established from the financial disclosures of the Indian banking business that global banks operating in India have performed better than their Indian counterparts as far as reducing the proportion of NPA within the overall portfolio of advances is concerned. As per Table 1, State Bank of India, India's leading commercial bank, managed to reduce its NPA by 0.09 % in the Financial Year (FY) ending 2011 from the level existing at FY ending 2010. During the same period Standard Chartered Bank, the leading foreign bank in the India, managed to reduce its level of NPA by 1.13%. Further, Hongkong & Shanghai Banking Corporation (HSBC) reduced its level of NPA by as much as 1.4% during the same period. The ability of the foreign commercial banks to turnaround a larger proportion of its NPAs may be attributed to their fat capital cushion which enables them to initiate more rigorous recovery procedures as compared to the banks which are hard pressed in terms of capital availability.

**Table 1**  
**Net NPA as % of Net Advances along with Total Income (Interest + Non interest based)**

<b>Banks</b>	<b>2010</b>	<b>2011</b>	<b>% Increase or Decrease</b>	<b>Total Income (in ₹ Crore)</b>
<b>Indian Banks</b>				
State Bank of India	1.72	1.63	0.09	97,219
Central Bank of India	0.69	0.65	0.04	16,486
Punjab National Bank	0.53	0.85	0.32	30,599
HDFC Bank	0.31	0.19	0.12	24,263
ICICI Bank	2.12	1.11	<b>1.01</b>	32,622
<b>Foreign Banks</b>				
Standard Chartered Bank	1.40	0.27	<b>1.13</b>	8,824
HSBC	2.31	0.91	<b>1.40</b>	6,984

American Express Bank	1.50	1.50	0.09	460
Citibank	2.14	1.21	0.93	8,216
Deutsche Bank	0.79	0.23	0.56	2,861

*Source: Key Business Statistics, Indian Banks' Association*

## **SIGNIFICANT ISSUES IN RISK MANAGEMENT**

### **Are the Indian banks adequately prepared for migration to Basel III regime?**

Indian commercial banks have already adopted the approaches provided under the Basel II supervisory framework. It is time for larger banks to seriously consider system upgradation and migration to advanced approaches. Adoption of advanced approaches requires simultaneous use of the underlying processes in the day to day risk management of banks. In the background of the recent global regulatory developments, a question often discussed is whether the Indian banks are prepared for Basel III. The foundation of Basel III is widely known by now: higher and better quality capital, an internationally accepted leverage ratio towards constraining excessive risk taking behavior, adequate capital buffers which would be built up in good times so that they can be drawn down during stressful events, minimum global liquidity standards, and stronger standards and stronger standards for supervision, public disclosure and risk management.

Quick assessments show that the aggregate level Indian banks will not have any problem in adjusting to the new capital rules both in terms of quantum and quality. Indian banks are comfortably placed in terms of compliance with the new capital rules. In India, banks have a stock of floating provisions which RBI has not permitted to be used, except under a situation of systematic stress. While the floating provisions may serve the purpose of countercyclical provision, a framework is necessary for allowing its use. As an interim measure, RBI has been attempting to introduce a methodology based on the Spanish dynamic provisioning system. This, however, has not been easy given the lack of required data and analytics with the banks.

Migration to Basel III requires a high level of liquidity to be maintained via a pool of liquid assets. The definition of liquid assets is very stringent including the requirement that they should be freely available.

### **Are the Indian banks geared up for transition to the International Financial Reporting System (IFRS)?**

Converging to global accounting standards i.e. IFRS facilitates comparability between enterprises operating in different jurisdictions. Convergence would help to reduce both the cost of capital and cost of compliance for industry. Training, education and skill development are cornerstones of a successful IFRS implementation. All the stakeholders including investors, accountants, auditors, customers, software and hardware vendors, rating agencies, analysts, audit committees, actuaries, valuation experts and other specialists will need to develop an understanding of IFRS provisions to varying degrees and what they need to do. It is not only the accounting issues but how to address the non-accounting issues that will determine how successfully banks make a transition to IFRS.

Additionally, banks will need to upgrade their infrastructure, including IT and human resources to face the challenges of IFRS. Some major technical issues arising for Indian banks during the convergence process are the differences between the IFRS and current regulatory guidelines.

### **Interconnectedness in the banking sector and vulnerability of financial system**



Post-crisis, macro-prudential policy has emerged as an important tool for addressing systemic risk, highlighting its time and the cross sectional dimensions. While the time dimension refers to pro-cyclical elements that give rise to the evolution of aggregate risk over time, the cross section dimension is concerned with distribution of risks which can be exacerbated owing to the interconnectedness in the financial system. Financial interconnectedness as a part of macro-financial surveillance is the key issue in discussions on prudential regulation policies as it can magnify idiosyncratic shock across the financial system. To put in place an effective system of macro-prudential surveillance of the financial system, RBI has started using network analysis technique to model inter-bank exposures. The analysis revealed that the banking sector in India is deeply connected. Further, the contagion analysis made on the basis of network analysis underlined that interconnectedness in the banking sector gives rise to vulnerability of the financial system in the event of failure of one or more banks depending on the degree of interaction.

## **RISK MANAGEMENT PRACTICES: INDIAN BANKS VS. GLOBAL BANKS**

Reserve Bank of India (RBI) approach has been of gradual convergence with international standards and best practices in a deliberately phased manner. RBI, being the apex institution of banking in India, took prompt initiative to respond to Basel Accord and became one of the signatory to it. Considering the “One-size fits all” approach of Basel I, Basel Committee on Banking Supervision came out with more risk sensitive and comprehensive framework Basel II to replace the existing Accord.

Keeping in view its goal to have consistency and harmony with international standards, RBI endorsed the committee proposals to replace the current broad bush approach with preferential risk weighing. Thus, Basel II was adopted by India keeping into view size, complexity of operations and relevance to financial sector. The new capital adequacy norms were maintained at different levels of stringency given the differential risk appetite across banks and their business philosophies (Kaur & Kapoor, 2011). The RBI directed that Indian banks having foreign branches and foreign banks operating in India should migrate to Basel II norms from March 31, 2008 and all other commercial banks (excluding local area banks and regional rural banks) were required by RBI to adopt Basel II norms not later than March 31, 2009.

### **Capital Adequacy Ratio (CAR) – Cornerstone of Basel II**

The first pillar of Basel II accord deals with maintenance of regulatory capital i.e. 8% Capital Adequacy Ratio (CAR). CAR under Basel II is the ratio of Regulatory Capital to risk weighted assets which signifies the amount of regulatory to be maintained by banks to guard against various risks inherent in banking system.

**CAR = Total Regulatory Capital (Tier I + Tier II + Tier III) ÷ Risk\* Weighted Assets**

*\* Credit Risk, Market Risk and Operational Risk*

RBI has mandated that minimum CAR requirement should be 9% and Tier I capital of banks should be at least 6%. Banks below this level were required to achieve this ratio on or before March, 31, 2010 at both solo and consolidated level. Further, the Government of India has stated that public sector banks must have a capital cushion with a CAR of at least 12%, higher than the threshold of 9% by RBI (Annual Report, RBI, 2005-06 and 2006-07). Table 2 depicts the overall Capital to Risk Weighted Asset Ratio (CRAR) as per Basel II framework for Indian commercial banks as on 31<sup>st</sup> March 2010 and 2011.

**Table 2**  
**Bank-wise CRAR as per Basel II Framework for Major Indian Commercial Banks**  
**as on 31<sup>st</sup> March 2010 and 2011**

Name of Bank	Year 2010			Year 2011		
	CRAR as per Basel II (in %)			CRAR as per Basel II (in %)		
SBI and Nationalized Banks	Tier I	Tier II	Total	Tier I	Tier II	Total
State Bank of India (SBI)	9.45	3.94	13.39	7.77	4.21	11.98
Allahabad Bank	8.12	5.5	13.62	8.57	4.39	12.96
Andhra Bank	8.18	5.75	13.93	9.68	4.7	14.38

Bank of Baroda	9.2	5.16	14.36	9.99	4.53	14.52
Bank of India	8.48	4.46	12.94	8.33	3.84	12.17
Bank of Maharashtra	6.41	6.37	12.78	8.02	5.33	13.35
Canara Bank	8.54	4.89	13.43	10.87	4.51	15.38
Central Bank of India	6.83	5.4	12.23	6.31	5.33	11.64
Corporation Bank	9.25	6.12	15.37	8.59	5.52	14.11
Dena Bank	8.16	4.61	12.77	9.77	3.64	13.41
Indian Bank	11.13	1.58	12.71	11.02	2.54	13.56
Indian Overseas Bank	8.67	6.11	14.78	8.16	6.39	14.55
Oriental Bank of Commerce	9.28	3.26	12.54	11.21	3.02	14.23
Punjab National Bank	9.11	5.05	14.16	8.44	3.98	12.42
Punjab & Sind Bank	7.68	5.42	13.1	8.35	4.59	12.94
UCO Bank	7.05	6.16	13.21	8.61	5.19	13.8
<b>Private Sector Banks</b>						
Axis Bank	11.18	4.62	15.8	9.41	3.24	12.65
HDFC Bank	13.26	4.18	17.44	12.23	3.99	16.22
ICICI Bank	13.96	5.45	19.41	13.17	6.37	19.54
Kotak Mahindra Bank	15.42	2.93	18.35	18	1	19

Source: *Basel II in India – Compliance and Challenges* (Kaur M. and Kapoor S., 2011)

## Advent of Basel III Regime

In the wake of late-2000s financial crisis the postulates given by existing version of Basel Accords i.e. Basel II were found to be inadequate and deficient in multiple aspects. This gave rise to need for stringent and situation specific norms based on the lessons learnt from the period of financial crisis. For instance, Basel III forwarded a change in *loan risk calculation* framework of the Basel II which some consider a causal factor in the credit bubble prior to the 2007-08 collapse. Further, under Basel II one of the principal factors of financial risk management was out-sourced to companies that were not subject to supervision i.e. *Credit Rating Agencies*. Creditworthiness ratings for various financial instruments were conducted without supervision by official agencies, leading to AAA ratings on *Credit Default Swaps (CDS)* and *Mortgage-backed Securities (MBS)* which proved to be catastrophic during the financial crisis.

Taking lessons from resultant crisis, in Basel III a concept of *Scenario Analysis* has been introduced. Under this, three official scenarios are to be issued by the country's banking regulator, out of which the independent rating agencies and firms are instructed to apply more extreme scenarios prescribed.

Basel III will require banks to hold 4.5% of the common equity (up from 2% in Basel II) and 6% of Tier-1 capital (up from 4% in Basel II) of risk-weighted assets (RWA). Basel III also introduces additional capital buffers, (i) a mandatory capital conservation buffer of 2.5% and (ii) a discretionary countercyclical buffer, which allows national regulators to require up to another 2.5% of capital during periods of high credit growth. In addition, Basel III introduces a minimum 3% leverage ratio and two required liquidity ratios. The Liquidity Coverage Ratio requires a bank to hold sufficient high-quality liquid assets to cover its total net cash outflows over 30 days; the Net Stable Funding Ratio requires the available amount of stable funding to exceed the required amount of stable funding over a one-year period of extended stress.

Migration to Basel III will take time as far as commercial banks in India are concerned, since Basel II structure is still very much active in India banks. In the global front, few major countries have migrated to Basel III framework, with USA taking an initiating lead being at the helm of financial crisis.

## Six Year Roadmap for the Implementation of the Basel III norms by RBI

The Reserve Bank of India has laid out a six-year road map to make Indian banks safer and avoid recurrence of the 2008 crisis. But this step will need an estimated ₹ 150 billion (\$3 billion) in capital at a time it is scarce. The central bank has raised the equity component in overall capital and restricted dividend or bonus pay outs when

capital ratios fall close to mandated levels. It has also addressed banks' leverage ratios, which will shrink off-balance sheet business and investments in subsidiaries, to reduce risk.

The banking regulator also aims to reduce systemic risk by eliminating some dodgy entries in the books of accounts and explaining the cross-holdings of capital instruments among banks, which exposed many of them during the credit crisis. These guidelines prepared by the Basel Committee on Banking Supervision (BCBS) are implemented "with the objective to improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source, thus reducing spill over from the financial sector to the real economy.

Prudential norms under the Basel - III accords have become a bone of contention between bankers and regulators as the former say it would drag down return ratios and may not serve the purpose. But the regulators believe the banks are biased and these capital buffers are essential to prevent another 2008 like crisis, which led to governments bailing out banks with taxpayer's money. Capital Adequacy levels will rise to as high as 11.5%, from 9%, by 2019.

## GLOBAL BANKING TRENDS

The global macro-economic situation in 2009-10 was characterized by an unbalanced economic recovery across advanced and emerging economies, moderation in economic prospects in 2011, high levels of unemployment and inflationary pressures, and elevated levels of government debt (Report on Trends and Progress of Indian Banking in India 2010-11, RBI).

### Uncertainty about Credit Revival

Against the macro-economic backdrop in the preceding section, banking business in some advanced economies showed signs of revival in 2010. An increase in the growth of bank credit was evident in the US, Germany and France in the first quarter of 2011 after entering into the negative growth zone after the crisis. However, there was uncertainty about whether this credit revival would continue or not given the picture of economic revival looking bleak in the US and gradually in Germany too.

In fact, credit growth witnessed a slump of in the second quarter of 2011 in the US. In the UK and Japan, bank credit growth, which had entered a downtrend since the beginning of 2009, had shown a recovery in 2011, but it remained in the negative zone. Other advanced economies from Europe, particularly countries with fiscal strains, namely Portugal, Spain and Italy, showed a steep fall in the growth in bank credit with no signs of revival till 2011.

### Return on Assets showed a Moderate Increase

Apart from the pickup in credit growth, Return on Assets (RoA), an indicator of banking system's profitability and soundness, also showed a moderate increase in the US and France in 2010 (Table 3). The RoA of US banks turned positive by 2010 after staying in the negative zone in 2008 and 2009, and it showed a further rising trend in 2011. In Russia, China and Malaysia, the RoA of the banking system, which had dipped between 2008 and 2009, recovered between 2009 and 2010. In Russia and Malaysia, the trend of increase in RoA continued even in 2011. The RoA of Indian banks too showed a modest rise between 2008 and 2010.

**Table 3**  
**Return on Assets of Banks for Select Economies**

Country	2007	2008	2009	2010	2011
<b>Advanced Economies</b>					
France	0.4	0.0	0.4	0.6	...
Germany	0.3	-0.1	0.2	...	...
Greece	1.0	0.2	-0.1	-0.6	-0.3
Italy	0.7	0.3	0.2	...	...
Japan	0.3	-0.3	0.2	0.4	...

Portugal	1.2	0.4	0.4	0.5	0.5
Spain	1.1	0.8	0.6	0.5	...
UK	0.4	-0.4	0.1	0.2	...
USA	1.2	-0.1	-0.1	0.9	1.2
<b>Emerging and Developing Economies</b>					
Russia	3.0	1.8	0.7	1.9	2.3
China	0.9	1.0	0.9	1.0	...
India	0.9	1.0	0.9	1.0	...
Malaysia	1.5	1.5	1.2	1.5	1.8
Brazil	3.4	1.5	2.4	3.2	3.3
Mexico	2.3	1.4	1.5	1.8	1.6
<i>Source: Report on Trends and Progress of Banking in India 2010-11 (Reserve Bank of India)</i>					
... Not Available					

## Financial Soundness of Banks

### Increase in levels of Capital Adequacy

The level of capital adequacy across banks in most advanced economies was on a steady rise between 2008 and 2010 (Table 4). By 2010, in the UK, US, Japan and Germany, Capital to Risk- weighted Asset Ratio (CRAR) was placed above 15%. The ratio showed a further increase for US and German banks in the first quarter of 2011. Among the major emerging economies, however, the level of capital adequacy showed a moderate decline between 2009 and 2010, with the exceptions of China, India and Mexico. Both Mexican and Chinese banks showed a moderate decline in their capital positions by March 2011.

**Table 4**  
**Capital to Risk-Weighted Assets Ratio of Banks in Select Economies**

Country	2007	2008	2009	2010	2011
<b>Advanced Economies</b>					
France	10.2	10.5	12.4	12.3	...
Germany	12.9	13.6	14.8	16.1	16.6
Greece	11.2	9.4	11.7	11.4	12.3
Italy	10.4	10.8	12.1	12.3	...
Japan	12.3	12.4	15.8	16.7	...
Portugal	10.4	9.4	10.5	10.2	10.5
Spain	11.4	11.3	12.2	11.8	...
UK	12.6	12.9	14.8	15.9	...
USA	12.8	12.8	14.3	15.3	15.5
<b>Emerging and Developing Economies</b>					
Brazil	18.7	18.2	18.9	17.6	18.2
China	8.4	12.0	11.4	12.2	11.8
India	12.3	13.0	13.2	13.6	...
Malaysia	14.4	15.5	18.2	17.5	16.4
Mexico	15.9	15.3	16.5	16.9	16.5
Russia	15.5	16.8	20.9	18.1	17.2
<i>Source: Report on Trends and Progress of Banking in India 2010-11 (Reserve Bank of India)</i>					
... Not Available					

### Uneven Decline in Leverage

An element of unevenness was observed in the decline in banking sector leverage across countries after the crisis. Here the percentage of total capital (and reserves) to total assets has been taken as an indicator of leverage

in the banking system. In the US, leverage in the banking system showed some moderation between 2008 and 2010 (Report on Trends and Progress of Banking in India, 2010-11, RBI). Notwithstanding this moderation, the extent of leverage for UK banks continued to be at relatively high levels. Deleveraging had not gained any significant momentum in the banking systems of other advanced European economies, viz., France, Germany, Portugal, Greece and Spain, treating 2008 as the reference point.

In major emerging economies, banking systems were generally less leveraged than most advanced economies. Moreover, the banking systems in these economies did not show signs of any perceptible increase in leverage during the crisis period. However, treating 2008 as the reference point, in many emerging economies, there was an increase in the leverage of their banking systems in the post-crisis period. The Global Financial Stability Report (GFSR) (September 2011) had in fact highlighted re-leveraging as a major concern for banking systems in emerging economies.

## CONCLUSION

It can be concluded that Indian banks are still having a preferential affinity towards operating in Basel II regime. It will take some time before the major banks break free from the existing Basel II provisions and embrace the policy provisions recommended as a part of recent Basel committee accords i.e. Basel III. As a response to the financial crisis, the proactive role of Reserve Bank of India (RBI), India's central bank, has been commendable. Enforcement of prudential norms and maintenance of adequate liquidity using diverse policy rates at its disposal have been the hallmark of RBI's role as central banking authority. Adoption of International Financial Reporting System (IFRS) has been another major bone of contention for the Indian banks in the recent times.

Credit risk happens to be a significant component of bank's overall financial risk profile. The awareness and more importantly the assessment of credit risk assumes enhanced significance in current competitive environment wherein the commercial banks operate. Adoption of a transparent credit risk management model with defined criteria for risk assessment indeed goes a long way towards catering to CRM issues of commercial banks globally.

On the global front, banks had been significantly impacted by the burst of subprime bubble which had its root within the credit granting financial institutions itself. Global banks though, unlike their Indian counterparts, have more open towards embracing Basel III provisions. Post financial crisis, the global banks have been rather uncertain as far as revival of credit granting business is concerned, though the initial signals have been encouraging in few advanced economies. Additionally, global banks in the post crisis environment have experienced only a moderate increase in their Return on Assets, a key indicator of banks financial prosperity.

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# **THE CONSTITUTIONAL RIGHT TO SUSTAINABLE- AND ECONOMIC DEVELOPMENT IN SOUTH AFRICA: A LEGAL PERSPECTIVE**

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## **ABSTRACT**

*The South African Constitution, in section 24, entrenches the right to a healthy environment and sustainable development. Sustainable development is however not a right that exists in isolation. The Brundtland Report found that one of the major causes of global environmental problems is poverty. The victims of poverty are also the people who experience the effects of environmental challenges the most. People living in poverty are therefore both the agents and victims of environmental degradation. For this reason sustainable development in South Africa cannot be discussed without including the impact of sustainable development on economic development in the country. This paper will provide an overview of sustainable development and the importance of economic development as a part thereof in the country.*

## **INTRODUCTION**

Sustainable Development was formally, and now famously, defined for the first time in 1987 with the publication of the report of the World Commission on Environment and Development (WCED) – “*Our Common Future*”, also called the Brundtland Report. The Brundtland Report defined sustainable development as “development which meets the needs of the present without compromising the ability of future generations to meet their own needs”.

Brundtland stated that sustainable development must take into consideration the concept of needs, especially the essential needs of the poor, which should receive overriding priority. The Brundtland Report further argued that ‘... the goals of economic and social development must be defined in terms of sustainability in all countries – developed or developing’.

Sustainable development rests essentially on three pillars, namely environment protection, economic development and social needs. There needs to be a balance between the three pillars to obtain sustainable development. Poor people often need to exploit the environment to ensure short term survival, without paying too much attention to how their actions will affect future generations. To this extent people living in poverty are both the agents and victims of environmental degradation. Sustainable development in South Africa can therefore not be discussed without including economic development as well.

## **INTERNATIONAL POSITION**

After the Brundtland Report was published the international community came together at the United Nations Conference on Environment and Development in Rio de Janeiro in 1992, to discuss the state of the environment and the way forward. Agenda 21 was introduced at the Rio Earth Summit as an action plan relating to sustainable development. The authors of Agenda 21 envisioned that it will affect all areas of human lives in terms of three principles called the 3 E’s, namely Equity, Economy and the Environment. One of the central themes discussed in Agenda 21 is sustainable economic development. Globally the focus is on economic development, without paying attention to the detrimental effect this has on the environment. Agenda 21 placed

the emphasis on the fact that economic development and sustainable development (including environmental protection) do not have to be mutually exclusive. The global arena needs to develop policies, strategies and legislation to change unsustainable consumption patterns in order to halt environmental degradation. Another major theme of Agenda 21 is the eradication of poverty by making natural resources available to poor people, to allow them to live sustainably. Agenda 21 aims to promote public-private partnerships between national governments and industry to achieve sustainable economic growth on a global scale.

The Rio Earth Summit was followed in 2002 by the World Summit on Sustainable Development (WSSD), held in Johannesburg. The international community's commitment was reaffirmed at the 2002-summit with the Johannesburg Declaration. One of the key concerns raised at the WSSD was transnational trade agreements which have the effect of exporting pollution to poorer countries, whilst making the richer countries appears cleaner. Through these trade agreements, economic development is taking place in developing countries, but to the detriment of sustainable development. The WSSD again stated clearly that the eradication of poverty, as described in Agenda 21 and the Millennium Declaration, is an issue of utmost importance.

The Millennium Declaration was adopted by world leaders at the 2000-Millennium Summit, held in New York. Part of the Millennium Declaration is the Millennium Development Goals. Goal 1 established the aim of the international community to eradicate extreme poverty and hunger, and Goal 7 aims to ensure environmental sustainability by integrating the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources. It is therefore clear that poverty alleviation and sustainable development should be goals that countries aim to achieve in unison.

## **SOUTH AFRICAN POSITION**

### **History**

Prior to 1994 the majority of South Africans were denied basic human rights as a result of apartheid. The country was governed by the white minority, and the black majority was oppressed and grossly discriminated against. Many socio-economic rights were reserved for the white population only, such as quality education (primary-, secondary- and tertiary education). Black people were also not allowed to live in so-called 'white' areas. These areas were the areas surrounding the economic hubs of the country, making it difficult for black people living far away from these areas to participate in economic activities. Certain job opportunities were also reserved for whites only, which lead to a large part of the community living in dire circumstances of poverty.

In the 1980's representatives of the apartheid government entered into negotiations with the opponents of apartheid, as the apartheid's government realized that the prevailing policies were not likely to achieve stability in the country. Informal talks started in 1985 between the National Party government and Nelson Mandela, who was still imprisoned at that stage. These meetings continued until 1990, at which time the then State President, FW de Klerk, announced the lifting of all legal restrictions on the main liberal political role players, namely the African National Congress (ANC), the Pan Africanist Congress (PAC) and the South African Communist Party (SACP). The unbanning of these parties, together with the release of political prisoners and the return of political exiles, opened the way for formal negotiations to democratize South Africa.

The formal negotiations between all the major political parties in South Africa commenced in 1991 as the Conference for a Democratic South Africa (CODESA). In 1993 CODESA ended with the adoption of the Interim Constitution on 22 December 1993, which was adopted as an Act by the apartheid's government. The Interim Constitution came into force on 27 April 1994 as a transitional constitution, changing South Africa from a parliamentary sovereign state to a country where constitutional supremacy existed and any law that is inconsistent with the Constitution will be invalid to the extent that the law is inconsistent with the Constitution. On this date the first democratic elections in South Africa took place, where all South African citizens over the age of 18 years had the opportunity to vote for the political party of their choice. The ANC won this election with a vast majority.

### **Poverty**



Economic development is a challenge which the South African government faces on a daily basis. The only way to alleviate poverty, and eventually to eradicate poverty all together, is through economic development. A large portion of the South African population still lives in poverty. For these people sustainable development is not a priority. Their first priority is survival, irrespective of the damage done to the environment, or the effect this may have on future generations.

In order to determine the prevalence of poverty in South Africa, it is necessary to define poverty for the country. This is not an easy task as no formal definition for poverty exists. The World Bank defines poverty as a 'pronounced deprivation in well-being'. To establish whether a person is living in poverty, poverty must be measured. Poverty lines are used to measure poverty, if a money-centric approach is followed. The international poverty line to determine absolute poverty in developing countries is \$1.25 (approximately R8.75) per capita per day at 2005 prices.

This poverty line means different living standards for different countries, as \$1.25 in the United States of America does not have the same buying power as in South Africa. It is therefore necessary to determine the poverty line for South Africa in the South African currency (South African Rand), before it can be determined how prevalent poverty really is in the country.

The National Treasury proposed an official poverty line for South Africa to assist in measuring the extent of household poverty, and to determine the effectiveness of poverty alleviation strategies. The Treasury based the poverty line for South Africa on minimum food needs for daily energy requirements (approximately 2 000 calories per person per day), as well as essential non-food items. The Treasury also included an additional two thresholds above and below the official poverty line to determine extreme poverty (below the official poverty line) and inadequate household income (below the official poverty line). The poverty line needs to be adjusted at least every five years to make provision for inflation. The National Treasury set the official poverty line for South Africa at R515 (at 2008 prices) per person per month. The higher threshold is set at R949 per person per month. R515 per month is comparative to \$121 purchasing power, and R949 is equal to \$223 purchasing power per month.

Another dimension of poverty includes the deprivation of essential services that allows a person to obtain a certain standard of living. This lack of essential services includes access to basic housing, water and electricity. The United Nations Development Programme used the Multidimensional Poverty Index (MPI) in its Human Development Report 2010 to determine the percentage of the South African population living in poverty, as well as the percentage of people living in South Africa who are deemed vulnerable to poverty. The MPI identifies different areas of deprivation suffered by households living in poverty, namely education, health and standard of living. The statistics for income poverty (the money-centric approach) was also included in the report and compared to the results of the MPI.

In terms of the MPI 3.1% of South African households suffered from multiple deprivations, with nearly 4% of the population vulnerable. Income poverty is estimated at 26%, if the poverty rate used to measure poverty is \$1.25 per person per day. If the poverty line expressed in ZAR is used, this total is closer to 50% of the population living in poverty. The 23% difference between the MPI and income poverty can be explained by non-income resources provided to the families with low incomes.

In the Millennium Development Goals Country Report 2010, released by the South African Government, the statistics for people living in the country supports the above figures. The proportion of the population living below the absolute poverty line of \$1.25 per day is estimated at 9.7% (in 2006), and the proportion of the South African population living between \$2 per day is estimated at 25.3% (also in 2006). In a country with a population of more than 49.3 million people that equates to nearly 4.8 million people surviving on less than \$1.25 per day and close to 12.5 million people living on less than \$2 per day.

## **The South African Constitution (Act 108 of 1996)**

As the Interim Constitution of 1993 was only a transitional constitution, the process to draft a final Constitution for South Africa had to start after 27 April 1994. The Interim Constitution set out, as one of its principal objectives, the procedures and processes to follow in order to negotiate and draft the final constitution for the

new democracy. This final Constitution was drafted by the democratically elected Constitutional Assembly, and approved by the Constitutional Court. The Constitution of the Republic of South Africa was signed into law by President Nelson Mandela on 10 December 1996, and became operational on 4 February 1997.

The preamble of the Constitution states clearly that the aims to heal the divisions of the country's past by establishing a society based on democratic values, social justice and fundamental human rights, as well as to improve the quality of life of all citizens and to free the potential of each person.

Chapter 2 of the Constitution (the Bill of Rights) focuses on the rights the people of South Africa are entitled to. The Bill of Rights does not only provide for civil and political rights, but also includes socio-economic rights. The Bill of Rights are not only a negative enforcing mechanism, because the Constitution, through section 7(2), places a positive duty on government to put policies, programmes and legislation in place to fulfill, promote and protect socio-economic rights. Even though all these socio-economic rights are entrenched in the Constitution and enforceable by the South African courts, a large part of the South African community still live in desperate circumstances of poverty 18 years after the first democratic elections took place in the country.

Since 1987, sustainable development has been recognized by international law, as well as national law. S24 of the Constitution also entrenched the concept of sustainable development in South African law. S24 of the Constitution states:

- 'Everyone has the right:*
- a) To an environment that is not harmful to their health or well-being; and*
  - b) To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that*
    - i) Prevent pollution and ecological degradation;*
    - ii) Promote conservation*
    - iii) Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.'*

Section 24 (b) states that government needs to protect the environment through reasonable legislative and other measures. This requires government to take positive action in fulfilling the right to a protected environment. All three levels of government (national, provincial and local government) must be involved in this process. Section 152(1) (d) of the Constitution specifically states that one of the objects of local government is to promote a safe and healthy environment. Local government must also have the promotion of social and economic development as an object (section 152(1) (c)).

The Constitution does not promote sustainable development as a lone-standing ideal. Section 24(b) (iii) goes further to state that government must "secure ecologically sustainable development and use of natural resources *while promoting justifiable economic and social development*" (my emphasis). This is a clear indication that the Constitution aimed to also included the goal of "improving the life of all citizens" in section 24. The court, when interpreting s24, must not do so in isolation, but that regard should also be given to other rights contained in the Bill of Rights, such as the rights to life, equality, dignity, property and socio-economic rights. The Constitution clearly states that the environment needs to be protected through sustainable development, whilst keeping economical and social development in mind. This is of particular importance when sustainable development is measured against poverty. It is therefore clear that the Constitution envisions a society based on social justice, also where environmental law is concerned.

Section 10 of the Constitution states that "everyone has inherent dignity and the right to have their dignity respected and protected". Dignity is also one of the fundamental values the Constitution is based on. A person's dignity is severely impacted on if that person needs to salvage other people's waste in order to survive. By creating a sustainable environment to which people living in desperate circumstances have access to, government can fulfill its constitutional duty to respect and promote a person's dignity.

Everyone has the constitutional right to life (section 11). All people rely on natural resources and the environment to stay alive. Without air, food and water we cannot survive. It is therefore obvious that section 11 and section 24 overlaps.

## National Environmental Management Act 107 of 1998 (NEMA)

Section 24(b) of the Constitution places a duty on the South African government to take reasonable legislative and other measures to protect the environment. In response to this obligation the National Environmental Management Act 107 of 1998 (NEMA) was implemented.

The purpose of NEMA is to “*provide for cooperative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote cooperative governance and procedures for coordinating environmental functions exercised by organs of the state*” (as described in the Act).

It is also clearly stated in the preamble of NEMA that “*sustainable development requires the integration of social, economic and environmental factors in the planning, implementation and evaluations of decisions to ensure that development serves present and future generations*”.

NEMA, in section 2(1), sets out the principles that must be applied by all organs of state to their actions, if these actions may significantly affect the environment. These principles include the fact that all environmental decisions must be made in line with the social and economic rights contained in Chapter 2 of the Constitution benefitting especially those people disadvantaged in the past under apartheid.

Sustainable development as described by NEMA is based on three factors, namely social-, economic- and environmental factors. In planning, implementing and decision-making concerning sustainable development in South Africa, the various organs of state need to use an integrated approach based on the three pillars on which sustainable development is based to ensure that development serves not only the present generation, but future generations as well.

Section 2(2) requires that people and their needs must be placed first by environmental management. This has the effect that NEMA broadens the scope of sustainable development to not only include environmental concerns and economic development, but also social- and cultural interests.

Sustainable development is directly addressed in sections 2(3) and 2(4) of NEMA. Section 2(3) determines that ‘*development must be socially, environmentally and economically sustainable*’. Section 2(4) (a) continues to explain the factors which need to be considered in sustainable development. Section 24(b) of the Constitution, read together with section 2(4) (a) of NEMA, entrenches sustainable development as the cornerstone of the South African environmental law.

Section 2(4) (d) determines that special measures must be taken to ensure that disadvantaged persons, who were unfairly discriminated against, gain access to equitable environmental resources.

To ensure that all stakeholders have a say in environmental governance, section 2(4) (f) states that government should promote the participation of all interested and affected parties. This includes vulnerable and disadvantaged persons. NEMA goes further to say that environmental education and the raising of environmental awareness must be promoted to achieve community wellbeing (Section 2(4) (h)).

NEMA provides for the establishment of the National Environmental Advisory Forum (NEAF). NEAF was established in 2005, with its aim to advise the Minister on any matter concerning environmental management and governance, specifically the setting and achievement of objectives and priorities for environmental governance, and appropriate methods of monitoring compliance with the principles set out in Section 2 of the Act.

## The National Framework for Sustainable Development

To meet the international- and national requirements of sustainable development the South African government passed the National Framework for Sustainable Development (NFSDF) in July 2008. The NFSDF was introduced to serve as the foundation from which a Sustainable Development action plan must be developed for South

Africa. The NFSD describes 5 strategic priority areas which must be addressed in order to ensure a sustainable, economically prosperous and self-reliant nation. These 5 priority areas are:

- Enhancing systems for integrated planning and implementation
- Sustaining our ecosystems and using resources sustainably
- Investing in sustainable economic development and infrastructure
- Creating sustainable human settlements
- Responding appropriately to emerging human development, economic and environmental challenges.

## **Sustainable- and Economic Development in South African Case Law**

In South African case law the connection between socio-economic considerations and sustainable development was discussed in *Fuel Retailers Association of Southern Africa v Director General Environmental Management, Department of Agriculture, Conservation and Environment, Mpumalanga Province* 2007 (6) SA 4 (CC). The court held in paragraph 45 that:

*'The Constitution recognizes the interrelationship between the environment and development; indeed it recognizes the need for the protection of the environment whilst at the same time it recognizes the need for social and economic development. It envisages that environmental considerations will be balanced with socio-economic considerations through the ideal of sustainable development.'*

Sustainable development and economic considerations were also the issue in *BP Southern Africa (Pty) Ltd v MEC for Agriculture, Conservation, Environment and Land Affairs* 2004 (5) SA 124 (W). The applicant wanted a decision by the Gauteng Provincial Department of Agriculture, Conservation, Environment and Land Affairs (GDACE) set aside, the Department refuse to allow the applicant to open a filling station on one of its properties. The department based its decision on environmental factors, but the applicant claimed that the decision was an economic one as there was already two other filling station in a three kilometer radius. The applicant claimed that the department refusal was based on an attempt to protect the financial interests of the existing filling stations. The court held that the department had the right to refuse the applicant's application to open a filling station on the grounds that the definition of environment included economic-, social- and cultural considerations, and that the department had the right to consider the community's socio-economic rights in terms of the Constitution and NEMA.

## **CONCLUSION**

It is of the utmost importance that all people take sustainable development and the protection of the environment to heart. Not only is this important for the present generation to enjoy a healthy life in a clean environment, but as custodians of the environment we also have the obligation to ensure that future generations will enjoy the same privileges that we do. As indicated, the wellbeing of the environment should not be our only concern. The needs of the people, especially the poor, must also be considered.

Sustainable development can only be effective if an integrated approach is followed in environmental governance. There needs to exist a balance between protecting the environment, economic development, social- and cultural needs of the community. Decision-makers must guard against preferring one of these factors above the other without a legitimate reason, as this might render decisions void. The high prevalence of poverty in South Africa is reflected in decision-making concerning sustainable development in that the economic development pillar is preferred above environmental protection which amounts to an economic-centred approach to integration. The need to make socio-economic rights available to the poor is often disguised as environmental concerns. This is not necessarily a wrong approach as the needs of people should always take the highest priority.

It is however necessary to keep the impact of decisions on our environment in mind. Decision-makers should weigh up the benefit to people against the detriment to the environment. Minimal benefit to people should not be considered if this will cause maximum detriment to the environment.

If the South African government succeeds in eradicating poverty in the country, the ultimate aim of section 24 of the Constitution and NEMA will become a reality. All decisions made by government will follow an

environment-centred approach where the protection of the environment will be the first priority. Presently this is not possible as too many people are still living in extreme circumstances of poverty.

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# **23 YEARS SINCE THE ESTABLISHMENT OF THE GREEK PATENT OFFICE: THE PAST, THE PRESENT AND THE FUTURE**

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## **ABSTRACT**

*This paper aims at studying the development of intellectual property in Greece. It particularly focuses on the Greek patent system and its functioning and development since its establishment in 1988. The analysis relies on the theoretical and empirical arguments of the importance of intellectual property in economic development and on its description and measurement through patent data, which are considered to be a major category of intellectual property. Results could be useful in the development of the Greek innovation policy and, in this context, could also be integrated into a wider discussion on the development of the Greek innovation system.*

## **INTRODUCTION**

The term intellectual property is used to describe ideas, inventions, technological and artistic works, music and literature, which in total are intangible when being created and acquire value only when they get a particular form- shape as final products. Intellectual property mainly refers to the commercial application of a concept, which leads to the solution of technical or artistic issues. Intellectual property isn't the product but the specialized idea behind it and the way that this idea can be expressed and, then, further defined and described. The term intellectual property is used to describe the value and it is only applied in inventions, works and appellations of origin for which an individual or a team demands and claims property. The issue of property is important because the potential economic benefits can be a significant motive for the development of respective ideas and the encouragement- promotion of other related activities. Intellectual property is based on the existing knowledge, which exploiting on the one hand existing studies, works and experiences from the past and on the other hand old ideas and conceptualizations, is further improved in a creative way.

As already mentioned patents are one main category of intellectual property. They compose one of the most important and officially recorded data source and proof of appropriation of new knowledge. Patents are, therefore, a tool and a mechanism of public policy, which has been created to push and further strengthen the existing national R&D system, protecting the innovation activities and developing more efficient conditions for the further production of technological change. This tool gradually took a more formal shape, became a system and a regime including on the one hand many laws, which are continually strengthened and on the other hand many regulations, which are continually improved. Obviously, the products of knowledge and the demand for appropriation don't end with the filing of patents. Gradually, other kinds of new knowledge emerged and therefore new or differentiated demands for appropriation and protection appeared. Nowadays there are literature, artistic and scientific works which are protected through copyright, inventions in all fields of human creativity and effort, which are protected through patent titles, scientific discoveries, trademarks, commercial names and appellations of origin. All these types of human creativity are protected through the system for the protection of intellectual property.

This paper aims at studying the development of intellectual property in Greece. It particularly focuses on the Greek patent system and its functioning and development since its establishment in 1988. The analysis relies on the theoretical and empirical arguments of the importance of intellectual property in economic development and on its description and measurement through patent data, which have been considered to be on the one hand a major category of intellectual property rights and on the other hand a good and reliable source of information for this purpose. The rest of this paper is structured as follows: Second part discusses the theoretical and empirical evidence of the importance of intellectual property and the main rationale behind its existence and functioning. Section three focuses on some methodological issues, while describing the data that has been used for this paper. Section four presents the main results of analysis, which are based on the examination of all patents granted by the Greek patent office during the period 1988-2010. The Greek case is presented in an historical context, which examines the evolution of the Greek patent system and analyses its main features in terms of annual and total growth of patents, ownership, geography, technological content. In addition all technological fields are related to industrial sectors in order to have a first interpretation of the economic direction of the developed patents. The fifth part of this paper synthesizes and summarizes the main results, starting from a more general discussion on the 'present' and 'future' of the Greek patent system and ending on integrating results into a wider context. Finally, the sixth part contains the main conclusions.

## **THEORETICAL EVIDENCE AND BIBLIOGRAPHY REVIEW**

There is a specific rationale regarding the functioning of a system for the protection of intellectual property and a specific economic meaning and interpretation at government level behind it. Summarizing the main idea is the following: In spite of the short term and temporary losses at prosperity level, governments need to offer to creators a kind of monopoly privilege for a certain period of time in order to encourage creativity. Without this monopoly privilege, intellectual property creators couldn't completely appropriate the benefits of their research and, consequently, less innovation will be produced for the economy in total. If it is accepted that the system of intellectual property creates a market failure, governments are asked to 'correct' this failure and based on that argument they also accept and define rights on intellectual property. Therefore, it is believed that such a system aims at two things: First the encouragement of investments in relation to knowledge creation and innovation, through the award of exclusive rights on use and sell of new technologies, goods and services. Second the dissemination of new knowledge through the publication of information, which is included in it. Thus, the system for protection of intellectual property tries to balance between two contradictory situations, namely those of strengthening of protection and its confinement. The former confines and reduces the social benefit which is derived from the development of new knowledge, increasing at the same time the motives for innovation. The latter encourages and increases the dissemination of results of new knowledge, confining at the same time the probable profit of the investment.

From the above arguments it is rather implied that there is a connection between intellectual property protection and economic development. Knowledge is the starting point of this connection, as knowledge is a key component of the innovation process, which is a prime economic activity. Through the innovative process and the contribution of human creativity, innovations are made, which can be protected by the system of intellectual property rights. Thus, it could be easily and perhaps naively argued that such a system contributes positively to economic development and that its further reinforcement will result in more growth and, therefore, prosperity. But are things like this? Looking more closely at this relationship, it can be believed that it isn't easy to determine how property rights affect the process of economic development. This difficulty arises, first by identifying the fact that economic development is a complex process, and secondly by the content of the development process. The positive or negative effect of intellectual property protection in economic development has long preoccupied scholars and researchers of this field. The literature is rather sufficient, but the opinions conflicting. Among the views that insist on the positive impact, the basic argument is that the system of intellectual property rights plays a positive role in developing new businesses, streamlining the inefficient industrial and technological development, promoting the extension of trade (Maskus and Penubarti 1995; Maskus et al. 2005), encouraging foreign direct investments (Mansfield 1995; Boransztein et al. 1998) and producing more technology transfer (Yang and Maskus 2001).

Gould and Gruben (1996), being among the first that combined growth rates with patents, didn't find a significant and immediate impact of patents in economic growth, but instead a significant and positive impact of



patents in the measured variable of 'trade openness'. This means that patents in open economies increase the growth of these countries, which implies that more comprehensive market liberalization combined with a stronger intellectual property system contribute to economic growth. Ginarte and Park (1997) studied the determinants of intellectual property through the examination of the patenting laws. Results showed that the developed countries had higher indicators and with less volatility than the economies of middle and low economic income. The average increase in protection from poor to middle-income countries was significantly lower than that of middle income countries to the rich. Mascus and McDaniel (1999) examined the way the Japanese patent system influenced the postwar technological progress, through the recorded growth in the overall productivity. The two researchers suggested that utility models were an important source of technological change and diffusion of information, while patent applications had both a direct and indirect boost in productivity. Braga et al. (2000) argued that such a system can enhance economic growth and stimulate technological change and, thus, improve its growth prospects, if of course the laws that govern it are structured in a way that promote the effective and dynamic competition. Mascus (2000) investigated the determinants of patent rights in 72 countries through regression models. Among his main findings were that the market size, as measured by total GDP, had no significant impact on patent rights. At the same time he argued that patent rights will begin to pay off if the income increases beyond the existing levels. In a similar work by Falk (2005), the factors that determine the development of patents were identified. He found that factors such as the specialization in ICT, the R&D expenditures, the strength of intellectual property, the human capital intensity and the per capita GDP are positively related to patents.

On the other side, there are views that emphasize the negative impact, supporting the argument that the system of intellectual property rights may harm the growth expectations by increasing the cost of imitation and allowing monopolistic behaviors by the owners- holders of intellectual rights. In addition there are views that underlie the danger of an increase in unemployment as a result of intellectual property rights in developing countries due to the fact that many employees are involved in the production of copied and without authorization goods. As these countries improve and modernize their intellectual property laws, employees have to find alternative work and such a situation could have a negative impact on economic growth, as described by Mascus (2005) in a related work. A second possible negative consequence of the intellectual property in economic development is the prevalence of monopoly prices, resulting from the award of exclusive rights for the exploitation of new knowledge. For example the granting of patents on drugs, agrochemical and biotechnology has resulted in increased market power for the patent holders (Lanjouw 1998). The studies of McCalman (2002) highlighted another possible negative consequence of the intellectual property in economic development: the higher cost required for the use of new technology. This negative impact is based on the assumption that most of these costs can be transferred from developing countries or importers of technology to foreign patent holders in the form of financial returns. The fourth and last possible negative consequence of the intellectual property in economic development derives from the inherent nature of the system of protection. There is a 'global' pressure on developing countries on strengthening these systems, as a result of a more general harmonization effort. However, this strengthening and modernization is costly. Should developing countries bear these costs? It is not easy to answer this question and obviously there is a need to deeply analyse it. In fact for developing countries being adapted to the requirements of the TRIPS Agreement, they should take to address various forms of costs (e.g. cost of administration, management, equipment procurement, recruitment in the legal-judicial matters, education and training of personnel etc.).

This section presented some indicative works on the relationship, positive or negative, between intellectual property and economic development. In an attempt to integrate the above views, the truth lies somewhere in the middle and, therefore, the relationship between intellectual property protection and economic development is rather reciprocal and interdependent between potential gains and losses on one side and on the other between the competitive structure of markets and the effectiveness of some related regulations, including those of competitive policy and technological development. Especially in less developed countries the protection of intellectual property could be more related, and thus more effective to the issue of foreign direct investments and technology transfer rather than the domestic development of innovative products.

## **METHODOLOGY AND DATA ANALYSIS**

This paper examines the development of intellectual property in Greece, based on data that derive from patent documents and particularly all patents granted by the Greek patent office during the period 1988-2010. Patents have been considered to be a major category of intellectual property. In this context, the analysis is based on the elaboration of a database. This database contains all patents (Greek and foreign), which have been first applied and then granted in Greece.

There is a certain rationale and thus specific methodological choices behind the construction of this database. First, It has been decided to work only with data from the Greek Patent Office and thus to work only with patents, foreign and Greek, protected in Greece. Second, it has been decided to collect patent grants instead of simple patent applications, as there has been made a conscious choice of assigning higher value to this study and so to results. Based, therefore, on the fact that a patent is only granted when it contains a potential technological innovation, which exceeds a certain level of novelty, only patent grants can guarantee that. Third, it has been decided to use the IPC system of patent classification, relying on its main advantage, namely the fact that it is application-based and, therefore, facilitates both the identification of technological innovation and their assignment to different industrial sectors. The IPC is a hierarchy of codes, structured into different scales with several levels of breakdown primarily concerned with the technological characteristics of each invention. Last but not least, patents and particularly their technological content are related to respective manufacturing branches in order to have a first interpretation of the economic direction of the produced patents. This can't be done without the IPC patent classification and the matching of each technology to one or more manufacturing industries. IPC allows linking patents to one or more economic areas. The 1 to 1 matching can only be realized at the subclass technological level, where every technological subclass can be related to a manufacturing activity. This is due to the fact that there is no natural or perfect correspondence between technological classifications and economic areas.

Based on the above methodological choices, the data has been analysed and elaborated according to the following steps: Step one, patent documents in paper sheets have been collected from the Greek Patent Office for the period of 1988-2010. Based on these patent documents a patent database has been constructed, which contains all patents (Greek and foreign) that have been granted by the Greek Patent Office, a total of 7187 patents. Step two, patents have been divided and classified based on five criteria and more specific based on their national origin (e.g. 'foreign', 'Greek' and 'mixed'), institutional status- ownership (e.g. 'academic agent', 'firm', 'individual', 'research institution', 'public sector', 'mixed', 'other'), geographical location (e.g. 'country location' for foreign patents and 'regional location' for Greek patents), technological content (e.g. classification of patents among 8 'sectors', 20 'sub- sectors', 113 'classes', 637 'subclasses' and more than 2500 'main groups' and) and economic direction (e.g. classification of patents among 41 industrial sectors).

Some further remarks have to be clarified regarding methodology and elaboration of data: First, the total period of analysis has been divided to three sub-periods: 1988-1997 (period 1), 1998-2005 (period 2) and 2006-2010 (period 3). This enables the historical evolution and development of the Greek patent system, tracing at the same time changes in trends and behaviours, while highlighting technological- economic fields of absolute and relative importance. Second, the technological content of patents is analysed at five levels of analysis, from the more general (sector, sub-sector) to the more detailed (class, main group), thus ending up to group of products or simple products. Third, the correspondence of patents into relevant industrial sectors is based on their main technological content, thus the first patent code assigned to each patent. In this way it is also avoided the problem of overlapping, while being focused on its main potential application or industrial use. Forth, five different kinds of indicators have been constructed and presented in this paper and more specific indicators of patent counts per sub-period and total period, indicators of institutional status- ownership, indicators of geographical origin, indicators of technological content and indicators of economic direction based on the application or industrial use at NACE 2-digit level.

The section that follows presents the main results of the proposed analysis, starting from the issue of national origin and ending to that of economic direction of patents, marking and highlighting thereby the key features of the Greek patent system, as those arising from the content of patent documents.

## MAIN RESULTS

The annual and total growth of patents granted by the Greek patent office has been significant during the period 1988-2010. The Greek patent system was officially established in 1988 and it published its first bulletin on patent applications and grants in 1989. Since then it is in a process of continuous development and improvement. Greece as a member of both the European Union and other international agents and bodies integrates international laws and regulations and adapts the decisions of international conventions on intellectual property at national level and according to the national standards (e.g. PCT procedure, community patent). In total, 7187 patents have been granted by the Greek patent office during the period 1988-2010. The majority of these patents originate from foreign firms and Greek individuals (people). Patent activity started as a foreign firm activity of well known multinationals (e.g. Colgate Palmolive, Ethicon, Johnson & Johnson consumer products, McNeil consumer products), but gradually became a Greek individuals' hypothesis. In fact, the share of foreign firms accounted for 46.32% during the period 1988-1997, decreased to 9.16% during the period 1998-2005 and further decreased to 2.6% during the period 2006-2010. Focusing on the sample of foreign firms, their total number which accounts for 1565 patents is related to 581 foreign firms. The majority of these firms is involved in the industrial activity of 'chemicals and chemical products' and particularly in the production of pharmaceuticals and sanitary goods, while they originate mainly from the USA and the United Kingdom. The share of patents owned by Greek individuals shows a significant stability and dynamism. They accounted for 35.14% during the period 1988-1997, increased to 64.08% during the period 1998-2005 and further increased to 70% during the period 2006-2010. On the contrary patent activity from institutional categories such as academic agents and research institutions is very small. Results also show that patent activity isn't still important for the development of Greek firms. Their share is being gradually increased (from 9.87% to 20.35% and then to 24% during the period 2006-2010), but on average it accounts for 19.24% based on the total patent activity (Greek and foreign) or nearly 25% based on the Greek-domestic patent activity.

The geographical distribution of patents confirms both theoretical and empirical research in this field, which highlights the issue of concentration. With respect to foreign patents, most of them originate from the USA and the countries of the European Union (e.g. France, Germany and Italy). However the number of patents from USA is gradually decreased, accounting for only 6% during the period of 2006-2010 instead of 36.34% previously. The further study of the geographical origin of foreign patents reveals that the factors of both geographical and cultural proximity aren't important in Greece, as there no patents protected in Greece by its geographical neighbours, namely the Balkan countries (e.g. Bulgaria, Serbia, and Albania) and fewer than expected patents from Cyprus. With respect to Greek patents, results show that a large part of patent owners are located in few regions and, in most of cases, in their capitals. These regions and related cities are in fact Greek locations where most of population, economy and production are recorded. More specifically, 'Attiki'- the administrative region where the capital of Greece Athens belongs to- generally dominates, independently of the institutional status of patent owners, but this dominance is due to the performance of several regional entities and their related cities, which are mainly located at the central, northern and southern part of Athens. Some of these cities are characterised by a long industrial-commercial tradition in Greece, while others are of high-income and social status. The importance of the other 3 to 4 regions is more or less anticipated, as in these regions all the most important, at economic and demographic level, regional entities and cities are located. All important cities are also locations of international ports of entry-exit to the country and important industrial and commercial centres. Some of them are also the seat of industrial areas of the respective regional entities.

The technological content of patents varies and also depends on national origin and ownership. The foreign patent activity is highly concentrated on 'human necessities', where half of total foreign patents are classified, 'chemistry- metallurgy' and 'performing operations- transporting'. The share of 'human necessities' is even larger for firm patents. On the contrary the Greek patent activity is widely dispersed. Shares higher than 10% have been recorded in the sectors of 'human necessities', which ranks first, 'performing operations-transporting', 'fixed constructions', 'mechanical engineering- lighting- heating weapons- blasting' and 'physics' which barely surpasses the 10% share. 'Chemistry- metallurgy' and 'electricity' range between 5-10%, while only 'textiles- paper' accounts for very low absolute numbers. 'Human necessities' are further focused on technologies of 'agriculture', 'foodstuffs- tobacco', 'personal or domestic articles' and 'health, lifesaving, amusement'. 'Performing operations- transporting' is mainly related to technologies of 'transporting', while 'fixed constructions' to those of 'building'. 'Mechanical engineering- lighting- heating weapons- blasting' is further specialized to technologies of 'engines or pumps' and 'engineering in general', while 'electricity' leads to 'electric communication technique'. Particular for the sector of 'fixed constructions', it exhibits a remarkable stability, accounting for 14% of Greek patents during the whole period of analysis (1988-2010), while it is also a

sector of high concentration at technological class level, contrary to 'performing operations- transporting', which is a rather dispersed sector with many relatively important classes.

The economic direction of patents also varies and depends on national origin and ownership. The direct correspondence between technological and industrial fields shows that foreign patents are mainly related to the sectors of 'chemicals and chemical products' (e.g. pharmaceuticals), 'instruments' and 'medical equipment'. On the contrary Greek patents are characterized by a different and much more dispersed pattern. A careful examination shows that Greek patents are related to the following industrial activities based on NACE codes: First, chemicals (e.g. pharmaceuticals and pesticides-agrochemical products), second different kinds of machinery (e.g. agricultural-forestry, energy, office and computers, special purpose machinery, non-specific purpose machinery), third different kinds of equipment (e.g. medical, other transport, other electrical, industrial process control), four different kinds of instruments (e.g. measuring, optical), five products and final products from different materials (e.g. non-metallic mineral, fabricated metal, rubber-plastic, basic metal, wood), seven general basic and consumer goods (e.g. food-beverages, domestic appliances, furniture-consumer goods), eight electric and electronic equipment (e.g. signal transmission-telecommunications, television, receivers-audiovisual electronics) and nine particular forms of vehicles. Nearly, 80% of Greek patents are related to the above industrial activities.

The above results are some of the most important features of the Greek patent system. They reflect and express how the system has been structured and developed since its establishment. They also shed light on the past, sketching the present and helping build the future. However, what could be the future of this system? This issue is further discussed in the next session.

## DISCUSSION

This paper examines the development of intellectual property in Greece, focusing on the Greek patent system and its functioning and development since its establishment in 1988. Relying on the theoretical and empirical arguments of the importance of intellectual property in economic development and on its description and measurement through patent data, which have been considered to be on the one hand a major category of intellectual property rights and on the other hand a good and reliable source of information for this purpose, this paper presents the Greek case.

The theoretical evidence and bibliographic review highlighted both views that support the existence of such a system and those that reject it or at least are more reluctant with it. The main conclusion that results from the above bibliographic review is that the positive aspects outweigh the negatives and that 'the existence of a powerful system of protection of intellectual property can attract significant flows of technology, which can contribute to domestic technological development and lead to the desired long-term convergence'. However, is a common belief that the simple existence and strengthening of such a system is unlikely to bring these benefits. The potential benefits that may arise from the strengthening and reinforcement of intellectual property are many, for the long term, but can't be fulfilled without preconditions. This is due to the fact that developing countries are largely importers of technology, which means that these countries must develop adaptable principles of assimilation and absorption of new technologies according to the local industrial needs and conditions and then develop skills of technological development. In this effort, the contribution of human capital and domestic R&D is crucial. But another aspect that is equally important for developing countries to "seize" the potential benefits of the intellectual property is the existence and functioning of competitive markets.

The Greek patent system is a recent establishment and structure. The previous analysis described the way the system has been structured and developed. However, two issues emerge and should be further addressed: First, is this structure and development compatible and similar with those of other countries and second, how could the Greek patent system be integrated in the global context?

On the first issue it is obvious that the 23 years of functioning of the Greek patent system have shown that there are some encouraging facts for Greece. From a system for foreigners, and specifically a mechanism of protection used by multinational firms originated from the USA and the western European countries, it became a system and a regime that Greeks now trust and use. In fact it seems that it is a system that Greeks individuals

trust more than Greek firms, as the former are the most important category of patent holders. Both these two features aren't a special Greek phenomenon. Regarding the importance of foreign patent activity, results show that this activity is very important until 1998. After 2000, it decreases, but this is partly deceptive since foreign assignees can use the European Patent Office procedure in order to protect their inventions in Greece. Israel is also characterized by the same pattern (the foreign patent activity accounted for 77% in 1980s). More generally, empirical works argue that this phenomenon is a common feature of the patent systems of many small both developed and developing countries. During the 1980s, the foreign patent activity in Holland, Belgium and Canada accounted for more than 90%. Regarding the importance of individuals' patent activity, empirical works show that many patent systems have been characterized by the same pattern during the first years of establishment and, especially, this pattern basically characterizes many developing countries. Penrose argues that this feature is a characteristic of less developed countries (in Albuquerque 2000). In India for example, the individuals' share is 36.4%, in Mexico 60.4% (Aboites and Betran 2008) and in Taiwan 78.6%, as Choung (1995) argues. In Israel, approximately 60% of patent applications are owned by individuals and this share is being highly stable over time. On the contrary, the share of individuals in other countries is much lower, ranging from 25% (USA) to 36% (Norway) in the 1980s (Herskovic & Shalit 1999).

As for the parameter of geography and the concentration of patents in few regions and cities, empirical research shows that concentration is a common feature. The OECD report (OECD 2003) shows that patents tend to concentrate geographically in a small number of regions in almost all countries. On average, the 54% of patents come from the 10% of regions. Belgium and Norway are classified below the OECD average, Poland has the lowest indicator of geographical concentration, while both Australia and Japan the highest. Greece moves on the OECD average and its geographical concentration accounts for 0.59. Relatively low concentrations are recorded in small (e.g. Belgium), large (e.g. Canada), in economically-technologically developed (e.g. Germany), as well as in more developing countries (e.g. Poland). At the same time, relatively high concentrations are recorded in small (e.g. Portugal), large (e.g. Australia), in economically-technologically developed (e.g. Sweden) and also in more developing countries like Portugal. Most patent owners come from urban regions (81% the OECD average). Therefore, concentration is both important and expected, as economic activity is far from accidental in space. On the contrary it tends to concentrate spatially because of scale and proximity effects. Technology is an important and motivating factor for this concentration, which tends to be a persistent phenomenon, and could be explained by Myrdal's argument on 'circular and cumulative causation' or by Arthur's argument on 'path dependency' (Markatou 2012d). Particularly for Greece, patents' holders are located in a small number of regions and specifically in their capitals, where in fact most of production is made and most of population lives. Empirical research in this field shows that technology- innovation, economic production and population move in parallel and are concentrated in large urban and economic centers in Greece. All these regions and cities have their own urban and industrial tradition in Greece, which historically were developed, evolved and all have determined both production and innovation (Markatou 2012d).

Consequently the Greek patent system has been developed as generally expected, while the only problematic feature is the low participation of Greek firms. Could this mean that the Greek patent system contributes to the national economic development? Obviously, no easy reply can be given to such a question based on previous results. Results, however, can confirm the gradual increase in the contribution of Greek firms, which is however still less than anticipated, the more active participation of Greek non- private institutions (e.g. academic- research institutions) and the existence of certain persistent patent owners, which are both firms and individuals, but in any case dedicated to what they do, while they continue patenting at the same rate and with the same intensity. Especially for the persistent Greek individuals, first empirical results argue that they use the patent system as an incentive for the establishment of their business activity (Markatou 2012b).

On the second issue, the integration of the Greek patent system into the existing international context will depend on the technological content of the developed patents, i.e. if new Greek technologies are similar with those developed at the international level. Results show that 'human necessities' is a very important technology sector in Greece. This sector is also very important in many other countries. In fact a large number of patents granted at the U.S.A. office and originated from countries like Denmark, Hungary, Poland, Portugal, and Slovakia follow the same pattern. On the contrary, in Germany and France a different technology taxonomy can be recorded: Technologies of 'performing operations- transporting' come first, these of 'electricity' are second and technologies of 'physics' are ranked third. So overall, Greece has one of the largest concentrations in 'human necessities' and this pattern is also recorded in its external patent activity at the offices of Europe (e.g.

European patent office) and the U.S.A. (e.g. USA patent office). At the same time, an unusually large share of patents is related to 'fixed constructions'. This share outgrows by 400% the relative share of patents coming from U.S.A. and by 240% the relative share of patents coming from the European Union. On the contrary, the insufficiency of Greece in the sectors of 'chemistry- metallurgy', 'physics' and 'electricity' is more than obvious. The concentration of patents in 'fixed constructions' is related to the fact that most of these patents are directly or indirectly linked to the construction industry, which has a long tradition in Greece (Markatou 2011).

The comparison between the Greek technological taxonomy and the respective of OECD shows that there are more than thirty technological subclasses which are recorded in both taxonomies. The most important among them based on their relative rank are the following: First, 'hygiene preparations for medical, dental, or toilet purposes', second 'separation' and third 'pipes, joints or fittings for pipes, means for thermal insulation in general'. In addition, the two technological rankings are identical on the two following sub-classes and more precisely those of 'diagnosis, surgery, identification' and in 'vehicles, vehicles fittings or vehicle parts'. If it is accepted that the OECD taxonomy of 42 sub-classes, as examined by Khan and Dernis (2006), presents the new technologies that dominate or will dominate the international scene, than it can be argued that the international R&D activities focus on the development of technologies related to 'chemical products', 'biotechnology', 'ICT equipment', 'instruments' and 'computers and office machines'. According to the Eurostat-2002 in the Europe of 25 member- states, 83% of patent applications at the European patent office were related to 'chemical products', 'machines and equipment', 'electrical and optical equipment' and 'transport equipment' with shares of 22.7%, 12.3%, 35.3% and 13.2% respectively (16.6% for the 'rest of manufacturing'). The Greek shares are above the European average in the 'chemical products' and the 'rest of manufacturing', at the European average in the industrial sector of 'machinery and equipment' and below the average in both the 'electrical and optical equipment' and 'transport equipment' (Eurostat 3/2006). However deepening this kind of analysis, it is evident that Greek patents are characterized by a more traditional technology orientation: Only 1.5%, 15% and 10% of Greek patents are related to 'biotechnology', 'sustainable development' and 'information and communication technologies' (ICTs) respectively. 'Sustainable development' patents are related to the optimization of the exploitation of natural resources, which are further specialised in 'energy generation from renewable and non-fossil sources' and 'general environmental management'. The former ends up in 'renewable energy generation', mainly solar and hydro, while the latter in 'water pollution abatement' and 'waste management', mainly focused on 'solid waste collection' and 'material recycle' (Markatou 2012a). ICT patents, on the contrary are related to 'other ICTs', 'consumer electronics' and 'computer and office machinery' (Markatou 2012c).

## CONCLUSIONS

The study of the development of intellectual property through the examination of the Greek patent system since its establishment in 1988 was the main issue of this paper. Theoretical and empirical arguments argue that intellectual property is directly or indirectly related to a lesser or greater extent with the aim of economic development, but this connection or positive contribution is, in some cases, more obvious and direct in countries that have already achieved a certain level of national income. Consequently, the protection of intellectual property is more important in developed than in developing countries. Based, therefore, on the above theoretical and empirical evidence about the importance of intellectual property in economic development, this paper presents the Greek case using patent documents, which are considered to be a major category of intellectual property.

The analysis showed that the Greek patent system was structured and developed in a manner similar to the systems of other countries. Features, such as the significant presence of foreign patent holders (multinationals), the high participation of individuals in total patent activity, the geographical concentration of patents in few regions and cities and the specialization of patents in the technological fields of 'human necessities' and its technologies are common to a lesser or greater extent in the profile of many other countries. The analysis also highlighted one 'special' feature that characterizes only the Greek case: The concentration-specialization of patents in 'fixed constructions'. This feature can be easily understood if someone studies the structure of Greek industry, but still remains a unique case, which obviously can't be integrated in the international context. However, there is one Greek feature that deserves further attention and this is the very low participation of Greek firms in total patent activity. In fact the Greek patent system is a system that is used by Greek individuals and not by Greek firms.

This paper could have some implications for the development of the Greek innovation policy. Presenting both the past and the present of the Greek patent system and analysing its main features, the obvious question of ‘now what’, or otherwise said ‘what could be the main challenge for the future’ arises. The above question is naturally assuming other proportions, especially now that Greece faces very severe fiscal and structural problems. As it is believed that the production of innovation could be the only development solution for the country and as it is argued that a large part of innovations rely on patents, the challenge for the Greek patent system is clear: The Greek patent system should play its traditional, and by definition role, but should also try to become more open and extrovert, attracting more creators, especially firm creators, through a more active communication policy. This could particularly work and be effective for private as well as non- private creators, such as research institutions and academic departments. Such a proposal could also serve another aim, namely that of its further integration to the Greek innovation system.

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# **NON-COLLATERAL APPROACH TO DEVELOPING SURVIVALIST ENTERPRISES IN SOUTH AFRICA: INTERNATIONAL BEST PRACTICES**

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## **ABSTRACT**

*High levels of poverty and unemployment in South Africa condemn most of the people to very low skills jobs where income is insufficient to survive. In most cases, the unemployed resort to self-employment where they engage in informal and/or survivalist activities in order to survive. A common problem confronting many survivalist enterprises seeking a loan to develop their businesses is associated with lack of adequate collateral required by the formal banking and/or micro lending institutions. The objective of this paper is to determine and develop innovative approaches that can be used to provide much-needed finance (credit) to survivalist entrepreneurs in South Africa. This paper analysis a sample of best practices in different countries to determine how the need for collateral is eliminated, using non-collateral approaches, in loan applications. Using a case study of Mamelodi township situated in the Gauteng Province, a sampling technique is also employed to conduct personal interviews with 50 survivalist entrepreneurs who are randomly selected to determine how they finance their businesses. International best practices reveal that the success of non-collateral approaches lies in specialised structure embedded in the informal financial arrangements which enable the improvement in the extension of credit to survivalist entrepreneurs and/or the poor. Based on these findings, it is recommended that non-collateral be used as a first point of reference when developing credit instruments for survivalist entrepreneurs and it should receive recognition and support commensurate with its potential to improving access to credit in South Africa.*

## **INTRODUCTION**

Collateral plays an important role in bank's openness to loss and therefore in the transforming of uncertainty. Collateral serves as a guarantee for the lender or bank for taking the risk in case the borrower will default in that it decreases the amortization period of and loss on the loan. The need for collateral as mechanism to decrease probable loss from especially first time borrowers provides constraints for the lender to serve the credit needs of people who do not have collateral or valuable assets that can be used to secure credit (Mashigo and Schoeman 2011; Murdoch 1999; Karlan 2007). Most of the poor people in South Africa live in townships and/or rural areas where poverty is still rife (Southern African Development Bank 2005) and tend to have larger families, lower educational and high unemployment levels. This condemns them to very low-skill jobs in the informal economy where remuneration or income is insufficient for them to survive. According to Aliber (2001), they have been excluded from social and economic opportunities and are vulnerable to unforeseen circumstances such as death, illness, and fire. It is therefore questionable if these poor people (including survivalist entrepreneurs) will become part of the economic mainstream if their social, economic and financial environment is not addressed by sustainable structures, mechanisms and policies that are specifically developed for them. A number of vulnerable families, mostly women-headed, engage in informal economy such as domestic work in the private homes and local schools, street trading and others are pensioners. In many cases, the unemployed resort to self-employment where they operate survivalist enterprises such as hawking and vending, hairdressing, spaza shops operations, shoe repairing, establishing day care centres, as well as other survivalist activities to generate alternative income. Survivalist entrepreneurs are normally without paid employees and minimal asset value (Department of Trade and Industry 1998), or activities by people unable to find a paid job, with no skills training in the particular field and only limited opportunities for growth into a viable business (Department of Trade and Industry 1995; Quano 2001).

Survivalist entrepreneurs generate income to provide minimal subsistence means for their families. Self-employment, according to Lazaridis and Koumandraki (1996-2004), is a strategy towards inclusion, a feasible survival strategy for escaping discrimination and exclusion given the lack of other employment options. There are times when the entrepreneurs need sums of money greater than what they have and usually get such sums from borrowing. They lack access to credit, lack of information about markets, lack of business and negotiating experience, cultural and social distance and these make them to be discriminated against and marginalised from economic financial resources. Many of these entrepreneurs do not have any choice but to incur debt/credit due to their inability to finance their businesses as well as basic needs on a continuing basis (AfricaFocus Bulletin 2004). Effective interventions are more crucial in reducing the proportion of enterprises that do not have access to financial resources and building sustainable social security net to meet the objectives of poverty reduction. This has to inform much of the policy focus of the South African government.

The difficulty faced by survivalist entrepreneurs is that the provision by the formal banking and micro lending institutions is dominated by the need for collateral which is used to assess the probability that borrowers would default on loan payments and whether a borrower is considered a low or high risk (Song 2002). Majority of survivalist entrepreneurs do not have collateral or valuable assets that can be used to secure credit and are, therefore, marginalised. Many countries, however, have different views with regards to collateral requirements and have demonstrated elements of best practices which enable the provision of loans/credit to people without collateral. Song (2002) argues that collateral does not always guarantee repayment of loans but can pose risks for a lender (e.g. bank) when a loan is impaired and other sources of payment which a borrower utilises become inadequate. This paper resumes by analysing the need for and importance of micro credit and its availability to survivalist entrepreneurs. It proceeds with an analysis of collateral versus non-collateral financial contracts. The next section provides discussions regarding sources of credit utilised by survivalist enterprises operating businesses in Mamelodi township. Of importance in the next section is an analysis of international best practices which demonstrate the success and significance of non-collateral approach to loan applications. On the basis of this, conclusions and recommendations are also presented in the last section.

## **Research Problem and Objective**

An underlying problem confronting many survivalist enterprises seeking a loan to develop their businesses is lack of collateral or valuable assets required by the formal banking and/or micro lending institutions in securing loans/credit. These institutions' concern is that lending to people and/or such enterprises whose repayment capacities seem uncertain is risky and unprofitable and are therefore marginalised. The objective of this paper is to determine and develop innovative approaches that can be used to provide to provide micro credit to survivalist entrepreneurs. The underlying research question is:

- How can non-collateral approaches be effectively used to reduce the need for physical collateral and improve the provision of micro credit to survivalist entrepreneurs?

## **Research Methodology and Study Site**

The study is based on review of accumulated literature related to non-collateral innovative approach and its significance on entrepreneur development in South Africa. Using a case study of Mamelodi township situated in the Gauteng Province, a sampling technique is employed in this paper. Within this study area, survivalist entrepreneurs were randomly selected on the basis of their homogeneity in terms of their operation. Personal interviews were conducted with 50 entrepreneurs to determine how they finance their businesses. Several visits to Mamelodi township were made to establish a trust relationship with the entrepreneurs.

The interviews were also recorded on the audio tape recorder and thereafter transcribed for more formal analysis. Data analysis took place while the interviews were still underway as well as at the end of the interviews. A comparison has been done to discover the connections between themes, and finally these themes and concepts were integrated into a provisional theory that could offer comprehensive and accurate interpretation of financial mechanisms for survivalist entrepreneurs. Because of the homogeneity of the enterprises, the sample offered rich evidence on how such enterprises in Mamelodi operate and access credit.

International best practices which are equally important and crucial were also used in an attempt to identify the mechanisms/systems that underlie successful implementation of approaches that alleviate the need for collateral in loan applications. Evidence is provided that non-collateral approaches such as village/community banks, government loan guarantees, solidarity group lending, movable and non-movable assets can be offered as collateral for loans/credit while at the same time decreasing transaction costs. The practices can be instrumental in improving access to credit to survivalist entrepreneurs in South Africa thereby helping them to develop and grow their businesses.

## **The Need for and Importance of Micro Credit to Survivalist Entrepreneurs**

Survivalist enterprises need small amounts of loans in the form of micro credit which is acute for the development and sustainability of their businesses. Micro credit, according to Mallya (2005), is a fund source that is made available to very small livelihood ventures or activities which directly benefit the poor, or the category of financial services offered to lower-income people, the unemployed as well as the poor entrepreneurs and others living in poverty, where the unit size of the transaction is usually small (Isern and Porteous 2005; Smit et al 1996). Micro credit has, in many developing countries, successfully enabled extremely impoverished people, including survivalist entrepreneurs, to engage in self-employment projects that allow them to generate an income and, in many cases, begin to build wealth and exit poverty (Wikipedia 2007). Access to credit has changed the lives of the poorest communities in the world. According to Van de Ruit (2001), many studies have shown the importance and benefits of access to credit as a poverty alleviation strategy. Most survivalist entrepreneurs are able to smooth consumption, sustain loan repayments, develop small businesses, and begin to improve household conditions. When small credit is received, it creates an addition to the resources available during that time and can be allocated to the household activities and businesses.

## **Availability of Micro Credit to Survivalist Entrepreneurs**

Micro credit emerged as an alternative to conventional banking and has become a major tool of development among the poor segments of society and an appropriate solution to the inaccessibility of such credit by the poor survivalist entrepreneurs. The availability of micro credit can contribute greatly to the development of survivalist businesses and can help the entrepreneurs to expand their enterprises, build assets, stabilise consumption, and shield themselves against unforeseen circumstances (Van de Ruit 2001). The financial system in South Africa has undergone significant changes and transformation to accommodate a rapid growth of the micro lending providers who employed different strategies in providing credit to the poor and survivalist entrepreneurs. In response to the increasing need for micro credit by the entrepreneurs, the providers started to design financial products, developed new concepts, strategies and methods to focus on the financial needs of survivalist entrepreneurs as well as other poor households.

However, the need for micro credit by survivalist entrepreneurs is coupled with limited availability of such credit due to collateral constraints and high transaction costs. Micro credit instruments focus only on urban areas and are inadequate vehicles for delivering such credit to survivalist entrepreneurs in informal settlements and/or rural areas. Burke and Hanley (2002) point out that whether or not financial institutions can choose to lend to lower risk ventures depends, among other things, on the availability of physical collateral and the degree of information existing between the institution and borrower. The lack of information about abilities and character of survivalist entrepreneurs as borrowers, their creditworthiness, together with lack of collateral, increase transaction costs and this provides constraints in providing small loans to the entrepreneurs.

## **Collateral or Non-Collateral in Financial Contracts**

Financial contracts (lending and borrowing) need the assessment of various probable specific, systematic events and probable states that emphasize the importance of the distribution of information among the parties acting in the financial sector. This is demonstrated by the commercialised and viable existence of a whole different range of institutions like banks, credit agencies and individual credit references and the use of mechanisms like collateral as well as history of default, all playing a pivotal role in financial contracts. The limitations on human

knowledge or ignorance hamper informed decisions-making especially by the banks (lenders) and efficient pricing with high costs to enforce contracts in the end (Stiglitz and Weiss 1981; Bernanke 1980). This means that it is difficult and costly for the lenders/banks to acquire initial information about the intentions and behaviour of borrowers and also to secure repayment after a transaction has been concluded. When a bank grants credit, it means allocating estimated risks of nonpayment based on a borrower's repayment capacity to meet his obligation under the loan contract (Song 2002). Collateral then becomes a requirement for a bank in case a borrower defaults. The absence of contracts simply means borrowers fail to meet banks' collateral requirements even if they (borrowers) have assets but which banks would have difficulty accepting as collateral. Banks then hesitate to lend to people whose repayment capacity seems uncertain, risky and unprofitable. The risk of any decision is therefore incalculable as it may arise in a situation where all plausibly available information fails to give even a sense of the risk (Stiglitz and Weiss 198).

Although collateral may be considered a requirement for credit, Song (2002) is of the view that practically, it may not be the solution to transactional economic problem when such collateral becomes illiquid (difficult to value, convert into cash, size or foreclose especially during periods of financial distress) and ultimately costly. Even more critical is when a loan is impaired and primary sources of repayment which a borrower uses become inadequate. In this case, collateral does not benefit the bank/lender.

Experiences around the world (Fleisig 1995; The World Bank 2012; Fernando 2012; Song 2002) suggest that lack of collateral or asset ownership does not necessarily mean that there is a high risk of default on loans and have proved that it is possible to provide loans to borrowers without collateral (a non-collateral approach). This refutes the assumption that loan risk is inversely related to asset/collateral ownership. Various forms/approaches of security related to loans such as government loan guarantees, community/village banks and solidarity groups, non-movable and movable assets have been found to be successful in tackling the problem of lack of collateral.

## **Analysing Survivalist Sources of Credit in Mamelodi Township:**

Many people in South Africa, for example, those that are totally unemployed together with domestic workers, turn to self-employment where they engage in survivalist activities in order to generate income and/or survive. However, income is generated below the poverty line and the main aim is to provide minimal subsistence means for themselves and their families. It is evident in this paper that the entrepreneurs have been forced to start their businesses due to the struggle for survival and livelihoods rather than positive economic growth. They own their businesses and their contribution lies in poverty alleviation rather than employment creation. The paper found that 46 % of survivalist entrepreneurs employed only one employee whereas 36 % employed two employees, and the remaining 18 % utilise the services of family members. They cited inaccessibility to small loans from the formal micro lending sector as a serious problem due to collateral demand which the entrepreneurs do not have. The entrepreneurs, therefore, adopt a wide range of livelihood strategies to secure their own survival. They continually depend on informal sources of finance to access credit which can be allocated to their survivalist enterprises or other household activities.

Majority of survivalist entrepreneurs in Mamelodi, for example 62 %, survive through selling fruits and vegetables which are demanded on a daily basis by the local community. Only few, 10 %, operate spaza shops whereas 28 % constitute hairdressers operating their businesses in their homes. A large number of the entrepreneurs, for example, 80.6 % of those selling fruits and vegetables, and 80 % of those operating spaza shops, access credit from rotating credit and savings associations, known as *stokvels*, to which they belong. *Stokvels* are savings, credit, capital generating clubs and funeral associations operating in the African communities and/or townships for survival (Smit et al 1996; Verhoef 2000).

These *stokvels* are the most common informal sources made up of a group of people, including survivalist entrepreneurs, who agree to contribute a specific amount of money to a pool of savings or common fund, which may be awarded, on a rotational basis, to one member, fortnightly or monthly, depending on a type of *stokvel*. The respondents (i.e., entrepreneurs) indicated that they contribute a minimum of R50 (\$7.14) in the form of savings per month which is also made available to them in the form of credit when the need for such credit arises or to sustain their enterprises. This savings serve as collateral and no any other form of collateral is

required from members of *stokvels* (Mashigo 2007; Mashigo and Schoeman 2011). Long standing traditions, relationships, customs and socialisation through regular meetings play a significant role in the operation of *stokvels*. Defaulting is very minimal due to peer pressure or other members to repay loans to maintain and sustain the *stokvel*.

The research also found that 35.4 % of survivalist entrepreneurs who sell fruits and vegetables, 40 % of those operating spaza shops, as well as 28.6 % of the hairdressers, access credit from the local township informal moneylenders (known as *mashonisas*) who are regarded as responsive to their needs. These moneylenders also use informal financial systems and methods where honesty, trust, and loyalty play an important role in borrowing and lending activities. Their strength lies in their ability to access and use local information about their clients. The moneylenders provide loans to their regular clients (entrepreneurs) and this makes them not to require collateral or proof of employment to secure loans (due to the long-term relationship that exist between them) but only assurance that money will be repaid on a certain date. The entrepreneurs repay the loans to maintain their reputation and clean repayment records so that they are able to access further loans in the future when such a need arises. Moneylenders are seen as lenders of last resort for financial assistance for survivalist activities and also on emergencies like illness and funerals. Although these township moneylenders charge exorbitant amounts of interest which ranges between 30 and 40 %, they are still highly preferred by the entrepreneurs and local community because of easy access and the positive atmosphere in which they operate their businesses. They provide instant cash with no complicated documentation and specialise in short-term loans, generally for thirty days. The entrepreneurs (as borrowers) do not normally consider the cost of lending but the fact that the lenders are easily accessible and immediately responds to their financial needs as compared to the formal financial institutions.

Furthermore, buyer-seller credit relationship was also found to be an important informal source that deals with the problem of inaccessibility of micro credit. It was found that only 6.5 % fruits and vegetables entrepreneurs and 20 % of spaza shop operators regularly buy from a specific seller in the community who gives them, in return, reduced prices for the products. Of importance is that the sellers provide products on credit to the regular entrepreneurs who are well-known to the sellers and have a past record of repaying loans. The sellers normally have the advantage of having adequate information about their clients because they live in the vicinity of their businesses and they know them very well. The high degree of information that is available about clients helps to reduce the need for collateral and transaction costs.

Kinship and friendship or reciprocal informal source of credit has also been found to be the most common source of credit among survivalist entrepreneurs in Mamelodi township. Whenever there is an urgent need for cash, the entrepreneurs approach those they are closest to for help, for example, a relative, friend, or neighbour because they would expect them to return the favour some times in the future, that is, a reciprocal obligation. These reciprocal relationships are very strong in the black communities with strong traditional values. A large number of hairdressers (71.4 %) are highly dependent on families and friends for credit. In reciprocal credit, certain ties among those within one's group of friends, families and neighbours are an important factor in the development of relationships. The significance of these ties is that they know one another better and this reduces the cost of acquiring information about one another, the need for collateral and high transaction costs when the need for credit arises. Kinship and friendship provide a framework of trust, loyalty, reputation and social relationships which underlies all financial relationships to entrust or believe. In the lending and borrowing activities, the ties between them and traditional values are used as collateral. The problem of collateral, which is a concern for the formal financial/micro lending sector, does not exist in this informal approach. Many of the loans that are provided involve very low or no interest rate, for example, in the case of neighbour relationships, interest rates are recorded very low and in many cases, as in relatives and close friends, no interest rate is charged.

Lastly, landlord and tenant credit is the kind of bonds which prescribe patterns of appropriate behaviour and are formed between landlords and tenants. Many landlords are formally employed and range from middle- to high-income earners, own valuable assets which include big residential areas (houses) mostly with spare back rooms. Mashigo (2007) found two types of arrangements in landlord and tenant relationships. Firstly, some landlords act as savings or deposit collectors collecting money from the tenants (apart from accommodation payments made by tenants) for safe keeping. Only 12.9 % of survivalist entrepreneurs selling fruits and vegetables, who are also tenants, contribute money and access credit (landlord and tenant credit).

Communication between the landlord and the tenants is easy as the landlord (savings collector) visits them in their premises to collect money. They agree to save every month in case there is an urgent need for credit. No need for collateral, fee or interest charged when extending credit and there is no complicated information that is required to extend such credit because they know each other very well. Also important about this arrangement is that the problems of transport or transportation costs to access money do not exist. Secondly, in some cases, landlords lend money to tenants and these landlords do not collect any savings but only lend to tenants (operating very small businesses) to buy stock and threaten not only to evict the tenants but to retain all their possessions in case of default.

Although these informal sources of credit have been found to play an important role in providing credit to survivalist entrepreneurs through removing the need for collateral, reducing high transaction costs and informational asymmetries, however, limitations have been found in the lending and borrowing activities. These include, among others, very small or insufficient and sometimes unavailable amounts of credit available to entrepreneurs, abusive collection methods by local moneylenders, and over-indebtedness as entrepreneurs access loans from more than one source to pay another. It is in this regard that effective and sustainable approaches are necessary to support and develop survivalist enterprises. Lessons are therefore drawn from best practices in some countries which use innovative approaches that improve the provision of credit in an effort to support and develop the poor and/or small/micro enterprises. These are discussed below.

## **Non-collateral Approaches of Developing Survivalist Entrepreneurs in Some Countries: Findings and Discussions**

It is evident that the increasing need for credit by survivalist entrepreneurs in South Africa as alluded above is coupled with a gap in the provision of such credit by formal financial institutions due to collateral constraints and high transaction costs. It becomes difficult for the institutions to quantify risk. It has been demonstrated that informal sources of credit utilised by these entrepreneurs in townships like Mamelodi only serve as short-term solutions to the problem of credit accessibility and are not sustainable. Against this background, a rethinking to conventional banking and micro finance practices is evident and an examination of non-collateral as a strategy of tackling the problem of lack of collateral is necessary. An attempt is made to analyse the ways in which non-collateral drives financial sustainability and development among survivalist entrepreneurs.

The paper attempts to identify innovative approaches that underlie successful international best practices to tackle the problem of lack of collateral that hinders survivalist enterprises from accessing credit. Alternative initiatives to conventional physical collateral are found in Indonesia, Ghana, Canada, Spain, Holland, Benin, Burkina Faso, Sri Lanka, Bangladesh and United States, which had demonstrated that it is possible to grant loans to borrowers who do not possess collateral or valuable assets (Song 2002; Fao Corporate Document Repository undated; Fleisig 1995). These countries have different views regarding collateral requirements in loan contracts. They use specialised lending approaches that eliminate the use of physical collateral.

### **Village/Community Banking Approach**

In an effort to meet the credit and savings needs of the poor and survivalist entrepreneurs, Indonesia and Ghana started to develop physical structures or centres such as village/community banks. The main purpose of creating these banks was to deal with perceptions of high risk, high transaction costs and low returns (Ghatak 1999). The savings and credit services are decentralised, for example, at larger village level (where they reside). In a village banking approach, an institution goes into a village and help people to be organised in small groups (eg 20 -50 members) which then operates as a village bank (Staschen 1999; Wilson 1996). Group members then select the management committee which is trained to run such a bank. This means village/community group members decide how these village banks must operate. These groups were then used as a point of departure in improving the provision of credit. In Indonesia, for example, the groups are encouraged and assisted to save money in the village banks and the savings would be used as collateral for granting credit. The significance of these village banks is that none has a status imposed or controlled by the central bank (Wilson 1996). These village banks organise their own funds transfer and develop training programs to equip the poor who constitute groups with the necessary financial skills. Some village banks adopted an approach such as that of rural Islamic banks where

credit is accessed with no interest. A substantial share of the group savings is deposited in long-term accounts for sustainability purposes (Ghatak 1999). The village banks in Indonesia placed more emphasis on development programs for the poor and small businesses where operating procedures were simplified and strict lending rules were amended and relaxed as a result of increase in savings. This provided the opportunity for even the poorest households to access credit. For financial viability, and in dealing with the risk of loan default, village/rural authorities were made to share responsibility for compliance with the terms of loan contracts.

It was found that the village banks in Ghana operate more as informal financial agents who act as mobile bankers and regularly visit the groups in their communities to collect savings (Jones et al 2000; Embassy of Ghana 1997). The successes of their systems are that these mobile bankers are able to take deposits that are often of low but regular value on a daily basis from groups over the course of a month after which the accumulated savings are returned to the group but keep one day's amount of savings as commission. As savings collectors, these mobile banks are characterised by a large client base, large individual deposits, and high annual aggregate value of deposits. The banks also advance loans to their regular depositors which are usually low value, very short term (one month) and which are provided on an interest-free basis and no collateral is required and the loans are disbursed immediately upon request (Jones et al 2000). Regulation in these countries was reformed in such a way that community groups have been given joint financial power and decision-making. This implies local or member control and mutual monitoring over the activities of the banks by members themselves.

Wilson (1996) mentions that a village bank plays a multiple role of encouraging the natural inclination of poor people to save their own benefit, establishing a community capital base for the community to access credit and savings, a means of handling and managing welfare and agricultural subsidies. It is a means of ensuring not only that the financial resources are delivered adequately and effectively into the community but that accountability is at the point of delivery. Relying on social guarantees as collateral, small loans can be disbursed to the village bank. A bank has to operate for some time before it could receive one or few loans. It can only receive subsequent loans upon repayment of the first loan. The loan terms can be decided upon by the community/village groups themselves. According to Jones et al (2000; Wilson 1996), village bank members have demonstrated relatively high propensities to save. The mobilised savings can also be lent to an individual village bank member who is in need of a short-term loan. Once the borrower has paid back his/her first loan, he/she may then, as the need arises, request a new loan that is equal to the first loan plus the amount that he/she has been able to save. No member of a village bank may receive a new loan unless all members have paid off all their previous loans. The importance of the village banks is that since they do not rely on collateral to guarantee loans, they can serve communities that lack such collateral or assets. In these cases, social pressure and peer monitoring effectively substitute collateral. Like some village banks in other countries, the village banks can also lend the group savings to neighbours who are not village bank members and charge them a small fee (Ghatak 1999).

One other important mechanism is that to be able to use the village bank's services, an individual has to purchase a share (at a very reasonable amount), which entitles him/her to voting rights in electing management committee (or board members) (Dallimore and Mgiteti 2003) and full ownership and responsibility towards the bank. If members are involved in key decision-making processes, this will make them feel that the village bank and its future belong to them. Members can arrange for the transfer of money and also of their social grants like pensions and child support directly into their bank accounts to relieve them from standing in long queues to receive their money.

## **Government Loan Guarantees**

Government loan guarantees in Canada, Spain and Holland play an important role as security/collateral for loans. Such guarantees though have to be signed by appropriate authorities (eg government and private bank) and their value depends on terms and conditions of such guarantee and the creditworthiness of the issuing bank (Song 2002). Government loan guarantee in Canada and Spain was found to be an effective approach that serves as substitute for the borrower's collateral as the government makes the loan and the risk of the borrower defaulting is shifted to the government (Fleisig 1995).

The problem, however, according to Song (2002; Fao Corporate Document Repository undated), is that such guarantees are difficult to assess and often unable to protect the lender in case of default because the government making the loans experience difficulties in ensuring that the loan is repaid.

However, the mitigating factor to this problem, as in Holland, is for government to minimise the extent to which it is requested to honour its guarantees (Fleisig 1995) otherwise the payments of guarantees to the bank become a money-losing government exercise and a drain on the public purse and subject to political attack. The minimization of guarantees, according to Song (2002; Fleisig 1995) have been successful in improving repayments.

## **Solidarity Group Lending Approach**

Solidarity group lending has been found in Bangladesh to be successful in eliminating the problem of collateral. Fao Cooperate Document Repository (undated; Fleisig 1995) found that many poor and very small enterprises around the world had difficulty making savings and accessing loans due to collateral constraints. Solidarity group lending approach was popularized by Bangladesh, through its specialized bank, the Grameen Bank, where community members voluntarily form informal small groups (Johnson and Rogaly 1997; Rahman 1997) which are used as social technology to access credit and mobilize savings. Evidence shows that the Grameen Bank used unconventional banking practice to lend money to the poor and/or very small businesses with a reasonable degree of financial self-sufficiency and repayment rates (Rahman 1997). The Bank's success was found in the use of collateral substitute or social collateral (Conlin 1999) through the creation of a specialized banking system based on mutual trust, accountability, participation and creativity. In this case, credit is granted to borrowers who comprise small groups while using joint-guarantees. All members of the group are held responsible for repaying the loans. If one member defaults, all in a group are denied subsequent loans (Rahman 1997). According to Karlan (2007) a lender can benefit from peer pressure which is exerted by group members on each one to repay loans. Conlin (1999) uses the term peer monitoring as a borrower who agrees to pay the lender an amount owed by another borrower who defaults on a loan. However, a borrower who pays the loan may impose social penalties on the one who defaults and in this case the probability of loan repayment increases.

Benin also took initiatives to encourage and help poor people in villages to form small groups which contribute amounts of savings into newly formed private banks which, in return, provide loans to the groups. Most importantly, loans are only granted to members who have had a savings account for more than six months and the loans cannot be more than double the amount saved. The group savings is accepted as collateral to secure loans. Solidarity group lending may enhance the likelihood that borrowers undertake the actions desired by lenders and removes the need for formal collateral which is a requirement for financial institutions and/or banks (Hoff and Stiglitz 1990; Wilson 1996; Mashigo 2011). In forming groups, enforcement costs are low because of peer social sanction. An incentive of solidarity group lending is that social selection homogenizes the group and their selection is based on creditworthiness and commitment of members. Their probability of default will be low as they will be jointly liable to repay the loans. The formation of groups has been found effective in improving social ties and relationships and these relationships serve as mutual insurance and there are also threats such as social sanction for defaulting (Rahman 1997). The strength, significance and success of a group lie in social structures embedded in the informal financial arrangements between borrowers and lenders. An important aspect of socialisation is its ability to remove the need for collateral and to lower transaction costs of borrowing. Socialisation is an important network of trust and reciprocity that improves social relations between the groups (as borrowers) and lenders. Their long-term relationships and weekly, fortnightly, or monthly meetings held by these community groups improve social connections and inspire loan repayment (Mashigo 2007). Their customs and norms such as decisions taken by both the lenders and borrowers, which serve as agreements on how and when the loans will be repaid, how often the meetings will be held, and how the loans will be approved are important informal arrangements of a group. Credit carries no or very low interest rate and often relates to social ties between borrowers and lenders. This case differs significantly from the formal credit situations where interest rate is paid on the loans advanced to borrowers. Most importantly is the mobilisation of savings by group members which is contributed into a pool which is then used as collateral when the need for such loans arises.

## **Movable Assets/Property**



Movable assets have also been found to have economic potential of being used as collateral in exchange for loans. Researchers around the world (The World Bank 2012; The Sunday Times 22 My 2011; Fao Corporate Document Repository undated) indicate that collateral availability is not the source of the problem in accessing loans but the inability of translating enterprises' capital stock which constitutes moveable assets such as machinery, vehicles, furniture, electronic or electrical appliances. Countries such as Sri Lanka, United States and Canada, for example, paved the way for small and medium enterprises and the poor to borrow money using movable assets. In the United States and Canada, when a bank (lender) accepts an asset as collateral for a loan, it takes security interest in the asset (collateral) (Fleisig 1995). A security interest means that it should be easy and less costly to define the asset according to legal requirements. Although it is not easy to create a security interest in some countries like Uruguay, for example, Fleisig (1995; Fernando 2012) indicate that in Sri Lanka, United States and Canada, this could be achieved by introducing modern secured transactional law or a written binding agreement which recognises utilisation of the full value of a movable asset in providing credit/loans. This can be secured by a floating security interest. A notable example is that of a farmer owning cattle and wishes to secure a loan from a bank. The law (in Uruguay for example) requires a bank, in this case, to pledge against or identify specific (e.g. 25) cattle to be used as collateral agrees to lend. This would then be difficult and costly to create a security interest in the cattle.

This problem could be resolved by a written binding agreement secured by a floating security interest in, for example, \$5 000 in cattle. In so doing, security interest is created and if a farmer sells the cattle, the bank attaches the proceeds of the sale (Fleisig 1995; Fernando 2012). The difficulty, as in Uruguay, is when an asset had already been offered as collateral for another existing loan or sold on credit and a bank is not aware thereof. Perfection of security interest, in this case, is done through a publicly accessible and easily searched registries (as in the United States and Canada) of all assets offered as collateral to avoid prior superior claims to the collateral/asset (e.g. cattle).

## **Non-movable assets**

Non-movable assets, such as land, in Benin and Burkina Faso, which has value and for which there is some form of firm title can also be used as collateral for securing loans. This can only be possible if the title is transferrable from one person to another (Heltberg 2002; Song 2002; Fao Corporate Document Repository undated). In the case of a mix of land, a portion which is the equivalent of a loan can be used as collateral. Heltberg (2002) found that common property/land where legally enforceable rights are undefined or do not exist (unregulated common property) but which is protected only by community membership restrictions, can be used as collateral for loans. Evidence was found that in most communities smaller groups are effective in managing the use of common property and these communities use punitive measures like fines in cash or kind, moral persuasion, social exclusion of offenders and religious taboos to deter members from breaking the rules. The title of the land is then temporarily transferred to the lender as collateral until the loans are repaid. However, the community still benefits from gains from using the land sustainably (Heltberg 2002).

## **Conclusion and Recommendations**

This paper analysed some approaches of solving the problem of lack of collateral faced by survivalist entrepreneurs seeking loans/credit to develop their businesses. It is also evident that the need for even micro credit by survivalist enterprises is coupled with limited availability of such credit due to the absence of collateral as well as high transaction costs. The paper demonstrated that collateral may not practically be the solution to transactional economic problem when such collateral becomes difficult to value.

While there is no doubt that some forms of informal sources of credit in townships like Mamelodi have been found to play an important role in providing credit to survivalist entrepreneurs through removing the need for collateral and reducing high transaction costs, these sources, however, have been found to be unsustainable due to some limitations with regard to availability of credit to the entrepreneurs.

There are lessons to be learnt from international best practices which demonstrate that it is possible to provide credit to survivalist entrepreneurs and/or the poor using non-collateral approaches such as the development of village/community banking, the use of government loans guarantee, movable and non-movable

assets that remove the need for collateral and help them build assets and expand their enterprises. In some instances, the adaptation of solidarity group lending through mobilization of savings for use as collateral for credit.

Based on the findings, the first recommendation is the consideration of establishing village/community banks. The same approach of assisting the poor and survivalist enterprises through the establishment of small groups is essential if South Africa needs to support and develop them. The usage of local knowledge and social ties can permit accurate predictions to be made about the risk status of the banks (village groups, their loyalty, character, and private habits). However, the joint financial power and ownership of the village banks by poor community groups should be maintained and protected against the possibility of other institutions wanting to take advantage of trying to participate in or flood such village/community banks. A system should be put in place to safeguard the savings of the community group members and/or such banks.

The second recommendation is the use of solidarity group lending approach. Also important is the formation of small groups which, survivalist enterprises can become part of, and can then apply for loans and become jointly liable for repayment of such loans. A consideration of social structures embedded in the informal financial arrangements between borrowers (survivalist entrepreneurs) and lenders becomes vital. The strength of socialisation can be its ability to remove the need for collateral and to lower transaction costs of borrowing as in the countries discussed in this paper. After such groups are formed in South Africa, their relationships can be improved through weekly, fortnightly, or monthly meetings to improve social connections and inspire loan repayment. It is important to emphasise the mobilisation of savings by group members which should be contributed into a pool which can be used as collateral when survivalist enterprises need loans to develop their businesses.

Thirdly, though not very easy to implement, government loan guarantees may also be carefully considered, taking into consideration how other countries use them to help develop survivalist enterprises and/or the poor. Tailor-made policies should be developed to enable government and borrowers (enterprises) to commit themselves in ensuring that the loans are paid to the relevant institution.

The fourth recommendation is the consideration of using non-movable assets/properties such as land which belong to survivalist entrepreneurs and for which there should be a firm title and which can be carefully considered as collateral. Effective measures should be considered to ensure that such piece of land carries value and ensure that it is not sold or its title transferred to another person before the loan is fully repaid. Government needs to ensure that it becomes possible, within the South African legal and regulatory framework to carefully and considerably use land as collateral while a cautionary note is to ensure that other parties do not take advantage of such initiatives and in so doing will be safeguarding such land.

Lastly, allowing movable assets to be used as collateral can improve the provision of credit to survivalist enterprises. Security interests can be considered which can enable lending to be based on more informed and less risky decisions about a type of movable asset in question.

It is important to mention that these innovative approaches of collateral substitution, though successful in the countries alluded to above, have to be carefully considered in South Africa. To achieve this needs the creation of an enabling policy environment with the support of government.

The financial support for survivalist enterprises has to be seriously considered and intensified through effective and tailor made policies and the distinction has to be made between different kinds of enterprises, eg Small, Medium, Micro as well as survivalist enterprises before such support can be provided and policies implemented and not only use general strategies for all of them.

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# **A THOUSAND MARK OF SOUTH AFRICAN NATIONAL ROAD CARNAGE: TAXI BUSINESS VIOLATION OF THE NATIONAL ROAD TRAFFIC REGULATIONS**

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## **ABSTRACT**

*Although taxi business is one of the most conspicuously important businesses within the transport industry in South Africa (SA), it appears nonetheless arguably, and by far, the most risky mode. Despite a number of accidents reported annually, it is now evident that the government indeed still ignores the causes of this road carnage upon innocent commuters and pedestrians thereby destabilizing the taxi industry. This paper argues that the government is so ignorant that taxi business is almost totally out of control where innocent lives are claimed, thus occasioning national outcry. It has now reportedly reached a mark of well over a 1 000 innocent live claims as the national road carnage something that has instigated this research. The aim of this paper is therefore to investigate this outcry by exposing various causes of this road carnage and illuminates, and thus, suggests what the solution should actually be. After establishing these causes through purposive interviews, it would then be apparent as to what causes of action the government should embark on if SA is really prepared to map the future of taxi industry through innovation and excellence.*

## **INTRODUCTION**

Taxi businesses, like most other forms of businesses as modes of transport, globally also, are one of the most conspicuously important businesses in SA for quite a while now (Jones et al., 2007). Although it may be said that road transport is not very safe to use as the means of transportation compared to air and sea transport (Hult, 2005). It is, however, never immune from accidents, and thus, should be strictly regulated. The lack of road safety is in most cases caused by gross negligence from the part of taxi operators. These forms of negligence emanate from quite a number of factors, which will be discussed in this paper. 'Road accident', from the context of this paper, refers to collision of a taxi with other vehicles as a result of gross negligence from the part of taxi operators. Despite a number of accidents reported almost every week, the SA government had, and still, turns a blind eye to act upon those who might be responsible for the road carnage upon innocent commuters and pedestrians. This, in itself, necessitates some form of regulation from the part of the government.

Describing the research theme, namely, Minimizing Illegality & Unethical Conduct in Business, the word 'control' denotes a number of regulations for road-use governance which are grossly neglected, and thus, violated by taxi operators in particular. 'National outcry' refers to the fact that, despite the road accidents occasioned by gross and mostly the sole negligence of taxi operations being reported, the government seems to still fails to respond to these reports in a manner that will be informed and regulated by local transport governance. This paper thus aims to investigate these failures by exposing various causes of the road carnage (Arrive Alive SA, 2011). These as just stated, are also the responsibilities of both the government and the management of the taxi associations, in which this paper illuminates what the solution can possibly be. 'Road carnage' should be understood here as personal injuries and deaths occasioned by these accidents.

## PROBLEM STATEMENT HYPOTHESIS

South Africa consists of nine provinces, namely Gauteng; North-West; Mpumalanga; Northern Cape; Eastern Cape; Western Cape; KwaZulu Natal; Free State and Limpopo. The research problem to this paper is therefore that the government is by far so ignorant that taxi-driving business and ownership is almost totally out of control as a result of lack of adequate enforcement of regulation where innocent lives in these provinces are claimed occasioning national outcry (Gartner, 1990). This research now focuses on the root causes of road carnage and investigates how this can be sorted out. In doing this, the research will review organized literature as theoretical underpinnings that follow.

## THEORETICAL UNDERPINNINGS

This article contextualized the literature available, focusing on what the causes of road accidents are. (Ucbasaran et al., 2001),

### Causes of Road Accidents

This paper discusses those that directly and indirectly threaten the lives of other road users, they are discussed below:

#### ▪ Rules and Regulations

Rules and regulations discussed include, the National Road Traffic Act, Income Tax Act, Labour Relations Act and Skills Development Act. All these form a body of regulations espoused by this research study which should be enforced by the government. Besides all these, there are regulations meant for drivers' licenses in terms of the National Road Traffic Act, and are unpacked under the regulations governing the K53 License Test as follows:

#### Regulations governing the K53 License Test

National Road Traffic Act (Act 93 of 1996), National Road Traffic Regulations of 1999, Chapter V: fitness of Drivers Part II: Learners and driving licenses and s107 of this Act providing for the manner and contents on which the applicant for driving license should be examined

1. An applicant for a driving license shall be examined and tested by an examiner for driving licenses.
2. The examiner shall satisfy himself or herself that the applicant holds a learner's license; knows and understands the road traffic signs; has a sound knowledge of the rules of the road; is not subject to any disqualification referred to in section 15 of the Act; and is generally capable of driving a motor vehicle of the class to which the application relates.
3. Where a person applies for a driving license which authorizes him or her to drive an articulated motor vehicle, or a combination of a motor vehicle and trailer, the practical test shall be conducted.
4. An examiner shall test an applicant according to the manual of the Corporation "K53" in cases of: code B, C1, C, EB, EC1, EC and A1.

#### ▪ Joblessness

Joblessness in South Africa is the most acutely debatable issue in all spheres of social gatherings, including the media. As there are no jobs within the job market, men would usually take any form of job available. Taxi operating is one of the jobs that normally do not follow stringent procedures and regulations in South Africa despite the provisions of the Labour Relations Act (Act 66 of 1995, the LRA). For example, there are no jobs ever advertised formally for taxi operators as required by the LRA; even so, no job interviews are conducted if someone happens to be informally recruited, and even worse, no employment contract, let alone the failure for the payment of the income tax (Kenny, 2010) in terms of the Income Tax Act (Act 58 of 1962).

### Drivers' Licenses

Once employed, the taxi owner or the employer does not ask to see the driving license from the taxi operator. If the taxi operator does not have a driver's license, what normally happens is that the operator would go and buy the driver's license. (Drivers.com Staff, 2007; Arrive Alive SA, 2011)

#### ▪ **Taxi Owner's Remuneration**

Taxi businesses in South Africa operate very strangely. Those taxi operators doing the actual work who are supposed to be employees to be remunerated are now the ones who pay the taxi owners. This is contrary to employment regulations. The taxi owner would request to be given a certain amount per day and the remainder will be the payment of the taxi operator regardless of the difference in the amount.

#### ▪ **Taxi Operator' Arrogance**

The arrogance of taxi operators starts with their rudeness towards the commuters within the taxi itself. This happens at the time when the commuters have to pay and if, for example, one of these commuters does not have lose money, and the taxi operator does not have enough change, the war starts right there.

#### ▪ **Level of Education**

Most taxi operators do not have formal education or did not go through any formal educational training, hence they are not professional when transporting commuters. Very few of taxi operators possess a grade twelve or matric certificate.

### **Areas of Control**

Bribery: Otherwise referred to as corruption (The Economist, 2011), bribery is one of the most destructive forms of disloyalty on taxi operators. What happens is that once instructed to pull over, the taxi operator initiates money and just pays any amount that he has to the traffic officer regardless of the nature of offence committed. This happens every time on the road block.

SARS Tax Payments: taxi industry has never registered its taxi operators as employees. Despite this knowledge, the South African Receiver of Revenue (SARS) does nothing about it. One of the most disturbing aspects is the fact that most government officials are taxi owners. This point has been revealed during purposive interviews conducted with the Taxi Associations as indicated below.

All these culminate to management failures by taxi owners, taxi associations, traffic departments and most of all, the government, in making sure that the road traffic regulations are obeyed.

## **RESEARCH DESIGN AND METHODOLOGY**

This investigation is qualitative (Gummesson, 1988) and has focused on the causes of national road accidents brought about by regulatory and gross negligence of taxi operators due to failures of government and the management of taxi associations. It exposed various causes of the road carnage and illuminated what the solution should actually be (Gummesson, 1988). This description was done by conducting purposive interviews with senior officials, two from the National Department of Transport and two from each of the Taxi Associations as will be indicated (cf Research Approach, below). In highlighting the problem and arriving at the findings, the outcomes emerging from the interviews were then contextualized with the argument to this paper through literature review (Gainer and Padanyi, 2005).

### **Research Approach**

Table 1 below illustrates the research fields or sites in which these interviews were conducted.

Research Site	Province	Research Location	Distance from Pretoria
Mamelodi – Pretoria	Gauteng	Almost in the centre of South Africa	50 kilometers
Park Station - Johannesburg		In the centre of South Africa	130 kilometers
Rustenburg	North West	South-west of Pretoria	300 kilometers
Nelspruit	Mpumalanga	South-east of Pretoria	600 kilometers
Department of Transport - Pretoria	Gauteng	Central Pretoria	25 kilometers

Table 1 – The research fields or sites of the study – Self-adopted.

These interviews were conducted in only three provinces and sampled out of the whole nine provinces. The sample provinces are Gauteng, North West and Mpumalanga.

## Purposive Interviews

The interviews were conducted with senior officials of both the Department of Transport (DoT) in Pretoria on the one hand and those of Taxi Associations from Mamelodi, Pretoria, Park Station, Johannesburg, Rustenburg and Nelspruit, on the other respectively. These interviews were conducted for one day each at every research site. According to the analyses, and also following Klein's, (2007) paradigm on investigative interview questions, the questions for the interviews for the two officials of the Taxi Associations were almost similar so, the responses were also almost identical with just a few differences.

### Reflections from Taxi Associations

***When asked how the job interviews were conducted before the taxi operators were appointed for their jobs and the following emerged:***

It should be borne in mind that this is our own businesses and the so-called your government does absolutely nothing for us. We cannot be expected by someone out there to do what he/she demands of us to do. My reason here is that when our families lie hungry, your so-called government does absolutely nothing for us. Now look, some of us are retrenched and when we try to make ends meet, here you are after us. What do you actually want from us; commit crimes?

***When asked about the national outcry about the number of road accidents involving taxis:***

Our taxi operators are very careful on these roads. What I am saying here is that, any taxi, anything, may happen anytime. I cannot budge on how someone should or will die. You know what? Sometimes not very long ago, one of our taxis full of teachers lost control and all teachers died. Who is to blame here? Me?

***On the question of whether or not their drivers' licenses are authentic, here is what they unwrapped:***

Our drivers' licenses are our lives. Our families depend on these cards. You know, they are our bank credit cards. To go to the traffic department and beg for your own license is another waste of time. Time is money. All we do is simple. Remember we cannot just suffer while we have connections everywhere. We have our own people at the traffic department. What do you take us for? In fact some of the traffic cops have their own taxis here, and why should they give us tickets? If his friend gives one his drivers a ticket, he must cancel it.

***Asked about remuneration, they indicated as follows:***

Our drivers are the bosses to the supposedly to be. We pay our own bosses. I give boss what he asked the rest is mine. Sometimes there is no business and I just explain to him.



***On the question of arrogance, this is what they had to say:***

Our taxi drivers do not tolerate people with tycoon attitudes. They simply put you where you belong. If you want to complain you come to our offices where you will have to identify the culprit and we will talk to our own driver.

***On the question of the taxi operators' education, however, they pointed out as follows:***

Our people need money not school, as school will waste your time while your peers are actually earning wealth. With school, however, there is only one thing I respect it for, teaching you to write your name.

### **Reflections from DoT**

Taxi operators are extremely obstinate and selfish when coming to road-use. They are virtually in competition. They ignore the feelings of other road users through their bad mannerism and arrogance. Even if the DoT can attempt to negotiate installment payment method with them, it is just a waste of time and resources. No salary slips, no banking accounts, nothing. They are simply not employees. They are not even paying income tax in terms of the Act. Their vehicles are not roadworthy. Attempts have failed where we also tried to impound their vehicle. We impound it today, after a short while afterwards; it is back on the roads. We suspend their drivers' licenses not long they are renewed. They become detained, similarly, they are released. What should we really do as a department to show that we indeed do our best?

## **RESEARCH FINDINGS**

The findings are based on the six pillar aspects described above labeled 'causes of road accidents':

- **Rules and Regulations**  
The National Road Traffic Act (Act 93 of 1996) is disregarded by taxi operators that one may even think it does not officially exist on the part of taxi operators.
- **Joblessness**  
The question of taxi owners' greed makes them take an advantage of joblessness for a right upon people who are jobless disregarding the provisions of employment legislation (Katungi et al., 2006).
- **Drivers' Licenses**  
Although a vast majority of prospective taxi operators enter taxi job-market without drivers' licenses and nonetheless allowed to drive taxis, disregarding traffic regulations, they once more violate regulations so grossly by obtaining these licenses without following the procedures.
- **Taxi Operator's Remuneration**  
The taxi operator being the employee, is the one who compensates or pays the remuneration to the employer, namely the taxi owner.
- **Taxi Operator' Arrogance**  
The fact that many officials are stakeholders to the taxi industry almost in its entirety, this phenomenon brings in arrogance to taxi operator to every road user regardless of whom one may be. This arrogance extended to passengers who are supposed to be the ones bringing income to the taxi business. This arrogance is rooted from the fact that most of taxi operators are armed to the teeth. Arguably, some of guns may have been provided to them by government officials (The Sunday Morning Herald Traveler, 2008).
- **Level of Education**  
Although not all, most of taxi operators do not have adequate education to enable them to deal professionally with the members of the public. It has been empirically found that there are a very few of them holding at least grade twelve.

In addition to the above findings, corruption is extremely rife between the taxi industry and government officials (The Economist, 2011) contributing to maladministration of fatal accidents experienced by taxi commuters (Grinstein, 2008; RAF Report, 2011). Even so, the South African Revenue Services, on the other hand, does not

become proactive in demanding tax payment from the taxi businesses as provided by the Income Tax Act 58 of 1962.

## MANAGERIAL IMPLICATIONS

This research basically hinged on a number of major causes of fatal accidents. As a general rule, the employer should be the one paying the employee the remuneration for the work done and not the other way round. In South Africa, however, the position is that the taxi owner, as the employer, gets paid by the taxi operator on daily basis. If the amount of pay due to the taxi owner is not covered at the end of the working day, there will be rigorous explanations expected from the taxi operator, causing much pressure on the latter. While no formal education is required to become a taxi operator, training and specific driver license regulations should apply (Taxi Industry Inquiry, No Date; Sekhonyane, 2004; Arie, 2010).

Applying the economic principle as amplified by Lehobye & Rankhumise (2012), this paper suggests that the limited resources should be used for the best advantage per taxi business, the formula normally applied to calculate the economic principle; where  $EP^1$  denotes Economic Principle that should equal  $MI^1$  which is Minimum Inputs minus  $MO^1$  representing Maximum Outputs.

$$\text{Taxi Business 1: } EP^1 = MI^1 - MO^1,$$

This does not seem to have been followed and consequently, it would seem that the business would fail in its performance unless the road traffic regulations are illegally compromised as it were;

- Experience – without relevant experience, it would be difficult to guide taxi operators on the road.
- Project management – without project management knowledge, it would be difficult for the taxi owner to monitor the project. Seeing that there was no one who has some kind of experience in this line of expertise, this is indicated as a challenge regarding the amount of money invested in the taxi industry.

Mentoring system should be orchestrated in terms of measuring performance appraisal as well as guidance provided (Switzer & Huang, 2007). On this point it may be assumed that performance appraisal does not feature, thus prompting this kind of a problem.

Regarding the income tax in terms of the requirements of the South African Receiver of Revenue and Act 58 of 1962, it is preemptory for every business to pay the tax in relation to the income that the business generates. It can be argued that this regulation in the South African taxi industry was never, and is still not, enforced.

## POSSIBLE SOLUTIONS

Based on the above, the only possible solution that could be met to sort this problem is to retrain taxi operators for a fee. The following, offer managerial applications to practicing managers and policy-makers and point out how the solution could be approached (The Economist, 2011).

### Drivers' Licenses

In order to test the validity of drivers' licenses, for those taxi operators who have some, there should be numerous road blocks on the taxi routes targeting taxi operators. These road blocks should be announced to all taxi operators, perhaps through the media.

### Job Interviews

The interviews should be conducted for every taxi operator to be appointed for a job. This is to ensure that employment regulations are complied with. This would also help to have the employee registered for income tax purposes in terms of the Income Tax Act of 1962. Failure to comply with both registration procedures should constitute offences punishable by law courts.

### Educational Requirements

Research has established that no formal degree or secondary education is required to become a taxi operator, but still taxi operators must obtain a chauffeur license, or a license with passenger endorsement (No Author, 2011). Completion of an employer-mandated training program should be essential. Driving schools should also offer courses in taxi driving, which include map reading, and local regulations and customer service. This paper insists that there should be some educational level as a prerequisite for the taxi operators (Kreiser, 2011).

## CONCLUSION

This paper investigated causes of road accidents as factors destabilizing taxi business (International Labour Office, 2002), by exposing various root causes of the road carnage and illuminated what the solution should be. The research established that the taxi business in South Africa is conflagrated with disobedience, negligence and violations of road traffic regulations. This negligence resulted in causing road carnage eventuating national outcry. The research found that despite a number of accidents reported, the government still turns a blind eye to act upon the causes of this road carnage. If South Africa indeed wants to eradicate gross negligence that is continuing on South African roads by arrogant taxi operators, as is evident from the research findings, the suggested solutions provided should be rigorously implemented (Bromley Hansen, 1995).

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# **SOUTH AFRICAN COAL MINING INDUSTRY: A MODEL FOR MINIMIZING THE SUPPLY CHAIN CONSTRAINTS**

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## **ABSTRACT**

*The study explored the South African coal mining industry and its role players to establish the causes of the bottlenecks/constraints experienced in the coal mining industry supply chain. A qualitative research methodology was used. Both theoretical and philosophical assumptions were utilized with inferences from and references to works by other researchers to broaden the knowledge horizons for the study. Thirteen supply chain executives and professionals from the key role players in the coal mining industry were interviewed. The study determined the presence of communication barriers between the industry role players in the public and private institutions. Eight main constraints affecting the various role players within the coal mining supply chain emerged that culminated into the model that would enable the industry to minimize such constraints. To this end, the study proposes the development of an Integrated Strategy for the Development of Coal Mining (ISDCM). The model is based on the public and private partnership arrangement that would alleviate most of the prevailing constraints when implemented. The model would furthermore have the capacity to rectify most of the existing constraints. It would be funded from the commercial sector and would operate on triple bottom lines of economic, social and environmental factors, with equal weight. This is a desirable direction for the future in order to maintain sustainable development. Emanating from the study are policy and research recommendations for the South African coal mining industry, covering the coordination of the critical areas of the proposed integrated strategy for the development of the coal mining industry. Such recommendations include further research into new coal mines and power stations as well as perceptions and expectations of potential investors in the industry, among others.*

## **INTRODUCTION**

The aim of the study was to explore the supply chain constraints facing the South African coal mining industry supply chain with a view of developing a model which would assist in minimizing such constraints. The study examined the South African coal mining supply chain commencing with the industry legislative environment, mining, stockpiling, transportation and the activities at the customers' premises who in many instances are also the coal consumers. In the South African scenario, coal-fired power stations and the manufacturers of liquid fuels and petrochemical products are the leading local consumers followed by coal export (DME 2009: 48).

The domestic coal supply chain entails local coal consumption for power generation, petrochemical production, for metallurgical and general industries. The export coal supply chain is entirely for coal exported to other countries. Both supply chains have three steps namely (mine, transportation and customers) for the domestic supply chain and (mine, transportation and the export terminals) for the export that forms the basis of this study.

Supply chain encompasses both the demand and supply sides of business operations. The demand side involves managing physical distribution of products/services downstream to service the first and second tiers of customers, while supply side involves managing functions of purchasing and supplies through the first and second tiers of suppliers (Pycraft, Singh, Phihlela, Slack, Chambers, Harland, Harrison & Johnson 2003: 459).

Coal is a fossil fuel and a primary source of energy. It was formed approximately 300 million years ago as a result of slow decaying process of vegetation in swampy valleys (Anglo Coal 2007: 47). It is a nonrenewable energy source due to the many years the formation process takes (Kruger 2006: 43). Starting with the lowest coal grade, there are five grades namely lignite, sub-bituminous, bituminous, anthracite and graphite which are determined by their carbon content and calorific value World Bank (2007: 282). South Africa has the 6<sup>th</sup> largest coal reserves in the world comprising 30 408 million tons (DME 2009: 44).

The mining and consumption of coal has serious environmental consequences that lead to land degradation, water and air pollution (Cassedy & Grossman 2000: 17). Most of South African coal mines are concentrated in the Mpumalanga coalfields where most of the coal-fired power stations and the petrochemical industry are located. The coal-fired power plants were planned and built next to the coal mine for the ease of transportation costs as the conveyor belts facilitate coal transportation from the mine to the power station (DME 2009: 47).

The South African domestic coal consumption in 2009 was power stations (69%), synthetic fuels (20%), industry (5%) merchants (4%) and metallurgy (2%) (Prevost 2009: 9). The transportation predominantly used for domestic coal are conveyor belts, road and rail (Chamber of Mines 2009: 28). The export coal is transported through a 650 km rail line from Ermelo, Mpumalanga to Richards Bay Coal Terminal (RBCT) in Kwa-Zulu Natal. The RBCT is the biggest coal terminal in the world and it is privately owned with majority shareholding by the five leading mining companies (Chamber of Mines 2008: 18). The South African legislative environment falls under the Department of Mineral Resources (DMR) that uses the Minerals and Petroleum Resources Development Act of 2002 (MPRDA). The Department is mandated under the Act to issue exploratory and mining licenses among other mining directives. The Department of Water and Environmental Affairs is mandated under National Environmental Management Act of 1998 (NEMA) to administer environmental management plan (EMP) (Lloyd 2002: 16).

## SUPPLY CHAIN CONSTRAINTS

Supply chain constraints entail capacity management when products or services flow along a chain of processes. The theory of constraints developed by Goldratt in 1990 provides the philosophy for constraints management (Goldratt 2001-2009: 9). The Theory of Constraints (TOC) is based on based on the recognition that nearly all products and services are created through a series of linked processes (Bozarth & Handfield 2006: 222). The TOC provides a platform of establishing connectivity and collaboration of the value chain in order to establish the constraints experienced by a supply chain. It enhances the impacts and contributions of constraints profitability and performance measures to the value chain.

According to Heizer and Render (2008: 619) organizations need to follow the five step process pioneered by Goldratt to treat constraints. These are:

Step 1: identify the constraint(s);

Step 2: develop a plan for overcoming the identified constraints;

Step 3: focus resources on accomplishing step (2);

Step 4: reduce the effects of the constraint(s) by off-loading work or by expanding capacity. Ensure that the constraint(s) are recognised by all those who have impact on them; and

Step 5: once one set of constraints is overcome, go back to step (1) and identify new constraints.

(Heizer and Render, 2008: 619)

Jiang, Zhou and Meng (2007: 6) comment that constraints of coal supply chain manifests themselves due to such factors as:

- most companies have not implemented the supply chain concept theories;
- most coal companies are profit driven and overlook the cooperation and information sharing with other members of the value chain;
- employees not well trained in supply chain management;
- constraints are usually experienced in transportation and resources.

The modes of South African coal transportation are conveyor belts, rail and road for both domestic use and for the export market (DME 2009: 39). Conveyor and road are the modes predominantly used for coal delivery to

power stations, while rail is mainly used to transport export coal from Mpumalanga coalfields to the sea ports of Richards Bay, Durban and Matola coal terminal in Maputo, Mozambique (DME 2009: 5).

The constraints established by the study comprised infrastructural and resources.

The infrastructural constraints include:

1. Rail capacity for export coal stands at 80mtpa while that of coal terminal at Richards Bay is 90mtpa (Prevost 2010: 17).
2. Upgrading of locomotives, rail line, wagons (Transnet 2008: 85).

The resources constraints comprise:

1. Skills shortage (Transnet 2008: 85)
2. Poor coal planning and procurement, wet coal and low stockpile levels were Eskom problems during the power outage of 2007/2008 (NERSA 2008: 38-39).
3. Coal production below capacity (Eskom 2008: 58).
4. Increased domestic energy demand (Transnet 2008: 82).

## METHODOLOGY

In this study, qualitative exploratory and descriptive design strategies were used. An important characteristic of qualitative research is that the process is inductive in that researchers gather data to build concepts, hypotheses or theories rather than deductively testing theories or hypotheses (Merriam 2002: 5). The study sought to explore the constraints in the South African coal-mining industry supply chain with a view to providing a model which would enable the industry to minimize such identified constraints. Participants were requested to relate their experience, observations, and opinions, and to provide insight into the research topic (Lee & Lings 2008: 165).

In the exploration research the researcher tried to establish a deeper understanding of the management dilemma and conceptualizes ways of solving them (Cooper & Schindler 2008: 704). Descriptive study entails explaining deep understanding of a situation with the view of portraying its accuracy (Robson 2002: 59). By using unstructured research questions the researcher was able to follow the unfolding events on the true picture of the situation emanating from the participants (Greef 2005: 296).

### Research design

Research design involves activities of 'collecting and analyzing data, developing and modifying theory, elaborating or refocusing the research questions and identifying and addressing validity threats' (Maxwell 2005: 2). The research design in this study involved the selection of participants and inducting them into the research processes, introducing the participants to the interviews, undertaking the interviews and obtaining feedback on the interviews for validity. It also involved data collection using an audio-digital recorder. The recorded transcripts were transcribed and the data interpreted, evaluated and analyzed by the researcher.

### Participants

A purposive sampling technique was used to recruit participants. The participants in this research were high profile officers who are all professionals in the coal industry supply chain. According to Neuman (1997: 205), purposive sampling is based on the researcher's knowledge of the research area and the important opinion makers within that research area. In this case, one of the authors' knowledge of the South African coal-mining industry and the other role players in the industry enabled him to approach the high profile people, including chief executive officers, to participate in the study.

There were 13 participants in the study who were drawn from 10 organisations\institutions. The participants were selected from the executive management and professionals from those organizations\institutions. In the three organisations, the participants were chief executives while the rest were senior professionals in the coal supply-chain management. Participants had on average 20 years of experience in their respective specialist fields.

Participants were selected as the population for this study because it was assumed that they were in the best position to provide an informed perspective. A letter of introduction was sent to all potential participants.

This introductory letter included a brief outline and invitation to participate. Telephone contact was made and an interview was arranged with each willing participant.

## **Data collection and analysis**

The data were gathered through in-depth face-to-face interviews. Unstructured questions (open-ended) were asked in order to elicit more information from the participants. This enabled the researcher to follow the unfolding events coming out of the interview as the participants narrated the picture (Greef 2005:296). The interviews were recorded using an audio digital data recorder and transcribed. During the interviews, the researcher jotted down the important points in order not to interrupt the interview process. Immediately after the interview, the researcher drafted the field notes from the points noted. Each interview lasted between 30-50 minutes.

The recorded materials were transcribed from audio-visual format into written text format. The original recordings were held as reference material that could be consulted, if necessary, for certification of the accuracy of the transcripts' (Ehigie & Ehigie 2005: 622). The transcripts were then analyzed using content analysis. Content analysis involves reading research transcripts through a number of times, noting down the key points and identifying the themes emanating from the participants' story line (conversation analysis). The themes were then grouped into more manageable groups of sub-themes. Finally, a summary table of the main themes emanating from the participants' data was drawn up (Thorpe & Holt 2008: 116).

## **Strategies to ensure trustworthiness**

Guba and Lincoln (1994) state that 'trustworthiness consists of four elements: credibility, transferability, dependability, and confirmability. Credibility refers to whether those findings bear any relationship to the data one drew the findings. Transferability is about whether one can justifiably transfer the findings to any other context. Dependability or reliability is about how well a researcher can assure readers of his/her findings and the way he/she arrived at them from the raw social context. Confirmability refers to whether or not one can convince readers that, as a researcher, one was not influenced by biases either from one's own personal values or theoretical background' (Lee & Lings 2008: 210).

Following the interviews, the researcher communicated with all the participants via e-mail, thanking them for their contribution and in some cases, clarifications were sent in by the participants with regard to some of the issues discussed during the interview. This was a portrayal of cooperation and credibility of the research process. Dependability depends on the participants' willingness to contribute credible, applicable and valid data which can be sorted out through triangulation (Hammersley 2008: 67). The consistent coal supply-chain accounts provided by the participants from the leading coal mining companies in the country and their role players confirms the dependability of the data collected.

Triangulation enhances validity and makes one look at issues from different perspectives in terms of methods and analysis (Lee & Lings 2008: 239). In this study triangulation was achieved through the use of senior company executives and professionals in the interviews, cross-referencing internal documents obtained from the organizations/institutions involved and participants' checking and debriefing after the interview.

## **FINDINGS**

After analyzing the research data, eight major themes emerged along with other subthemes some of which characterized the constraints experienced in the South African coal-mining industry supply chain as follows:

- **Policy and legislative environment**

The Mining and Petroleum Resources Development Act (MPRDA) of 2002 emerged as the main hindrance. The interpretation of the Act is seen as cumbersome and the processes of licensing for exploration and mining are unreasonably long causing frustrations to the potential investors in the industry.



- **Lack of shared vision**

Presently, the South African private coal-mining industry and the public sector which controls the rail freight transportation and the policy decisions for the industry lacks enough coordination and collaboration to facilitate a smooth running coal supply chain. This is due to poor communication among the industry role players that culminates into mistrust, diminished coordination and collaboration. There is a need for an integrated strategy on coal mining for South Africa. This kind of integration advocated by this study would lead to other avenues for collaboration, instill confidence and enhance transparency among the role players in the coal supply chain.

- **Damage to roads**

Approximately 50 percent of the coal mined in South Africa is consumed as fodder for power generation. The coal transportation to the power stations is 70 percent by conveyor, 24 percent by road and 6 percent by rail. The constraints in the domestic coal supply chain are featured more in the road transportation to the power stations. All the coal-fired power stations were constructed adjacent to a coal mine for the ease of transportation. However, the massive coal resources that originally existed at the time of the power stations construction have since depleted significantly requiring the power stations to receive top-up capacity from outside mines by road. This has resulted in extensive environmental damage in the areas leading to the power stations in the Mpumalanga coalfields. Such damages include road damage, accidents and pollution among others. However, some coal-fired power stations such as Majuba and Tutuka had technical problems since the onset and have continued to receive coal supplies by road and rail.

- **Rail and infrastructure**

In the export coal supply chain, the constraints are mainly attributed to infrastructure capacity and operational problems at TRANSNET, which include shortage of locomotives, shortage of rolling stock, skills shortage, theft of rail and copper wire, among others. The South African coal export has dropped in the last five years, while the handling capacity at RBCT has increased from 72Mtpa in 2008 to 91Mtpa in 2010. The 2009 export was 61.1Mt. The other constraint is attributed to reduced capacity and fewer train loads due to slow loading process at the smaller mines for lack of appropriate rolling stock loading facilities.

- **Skills shortage**

The need for more power stations and new mines calls for more skills in the technical areas. A very important element of the Integrated Strategy on the Development of Coal Mining (ISDCM) would have to be the skills development plan for the industry. The skills shortage is found across the coal supply chain ranging from the mines through the transport and distribution system and to the users. Wilhelm (2009: 6) estimated that building 40 power stations would require 600 engineers and 2 500 artisans.

- **Lack of fresh investors**

Fresh investment in the industry seems to be hamstrung by the stringent and cumbersome requirements from the policy and legislative environment. Once these requirements are relaxed and the government communicates its position on the proposed nationalization of mines, the economy would see fresh investors in the coal mining industry.

- **Environmental issues**

The impact of coal mining on the environment is widespread from ground excavation to water and air pollution. Soil damage affects the plant growth and development and it is evident in the coalfields of Mpumalanga where several dilapidated mines have been neglected for many years. The other forms of degradation include the continuous combustion of the discard coal in unattended mine dumps, soil erosion and formation of the Acid Mine Drainage that is a threat to underground water table.

- **Ownership of the rail (TFR/TRANSNET)**

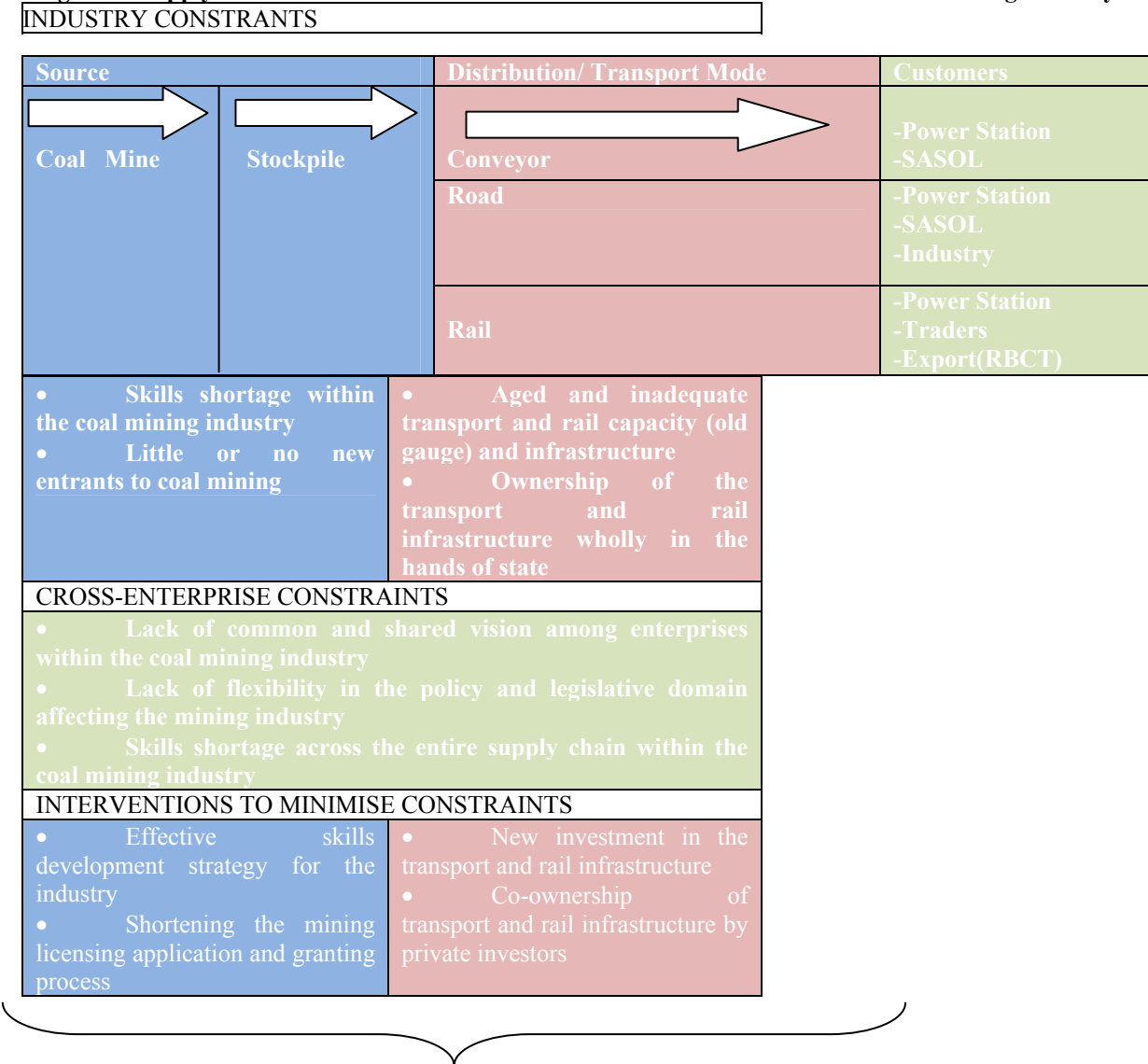
The current ownership of the rail infrastructure which is under the State corporation Transnet hinders integration and collaboration in the coal supply chain due to lack of flexibility in policy implementations. Opening up participation by the private sector in the ownership of the rail infrastructure would enhance integration and collaboration in the industry. This could be benchmarked from the developed nations that have public-private partnership running in the rail management and control.

# THEORY DEVELOPMENT

## Model: Minimizing supply chain constraints

After analyzing the research data, eight major themes emerged along with other sub-themes some of which characterized the constraints experienced in the South African coal-mining industry supply chain. (Figure 1) represents the model for minimizing supply-chain constraints in the South African coal-mining industry:

**Figure 1: Supply-Chain Constraints Minimization Model for the South African Coal-Mining Industry**



Integrated strategy on the development of the coal mining (ISDCM)

Source: (Mathu, 2011: 237)

The model has four major components as follows:

### 1. The coal supply chain

The coal supply chain commences with mining and separation of rocks and other debris leaving coal in the stockpile for other processes such as grading, beneficiation and transportation. The bulk of domestic coal goes to Eskom power stations for power generation and to Sasol the petrochemical industry where conveyor, road and rail are the transportation modes used. The industry and traders receive their supply via rail and road. The export coal is transported by rail.

## 2. Industry constraints

The constraints in the coal mining industry are skills shortage and lack of new entrants to the industry. At a distribution level major constraints emanate from Transnet (the South African government rail logistics corporation). The constraints range from lack of adequate rail capacity, old rail lines with old gauge and the sole government ownership of the rail company hinders cross-enterprise collaboration.

## 3. Cross-enterprise constraints

The constraints can be described as lack of common and shared vision by all the role players in the coal mining supply chain due to lack of optimal collaboration between the government and the private role players. The policy and legislations for the industry are unpopular with the private role players and potential investors. The Mineral and Petroleum Resources Development Act (MPRDA) is seen as cumbersome and scares potential investors in the industry. The whole industry is affected by skills shortage from mining engineers, managers, train and equipment drivers and other industry professionals.

## 4. Intervention to minimize the constraints

An integrated strategy and development of the coal mining industry (ISDCM) should be established to look into the needs of the coal mining supply chain holistically. The ISDCM would address the issues of skills development; reveal the mining licensing process with the view of reducing the issuing time and building confidence in the industry in order to attract new investments. There should be additional infrastructural investments to improve efficiency and diversify product range transported by rail. The preference of rail for long haulage of goods would attract intermodal transportation in our economy. The examples available from some of the developed countries of partnership between private companies and the government in the ownership of transport and rail infrastructure would be a fitting one for South African coal supply chain.

Indeed, this model recommends a Public-Private Partnership (PPP) for the South African coal supply chain and other government institutions that has shared interests with the public.

However, there are challenges in achieving cross-enterprise collaboration, but by utilizing ISDCM it is possible to realize the goal by addressing the barriers as indicated by the figure below.

**Figure 2: The South African Coal Supply-Chain Challenges to Optimisation**

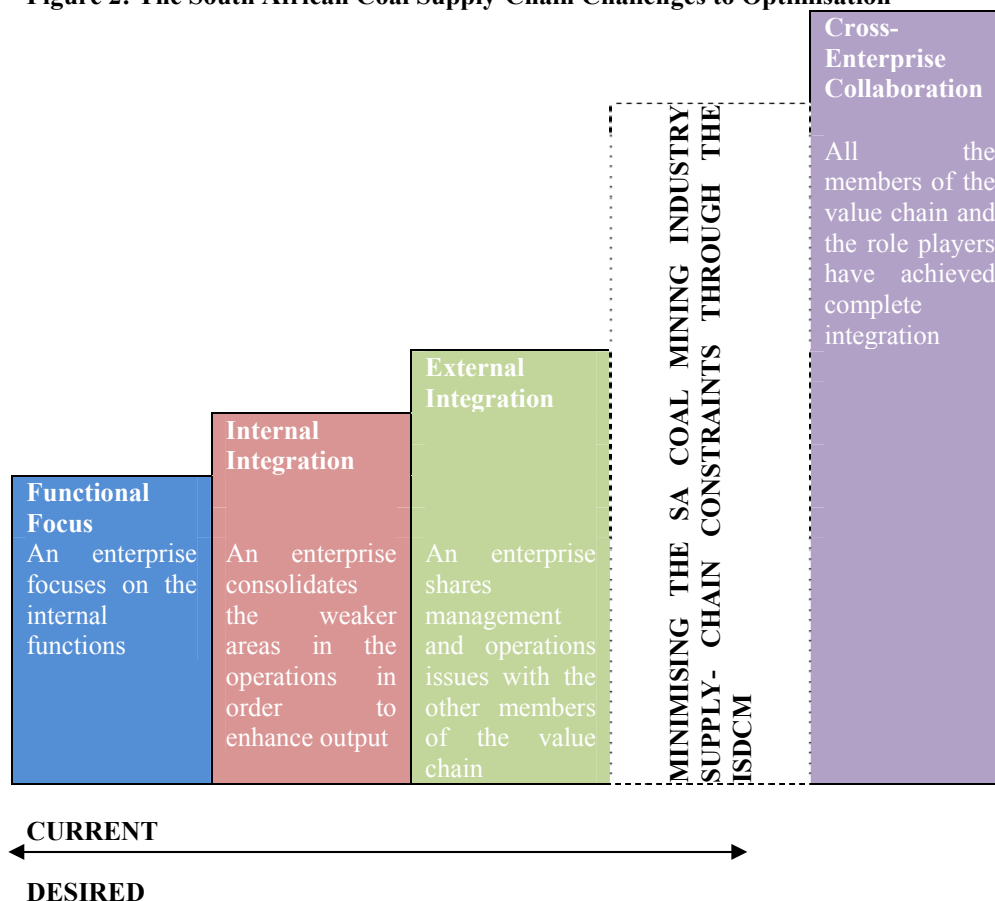


Figure 2 shows the current status of the South African coal mining industry and the desired aim to reach the cross-enterprise integration. Under the prevailing situation the industry has stagnated at the functional focus, internal integration and external integration. However, when the integrated strategy on the development of the coal mining (ISDCM) gets implemented, the industry would achieve the desired level of cross-enterprise integration. The vehicle capable of achieving the cross-enterprise collaboration is Public-Private Partnership (PPP) that this model recommends.

## Limitations

This qualitative inquiry resulted in the development of a theory and model for minimizing the supply chain constraints facing the coal mining industry in South Africa. Neither the theory nor the model has been tested and both require further evaluation. Empirical studies are needed to validate the model in South Africa.

## Implications

Results from this study were used to model that provides the coal mining industry with ways of minimizing supply chain constraints. The results of this study encourage reflective practice on the part of the industry as a way to improve efficiencies along the coal mining supply chain.

Recommendations are made on two levels, namely policy and research:

**Policy implications:** At a policy level the study recommends that the coal mining industry develops an Integrated Strategy on the Development of Coal Mining (ISDCM) for South Africa. The focus of the ISDCM should be on the constraints raised in the study. In other words the critical elements of the strategy should be:

- a policy and legislative environment;
- working towards a common and shared vision in the industry;
- developing rail and infrastructure ;
- developing skills ;
- attracting new investors in the industry;
- diversifying ownership of the rail and TFR/TRANSNET; and
- managing the environment.

As indicated earlier, the ISDCM coordination committee first needs to be set up by the Ministerial Planning Committee of the National Planning Commission. Its mandate would include developing and implementing the ISDCM.

**Research implications:** In support of the work of the proposed ISDCM coordinating committee a number of areas need to be looked into more closely to make more informed decisions. First, further research will need to be undertaken to determine the impact of the new coal mining and power station developments on the skills requirements in the industry. Secondly, a study needs to be conducted on the perceptions and expectations of the potential investors in this industry. Thirdly, a feasibility study needs to be done on the diversifying of the ownership and management of the rail, locomotives, and rolling stock to private investors. Fourthly, research needs to be undertaken into the potential effectiveness of the PPPs in this industry.

## CONCLUSION

The aims and objectives of the study both theoretical and empirical were realized and a model developed to minimize some of the constraints identified from the South African coal-mining industry. The need for a systems approach, an integrated strategy and collaboration within the coal-mining industry in South Africa was established. The study also proposed institutional arrangements for the implementation of an integrated strategy on the development of coal mining (ISDCM). In support of an ISDCM research was recommended into the

fields of coal-mining and power stations development, perceptions and expectations of potential investors in the industry, diversifying rail and infrastructure to private ownership and into the effectiveness of the PPPs in the coal mining and affiliated industries.

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# VENTURE CAPITAL AND INNOVATION: EU AND US VS CROATIA

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## ABSTRACT

*Innovation processes in companies are one of the determinants of economic development. Small and medium-sized enterprises are more dynamic than large ones, but they have difficulties with access to funds for initial investment and for starting production with a view to implementation and realization of innovations. One possible source of initial capital is venture capital, because in addition to money they can get professional support that is needed for beginners. Venture capital plays a significant role in technology transfer from research institutions to enterprises and in commercialization of ideas. Croatia as a small economy significantly lags behind the US (primarily), as well as the EU in the use of venture capital, but it is creating potential for increased growth rate.*

## INTRODUCTION

Many factors affect economic growth. From the neoclassical model that analyzed labor and capital as primary factors of growth through technological progress and to contemporary models that analyze human capital, social infrastructures, institutions, and other factors. Schumpeter's model of growth (Aghion and Howitt, 1998) describes that investing in innovation comes from the temporary monopoly profits as a result of the innovation process. Companies invest in research and development for profit to be realized in the market as a result of a temporary monopoly position. Capital accumulation and innovation define the long-term growth rate. The accumulation of capital increases the return on innovation activities. With falling yields in the innovation sector as the technology becomes more complex, the economy of a country can have a constant rate of growth (Aghion and Howitt, 1998). Schumpeter (1934) therefore argued that small enterprises are probably the best source of innovation. World experience shows that small and medium enterprises are more dynamic than large ones and can contribute significantly to economic development and increasing employment. One of the main problems of such companies is limited access to funds for the initial investment and for starting production with a view to implementation and realization of innovations. Investments in technology-oriented small and medium enterprises are too risky for banks and other institutional investors in comparison to investments in large companies that already have years of business history. One possible source of seed capital for small enterprises is venture capital (VC). In addition to capital they are also receiving the professional support that is needed for beginners. An increase in VC investments of 0.1% of GDP is statistically associated with an increase in real GDP growth of 0.30 pp. Early-stage investments have an even bigger impact of 0.96 pp (Deutsche Bank Research).

## VENTURE CAPITAL

The term "private equity" is used for almost any investment which is not traded on a formal market, which carries a risk that is not acceptable to conventional banking. Market investment in private property is segmented and gives a wide choice of investment options. Most investments in private assets include private companies and small and medium-sized enterprises - subsidiaries of listed companies. The phase of business development is

essential for VC, which consists of the following stages: seed, start-up, later developmental stage, expansion, restructuring, replacement capital and buyout. The early stage is considered to be investment in the seed and start-up phases. VC is an investment in an early stage, later developmental stage and expansion. Private equity investing involves investing in VC, restructuring, replacement capital and buyout. Different stages of development of enterprises are characterized by different levels of risk and different financial characteristics on which the most common sources of funding depend. The early stage of development is characterized by the high risk of failure and negative cash flow; hence it is unattractive to external sources of funding. Therefore, this phase is usually financed by own funds or loans from friends or family members, government incentives and VC. In the mature phase of development cash flow is positive and stable, the risk of failure is low, and these companies are attractive to outside sources such as banks, portfolio or strategic investors.

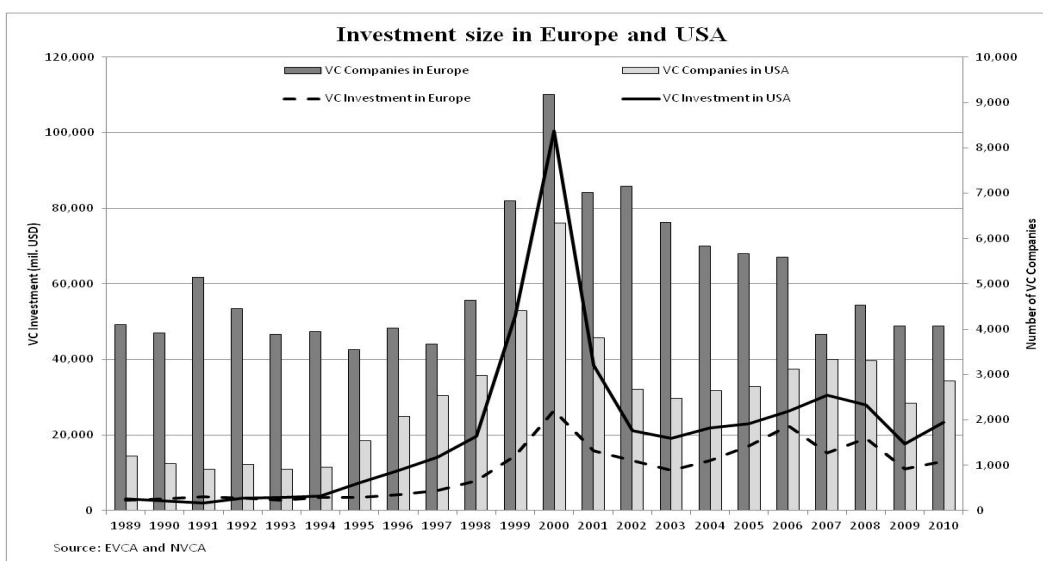
## **Venture capital in US and EU**

VC has a significant role in the US economy, particularly in the field of financing innovation. Almost all major US IT companies were funded by VC. Some of them are: 3Com, AMD, Apple, Cisco, Google, Intel, Oracle, Netscape, Silicon Graphics, Solectron, Sun Microsystems, Yahoo. Some biotech companies funded by VC are: Amegen, Biogen, Centocor, Chiron, Genetech, and many others. Some non-technology companies funded by VC are: Federal Express, JetBlue, eBay, HomeDepot and Office Depot. Many of these companies have changed the human way of life and work, and the world in general. In recent years, companies such as Facetime, MySpace and YouTube continue with the changes. The US industry has grown from US \$ 568 million in 1980 to US \$ 23 billion in 2010 (Figure 1). Approximately 85% of total assets are invested in high-tech companies, out of which 50% is in the software, medical devices and supplies, and biotech sectors. Investing is evenly divided according to the phases of development of enterprises: 35% is invested in seed and early stage, 31% in the expansion phase, and 34% in the later stage. In the last two decades VC has expanded from the US to the global level. Today, the US VC companies are investing in at least 40 different countries around the world.

VC investments in continental Western European countries began in the 1980s. Gradual structural and legal changes in Europe, such as changes in regulations for pension funds and insurance companies that have liberalized their investment opportunities were the catalyst for the development of this industry. VC development also is stimulated by tax reform. Driven by low inflation in the 1990s, investments in equity securities and other similar products were more attractive than investments in fixed income securities. In the mid 1990s, the VC market started to develop in Central and Eastern Europe. Countries with developed capital markets are a better base for VC (primarily the United Kingdom and Sweden). Most countries of continental Europe's financial system are dominated by banks. Companies are focused primarily on financing by loans. Therefore, the development of VC market should be stimulated by governments through creation of a favorable regulatory and tax environment. The size of the European VC market is substantially smaller than the US market (Figure 1) but does not differ from it in terms of sectoral diversification. In fact, over 50% of total assets are invested in high tech companies such as biotech or software/IT, and even more in the fast-growing sector of clean technologies. However, there is a big difference in terms of the companies' development stage. While in the US market in 2010 32% of total assets were invested in seed and early stage, in Europe it was only 4.7%. This is an indicator of lower risk tolerance by European investors, probably because of its structure dominated by banks, insurance companies and pension funds.

**Figure1: Investment size in Europe and US**





## IMPACT OF VENTURE CAPITAL ON ECONOMIC GROWTH AND INNOVATION

### The methodology of measuring

The number and size of enterprises is an important factor that affects the national economy. More enterprises and more powerful companies produce more and thus contribute to GDP growth. VC funded enterprises generate higher total income and EBIT, they are more productive, employ more workers and invest more in R&D (Table 2). These results can be partly attributed to the fact that VC finances inventive companies that seek to build new markets.

**Table 2: The impact of venture capital on company's economic parameters**

	EUROPE		Great Britain		US	
	VC	Other	VC	Other	VC	Other
Total income	33.0%	2.2%	8.0%	5.0%	5.3%	3.5%
EBIT	5.8%*	5.5%*				
Number of employees	30.5%	0.7%	8.0%	3.0%	1.6%	0.2%
Investment in R & D	70% of respondents considered that greater		14.0%	1.0%	12.3%	5.1%
TFP					0.023	-0.034

Source: EVCA, NVCA, BVCA, Ueda and Hirukawa, 2006 (\* measured by the OECD countries)

The growth rate of total income and employment in Europe is significantly higher than those in the UK and the USA. This is the result of several factors: low initial size in Europe, different reference periods (Europe comprises the largest growth period of VC investments from 1997 to 2004; for the UK the analyzed period is from 2002 to 2007, while the US shows the results for the period from 2006 to 2008), and different size samples (in Europe the study included 245 companies, in the UK 489 and in US 23,565). VC invests in high-tech companies and it is characterized by an ability to recognize companies that have a chance of success. An analysis of the contribution of individual factors to overall economic growth has found that the increase of knowledge has the largest share in the increase in productivity of production factors. Companies funded by VC are characterized by greater investment in R&D. In addition, they invest more than average in education and training of workers. These companies invest more in marketing and market research. Young, innovative technology companies in the

focus of VC arise from desire for the commercialization of ideas, combining knowledge, innovation and entrepreneurship. They are characterized by high quality human resources and better cooperation with scientific institutions and increase the entrepreneurial climate.

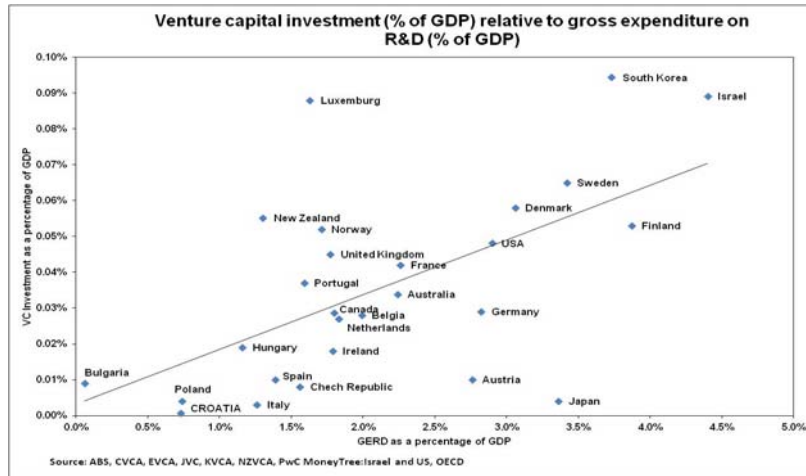
## Literature review

OECD's definition (OECD, 1993) distinguishes three types of R&D: basic research, applied research and development. Basic research is experimental or theoretical work undertaken to achieve new knowledge without any practical application or use. Applied research is also undertaken in order to achieve new knowledge, but with a specific practical aim or purpose. Development is systematic work, based on existing knowledge that is the result of research focused on the production of raw materials, products and equipment; implementation of new or significantly improved existing processes, systems and services. The third type is identical to the activities undertaken by small innovative companies. As they are usually financed by VC, it is legitimate to assume that VC is an important variable that affects economic growth because it directly contributes to the transformation of inventions into new products and services. This idea was confirmed by Tykvova (2004). Her research on the example of German companies has shown that large, established companies are less innovative than small, young companies. The reasons are their structure and internal organization. New companies with pioneering ideas and a flexible structure can better respond to customer requirements. Kortum and Lerner (2000) explored the relationship between VC and innovation on the example of US companies in the period from 1965 to 1992 on the sample of 530 companies from 20 different sectors. It was confirmed that the VC funded companies have significantly more new patents than companies with own funded R&D. At company level, this causality was analyzed by Engel and Keilbach (2002) on the example of German companies, and by Ueda and Hirukawa (2006) on the example of American companies. TFP (Total Factor Productivity) is used as an indicator of the innovation. A comparative analysis of indicators of VC financed companies and enterprises funded from other sources have confirmed the hypothesis that TFP is higher in VC funded enterprises. Bertoni conducted research (Bertoni et al. 2010) involving 3,687 European companies from six European countries (Belgium, Finland, France, Italy, Spain and the UK) and came to the same conclusion: that VC funded companies have higher productivity. At the aggregate level, Audretsch and Keilbach (2002) analyzed the impact of VC (expressed as the number of new enterprises in relation to population) on economic performance of certain German regions. They came to the conclusion that VC has a significant impact on production and productivity. Romain and van Pottelsberghe (2004) tested the hypothesis that VC affects economic growth in a panel of 16 OECD countries for the period from 1990 to 2001. The model was based on the traditional Cobb-Douglas production function. VC is taken as an additional source of knowledge (in addition to business and public investment in R&D). They showed that the social benefits of VC are significantly higher than the benefits that come from corporate or government investment in R&D. VC investment increases the absorption of knowledge generated by universities and companies. VC stimulates economic growth through two different channels: innovation and absorptive capacity (i.e. the development of know-how and abilities that encourage more efficient use of existing knowledge which came from private and public research centers). This study demonstrates that the social impact of VC is more important than corporate or public institutions dealing with research and development. Large corporations generally focused their research on improving products and processes that are less risky but the expected return is lower. VC stimulates the conversion of knowledge into new products and processes.

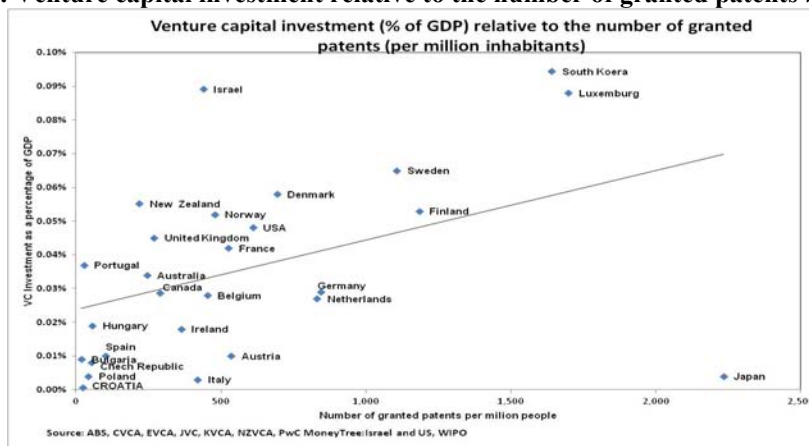
## Relationship analysis of venture capital and innovation

At the macro level, evidence of a positive correlation between the amount of VC investment and innovation shows the correlation between VC (expressed as a percentage of GDP), according to three indicators of innovation: gross investment in R&D (GERD), expressed as a percentage of GDP (Figure 2), the number of granted patents per million inhabitants (Figure 3), and the number of scientific publications per million inhabitants (Figure 4).

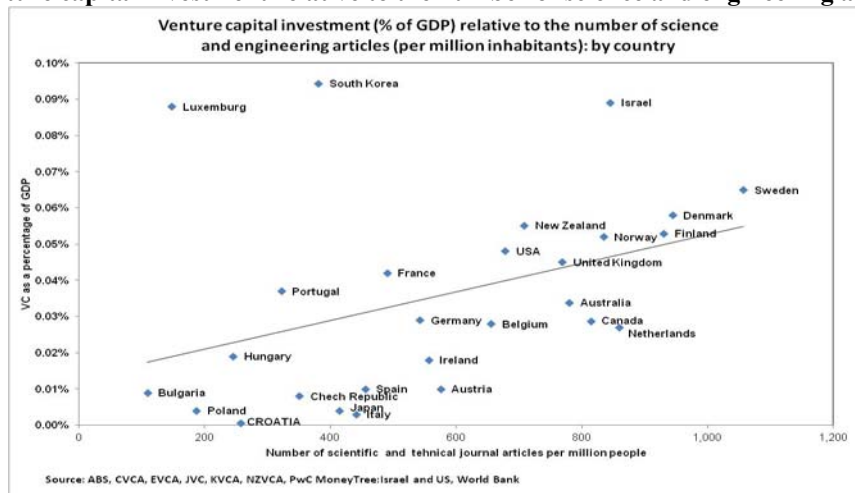
**Figure 2: Venture capital investment relative to gross expenditure on R&D by country**



**Figure 3: Venture capital investment relative to the number of granted patents by country**



**Figure 4: Venture capital investment relative to the number of science and engineering articles by country**



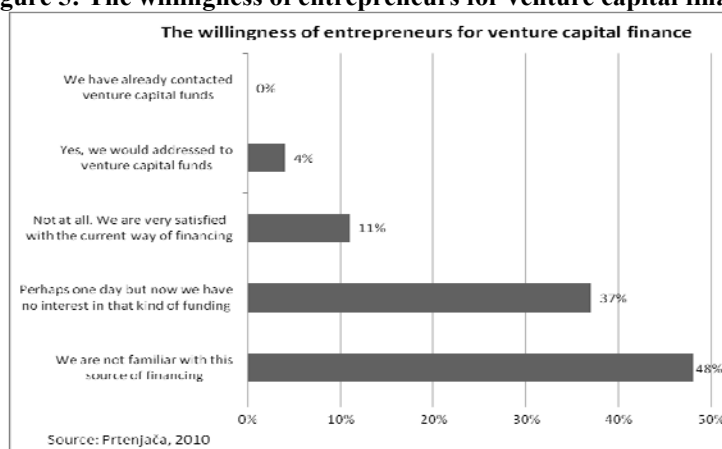
Investments in R&D are one of the engines of economic growth. The trend of its movement is an indicator of future competitiveness and wealth. The number of granted patents is one of the indicators of new product innovation. The competitiveness of enterprises is determined by the ability of companies to develop new products. The number of scientific publications is an indicator of the efficiency of the research system. The

amount of VC is an indicator of the relative dynamism of creation of new technology companies, because the commercialization of new technologies is very risky and often VC is the only source of their financing. Therefore, only the amount of investment in the early stages of business development (seed, start-up and early venture) was considered.

## VENTURE CAPITAL IN CROATIA

The Croatian VC market is in the early stage of development (Figure 2,3,4). US \$ 17 million was invested in 2010, which puts Croatia at the bottom of the European scale. In fact, by 2010 all VC funds had invested a total of US \$ 30 million, in 30 companies. Until 2010 only two VC funds were registered in Croatia. But, in 2010 the image of VC market was significantly changed when the Government adopted the Decision on the establishment of funds for economic cooperation. Funds would be organized as public-private partnership, in which the ratio of private and public capital would be 50%:50%. The Government has expressed willingness to invest US \$ 174 million over the next five years, and an equal amount funds should be collected from private sources. Five new private equity funds were established that have already raised money from private sources (banks, insurance companies, pension funds, etc). Similar projects in the world, such as Yozma in Israel and the Capital for Enterprise in the UK, have been very successful. In addition, a network of business angels, CRANE (Croatian Business Angel Network), is also active in Croatia, investing in productive and innovative companies in the early stages of development. Apart from the investing, CRANE is active in education of young entrepreneurs, too. Examples of some successful countries such as Israel and Finland show that it is not enough to focus only on the supply of VC, but countries should act on the demand for this type of capital, which means increasing the number of firms eligible to this type of capital. The research that was conducted in 2009 on a sample of 220 firms (Prtenjaca, 2010) confirmed that the entrepreneurs are not informed about the possibilities of venture capital financing (Figure 5). Specifically, 48% said that they never heard, and 33% stated that they heard but they are not familiar with this source of financing, even though 99% said that they need additional financing. More than 70% of enterprises were financed from external sources, mostly through commercial banks and leasing companies. Only 12% of companies have used other sources of funding, and only one tested enterprise is financed by venture capital. However, those entrepreneurs who are fully familiar with venture capital said that they currently were not interested, or had no interest in that kind of funding. The reasons they mentioned were diverse: a complicated procedure, fear of losing of independence, fear of new management, complicated administration, fear of the unknown.

**Figure 5: The willingness of entrepreneurs for venture capital finance**



Another study conducted by the portal MojPosao, during September and October of 2010, on 700 respondents, indicated that there is great potential for the development of venture capital markets in Croatia. Specifically, 78% of respondents said that they thought about starting own business, 20% had already done so, and only 2% of respondents do not think about starting own business. As the biggest obstacles to starting own business in the opinion of most respondents is money (72%), followed by poor investment climate in the country (36%), lack of information (32%) and insufficient time (20%). Only 2% of respondents believe that small entrepreneurs have sufficient support from the Government, while 29% of respondents did not know what kind

of support they can expect from the Government. In this respect, Croatia should enhance the impact of the Government that will create a stimulating environment for the formation of small innovative companies, such as: increasing and promoting investment in R&D, systematic innovation policy, particularly by encouraging innovative companies in the initial stage of development, facilitating the establishment of their own spin-off companies by scientists, building regional institutions to encourage small and medium-sized enterprises, encouraging fiscal and monetary policies, strengthening of information channels. It can be concluded that positive developments of the VC market are evident in Croatia. The experiences of other countries have shown that, on average, each monetary unit of VC invested in a promising company can draw up to five additional sources of monetary units. These enterprises could also attract foreign capital, which is constantly looking for good projects. In its study entitled "European Private Equity Outlook 2012", Roland Berger states that Croatian companies can count on the increased interest of European private equity funds in 2012, particularly those from the pharmaceutical and healthcare sectors. Enhancing innovative enterprise will positively affect the much needed structural change and technological transformation of an undeveloped and uncompetitive economy into a technologically developed and competitive one.

## CONCLUSION

The analysis of developed VC market shows that this type of financing has a significant impact on a nation's economy. VC finances innovative and fast growing companies that achieve better operating results in comparison with companies that are funded from other sources. VC creates entirely new sectors by financing new companies, which then become dominant in their sectors. On the one hand, the number of new businesses grows, these companies grow faster than average, and achieve above-average earnings, from which a conclusion can be drawn about their important contribution to the GDP. Also, these companies tend to retain an above-average share of exports. On the other hand, VC-funded businesses contribute to the state budget through the taxes they pay, which increases with the growth and development of the companies. VC has a positive effect on the development of an entrepreneurial climate, taking the risk of financing new companies, participating in the development of the strategy at the time of its formation and active participation and monitoring of subsequent operations, having an impact on strengthening the competitiveness of companies financed, and creating a network of experienced entrepreneurs, business angels and managers. With regard to VC role in commercializing innovation, the VC market in a country becomes the foundation of its international competitiveness. The commercialization of new products or services promotes employment, economic growth and wealth of the country. Croatia lags in relation to the US and Europe in the use of VC, which opens a significant potential that has to be used in future.

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# INNOVATION, TALENT ATTRACTION AND RETENTION

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## ABSTRACT

*The success of an organization isn't, in most cases, only shown through their profits. Today the value of a company, with respect to its market value exceeds their financial quality. Intellectual capital is a major share in the value of the company. Managing employees with an emphasis on intellectual capital and talent is an emergency that arises in the path of human resource managers. The definition of intellectual capital and talent, leads us, first, to a high IQ (Intelligence Quotient), good schools and / or university results. But the intellectual capital and talent of an employee must be linked to his ability, to high performance and good results. How to manage, attract and keep these employees in organizations is also something that requires talent. Now, the basic skills of employees aren't sufficient for competitive companies. There are currently required higher levels of skills, because there are a growing number of activities that involve "knowledge work". Most companies in the world have a great challenge for the coming years: the challenge of scarcity of talent. The most competitive companies will be those that have the most talented employees. In terms of originality, this paper aims to create discussion about the relationship between talent attraction, talent retention and innovation, as drivers of business competitiveness. The research is based on the categorization methodology defined by Yin (2003) as single case study carried out in a company that is specialized in high precision components. The findings presented here show a strong link between talents attraction, talents retention and innovation.*

## INTRODUCTION

In Although a significant degree of academic and professional interest in the topic of talent management is still in a very early stage. The talented employee has high levels of performance and profitability, the passion for change, is proactive and anticipates change. Steve Jobs has created a new need. The creation of the IPAD is an example of talent that anticipates the future.

The results of the performance of talented employees are not observable at an organizational level, which shows a clear difficulty to "measure" these valuable elements of organizations. As Fuller & Farrington (1999) reported, it must attract, retain and develop talent, and this is the biggest challenge of human resource managers. Companies, around the world, have difficulty in attracting and retaining talent, however the increasing complexity of the economy demands more sophisticated talent with a global and multi-cultural vision, with language skills, advanced knowledge of technology, entrepreneurial and innovative skills and innovative.

Attracting talent requires, in addition to offering excellent conditions, a high reputation in the market. Retaining these talents is a major challenge for managers. Among the factors that may influence the retention of talent, we highlight the area of career growth, the appropriate reward systems, high motivation levels and

exciting challenges. This issue will be discussed in this paper. We will use the analysis of a case study of a Portuguese company, which promotes talent management. Presented the findings here show a strong link between talents attraction, retention and innovation talents.

## **LITERATURE REVIEW**

### **Innovation**

To some authors, innovation is the way companies and entrepreneurs create value through change and management methods; for others, innovation is the application of knowledge, shown through development and in the introduction of new products, of new processes and/or services. Whatever the accepted definition is, there is a consensus about its importance in economic development.

According Lundvall (1992) and Edquist (1997), amongst others, innovation can be technological (relating to products, services or processes) and non-technological (relating to the organizational method, the market or other aspects of the economic activity). For the OECD (2005: 146), innovation is defined as “the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations”. Organizational innovation “is the implementation of a new organizational method in the firm’s business practices, workplace organization or external relations” (OECD, 2005: 177). Freeman (1982), in his “Innovation Theory”, refers to investment in innovation as the main growth factor, considering that competitiveness is achieved through investment in R&D and other intangibles.

According to Nonaka, (1995: 8) “the company innovates by building and using fluxes of information together with explicit, valid and useful knowledge; the company innovates, in a faster and more dynamic way, by finding and supporting the way to increase and empower its tacit knowledge and its members, e.g., conceiving ways of constant learning to provide itself quantity and quality leaps that increase its competitive capacity; the company innovates when it is able to improve the interaction quality between tacit and explicit knowledge in its core”. Andersen, Lundvall and Sorn-Friese (2002: 187) also see innovation as an interactive process, occurring when several agents interact, creating, developing and exchanging knowledge or other resources. Innovation is then seen from a multidimensional perspective, comprising not only technological but also organizational aspects.

Several studies show that to the majority of companies, particularly small ones, innovation is of the organizational kind, depending less and less on physical assets and more on intangible assets. Mintzberg and Quinn (1996: 289-308) emphasize the role of organizational innovation, by considering it essential to the improvement of a company’s quality and productivity. On this subject, Greenan (2003) considers that organizational innovations are a complement to technological innovations, establishing for this reason a mutual dependence between these two innovation components. Thus, there are various definitions of innovation. For some, innovation is the way companies and entrepreneurs create value by changing the methods of management, for others, innovation is the use of knowledge, manifested in the development and introduction of new products, new processes and / or services. However, there is consensus about its importance in economic development.

This paper will focus on the concept of innovation, understood as an ensemble of several practices that create sustainable value that is reflected in productivity and competitiveness.

### **Talent Attraction and Talent Retention**

The emphasis on the skills issue is relatively recent and represents a paradigm shift in organizational management it is to maximize the competitive advantage of organizations through the management of human capital. The literature on talent not allows us to set limits on the conceptual theme, since there are various definitions and interpretations of the theme.



Lewis and Heckman (2006: 140) identified three interpretations of management and talent: the first was to replace the term "human resource management" by the talent management; the second aims talent management as an area focused on "Projecting employee / staffing needs and managing the progression of employees through positions" and the third focuses only on managing talented people, which means that companies must fill the positions with "A" performers.

This latter approach is very limited because it is not desirable to fill all positions with highly talented people. The context in which companies operate is constantly changing, human resources are required with special ability to adapt and therefore the notion of talent is gaining importance. Scullion and Collings, (2006) reported that the great challenge of today is to find workers who have the right skills to perform tasks anywhere in the world.

The company's competitiveness (multinationals or local companies) is therefore dependent on its ability to have talented workers (Huselid, Becker & Beatty, 2009; Guthridge et al, 2008). This issue of talent attraction appears in the literature mainly in three approaches: an approach that considers that there are several types of workers in companies, some more talented than others and, therefore, more valuable (Huselid et al., 2009). According to this approach, companies' efforts should focus on management and attraction of these workers. On the other hand, an approach that considers that talent management must be global because all workers are valuable (Guthridge et al, 2008). We found yet another approach that tries to combine the two previous approaches, since it considers that there should be differentiated proposals for the attraction and retention of workers with different talents.

These approaches are evident in companies that use different tactics for recruitment to select workers with different profiles (recruitment in schools, head hunting, advertising, etc.). Some authors have reported that companies that choose talent with the right skills are those that are more successful (Guthridge et al, 2000). If in the short term, the choice of the right talent can be a competitive advantage, in the long-term competitive advantage that may change, because the talents can be attracted to move to other companies, more attractive (Daniels et al, 2007). Therefore, companies must be prepared to respond to this cycle of change, continually attracting new talents.

Fuller & Farrington (1999) consider that it is needed to attract, retain and develop talent, and this is the biggest challenge of human resource managers. Talent requires inspiration, space and time. Olsen (2000: 24) states: "The Company's traditional department-oriented staffing and recruiting process needs to be converted to an enterprise wide human talent attraction and retention effort". Other authors argue that talent retention is achieved through training programs and appropriate development (Cohn, Khurana, and Reeves, 2005: 64). Among the many authors there is consensus that with the artists, the talent should be sought, hired, managed and rewarded through differential compensation. For example, Axelrod et al. (2002) consider that the "War for Talent" an organization should hire only the best and most competent. Retaining talent is one of the biggest challenges of talent management. Strategies for retaining talent are therefore increasingly complex and include a strong commitment to top management so that all employees are managed as talent.

In our understanding, talents are people from all areas of organizations that can be managed and provide added value to the organization. Managing talent is finding ways to maximize the contribution that each person can give to the organization.

## **EMPIRICAL RESEARCH**

### **Methodological Framework Case Study**

This research aims to verify whether there is a clear association between talent attraction, talent retention and innovation as key factors of business competitiveness. We used the single case study methodology according to Yin (2003). According to Yin (2003) case studies can be single or multiple drawings. Single case studies are ideal for cases of revelation. The case study is an excellent tool when we want to understand a reality and to defining future paths of research.

Regarding the profile of respondents, we examined the leader's vision. Similarly to Yin (2003) this empirical study will follow the triangulation of data. This triangulation will be supported by gathering information from different data sources in order to verify if the same sources corroborate the same phenomenon. Following the methodological procedures set out above, we used content analysis, according to Bardin (2009), with the following steps of content analysis: pre-analysis, content analysis, processing of the results interpretation. As one of the techniques mentioned by several authors, the analysis of categories, according to Bardin (2009), is the technique used in this research.

We started by defining the categories guiding the questions asked to respondents, followed by the analysis of the collected material for interpretation of the dominant themes in each category. Regarding the profile of respondents, we examined Amândio José Lobo (AJ. Lobo) leader's vision.

## **Presentation of Research Subject**

The Amândio José Lobo, began operations in 1984. The company's goal was the production of mechanical precision components. The company currently has 150 employees.

During the last decade, the company became specialized in high precision components, usually associated with raw materials such as noble Aeronautical Aluminum, Stainless Steel, Chromium-Nickel, etc.. These components are used in applications as diverse as commercial and military aircraft, robots, trains, medical and pharmaceutical industries, among others.

## **Interview with AJ Lobo Leader - Answers most representative:**

"Many years ago, most of our employees who had no more than the 4th Grade. Today more than 90% have at least the 12th grade ... "

".... Good employees are not only those who are trained, we have graduated staff, but these are not the best, we have some that just have the 4th grade and are very good."

"What we did here was to encourage our employees positively,"

"... We gave more attention to those that had more difficulty than the others ...we have a policy of training and qualifications, perfectly defined, person to person."

"... We continue every day, looking for solutions so that we can achieve, not perfection, but approach it as much as possible ... we encourage our employees to give their best to the company ... "

"There are several ways we do recognitions ...the recognition through money is important ... to recognize when things work, motivation, and an encouraging word to the employee telling him he is doing a good job ..."

"We measure, innovate, and reward ...."

"... The demand for zero defects is constant in this company, and who does not have this philosophy does not fit in this company."

"... If I had to form a new company and leave this company ... I know it would take me 26 or 27 years to train those people...we do not have an undesirable employee in this company."

"... People who are here are people who are an effort for the company and that the company needs. "

"... All employees have the potential, which we cannot ignore, some people have more ideas, are more creative, but there are others who are not so creative but are more realistic, although certainly some ideas they have are good . "

"... The potential of each person is different; some people are much more capable than others professionally ..."

"... What interests me, as manager of this company, are these people and what they can do ..."

"... People have to feel good in the company and those who do not feel good are not integrated and go away."

"... Basically, we encourage teamwork."

"The rotation rate in this company is almost zero ..."

"... First the project belongs to AJLOBO, but we seek that employees feel it as their project."

"... Here are about 18 people who do development...we have teams of innovation and the development."

"Yes, we have some brands as well as patents ...every 6 in 6 months we have a new technology ..."

"... At the end of 2008, we won the award for an innovative project ....throughout our existence we have won other prizes. "

"Our company has technology of the future; we are talking about renewable energy, high precision .... These types of industries have more difficulty because they require by the part of management and employees of the company, a greater commitment, more training, more knowledge.... "

"... The training is directed towards innovation .. we got a way to involve all employees in the company's goals and we think it is best suited for the company ...we are also implementing some new products..."

"... Put the most appropriate people in the most appropriate positions ... "

"... all ideas are good and everyone can help. What matters is the participation of all and this is reflected in the fact that even the employee that we can consider less qualified can have brilliant ideas ...."

"... For us the performance has to be from everybody. It makes no sense to be only one. The company is seen as a whole that must work. "

".... When the company wins, we win all, but when you lose, you lose all ...."

## **Inference**

AJ Lobo attracts highly talented workers. These workers stimulate innovation. In AJ Lob talent management is evidenced by how the acquisition of knowledge and qualification is encouraged. We can say that there is a program of continuous improvement of talent. Employees who do not adapt are compelled to go out of business. There is a corporate culture where innovation is present. There are no teams specifically dedicated to innovation, any employee can be innovative. The know-how of employees is valued, the awards are common and this is a key determinant of continuous improvement and innovation.

## **Interpretation**

AJ Lobo stimulates talent acquisition and development of knowledge of its employees. There is a general culture of innovation, where teams are permanently stimulated. AJ Lobo rewards and encourages innovation. AJ Lobo has a good talent management of its employees. There is a policy of retaining talent by involving employees in the organization.

## CONCLUSION

This case study allowed us to conclude that attraction, talent management and talent retention are determinant factors of innovation. The awards are very important: stimulate the innovative capacity of employees and enhance the reputation of the company which shall have available a greater and better supply of human resources. The actions that maintain the link between the company and talented employees are very important. With this case study we wanted to explore the relationship that we can establish between talent attraction, talent retention and Innovation. The true idea of talent should be linked to the concept of competence and high performance, capable of transforming ordinary individuals into knowledge workers. Finally we can conclude that companies that do a better talents management are those that have better results in terms of innovation.

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# **A STUDY OF CHALLENGES FACING FEMALE ACADEMICS IN ADVANCING RESEARCH IN THE FIELD OF PUBLIC ADMINISTRATION IN SOUTH AFRICA**

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## **ABSTRACT**

*This paper reports on the challenges faced by female academics in the field of Public Administration while conducting research in South Africa. The basic underlying principle of conducting research in Public Administration is to advance knowledge that can be used to improve decision-making and assist in the utilization of public resources and problem solving in the society. This paper argues that female researchers in the field of Public Administration are vulnerable to environmental and circumstantial changes while conducting research. The opportunistic challenges facing female academics in the field of Public Administration include social factors, lack of funding opportunities, lack of institutional support, limited participation in research initiatives and lack of peer support. The outcome of this study recommends that female academics should be involved in the planning, implementation and evaluation of research initiatives so that they may address challenges while also advancing and improving their research outputs. This study noted the paucity of literature on the research by female academics in Public Administration.*

## **INTRODUCTION**

Research communities in South Africa regard research as essential for vertical mobility and peer recognition with much credibility from research associations in different bodies of knowledge. Research is credible when it is disseminated through peer-reviewed academic journals and books with reference to specific academic communities in the field of study. The current research policy developments in South African higher education (HE) compel academic institutions to conduct research as part of their core business. South Africa's HE is rewarded by the Department of Higher Education for the research output published in the form of articles in the accredited journals, chapters in books of their academic staff, through funding.

The post-apartheid period is marked by progress in terms of the transformation of the academic landscape, particularly in affirming and supporting female academics through funding and awarding of grants on scholarships. Research and development (R&D) hold the key to the future by bringing innovative transmission of knowledge through scholarships. In the Public Administration discipline, scholars have continuously disseminated their research findings through accredited journals, books and conference papers to reach the academic audience and create a platform for scholarly debates. Research and development create opportunities for academics to network and connect with each other in this globalized and borderless society through the transmission of knowledge. Through scientific research, policy makers and government officials can improve their decision-making that can effect proper allocation of resources and address societal problems.

It is a trend internationally and locally, for academics to advise public officials and political office-bearers on policy issues, by producing credible results that can be published in their accredited peer-reviewed academic journals and books. It is in this sense that research reflects our priorities, values and aspirations as academics. The greater part of research conducted by academics in South Africa is supported by the Department of Higher Education and Training (DHET) and the National Research Foundation (NRF). The Department of

Higher Education and the National Research Foundation support research initiatives through grant funding for female researchers, yet there are still some institutional and external factors that inhibit female academics to be successful in their endeavors.

The current debates on globalization and governance contend on issues of international and regional development, where nation states are bound by international treaties and actors' responsibilities in political, economic and social dimensions. The trends on globalization influence the creation and use of knowledge across these dimensions. At the centre of development, research and innovation are enablers of creating solutions and advice to universal problems such as global warming, the financial crisis, poverty, HIV and the AIDS epidemic, corruption, clean energy and others. However, institutions that are involved in research and development are located in higher education, non-governmental organizations, private business enterprises, science councils, national research foundations (NRF) and the Department of Higher Education.

This paper seeks to assess challenges faced by female academics in advancing research in the field of Public Administration in South Africa. After introducing the topic, the paper will define major concepts, elaborate on the current debates in Public Administration research (PAR), and discuss challenges faced by female academics in advancing PAR, the way forward, conclusion and implications.

## CONCEPTUALIZATION

### Research conduct

According to Brynard and Hannekom (2006, p. 6), research is regarded as the systematic, multidimensional process by which data on phenomena are accumulated and analyzed to determine the meaning of data. In the context of the study being reported here, the conduct of research refers to how academics are directly engaged in research, whether as supervisors or as participants or managers or as administrators of research.

### Facilitators of Research

Facilitators of research refer to those researchers who facilitate training workshops and classes. Universities, research institutes and centers devote their time to teaching students about the conduct and utilization of researchers.

### Methodological Issues

The study employed a qualitative research approach. In preparation for the study, survey questionnaires were distributed among female academics in the field of Public Administration, who are members of the South African Association in Public Administration (SAAPAM). Data was collected mainly from questionnaires, a review of the publications from the journals in Public Administration (*Journal of Public Administration* [JOPA], *Poleteika* and *Administratio Publica*) and a literature survey of scholarly articles from accredited journals and books, reports from the Department of Higher Education (DHET) and Council for Higher Education (CHE). A questionnaire was distributed to female academics in the field of Public Administration at 21 institutions of higher education in South Africa, and had a return rate of 55%. A purposive sample was specifically selected from the members of the associations of Public Administration in South Africa, and from those affiliated with the Association of Schools and departments in Public Administration.

## RESEARCH IN THE FIELD OF PUBLIC ADMINISTRATION

Public Administration (PA) has always responded to public sector challenges and opportunities when conducting research. Political and socio-economic changes emerge every day and attract the interests of Public Administration researchers. Du Toit et al. (2002, p. 409) postulate that Public Administration is a science, with knowledge proven to be valid and which can be analyzed systematically with an aspect of universal applicability. Research is regarded as an acquired human activity; researchers must therefore have specific skills and training aligned with specific standards in order for research to be credible. The goals of scientific research are aimed at

broadening knowledge by responding to the increase in the interpretation of the world we live in through various research paradigms. Furthermore, it is significant to note the contextual paradigm in South African contemporary Public Administration (PA) and that this paradigm is constantly shifting due to political systems, new reforms of the state machinery and the ever-changing societal needs.

South African public service has been seriously criticized by society for its inefficiency to manage public money and departments. Government has been under the spotlight; hence, it needs new ways of governance and the necessary knowledge and skills that can respond to allegations and claims of poor service delivery and meet the demands of society. The increase of knowledge can be discovered through application of theories, testing existing theories and generating new theories. Scientists can use such theories and concepts to analyze different cases in society, and also to predict the future to manage change while the society is developing. However, the reviewed literature and contributions from scholarly work call for a re-engineering of research in PA in two streams: the stream of *methodology* and that of the *scientific spirit and contribution* in the discipline of Public Administration.

## Methodology

However, several articles and statements have highlighted the need to rebuild credibility and quality of research output that we produced as dissertations and theses in the field of Public Administration (McCurdy & Cleary 1984; White 1986; Adams & White 1994; Perry, 1984). Regarding the stream of quality of research, Perry (1984) asserts that the inadequacy of quality of Public Administration research has a historical controversy. Perry (1984) reviewed doctoral dissertations and came up with the conclusion that (1) they have been predominantly applied research; (2) they have not been cumulative; and (3) they have lacked academic support.

White (1986) noted that Public Administration research (PAR) has not been reviewed in the other two modes of knowledge, namely the interpretive and critical modes. It is imperative for PA knowledge to be interpreted in light of all modes of research. Public Administration is largely the product of norms and incentives that are institutionalized within the public domain. It is imperative for PAR to employ methodologies that can add value to a verifiable knowledge base in our field of study. Thani and Van Heerden (2011, p. 49) argue that research must play a more prominent role than merely forming part of the post-graduate degree, by producing creative scholars who comply with ethical guidelines when conducting research. Research and research methods are often associated with the field of academic discipline in which the researcher conducts the study. Researchers in the field of Public Administration must make use of research methods that will capture valuable research material.

When post-graduate students act contrary to what is ethically expected, there will be lot of deception to the audience who often reads their dissertations. However, it is the responsibility of the Higher Degrees Committee of the relevant institution to curb unethical behavior when conducting research in order to protect the integrity of the institution and PA discipline. Students should also be mentored and guided to follow the research guidelines as outlined by their institutions. It is furthermore imperative for post-graduate scholars to be competent and adequately skilled when undertaking research. Universities are therefore urged to announce scholarships and research workshops and bursaries for funding so that students receive adequate support while undertaking research as part of their studies.

## Scientific Spirit and Contribution in the Field

Wessels (2006, p. 168) contend that Public Administration researchers in South Africa have shown a preference for research designs that make use of existing data (such as literature, official publications and statistical analysis). The nature of research designs for studies carried out by scholars in the field of PA follow empirical designs that are based on the existing literature (Wessels, 2006, p. 181). The crux of the matter is the fact that research outputs, in the form of dissertations, theses, scientific articles and books are found to be a duplication of existing knowledge.

Scholars in the field of PA are concerned about the research outputs often evaluated by peer reviewers and adjudicators in the form of the criteria that will cover the topic, purpose, research methodology, impact and



contribution towards the scientific spirit (Wessels, 2006, p. 177–178). It takes a true connoisseur to master the mask behind the true scientific spirit in a scientific article. South African scholars in the field of PA publish their articles in the *Journal of Public Administration* (JOPA) (published by Tshwane University of Technology), *Administratio Publica* (published by the University of South Africa), and *Politeika* (published by the University of South Africa). Most of the research articles for the field of PA in are published in these accredited journals in South Africa.

In examining research challenges in the 21<sup>st</sup> century, the study assessed training and scholarships in the field of PA .Across the globe, departments and schools in PA are created to offer undergraduate and post-graduate programs in the field of Public Management. These schools are compelled to address the needs of society in order to be competent and marketable and provide quality education. These institutions, together with policy centers and institutes, facilitate research programs and workshops for students and public sector employees. They have the responsibility to teach and support their students to acquire research skills by inculcating research modules in the curriculum, providing integrated learning and internships, using the case-study method of teaching, and by programming research in their stream of post-graduate studies. Nirmala and Pillay (2009, p. 98) contend that a strong partnership between public institutions and the HE sector can direct their expertise toward outreach programs that do not only focus on public sector management, but also employ work-based learning that encourages research and innovation.

There is no doubt that training of future public managers should focus on developing research skills aligned to essential characteristics of contribution to a ‘true scientific spirit’, or a scientific contribution.

## **CHALLENGES CONFRONTING FEMALE ACADEMICS IN RESEARCH**

### **Societal Challenges**

Female academics in PA are not immune from confrontations emanating from societal challenges such as inequalities and other forms of discrimination in South Africa. In the African context and in South Africa, women have always been engaged in power struggles with their male counterparts when sharing roles and responsibilities at work and in their households. Some of the economic, political and social factors necessitate role changing and gender formations in our society. South African women have long been overpowered by men in leadership and senior management roles, although women have always formed the backbone of economic and social development. According to some participants, women’s positions and roles in society have long been stereotyped. They were traditionally the cultivators of communal land and partly keep some land and trained domestic workers. The gender gap through race and inequality in the field of social science in South Africa has always been perceived as worsening the chances of women participating towards alleviation of poverty (Penzorn, 2005; Anigoli, 2001; Ginwala, 1999).

Some participants argued that this make women to suffer gross discrimination and subordination, both intellectually and emotionally. To some extent, some women become partially involved in research or are left out of development issues regarding the academic discipline of PA. These social stereotypes of women’s roles can create academic alienation of women in their associations and among themselves. Women may try to reverse this discrimination by ill-treating each other and not supporting each other. In some cases, women are not taken seriously by public officials and political office-bearers when they seek access to their agencies and asking them to participate. This tendency resulted in a number of studies conducted mostly using secondary data that has already been collected by some researchers instead of conducting empirical studies.

### **Funding Opportunities**

Some few female academics indicated that there is research funding for female researchers in their institutions. The research and development system is a sub-set of the national science and technology system, which in turn is a subset of the national system of innovation, where all institutions are directly engaged in

formal innovative activities that contribute to scientific development in the country. Females have been acknowledged for their contribution in research and innovation in South Africa. Figure 1 indicates that there are few female researchers who are engaged in conducting research. Funding for research infrastructure and outputs is directly allocated to universities through the Department of Education (DOE) based on the number of students. Later, funding was changed to be allocated based on through-put rates, research outputs and for research infrastructure development by DOE and NRF (CHE, 2009, p.49). Other funding opportunities are managed by universities' Higher Degrees Committees to support female academics who are already researching by allowing them to use some of the funding generated from their subsidy received from the DHET. The challenge is for the novice researcher, who has not yet established a research account. Some researchers are automatically excluded from Thuthuka grants when they reach the age of 45 years limit, which limits them from accessing funding grants. Most researchers only find time for research when they reach mid-life and when their kids are grown up to be independent and can take care of them.

## **Institutional Support**

There are few attempts by institutions of higher learning to support female researchers in the field of PA. Most of the basic and applied peer-reviewed research studies in Public Administration are self-funded. The support of female researchers in our fraternity is improving. Some studies are self-sponsored, while opportunities for client-sponsored research and foundation/center-sponsored studies exist and lead to creative and productive work. Reliance on these sources for conducting research is risky. It can lead to uncertainty in developing underpinning comprehensive scholarship that is fragmented with weakness in responding to critical policy issues in HE research policies.

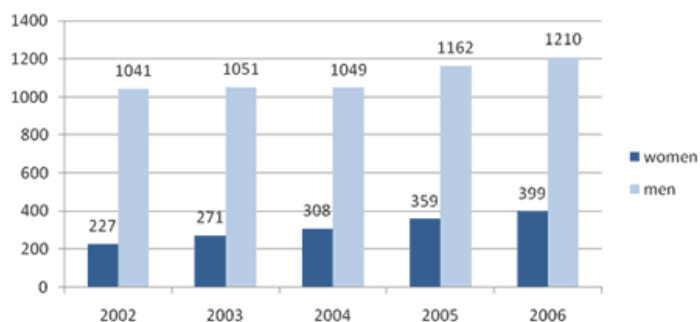
## **Participation in Research**

Female academics in PA are still participating less in research than their male counter-parts. The space of participation has not been widened much by the institutions conducting research and the DHET in South Africa. However, lots of contestation in leading and managing research programs is still under the control of male counterparts. Public Administration research outputs are counted inclusively with other disciplines as Arts and Humanities by the DHET. In the research output by field of study in 2008, Arts and Humanities accounted for 21% on journal articles, 45% on monographs and 31% on chapters and edited works. A reflection on higher education statistics on gender disparities in research is provided in the graph below. Female academics are outnumbered by men when engaging in research. Figure 1, below indicates that the proportion of the research output produced by women varies between 14% and 37%. For comprehensive universities, it ranges between 24% and 47%, and for universities of technology, between 26% and 41% (CHE, 2009. P. 58). There is improvement in the number of rated female academics in South Africa. In 2006, 25% of the NRF-rated researchers were women, up from 18% in 2001; this means that there is a steady increase of in the number of rated female academics.

Research in Public Administration involves public sector departments and agencies that are headed by bureaucrats and political office-bearers. It was remarked by some of the participants that it is difficult to gain access to some of the offices headed by politicians; hence, some scholars choose to conduct non-imperial studies.

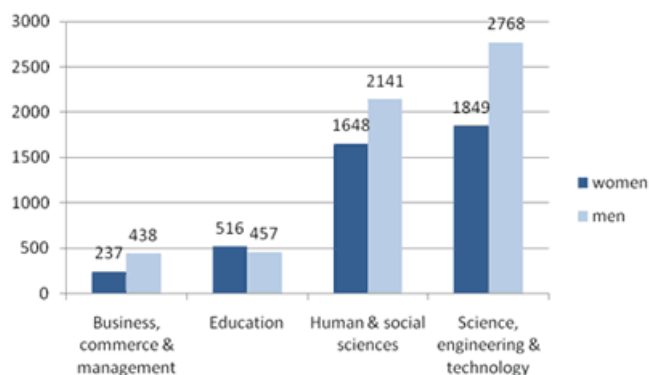
There is progress in the enrolment and completion of post-graduate studies by women more than in the case of men. There are more women enrolled in post-graduate programs, and more have been recorded as successful in completing their post-graduate programs as men. However, there are more men enrolled for doctoral studies than women (CHE, 2009. P. 59). In 2007, the proportional number of women enrolled in post-graduate studies was 35 in business, commerce and management, 53% in education, 43% in human and social sciences and 40% in science, engineering and technology. Public Administration falls under the social science group of the Classification of Education Subject Matter (CESM) category, and its research outputs and ratings are within the humanities group of social science. There is a steady growth on the Post-graduate enrollment in humanities (CHE, 2009.P 59).

**Figure 1. The gender of NRF-rated researchers, 2002–2006**



Source: HEMIS, CHE (2009)

**Figure 2. Enrolments (headcount) in doctoral study by gender.**



Source: CHE, 2009

Some institutions in South Africa have appointed females in our field as managers of departments, which automatically mean that they are also influential in leading research and in facilitating and teaching research. According to the CHE (2009, p. 48), five universities have progressed and dominated with research outputs in South Africa, namely the University of Cape Town, the University of Pretoria, the University of Stellenbosch, the University of the Witwatersrand and the University of KwaZulu-Natal. It has emerged from the survey that the best female researchers in the field of public management come from these universities. However, white females are dominating the terrain in terms of research outputs and in facilitating research. White females are also more visible in the management of the schools and department of public management, with greater influence on research matters. Editors of two of the South African journals in the field of Public Administration are headed by white females.

## Lack of Peer Support

It has emerged from the participants that conducting research in the field of PA is not easy due to a lack of male support in as far as coaching and mentoring by other females. Peer support is important because research should not be conducted for individual gain, peers should support each other by engaging collaborative work. They can also share their experiences, motivating each other and sharing resources in the utilization of research tools such as the use of laboratories, workshops and techniques that can be communicated through education.

## THE WAY FORWARD

### Legislation and Policy Development

South Africa is still in the process of undergoing social change and needs to inculcate a culture of female emancipation in research activities across the various fields of study. It has always been a tendency to address female and gender gaps as general issues that can be viewed with the same lances of political and economic agendas – affirmative action and broad-based black economic empowerment. However, it is imperative for all disciplines to advocate for female inclusion by addressing their support and experience and true emancipation from all oppression within the policy and legislative paradigm. Age should not be considered as a barrier used for awarding funding, rather female scholars should be encouraged to advance in research in their matured age and towards retirement. Participants highlighted the need to balance the role of women and to find time to do research. This paper calls specifically for academics in the field of PA to play a prominent role in the crafting of research policies and legislation and to contribute towards the research activities to complement existing knowledge in our field.

## **Funding and Institutional Support**

The 45-years age limit by Thutuka grant that is provided by NRF should also be revisited. Some of the female scholars in PA field of study are actively involved in research after the age of 45, when their children are independent and can take care of themselves. Some women furthermore engage in research when they have completed their post-graduate studies and when they are matured. The current generation is more emancipated than the generation before; consequently, they are better exposed to post-graduate studies than the generation before, because of political and economic societal change taking place in South Africa. It is recommended that HE institutions should provide training for supervisors and mentors to make life and relationship between the supervisors and supervisees to be better. Some few female researchers abandon their post-graduate studies when relationships between them and their supervisors are unhealthy.

## **Post-Graduate Studies**

The main aim of offering post-graduate studies (such as the master's degree, a master's in Technology, a PhD and an MPhil) in Public Administration is to develop candidates in their professional line of public management and to empower them with research skills. Post-graduates are expected to conduct research under a stipulated supervisor in order to fulfill the requirements for their qualifications. During the process of mentoring students/candidates, supervisors are also developing their research skills and getting empowered with more knowledge in their areas of specialization. Female academics can advance in research when they are supervising students. Some academics are able to publish scientific articles that are co-authored by post-graduate students. It is the responsibility of HE to encourage female students to enroll in post-graduate studies in order to be empowered with better research skills and knowledge.

Institutions of higher learning should offer quality post-graduate programs and cover a scope that is comparable with international standards, constituting analytical rigor in Public Administration and Management, with a pedagogical balance between theory and practice.

## **Community Engagement**

Community engagement is a core business of institutions of higher learning (IHL), and is discharged through teaching and learning and research. It is a priority for higher education to support communities in responding to the regional needs and the needs of communities through innovations and support. Universities and universities of technology are required to merge the theory taught in the classroom with the practice of Public Administration. They can equip researchers and students in PA by merging practice with theory, when allowed to conduct research while on internships programs, service learning and integrated learning. These initiatives can assist communities and HE to assess basic needs and problems in the communities and assist in applying interventions through capacity building and training.

Participatory research has been the most popular research method in social science whereby researchers and communities are actively involved in all the steps of needs assessment, the design, intervention and dissemination of research findings. Female academics in South Africa should be able to expand their avenues in research, which is intending to develop communities using diverse research designs. The NRF and the

Department of Higher Education (DHET) support community engagement as one of the priority areas for funding. Institutions of higher learning are already engaged in community engagement. They should constantly formalize it with quality management systems and research policies and channel adequate resources for undertaking research. It should be a high priority for HE to target women in order to improve their engagement in research activities and improve in producing outputs.

## CONCLUSION AND IMPLICATIONS

This paper addressed the challenges facing female academics in conducting research, such as social factors, lack of funding opportunities, lack of institutional support, limitations in participating in research and lack of peer support. Using different lenses, participants and scholars in the field of public administration have raised serious issues regarding the conduct of research in their field, referring to the choice and the use of methodology by post-graduate students and scholars; and also regarding the scientific spirit that contributes towards their field of study. In order for researchers in PA to participate in research, the South African government departments and agencies need to understand participants cause and to allow researchers to have access to public information as it is stated by the South African Constitution (Act 101 of 1996). Researchers in the public sector, managers and public officials and political office-bearers should play a prominent role in participating and supporting researchers by allowing participants to interview them and have access to public information that will add value to research conducted. In order for post-graduate candidates and female academics to succeed in addressing barriers in research, a collaborated effort should be made between higher education and public sector domains.

This study recommends that female researchers be pro-active and inclusive of decision-making in research policies and their implementation in the academic institutions where they work, support for each other in research initiatives, providing advice and participating in research agencies and academies and government agencies like the NRF and the Department of Higher Education. Female academics can also improve their research outputs when they engage in post-graduate programs and conduct research with their students and engage with their communities.

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# SOCIAL MEDIA AND EXCHANGE 2.0: MAKING SENSE OF B-2-B SELLING IN A WEB 2. AGE

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## ABSTRACT

*In approximately 2003, Sales, one of the world's oldest professions, encountered cataclysmic change. Static Web 1.0 evolved to dynamically interactive Web2.0 Exchange control moved into buyers' hands and Traditional sales cold-calling methods died. Sustaining company competitive advantage compromised as competitors designed new differentiation strategies around increased customer-centricity by using Social Media. We present an idealized model, Sales 2.0 to assist companies to embrace a Web 2.0 age. We then present a practical model, B-2-B Exchange 2.0 to offer an immediately implementable and inexpensive method for practical salespeople to embrace Web2.0 tools, while awaiting their own firms to act.*

## INTRODUCTION

This is the story of a significant shift in the world of economic exchange – where buyers and sellers engage and negotiate to create mutually agreeable value. It focuses on business-to-business markets (B-2-B) where complex products and services reign and iconic outside field salespeople ply a consultative sales strategy. It focuses on a post-2003 Web 2.0 world where face-to-face physical engagement between buyers and sellers, once exclusively mandatory are, today, blended and supplemented by a virtual buyer/seller relationships and presence. It tells of a strange, rapidly evolving, and often confusing new world of sales and exchange facilitated by social media, Wi-Fi enabled and mobile channels of communication, and new technological tools and strategies that has turned the pre-2003 world of the salespeople up-side-down.

The story tells of an exchange evolution over the last several decades and punctuates this history with the cataclysmic meteor strike of Web 2.0 that arguably is having as much impact as that which exterminated the dinosaurs. Concomitant to this event, it presents an evolving idealized model, termed, *Sales 2.0* conceptualizing how sales organizations can embrace the new Web 2.0 world. This idealized model is followed by a practical model – developed by and which this author terms, *B-2-B Exchange 2.0*. This practical model provides today's salespeople a roadmap to immediately begin to experiment with Web 2.0 technologies and improve their personal sales performance while they await a more difficult full implementation of Sales 2.0.

Most importantly, this story strongly cautions skeptical and *Luddite* selling organizations of invariable danger as competitors increasingly embrace the Sales 2.0 and B-2-B Exchange 2.0 evolution. While this evolution is still in its infancy, the imperative for sales organizations to evolve is not. Today, buyers call the shots and sellers must align their processes with them. Buyer expectations and they way they communicate has changed. They are becoming more comfortable with Web 2.0 technologies and it can be argued that there is a parallel *Buyer 2.0* movement, *out-there*, which is the primary catalyst in motivating reluctant sales organizations even to consider Web 2.0 tools. It is already apparent that buyers do not want to be *found* by sellers, but want to *find* them, that the *cold-call* is rapidly dying or already dead, and that the tables have been turned 180 degrees as the *Hunter* is becoming the *Hunted*.

## Problems

If *Cold-Calling* is dead and sellers can no longer irritatingly interrupt buyers to obtain leads and aggressively push products, just how can they find and get in front of qualified prospective customers? This is real problem at the individual sales people level for those still operating pre-Web 2.0.

At the organizational level, looms a bigger problem: Clearly at stake is sustainable organizational competitive advantage. For organizations reluctant to embrace Web 2.0 and infuse these new tools internally, the real problem is economic survival. Today, many companies are aggressively moving to build Web 2.0 organizations. These are the companies who will most probably be economic winners (Seley and Holloway, 2009).

Despite these increasingly visible concerns, broad change by individual salespeople and sales organizations is spotty, slow, and resistant. Many salespeople seem confused as to how to incorporate Web 2.0 tools into their sales careers. Management speculates if Web 2.0 is the latest *fad de jour* and, therefore, takes no action. Many executives and sales leaders see the sales process as sacrosanct and refuse to, *fix it if it is not* [obviously] *broken*. Or, to borrow a political phrase referencing *Social Security*, these leaders see the sales process as, *The Third Rail of Business* – you simply can't touch or mess with it (Seley and Holloway, 2009).

Ignorance of the problems or paralyzed inaction is no longer a viable option. Embracing Web 2.0 and applying its variant forms, *Sales 2.0* and *B-2-B Exchange 2.0*, to the selling functions of firms presents new opportunities as well as a beginning first step toward a solution to the confusion and challenges spawned by a Web 2.0 age.

## Purpose and Research Questions

The general purpose of this conceptual paper is to make sense of business to business (B-2-B) selling in a post-2003 Web 2.0 age. There are three specific sub-purposes generating three research questions.

**Sub-Purpose One.** To help individual salespeople and selling organizations to unravel some of the confusion surrounding applying new technological tools and methods to one of the oldest and often hidebound professions in the world – *Sales*.

Research Question One. Given the rapidly developing, widening accessibility, and real-time sharing of dynamic Web 2.0 multiple-way information and communication capabilities, how has this environment modified the traditional process of sales and economic value exchange?

**Sub-Purposes Two.** To present an idealized (*Sales 2.0*) model – sourced from the literature - in order to provide salespeople and their organizations a vision how many companies are and are planning might to adapt their sales organizations to Web 2.0.

Research Question Two. What are companies thinking and doing today, to adapt their selling organizations for a post-2003 Web 2.0 world?

**Sub-Purpose Three.** To provide salespeople a practical (*Exchange 2.0*) model – developed by this author - to immediately and inexpensively begin to use Web 2.0 technologies and social media to improve their performance.

Research Question Three. What practical actions can individual salespeople do today to effectively use social media and Web 2.0 without waiting for corporate-wide Sales 2.0 program initiatives?

## Methodology

This is a conceptual paper synthesized from secondary research and is a research foundation for the author's upcoming *Exchange/Sales 2.0* textbook. The author has integrated both academic observations and a plethora of observations from practicing companies. The author has drawn upon his own social media marketing/selling practices applied to his consulting firm. And, he draws upon his 40 year combined industry and academic sales experience.



## Limitations

Being conceptual, this paper relies upon the author's ability to synthesize his sales experience with his interests, and research skills. He also has developed a conceptual practical model, *B-2-B Exchange 2.0*, one of perhaps several, that can make sense out of the chaos of Web 2.0 ideas and tools currently altering buying and selling processes. As such, and adhering to a philosophically controversial Stephen Hawking term, *Model-dependent Reality* (Hawking and Mlodinow, 2010), this author accepts that it is meaningless to talk about the *true reality* of any model – the only meaningful thing is the model's explanatory usefulness.

This paper limits its discussion to business to business (B-2-B) markets and live salespeople practicing consultative selling strategies (Rackham & De Vincentis, 1999). This paper does not discuss related business to consumer (B-2-C) selling which is increasingly conducted without personal salespeople and through Internet and Web channels of distribution.

## SALES 2.0: THE IDEAL MODEL

### What is Web 2.0?

In approximately 2003, Web 2.0 replaced what has been termed Web 1.0 (Web 2.0, n.d). In essence, Web 2.0 is a description of web application features that facilitate dynamic, collaborative, and participatory information sharing and creation on the World Wide Web. It is a dynamic interaction between users as opposed to the static one-way Web 1.0 interaction of user and web content (Web 2.0, n.d).

In approximately 2003, the web had morphed into a dynamic platform of multiple collaboration and interactivity among users. Examples of Web 2.0 include social networking sites, blogs, wikis, video sharing sites, and folksonomies sometimes known as a social tagging classification system. Most associated with Web 2.0 technology are the social media platforms such as *FaceBook*, *LinkedIn*, *Twitter*, *YouTube* and other platforms too numerous to attempt to mention. In 2006, Google, the most powerful search engine appeared and has continuously stretched the limits of Web 2.0 tools. Additionally, mobile technology has dramatically advanced since 2003 making use of the Internet/Web and accessible from portable, GPS connected smart phones such as *iPhone* and *Android* and lightweight portable tablets such as *iPad*. Today, Americans, young and old live and work in a physical and virtual world. And, most importantly from a sales point of view, buyers of all levels-increasingly including senior corporate executives – have embraced Web 2.0 technologies (Forbes/Google, 2009).

### What is Sales 2.0?

Neil Rackham's work, cited earlier, is significant in having clearly identified three distinct selling strategies. They are a framework upon which the newest innovation in sales and exchange are being built. Web 2.0 did not exist at the time of Rackham's seminal work. However, incorporating Web 2.0 concepts into Rackham's three-part taxonomy led to the development of *Sales 2.0* to which we now turn our attention.

**Defining Sales 2.0.** Sales 2.0 practices have been defined as:

*...is the use of innovative sales practices, focused on creating value for both buyer and seller and enabled by Web 2.0 and next-generation technology. Sales 2.0 practices combine the science of process-driven operations with the art of collaborative relationships using the most profitable and expedient sales resources to meet customers' needs. This approach produces superior, predictable, repeatable business results, including increased revenue, decreased sales costs, and sustained competitive advantage* (Seley and Holloway, 2009, p 5).

**The Foundation of Sales 2.0.** The innovations associated with Sales 2.0 practices fit into four Parts: (Seley and Holloway, 2009).

1. Strategy – Sales 2.0 attempts to be a comprehensive system incorporating all variations of sales meanings. This differs from the B-2-B Exchange 2.0 practical model (Table 1). This includes alignment of sales resources with customer opportunities and leverages your most expensive professionals simultaneously ensuring that customers of all sizes, geographic locations, and stages in the sales/buying cycle (termed *exchange* cycle/funnel by this author – see Table 1 for an example of one version of a *cycle*). Alignment also means that the marketing function of the organization must be aligned with the sales function – both functions must be on the same page.

2. People – Sales 2.0 companies attempt to internally staff with people who are relationship- focused, open, authentic, and flexible. They are expected to create and maintain collaborative interactions with internal peers as well as external customers and partners. They are expected to use the most appropriate means of communication and interactions (includes social media) to engage and maintain relationships.

3. Process – This is an effort to reduce variation from idiosyncratic behaviors of processes that are not standardized. Sales 2.0 suggests applying *Science* to reduce this variation in a sales environment where *Art* has been king. Additionally, standard processes enable better training and consistency of performance across the system. Thus, Sales 2.0 strives for process that is customer-focused, measurable, reproducible, and automated, and which can be duplicated across a sales organization to produce predictable sales results from quarter to quarter.

4. Technology – This enables effective, efficient, and measurable movement through the buying/selling processes. Good metrics and analytics provides visibility to buying selling processes, thus, people are assisted in becoming more productive and successful using Web 2.0 tools.

## EXCHANGE 2.0 – THE PRACTICAL MODEL

Today’s dominant domain of the living/breathing *Field* or *Outside* Salesperson is in business to business (B-2-B) markets and this salesperson practices a *Consultative Sales Strategy*. This is a very practical group of people who simply want to be more productive and make more sales. While awaiting an enterprise-wide implementation of Sales 2.0, what can practical salespeople immediately do today to engage the Web 2.0 age?

### The B-2-B Exchange 2.0 Model

**B-2-B Exchange 2.0 Defined.** Taking cues from Sales 2.0, the author defines it, thusly:

*B-2-B Exchange 2.0 synthesizes the **Art** of a B-2-B consultative sales strategy with the **Science** of online Web 2.0 communication Tools recognizing that B-2-B markets require **BOTH** digital efficiencies and F-2-F (face to face) engagement between buyer and seller.*

**The Proper B-2-B Exchange 2.0 Mind-Set.** First, everything you do must start with your customer’s needs. But, Exchange 2.0 is a synthesis between a buyer and seller-centric view. Second, you must take a first step and persist by taking the next, the next, etc. Third, you must see yourself as a *Micro-Marketer*. A Consultative Salesperson has a *micro-market* of one buyer at a time and must perform all of the 4-P functions (Product, Price, Place, and Promotion) as a regular marketing department. And remember, that you probably are not receiving much help from the marketing function of your company so you have to do it all yourself.

**Table 1: B-2-B Exchange 2.0: Confluence of Buying and Selling Processes**

<u>PHASES</u>	<u>BUYING PROCESS</u>	<u>B-2-B EXCHANGE 2.0</u>	<u>SELLING PROCESS</u>
<b>One</b>	<p><b>No Need</b></p> <p><b>Buyer</b> has no present perceived product/service need.</p> <p>-<u>Active</u> on Internet and on Social Media as normal course of conduct.</p>	<p><b>Segmented Suspects</b></p> <p><b>Score</b> or rate the potential buyer at this phase:</p> <p>-<u>What</u> is the <i>Probability</i> (P.) of this potential becoming a customer?</p> <p>-<u>Assign</u> P. based on standardized criteria and</p>	<p><b>Branding &amp; Positioning</b></p> <p><b>Marketer Role</b> – department or individual salesperson performs:</p> <p>-<u>Segments</u> likely buyers from characteristics of existing customers.</p>

	<p><u>-Maintains</u> professional knowledge in general searches and following dialogue in Social Media membership groups.</p>	<p>buyer behavior.  <u>-Database</u> the <i>Suspect</i> and track.  <u>-P.</u> = .1 (10%) to .3 at this phase.</p>	<p><u>-Active visibility</u> on multiple Social Media Channels – joins membership groups where segmented buyers participate.  <u>-Attempts to position and brand</u> self and/or company as a <i>Thought Leader</i> through meaningful &amp; value contributions.  <u>-Avoid Cold Calls</u> as perceived as <b>Interruptions as buyer has no need.</b></p>
<b>Two</b>	<p><b>Awareness of Need</b>  <b>Buyer</b> begins to internally - from personal and organizational perspective - assemble criteria and specifications to fulfill need.  <u>-Remains Active</u> on Internet and on Social Media.  <u>-Seeks general</u> information on Internet regarding his/her need.</p>	<p><b>Self-Identified Prospects</b>  <u>-Self-Identified</u> because behavior or actions initiated by the buyer, for example visited your website, or downloaded a white paper.  <u>-How Measured?</u> Analytics, some free and others expensive measure behavior.  <u>-P.</u> = .4 (Rising Probability at this phase)</p>	<p><b>Education/Nurture</b>  <b>Marketer Role</b> – Content Provider  <u>-Goal:</u> Increase <b>Visibility</b> of self-brand and positioning.  <u>-Actions:</u> S.E.O. (Search Engine Optimization – Strong Tags) &amp; Website with value offerings such as whitepaper downloads.  <u>-Avoid Cold Calls</u> as perceived as <b>Interruptions as buyer does not yet feel fully educated</b> regarding needs.</p>
<b>Three</b>	<p><b>Information/Alternative Search</b>  <b>Buyer</b> begins a <b>specific</b> search to find or match a solution with need.  <u>-Maintains</u> control of search through his/her Social Media knowledge of potential solution providers or ability to conduct Internet searches.  <u>-Builds a Short-List</u> of vendors.  <u>-Receptive</u> to a <b>Social Call</b> from familiar vendors.</p>	<p><b>Qualified Prospects</b>  <u>-Qualified</u> generally because buyer has taken specific actions that show rising interest.  <u>-Analytics &amp; Research</u> by seller on buyer supplying increasing confirmation of probable match between buyer needs and vendor solutions.  <u>-P.</u> = .5 (50% probability of becoming a customer)</p>	<p><b>Education/Nurture</b>  <b>Marketer Role</b> – Content Provider  <u>-Goal:</u> Increase <b>Credibility</b> of self-brand and positioning.  <u>-Actions:</u> Write a Blog with embedded links to other value resources, Option-In E-Mail feeds from Blog, and RSS feeds.  <u>-Contact:</u> Make <b>Social Call</b> (Warm Call) after buyer behavior indicates rising interest. Sometimes, it is appropriate for <b>Inside Sales</b> to make this Social Call.  <b>Note:</b> Marketing Role about to shift to a Salesperson Role.</p>
<b>Four</b>	<p><b>Assessment of Alternatives</b>  <b>Buyer</b> meets or communicates with and negotiates with the <b>Short-List</b> of vendors and discusses his/her <b>specific</b> needs.</p>	<p><b>Sales Ready Prospects</b>  <u>-Needs Discovery</u> Interview – P. = .6 after completed.  <u>-Demonstration of Capability</u> Interview – P. = .7 after completion.  <u>-Proposal Interview</u> – P. = .8</p>	<p><b>Sales Interviews</b>  <b>Outside/Field Salesperson Role</b> – Consultative sales strategy  <u>-Goals:</u> Obtain <b>specific</b> buyer needs and match vendor value solution to satisfy needs and prepare written proposal of suggested need/match.  <u>-Actions:</u> F-2-F or Video engagement with potential buyer. Conducts <b>Selling Interviews</b> – usually multiple with complex B-2-B market products/services.</p>
<b>Five</b>	<p><b>Purchase Decision</b>  <b>Buyer</b> decides which vendor or vendors (if using multiple sourcing) offer the best solutions and enter into binding agreement with the seller.</p>	<p><b>Initial Customers</b>  <u>-Contract</u> – P. = .9  <u>-Note:</u> Why only 90%? Even with signed contract, before delivery or implementation, there is room for variation of value of contract due to unknown adjustments.</p>	<p><b>Sales Interviews</b>  <b>Outside/Field Salesperson Role</b> – Consultative sales strategy  <u>-Goals:</u> Convert Proposal into contract.  <u>-Actions:</u> F-2-F, Video engagement, mail, or other.</p>
<b>Six</b>	<p><b>Post-Purchase Evaluation</b>  <u>-Satisfaction</u> with both the Exchange experience and Implementation of vendor's solutions?  <u>-Expectations</u> – met, not met, or exceeded?</p>	<p><b>Loyal &amp; Advocate Clients</b>  <u>-Repeat and/or Referrals?</u>  <u>-P.</u> = 1.00  <u>-Notes:</u> (1) Why 100%? With implementation, all variations of the contract have been revealed. (2) When P. = 1.00s repeat purchase, they are readjusted appropriately in Exchange cycle.</p>	<p><b>After-Sale Implementation, Maintenance &amp; Development Operations, Salesperson, &amp; Customer Service Roles</b> – Collaboratively enacted.  <u>Goal:</u> Deliver on promises made.  <u>Actions:</u> Communication &amp; coordination among various <i>Roles</i> listed above..</p>

**Table : B-2-B Exchange 2.0 Model.** (See Table 1: *B-2-B Exchange 2.0: Confluence of Buying and Selling Processes*).

1. The Table Layout. The middle column of Table 1 is a tabular representation of a synthesized Buying/Selling *process* or *funnel* which maps and tracks the journey of a *Segmented Suspect* (sales lead) through the entire process of becoming first a *Customer* and then a satisfied *Client*. The two outer columns represent synthesized perspectives, a buyer-centric view and a seller-centric view synthesized and combined into the middle column to create an exchange-centric view.

2. Micro-Marketing Role. In the B-2-B Exchange 2.0 model, a marketing role – for example, branding and positioning as a *Thought Leader* and educating – takes place in the *top* of the Exchange funnel or Table 1, Phases One through Three. In Phase Four and Five, a normal selling role is adopted – taking place in the bottom of the Exchange funnel – sellers doing what they have always done. In Phase Six, you join customer support to implement that what you sold and continue contact to achieve repeat and referral business.

3. Metrics and Analytics. How do you know when a lead moves through the Exchange funnel of Table 1? What indicates movement? The short answer is, by their behavior. If you are communicating using Social Media and supplying content through your Blog, on your website, through social media channels (LinkedIn, FaceBook, etc), every time they visit your website or download a white paper, or sign up for an RSS feed, or opt-in giving you their e-mail this can be measured. *Google Alerts* offers you a free service. What do you do with this information?

This author uses a *Scoring System*. Here's how it works. Referring to Table 1, Phase One we have labeled these buyers as *Segmented Suspects* and assigned a *P. Value* of .1, .2 or .3 (a 10%, 20% or 30% probability of these suspects eventually becoming a customer – *P. Value* is based on your designed set of criteria). When they behave or take certain predetermined actions (measured by *Google Alerts*) we simply raise their *P. Value* and move them through the Exchange process until they become a *P. = 100%* or *Client*. They should move up the *P. chain* or off.

## Assemble Your B-2-B Exchange 2.0 Tools

The following is a brief listing of the minimum and most popular Social Media tools that you will need. With experience, you develop a customized list.

**Social Media Accounts.** a. LinkedIn – This is a must, b. FaceBook – Have separate personal account for your social network and a business account, c. Twitter – Both personal and business can be conducted in one account, d. YouTube – Create a business channel where you might consider developing videos to be able to present your brand (personal and/or business) and attach to your other social media.

**Presence on the Web.** a. Blog – there are free sites – *Google* provides as well as others. This supports your ability to have a *content* forum. This can also be referenced through your other social channels, b. Personal/ Business Website – Here you can redirect other Social Media. If permitted, you can direct to the company website.

**Some Social Media Management Tools.** a. HootSuite – This is a free service that allows you to manage all of the messaging that you conduct in your Social Media Accounts. For example, you can write a single message that will go to all of you Social Media Accounts. And, you can even schedule them so that you could sit down once a month and write them all and have them go out per your schedule. This saves time. Also, look into *ping.com*, b. Google Alerts – Free and this can supply you analytics and metrics to determine your buyers behavior, such as visiting your website or downloading, or how long they are viewing your materials. Google has many other free services to help your Social Media Selling efforts, c. CRM or SFA – Customer Relationship Management or Sales Force Automation – can help you manage your customers. Elementary systems and practically free, are *ACT* and *Outlook* used as a SFA. More sophisticated and for a fee is *salesforce.com* which is a Cloud based or *SaaS* (Software as a service) with monthly fees depending on the size of the business, d. Generate Leads – Social Media Selling through the B-2-B Exchange 2.0 model strongly suggests that you only put *Segmented Suspects* in the top of the Exchange funnel (See Table 1). *Segmented* means that these leads have similar characteristics to your existing customers. How do you find them? *LinkedIn* is free and very powerful for finding these leads. For a fee, *Jigsaw* is a powerful technology.

## Use Your B-2-B Exchange 2.0 Tools

A salesperson adopting a social media selling strategy has three primary activities: (1) Selling Activities, (2) Social media activities, and (3) Administrative activities. How do you schedule your working time? Here are some suggestions (Chase, Landy and Knebl, Kevin. 2011, pp. 185 - 188).

**Selling Activities.** You should allocate about 60% of time on selling. These activities would include: meetings with prospects , Development of proposals , Presentation meetings with prospects and clients, Closings, A Up-selling activities with existing clients, and Drive time to and from selling opportunities

**Social Media Activities.** You should allocate about 15% of time on social media These can be divided daily and weekly activities.

1. Daily Activities - Logging on to LinkedIn, posting updates, and checking the “People You May Know” section for new contacts to add to your network, Sending invitations to new contacts as needed , Doing the same on your business FaceBook page, Sending a tweet on Twitter, as appropriate ,Reviewing the content that was delivered to your E-mail account via RSS feeds, Sending selected content to your online community via ping.com

2. Once-a-week Activities - Writing a new post to your blog, if you choose to write your own blog • Sending up to five FedEx letters to prospects generated through your social media activity (Consider setting aside one afternoon per week for this—Friday is usually a good choice)

**Administrative Activities.** You should allocate about 25% of time on administrative. (This is a catch-all category). These activities include: Paperwork, Meetings, Post-sale paperwork, Expense reports, Resolution of customer problems or issues.

## CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

### Conclusions

**Addressing Research Question One.** Given the rapidly developing, widening accessibility, and real-time sharing of dynamic Web 2.0 multiple-way information and communication capabilities, how has this environment modified the traditional process of sales and economic value exchange? Currently, a tsunami of data regarding the application of Web 2.0 overwhelms most selling organizations –This paper attempted to make sense of how the current Web 2.0 phenomenon is affecting today’s communication channels and, subsequently, how it is altering the buying and selling processes. The significance of this paper is to provide salespeople practical and immediate help.

**Addressing Research Question Two.** What are companies thinking and doing today, to adapt their selling organizations for a post-2003 Web 2.0 world? The Web 2.0 evolution has been addressed by an ideal model termed, *Sales 2.0*. Sales 2.0 similarly attempts to universally encompass ALL sales in which a company might be involved and handle it with an omnibus systematic approach. Implementation of Sales 2.0 is still in its infancy.

**Addressing Research Question Three.** What practical actions can individual salespeople do today to effectively use social media and Web 2.0 without waiting for corporate-wide Sales 2.0 program initiatives? Table 1: *B-2-B Exchange 2.0: Confluence of Buying and Selling Processes*, offered a practical model and set of implementable guidelines where an individual salespeople can begin to experiment with Web 2.0 tools in order to improve their sales. And, they can start immediately and for negligible costs other than consistent investment of time.

### Implications

Salespeople and sales organization can significantly improve sales performance by more accurately aligning themselves with current and evolving buy practices and preferences. Thus, B-2-B Exchange 2.0 is an immediate solution for individual salespeople. Evolving Sales 2.0 practices is an imperative for companies to

achieve sustainable competitive advantage. By not aligning and evolving Web 2.0 practices, implications for individual sales people, sales management, and their companies are painfully obvious:

## Recommendations

To *B-2-B Consultative Salespeople*, begin to experiment today with the Social Media selling model presented in Table 1: *B-2-B Exchange 2.0: Confluence of Buying and Selling Processes*. To *Companies*, Sales 2.0 offers a vision upon which you can build and embrace Web 2.0 tools to improve your competitive advantage. Start today and learn as you go. There is no Sales 2.0 Nirvana, only continuous improvement. To *Academics*, Sales is top-line revenue and one half the equation of a successful business. It's time to abandon the idea that Marketing is sexy and academic while Sales is a step-child. Both work in unison. Let's get those textbooks and classrooms brought into the 21<sup>st</sup> century – a Web 2.0 age.

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# **VISUAL MERCHANDISING: IMPACT ON CONSUMER BEHAVIOUR (AN EXPLORATORY STUDY OF APPAREL SEGMENT IN AHMEDABAD)**

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## **ABSTRACT**

*Retail industry in India is booming and there is fierce competition. The country indeed has become the cynosure of FDI in retail sector and policies are heading towards more liberalization to attract foreign investment. There are various players in apparel segment in terms of lifestyle format. The study is aimed to find out impact of visual merchandising on the buying behavior of the customers visiting “Central Malls”. Four dimensions of visual merchandising viz. window display, in-store form/mannequin display, floor merchandising and promotional signage are studied and results reveal as to why visual merchandising is important for strategic marketing decisions to increase the sales of the stores. The study also reveals the dimensions of visual merchandising that are important and increase impulse buying of the consumers visiting the stores.*

## **INTRODUCTION**

Retail has caught lot of attention in the past one decade. AT Kearney recently identified India as the ‘second most attractive retail destination’ globally among thirty emergent markets. In terms of purchasing power parity (PPP), India is ranked 4<sup>th</sup> largest economy after USA, China and Japan. Indian retail market is growing with the compounded annual growth rate of 46.64%. One of the major contributors is the modernized retail format that is, “The Shopping Mall- the one stop destination”. In India, retail industry contributes 10% of the GDP and 8% of the employment. The Indian retail market is estimated at US\$ 350 billion. But organized retail is estimated at only US\$ 8 billion. India’s overall retail sector is expected to rise at US\$ 833 billion by 2013 at a compound annual growth rate (CAGR) of 10 per cent. McKinsey (2011) estimates that the Indian consumer market is likely to grow four times by 2025. According to the A. T. Kearney (2011), India stands 4<sup>th</sup> in Global Retail Development Index 2011.

The retail sector is witnessing an influx of large domestic conglomerates such as Reliance Group, Future Group and AV Birla Group. In November 2011, Government of India announced reforms in retail sector for both multi-brand stores and single-brand stores. These market reforms paved the way for retail innovations and competition with multi-brand retailers such as Wal-Mart, Carrefour and Tesco, as well as single brand majors such as IKEA, Nike and Apple. In January 2012, Government approved reforms for single-brand stores welcoming anyone in the world to innovate in Indian retail market with 100% ownership. This development in retail creates fierce competition in the industry. The competition in terms of innovations in organized consumer retail industry has always been avoided by India before 2011. India’s organized retail had a 31% share in clothing and apparel in 2011 (A. T. Kearney, 2011). Foreign retail chains entering India will aggravate the competition to different level. Hence, the retailers have to ensure that their stores appeal to the customers more effectively. In such case, the retailers need to differentiate themselves from others. The similarity of merchandise in the fashion or apparel forces the industry to utilize visual merchandising to improve the desirability of the product, differentiate their product and enhance the impulse buying behavior. Since the country is getting more

competitive in terms of retail industry, visual merchandising is the only effective way of differentiating in fashion industry. The last thing a customer wants is similarity in merchandise. The innovation in store chain is very weak. Indian consumers are becoming more aware about the latest fashion and design and also in the innovation of the store space. They also want state of art products that have good quality and are of global standards and experience that also meets global standards. Visual merchandising is the only technique to create euphoria in fashion industry by store presentation. There are various institutes in the country providing courses on visual merchandising. Retailers by incorporating innovative usage of store space can match the consumers' expectations and give strong competition. Hence, it becomes important to study visual merchandising in fashion industry and help the marketers to understand the way they can differentiate themselves from competitors.

## **LITERATURE REVIEW**

Visual merchandising is effective presentation of products that impacts customers purchase (Walters and White, 1987). It is providing right product to right customer at right time. It is defined as “the presentation of a store/brand and its merchandise to the customer through the teamwork of the store’s advertising, display, special events, fashion coordination, and merchandising departments in order to sell the goods and services offered by store” (Mills, et al, 1995). This means everything that customer sees, exterior or interior, creates a positive impact on customer. Retailers are gradually realizing that only selling the product is not important, but customers’ satisfaction and convenience is also important for shopping. Stimulus in retailing includes space related, product related and people related aspects (Quartier, et al, 2009). These stimuli are mostly collected through eyes. Hence, it is inexpensive way of marketing (Matthew and Clark, 2004).

Visual merchandising includes both store exterior and interior. The store exterior includes window display, façade and retail premises. Window display is a medium which creates first impression in customer’s mind to enter the store. Physical attractiveness of the store impresses customers highly for store selection (Darden et al., 1983). In the same way exterior of the store instigates customers to enter the store (Jiyeon, 2003). Omar (1999) suggests that there are three types of interior display: Merchandising display, Point-of-sales display and Architectural display. In-store cues have always been prominal for practitioners and researchers (McGoldrick, 1990, 2002). Good store interior interests customers and hence, reduces psychological defense and help purchase (Kotler, 1974; Walters and White, 1987; Bitner, 1992; Omar, 1999; Davies and Ward, 2002, Jiyeon, 2003). The store interior includes orienting factors (Davies and Ward, 2002); signage (Bitner, 1992); Layout (Levy and Weitz, 1996; Berman and Evans, 1995), fixturing (Levy and Weitz, 1996), merchandise (Davies and Ward, 2002), presentation techniques (Buchanan et al., 1999), props (Dua and Karolia, 2008) and spatial factors and ambient conditions (Davies and Ward, 2002), which Kotler termed “atmospherics” which is a very important strategy. Consumer expectation regarding in-store design have increased (Buchanan et al., 1999) and there is also a heightened desire for shopping excitement, which can in part be delivered through innovative design of the physical environment (Erlick, 1993; Levy and Weitz, 1996). Visual merchandising is, therefore, concerned with both how the product/ brand are visually communicated to the customer and also whether this message is aptly decoded. Visual merchandising includes various aspects of consumer such as sensory pleasure, affective pleasure and cognitive pleasure (Fiore, et al 2000). Consumers under stress will make planned or nondiscretionary purchase and won’t spend as much time or money on unplanned purchases (Donovan, et al, 1994). Customers account both monetary and non-monetary costs of the merchandise (Zeithaml, 1988). Recreational i.e. non-monetary are vital for shopping (Treblanche, 1999). The longer a shopper remains in the store the more he or she will buy. And the amount of time the shopper will spend in the store depends on how comfortable or enjoyable the experience is. So the visual stimulus and ambience must be soothing and effective so customer remains in store for longer time. Along with the merchandise, it triggered affective reaction among shoppers (Baker and Grewal, 1992) which creates store patronage intentions (Baker et al., 2002). It is evident from the above research studies, that in-store environment is critical component of store choice and sales behavior.

## **RESEARCH OBJECTIVES AND DESIGN**

### **Research Objectives**

1. To explore the dimensions of visual merchandising.



2. To study the impact of visual merchandising on consumer attitude and consumer response in terms of apparel segment.
3. To study the impact of visual merchandising on the buying behavior of the consumers.

## Research Design, Sample and Data

The research design is divided into two parts, the first part is exploratory in nature and the second part is descriptive. In the exploratory study the visual merchandiser of “Future Group” were interviewed to understand and find the dimensions of visual merchandising. The study was intended to focus on the impact of visual merchandising in terms of apparel segment as a product category. The sample size of the research was 100 but sixteen were outliers hence, the revised sample size was 84. The sampling technique was mall intercept method, customer who walk out of the store were surveyed with the help of structured questionnaire. Thus, sampling procedure is purposive sampling. The survey was conducted in Central Mall of Ahmedabad for four days. With the help of SPSS reliability test, factor analysis, correlation and linear regression have been run on the data to get the findings.

From the literature review it is inferred that in terms of visual display, window display, in-store form/mannequin display, floor merchandising and promotional signage, are very important dimension to be studied in visual merchandising. If these dimensions of visual merchandising are properly and innovatively developed, the stores’ sales may increase drastically. Window display will increase the walk-ins of the store. Customer once enters the store; the next encounter of the customer with the store happens only if the experience with the store is memorable. In that case in-store form/mannequin display, floor display and promotional signage will play a vital role in making the experience memorable to customer. Therefore, it is important to study the impact of these dimensions on impulse purchase behavior of customer, to find out effectiveness of visual merchandising.

## Research Hypothesis

- H1:** Customers who purchase on impulse are influenced by window displays.  
**H2:** Customers who purchase on impulse are influenced by in-store form/mannequin display.  
**H3:** Customers who purchase on impulse are influenced by floor merchandising.  
**H4:** Customers who purchase on impulse are influenced by promotional signage.

The dependent variable of study is impulse buying (section 1 in table 1) and independent variables are window display, in-store/mannequin display, floor display, and promotional signage (section 2 to 5 in table 1). These variables have individual variables which are tested on five point Likert scale which ranged from never = 1 to frequently = 5.

## ANALYSIS AND FINDINGS

The analysis of the data is carried out in the following step. The preliminary test run are frequency table, principal component analysis and reliability test. While for hypothesis testing regression analysis was carried out. First reliability test for the questionnaire was carried out. The Cronbach’s Alpha of the reliability test was 0.721, which means the questionnaire is reliable.

**Table 1: Factor Analysis**

Impulse Buying (Section 1)	REFERENCES	Component	
		1	2
1. I go shopping to change my mood	Youn & Faber, 2000 (1, 3, 4&5) Han 1987; Rook & Hoch 1985; Weun, Jones & Betty 1998 (2).	.226	<b>.8</b>
<b>2. I feel a sense of excitement when I make an impulse purchase</b>		<b>.829</b>	.2
3. After I make an impulse purchase I feel regret		<b>.785</b>	-
4. I have difficulty controlling my urge to buy when I see a good offer		-.023	<b>.8</b>
5. When I see a good deal I tend to buy more than I intended to buy		<b>.763</b>	.2
<b>Component Eigen value</b>		<b>2.227</b>	<b>1.</b>

<b>% of Variance Explained</b>		<b>45%</b>	<b>27</b>
<b>Influence of Window Display (Section 2)</b>	<b>REFERENCES</b>	<b>1</b>	
6. I feel compelled to enter the store when I see an interesting window display	Gopal V, 2006, Bhalla & Anurag, 2010 (6, 7), Dawes, 2008, Iqbal, et al, 2011.	<b>.833</b>	
7. I tend to enter the store when I am attracted by an eye-catching window display		.833	
<b>Component Eigen value</b>		1.388	
<b>% of Variance Explained</b>		69%	
<b>Influence of In-Store Form/Mannequin Display (Section 3)</b>	<b>REFERENCES</b>	<b>1</b>	<b>2</b>
8. When I see clothing featuring a new style or design on display I tend to buy it	Han, 1987 (8-9), Rook & Fisher, 1995 (10), Kerfoot, et al, 2003 (11), Clark 2007, Dua and Karolia, 2008.	<b>.869</b>	<b>-</b>
9. I get idea about what to buy after looking through in-store or mannequin display		<b>.831</b>	<b>.1</b>
10. I tend to rely on store displays when I make a decision to purchase clothing.		-.137	<b>.8</b>
11. When I see clothing that I like on in-store or mannequin display I tend to buy it		.342	<b>.7</b>
<b>Component Eigen value</b>		1.747	<b>1.</b>
<b>% of Variance Explained</b>		44%	<b>31</b>
<b>Influence of Floor Merchandising (Section 4)</b>	<b>REFERENCES</b>	<b>1</b>	
12. I tend to try on clothing that catches my eye when I pass by	Rook & Fisher, 1995 (12, 14), Kerfoot, et al, 2003 (13).	<b>.838</b>	
13. When I see clothing that catches my eye I tend to try it		.791	
14. When I walk along the aisle I tend to look through clothing close to		.373	
<b>Component Eigen value</b>		1.467	
<b>% of Variance Explained</b>		48	
<b>Influence of Promotional Signage (Section 5)</b>	<b>REFERENCES</b>	<b>1</b>	
15. When I see a special promotion sign, I go to look at that clothing	Beatty & Ferrel, 1998 (16); Youn & Faber, 2000 (15) Han, 1987; Rook & Hoch, 1985(17); Weun, Jones & Betty, 1998; Youn & Faber, 2000(18), Iqbal, et al, 2011, Dua and Karolia, 2008.	<b>.890</b>	
16. If I see an interesting promotional offer on in-store signs I tend to buy		.819	
17. Sales sign entice me to look through the clothing		.806	
18. I am more likely to make an unintended purchase if the clothing has a sale sign		.795	
<b>Component Eigen value</b>		2.744	
<b>% of Variance Explained</b>		69%	

Extraction Method: Principal Component Analysis with varimax extraction.

For hypothesis testing, question 2 of section 1, as it has the highest value 0.829 in component 1 of principal component matrix with Eigen value 2.22 and percentage of variance explained 45%, in dependent variable checked over with various independent variables (Table: 1). For first hypothesis (H1) independent variable from section 2 is question 6 as the value in both the component is same hence, first component is taken for analysis with value 0.833 with Eigen value 1.388 and percentage of variance explained 69% (Table: 1). For second hypothesis (H2) independent variable from section 3 is question 8 as the value in first component is highest 0.869 with Eigen value 1.747 and percentage of variance explained 44% (Table: 1). For third hypothesis (H3) independent variable from section 4 is question 12 as the value of the same is 0.838 with Eigen value 1.467 and percentage of variance explained is 48% (Table: 1). For fourth hypothesis (H4) independent variable from

section 5 is question 15 as the value is highest 0.890 with Eigen value 2.744 and percentage of variance explained is 69% (Table: 1).

## Correlation and Regression Analysis

Pearson correlation tests were conducted to see the correlations between the dependent variable (impulse buying) and independent variables (Table 2). In addition linear regression analysis was conducted for the hypothesis testing using impulse buying tendency as a dependent variable and each visual merchandising variable (Table 3).

**Table 2: Correlation with Impulse Buying**

Variables	Pearson Coefficient	Significance (p)
Window Display	0.425	0.000
Form/mannequin Display	0.214	0.051
Floor Merchandising	0.395	0.000
Promotional Signage	0.512	0.000

**Table 3: Hypotheses and conclusion with determining coefficients and p-values from regression analysis**

Hypothesis	Intercept	Slope	R Square Co-efficient	p-value	Conclusion
H1	2.602	0.372 (4.247)#	0.180	0.000	Customer's impulse buying behavior and window display has direct relationship.
H2	2.916	0.282 (1.980)*	0.046	0.051	Customer's impulse buying behavior and in-store form/mannequin display are related but there is no direct relationship.
H3	2.789	0.359 (3.891)#	0.156	0.000	Customer's impulse buying behavior and floor merchandising are related directly.
H4	2.223	0.473 (5.393)#	0.262	0.000	Customer's impulse buying behavior and promotional signage are related directly.

t- values in parenthesis

\*Insignificant

#Significant

**H 1:** In the result of a Pearson correlation test, a significant correlation was shown between impulse buying and window display with value 0.000 since value ( $p < .0001$ ) was smaller, the data provided sufficient evidence that window display was significantly related with customers' impulse buying behavior. The regression analysis also found that window display has weak significance on customers' impulse buying behavior with R square co-efficient 0.180. This suggested that there was a directional relationship where window display significantly influenced customers' impulse buying behavior.

**H2:** The Pearson correlation test resulted in a higher p-value 0.051 for the second hypothesis, suggesting there is no significant correlation between impulse buying and in-store form/mannequin display. In consistence with the result of the correlation test, the regression analysis found that in-store form/mannequin display also did not significantly influence customers' impulse buying behavior. This finding was not surprising because the result of the R square co-efficient of the test showed much smaller coefficient (.046) for the relationship with in-store form/mannequin display than the coefficient (.180) for the relationship with window display even though they both did not have significant relationships with customers' impulse buying behavior.

**H3:** The result of a Pearson correlation test found a significant correlation between impulse buying and floor merchandising with value 0.000. The regression analysis suggested that the floor merchandising has weak correlation 0.156 on customers' impulse buying behavior. The data provides sufficient evidence that there was a significant directional relationship between customers' impulse buying behavior and floor merchandising suggesting that although customers' impulse buying behavior and floor merchandising are correlated.

**H4:** The Pearson correlation test found a significant correlation between impulse buying and promotional signage with a p-value 0.000. As expected, the regression analysis found that promotional signage significantly influenced customers' impulse buying behavior with value 0.262. The result of the R square coefficient test showed much higher coefficient (.262) for the relationship between customers' impulse buying

behavior and influence of promotional signage than the coefficients for the relationship with window display (.180) or floor merchandising (.156). This result suggests that promotional signage significantly influenced customers' impulse buying behavior.

## CONCLUSION

This study investigated some external factors that influence impulse buying behavior as it is immediate with no pre-purchase decision. The results proved that there is a pivotal relationship between customers' impulse buying behavior and window display, floor merchandising and promotional signage. Even though, in-store form/mannequin display did not significantly lead to customers' impulse buying behavior, the results still suggested that this variable and consumers' impulse buying behavior are correlated. It can be agreed that all four types of visual merchandising variables (i.e., window display, in-store form/mannequin display, floor merchandising, and promotional signage) are significantly interrelated and that relationship generates the influences on consumers' impulse buying behavior. When consumers are exposed to these visual stimuli, they more likely make purchase decisions on impulse. This suggests that these visual merchandising practices, serving as stimuli that provoke a desire that ultimately motivates a consumer to make an unplanned purchase decision upon entering the store, significantly influence consumers' impulse buying behaviors. In-store browsing appears to be positively affected by consumers' impulse buying tendency, and in turn, has a positive impact on consumers' positive feelings and impulse buying urges (Beatty & Ferrell, 1998). Marketers must use this findings efficaciously to increase sales of their store and innovate themselves in terms of display. Since, window display has impact on impulse purchase it will increase foot falls of the store, if the window of the store is very attractive. Promotional signage and floor display will enhance the experience of the store. So marketers must use these dimensions creatively. This study has revealed usefulness and effectiveness of visual merchandising in understanding consumers' behavior of impulse buying.

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# USING SIX STAKEHOLDER RELATIONSHIP MANAGEMENT (SRM) PRINCIPLES TO ENSURE EFFECTIVE CORPORATE GOVERNANCE

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## ABSTRACT

*Corporate governance has gained international relevance due to the global economic crises and general distrust and lack of confidence in business after a number of corporate scandals (Hilb, 2006:3). One way for multinational companies to improve their image as good corporate citizens is by adhering to the internationally recognized King III Report on Corporate Governance. Chapter 8 is dedicated to stakeholder relationship management (SRM) and six principles on how to improve companies' corporate governance. However, a clear understanding of stakeholder relationship management and the implications of Chapter 8 of the King Report on Governance for communication management is necessary. Therefore the purpose of this paper is threefold. Firstly, it aims to provide insight into stakeholder relationship management and related concepts from a theoretical point of view. Secondly, it attempts to test communication professionals' knowledge and views from nine selected South African companies (six of which are multinational companies) and thirdly, it offers recommendation that communication professionals can present to their management.*

## INTRODUCTION

Various actions were taken globally to assist business to become more transparent and to comply with corporate governance rules. In the USA an act of Congress known as the Sarbanes-Oxley Act (SOX) was introduced as a statutory regime to curb the economic crises. Other parts of the world (56 countries in the Commonwealth, including South Africa, and the 27 states in the EU, including the UK) opted for a regime to be applied on a voluntary basis. This included the Cadbury Report (UK) as well as the King Report on Governance in South Africa.

In South Africa the former High Court judge, Mervyn King S.C. headed the King Committee on Corporate Governance, and published three reports, King I in 1994 and King II in 2002. Both reports advocated an integrated approach to corporate governance, over and above the financial and regulatory aspects. The King III Report on Governance, released in 2008, has become internationally recognized (Institute of Directors, 2009:6). Today Judge King is also the chair of the International Integrated Reporting Council (IIRC) which is an international cross-section of leaders from the corporate, investment, accounting, securities, regulatory, academic and standard-setting sectors as well as civil society. Its mission is to create a globally accepted integrated reporting framework which brings together financial, environmental, social and governance information in a clear, concise, consistent and comparable format (Sustainability, n.d.:1).

Chapter 8 of the King III Report on Governance forms the focus of this paper as it discusses the six stakeholder relationship management (SRM) principles that can be followed to ensure effective corporate governance. Today stakeholders have far greater power through their increased access to information and this creates stakeholder expectations which forces companies to align their corporate behavior with these expectations. Communication management focuses on building relationships and senior communication professionals can advise top management on how to become better corporate citizens by following the six stakeholder relationship management (SRM) principles advocated in the King III Report.

# SIX PRINCIPLES OF STAKEHOLDER RELATIONSHIP MANAGEMENT

The word 'stakeholder' was first mentioned in the management literature in an internal memorandum at the Stanford Research Institute (now SRI International) in 1963. The intention was that the term 'stakeholder' would generalize the idea of a shareholder as the only group management (or the board of directors) needs to consider. Stakeholders were originally defined as "those groups without whose support the organization would cease to exist" (Freeman, 1984:31). This traditional viewpoint, where directors of a company are expected to manage the business in the best interest of shareholders, are now being questioned. Directors are increasingly expected to take into account both shareholders as well as the interests of all other stakeholders such as employees, creditors, consumers, suppliers, the environment and the community, to mention a few. A more widely accepted and recognised definition of stakeholders was proposed by Freeman (1984:46) as "any group or individual who can affect or is affected by the achievement of the organization's objectives."

The six stakeholder relationship management (SRM) principles, discussed in Chapter 8 of the King III Report, mainly revolve around 1) stakeholders and reputation, 2) proactive management of stakeholder relationships, 3) stakeholder engagement, 4) the treatment of shareholders, 5) transparent and effective communication, and 6) dispute and conflict resolution. For the purpose of the discussion here, some of the principles are grouped together.

## Stakeholders, reputation and the proactive management of relationships

Jones, Felps and Bigley (2007:137) state that the organisation is a collection of internal and external stakeholder groups. Freeman (1984:46) argues that organisations are defined by their relationships with stakeholder groups that not only include groups that management think have a stake in the organisation, but also those who decide themselves to take a stake in the organisation. Furthermore, the term "stake" needs some clarification. Mitchell, Agle and Wood (1997:859) points out that differentiation is needed between groups that have a legal, moral or presumed claim on the company and groups that have the capacity to affect the company's behaviour. Suggestions on how to identify, categorize and prioritize stakeholders are made by authors such as Freeman (1984:52), Grunig and Hunt (1984:141), Donaldson and Preston (1995:66), Clarkson (1995:107), Mitchell et al. (1997:853), Steyn and Puth (2000:201), Grunig, (2005:778); Rawlins (2006:2), Gregory (2007:65) and Falconi (2009:14).

Reputation is defined as the collection of perceptions and beliefs, both past and present, which reside in the consciousness of a company's stakeholders (Rayner, 2003:1). Similarly, Marconi (2001:2) defines reputation as the general opinion of the public towards a company. The key aspects of reputation revolve around commitment, company values, involvement, emotions and attachment (Meyer & De Wet, 2007:20). Reputation begins with communication acts that start from the inside out which must be consistent (O'Brien, 2006:10). Varey and White (2000:10) argue that it is communication management, operating at a strategic level, that is concerned with the management of the relations between the organisation (and management) and its stakeholders. Sundaram and Inkpen (2004:370) are of the opinion that managers have a moral and ethical responsibility to all stakeholders.

## Stakeholder engagement through transparent and effective communication

Stakeholder engagement is defined by Sloan (2009:26) as the process of involving stakeholders. However, before stakeholders can become involved, organisations need to first identify and assess their current levels of stakeholder engagement. Sloan (2009: 40) states that corporate leaders are starting to realize the rising expectation in this regard. Therefore, their relationships with stakeholders are becoming more inclusive and stakeholder engagement forms part of the central business process in transforming the organisation and the stakeholder engagement strategy. For stakeholder engagement to be successful, leadership and management must be committed to stakeholder inclusion.

Transparency, is defined as information that is freely available to those who are influenced by decisions, and that sufficient information is supplied in easily comprehensible forms and media. This requires



that decisions are made and enforced in a manner that follows rules and regulations (Kim, Halligan, Cho, Oh & Eikenberry, 2005:649). The word “transparency” carries with it a great selection of ethical and political associations, including honesty, truthfulness, and openness (Best, 2005:142). Transparency, according to Bandsuch, Pate and Thies (2008:100) is determined by the accuracy and accessibility of the information businesses provide to their stakeholders. It is important that information must be accurate and accessible. Accurate information reliably represents the company’s situation through comprehensive and relevant data. Accessible information is available and easy for different stakeholder groups to obtain.

## **The treatment of shareholders**

A shareholder can be defined as an individual, institution, firm or other entity that owns shares in a company. The term “shareholder” is, according to Henry (2001:226) insufficient to capture the people and relationships involved in share ownership. Although shareholders can be seen as a stakeholder group, they are distinct from other stakeholder groups as they invest their money to provide risk capital for the company and (in many legal jurisdictions) shareholders’ rights are enshrined in law whereas those in the wider group of stakeholders are not. Shareholders are being privileged over other stakeholders as they are the recipients of the residual free cash flow (being the profits remaining once other stakeholders have been paid). This makes the compliance with Principle 3 in Chapter 8 of the King III Report on Governance difficult, which requires companies to balance the interests of all stakeholders, in the best interest of the company. However, shareholders have a vested interest in trying to ensure that resources are used to maximum effect, which in turn should be to the benefit to society as a whole (Mallin, 2007:49) and thus the other stakeholders of the company. Companies operate in this wider society and not within a defined corporate vacuum. Therefore, the views and interests of various stakeholders should be taken into account in addition to those of shareholders.

## **Dispute and conflict resolution**

Stakeholders and stakeholder groups have varying degrees of power. Often power imbalances exist between these stakeholders and stakeholder groups and even the organisation and these stakeholders and stakeholder groups (Ansell & Gash, 2007:551). These imbalances necessitate collaboration and a moral intent on the part of the company to assist these stakeholders to overcome these problems. This collaboration can typically be facilitated by communication management. Ehling (1992:623) noted that one of the roles of communication management is dispute resolution, which appreciates a vital feature of relationships between the organisation and its environment. This environment is characterized by cooperation between groups that disagree and far-reaching and comprehensive mutual communication is needed. Moreover, when a dispute arises between the organisation and a stakeholder or stakeholder group, conflict arises.

# **RESEARCH METHODOLOGY**

This paper forms part of a larger study, but the focus here is the six stakeholder relationship management (SRM) principles outlined in Chapter 8 of the King III Report. The research strategy and design consisted of a qualitative approach where senior communication practitioners expressed their views on the implications of Chapter 8 of the King III Report and on how communication practitioners can use these stakeholder relationship management principles to advise management on corporate governance. Non-probability convenience and purposive sampling were used. The companies included were from various sectors and industries such as Wireless Telecom Services, Real Estate Holdings & Development, Household appliances and consumer electronics, Beverages – Distillers & Vintners, Broad line Retailers, Hospital Management & Long-term Care, Paper, Building & Construction materials and Accounting and Consulting services. Six companies are listed on the JSE (Johannesburg Securities Exchange) Social Responsibility Index, are multinational while all the companies are among the top performing companies in South Africa. Interviews were conducted in the three major metropolitans in South Africa being Johannesburg/Tswane, Cape Town and surrounding areas and Durban areas. Data was gathered through in-depth, personal, face-to-face interviews with the use of an interview guide.

Qualitative data analysis consists of an ongoing process of continual reflection about the data, asking analytical questions, writing memos and making interpretations (Cresswell, 2009:184). The data from the transcription of interviews were arranged in into different types depending on the sources of information. Next, the researcher read through all the data to get a general sense of the information and reflected on the overall meaning. The following step was to start with the coding process, which was the organizing of the material into chunks or segments of text before bringing meaning to the information. This meant that text was gathered into categories which were labeled. The software program Nvivo 9 was used to code the text as raw data into nodes (themes). The results are reported on per the groupings in the theoretical discussion.

## **RESULTS AND DISCUSSION**

Some participants defined their stakeholders around the way in which their stakeholders are identified. An overlap thus exists between defining and identifying stakeholders. Of concern is that some companies engage in little stakeholder talk or discussion which resulted in their inability to define and identify their stakeholders. Senior communicators seem to understand reputation as the sum of the perceptions (in the form of company image) of stakeholders, over a period of time. Reputation management's components include corporate social responsibility, issues management and crisis management, although only issues and crisis were highlighted by senior communicators.

Stakeholder relationship management in the businesses was either proactive or reactive or seen as similar to stakeholder engagement. The description of the reactive approach to stakeholder relationship management by senior communicators is similar to that outlined in the theory. However, the proactive approach described in the data, aligns to both the proactive and interactive approach to stakeholder relationship management.

Stakeholder engagement was seen as inherent and integrated in the business. It was mostly seen as a process of identifying and understanding stakeholders, creating platforms or means to communicate with them and developing appropriate messaging. Some companies have an informal, unstructured approach to stakeholder engagement, while others make use of a stakeholder framework.

Some confusion seem to exists among senior communicators with regards to the strategies to handling conflict resolution and crisis management as well as who needs to drive/take responsibility for conflict resolution and crisis communication. Senior communicators do understand though that conflict and crisis is caused by issues and that direct engagement with stakeholders is needed. In South African businesses, conflict resolution is handled either by the legal department, the risk department, top management, communication management, or a combination of some of these departments.

## **MANAGEMENT IMPLICATIONS**

The implications for companies and their communication professionals include:

- Stakeholder relationship management is strategic and encompasses both stakeholder engagement and the governing of stakeholder relationships.
- Strategic stakeholder relationship management (SSRM) requires strategic integrated communication at the organisational, stakeholder and environmental levels of the organisation as well as the utilization of a strategic stakeholder relationship management and communication framework. These should be used to identify, prioritize, communicate and build relationships with stakeholders.
- A carefully crafted communication strategy aligned with and influencing business strategy is needed and requires the CEO and top management to have knowledge of and understanding of the considerations and challenges of stakeholders and how they can impact organisational reputation.
- Effective issues management and crisis communication approaches to assist in conflict resolution is necessary.
- The strategic, structured, disciplined and systematic management of communication throughout the organisation as well as the communication management function/department is imperative.

- Strategic stakeholder relationship management is enhanced through the empowerment of the communication management function, assigning decision-making responsibility and accountability to the communication management function, and having a supportive organisational culture and structure.

This paper adds value to both companies and their communication professionals by aligning the six principles of Chapter 8 of the King III Report of Governance with the role, scope, function and authority of the communication management function. Understanding Chapter 8 of the King III Report, as well as the implications of this report for communication professionals, provides the field and profession the opportunity to illustrate its value through the strategic communication with and management of stakeholder relationships. Although this may not directly lead to the enhanced professional status of communication management, it provides further evidence and a solid foundation upon which a case for professionalization can be built.

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# REDRESS MECHANISMS FOR OVER-INDEBTED CONSUMERS

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## ABSTRACT

*Since the beginning of our constitutional democracy in South Africa, many consumers have applied for loans and/or credit and the credit providers are exploiting the situation by granting them recklessly. Many consumers are over-indebted as a result of reckless lending practices by credit providers. This paper will examine the redress mechanisms for over-indebted consumers. The paper adopts research approach of literature review. The paper becomes more relevant, when one considered that hitherto, the research opinions of academics have not had much influence on the issue of the redress mechanisms for over-indebted consumers. This paper is concluded on the outcome of the research findings that if ever possible to do; measures for the prevention and alleviation of consumer over-indebtedness should be considered first.*

## INTRODUCTION

Many consumers are over-indebted and the prevention for over-indebted is essential. Consumers are over-indebted because of different reasons and the redress mechanisms for over-indebted consumers are necessary. The National Credit Act 34 of 2005 was introduced to regulate the credit industry and specifically to address over-indebtedness and reckless lending. The two measures for the prevention and alleviation of consumer over-indebtedness are direct measures and indirect measures. Different mechanisms to redress over-indebted consumers are discussed.

## CONSUMER EDUCATION

Consumers should get consumer education as a mechanism to redress over-indebtedness. In 2001, INSOL International recommended that different governments, quasi-governmental or private organisations globally should set up educational programmes to improve information and advice on the risks attached to consumer credit. Logically, the solution for over-indebtedness and over-spending is to be found in preventing over-indebtedness rather than in direct measures for debt relief.

The INSOL International made the following further recommendations:

(a) Educational programmes, in the form of advice, budgeting-support, financial literacy-courses and budgeting-administration, should be compulsory;(b) Special attention should be given to vulnerable groups of society, including the young, the elderly and minorities;(c) Consumers with debt problems should be monitored by a body controlled by representatives of both lenders and consumer organisations;(d) Lenders' organisations should arrange to make reliably accurate credit reporting and scoring information available to individual debtors, thus enabling them to understand the credit system better.

The South African law often fell short of the INSOL International recommendations and the solution to over-indebtedness lies in reforming South African consumer protection legislation. The South African various measures indirectly aimed at preventing and resolving over-indebtedness complies with the relevant INSOL International guidelines.

Section 3 (e)(i) of the National Credit Act 34 of 2005 provides that one of the Act's purposes is to protect consumers by addressing and correcting imbalances in negotiating power between consumers and credit providers. This can only be achieved by providing consumers with education about credit and consumer rights. The National Credit Regulator is appointed in terms of the National Credit Act. He is responsible for implementing consumer education and information measures to develop public awareness of the provisions of the Act. The Regulator has been actively involved in educating consumers and credit providers by way of placing important information on the National Credit Regulator's website; holding workshops and making presentations at conferences, regular communication with the industry; providing educational brochures; placing educational adverts; and holding media interviews.

Education and empowering consumers are important because this will enable consumers to have knowledge of, and take responsibility for their credit matters. Consumers must be encouraged to read before signing any contracts related to credit. There is a need for financial education and it should start at school level and if possible, be included in the South Africa school curriculum. Finances are viewed as a life skill and it would help children to have a familiarity with money matters at an early age. Financial education should form part of the subject called 'life skills' currently taught at schools.

## **DISCLOSURE**

Disclosure is another redress mechanism used to alleviate over-indebtedness to consumers. Section 64 of the Act provides that credit agreements must be in plain and understandable language and it is to be hoped that this will assist consumers with understanding their credit agreements better. Consumers also have the right to receive any document and information in one of the country's eleven official languages. A consumer has a right to receive any required document in an official language that the consumer reads or understands. Consumers will be able to take informed decisions if the material facts of the contract are disclosed.

Three levels of disclosure were identified and all the three stages of disclosure were made compulsory by the Act. They are as follows:

### **(a) Seeking business**

This stage of disclosure is a pre-agreement disclosure especially during marketing and credit quotations. Negative option marketing is strictly prohibited. If a credit agreement is entered into as a result of negative option marketing, the agreement will be void and unlawful. Section 74(6)(a) of the Act provides that when a credit provider and a consumer conclude a credit agreement, the latter must be given the opportunity of declining the option of pre-approved annual credit limit increases, and of being excluded from any telemarketing campaigns of the credit provider, marketing or customer lists that may be sold or distributed by the credit provider or any mass distribution of e-mail or SMS messages. This is necessary to alleviate over-indebtedness.

### **(b) Entering into a contract**

This is where the parties enter into a contract and entails the formalities and disclosure in the contract document. Section 93(1) of the Act requires the credit provider to deliver, without charge, a copy of his credit agreement to the consumer, or to send it, in printable electronic form, to the consumer. A credit agreement should be in writing and a copy of the agreement or a printable electronic form of the agreement must be delivered to the consumer. The consumer will be able to read the contract and if necessary cancel it within 5 days.

### **(c) Post-contract disclosure**

This entails post-contract disclosure, where copies of the instrument of debt, periodic statements and statements on request are sent to the consumer. It also includes the provision of a copy of the debt instrument and periodic statements to the consumer. The Sections 107-15 of the Act read with regulation 35 of the Act prescribe certain information that must form part of a statement of account in the case of a small credit agreement. The Act contains detailed provisions on statements of account in respect of content, form and frequency. A credit provider is obliged to offer to deliver periodic statements of accounts to each consumer. The consumer will be able to read the statements and if they are wrong, he will complain to the credit provider because overcharging may lead to him being over-indebted.

The maximum period between issuing of statements of account is generally one month. Two months is in respect of an instalment agreement, lease or secured loan, and six months in respect of a mortgage agreement. The statement must be in the prescribed form, and the opening balance shown in each successive statement must correspond with the balance shown in the preceding statement and the National Credit Regulator has the power to publish guidelines for methods of assessing whether a statement satisfies the prescribed requirements.

## MAKING CREDIT MORE AFFORDABLE

The credit must be more affordable for consumers but reckless lending and over-indebtedness must be alleviated. The Act and its Regulations place strict caps on interest rates and non-interest costs of credit such as initiation fees and service fees. The Act is prescriptive of the types of fee or charges that a credit provider may charge a consumer and a credit agreement may not require payment by the consumer of any money or other consideration except the principal debt, an initiation fee, service fees, interest, and the cost of credit insurance, default administration charges and collection costs. The Act sets maximums for interest and other costs of credit that may be charged on credit agreements. The Act also provides for the maximum allowable interest rates and other costs of credit that may be charged on credit agreements. The maximum 'interest rate' which may be charged for a credit agreement is calculated according to a formula where the reference rate ('RR') is the ruling South African Reserve Bank Repurchase Rate as at the time that the credit agreement is entered into.

The Act provides consumers with the *duplum rule* and its purpose is to protect the debtor from exploitation by the creditor. It is based on public policy. It simply means that the amounts owed by the consumer, initiation fees, service fees, interest, costs of any credit insurance, default administration charges, and collection costs that accrue during the time that a consumer is in default under the credit agreement may not, in aggregate, exceed the unpaid balance of the principal debt under that credit agreement as at the time that the defaults occurs. The *duplum rule* prevents the over-extension of a debtor's limited financial resources and it aims to provide a form of debt relief to a consumer, rather than to prevent a consumer from becoming over-indebted in the first place. This can be regarded as a mechanism for alleviating over-indebtedness. This regulation of credit protects consumers from charging more costs, interests, fees and charges and serves as a mechanism to alleviate over-indebtedness.

## PREVENTING RECKLESS LENDING

The Act prohibits a credit provider from entering into a reckless credit agreement with a prospective consumer. Credit providers that enter into such an agreement are penalised. Reckless lending causes over-indebtedness and it is discouraged to credit providers to practice it. Over-indebtedness occurs when a borrower can no longer service all his or her debts or where the level of debt servicing is depleting the household income and consumption.

A credit is lent recklessly if either-

(a) the credit provider took *no steps to assess* the proposed consumer's general understanding and appreciation of the risks and costs of the proposed credit agreement, and his or her rights and obligations under the agreement; debt re-payment history for credit agreements; or his or her existing financial means, prospects and obligations (that is, an assessment of whether a consumer could make the repayments); or, lastly, whether there was a reasonable basis to conclude that any commercial purpose may prove to be successful, if the consumer has such a purpose for applying for the credit; *or*

(b) after having conducted such an assessment, the credit provider still entered into the credit agreement with the consumer despite the fact that the preponderance of information available to the credit provider indicated that the consumer did not generally understand or appreciate his risks, costs or obligations under the proposed credit agreement, or that entering into that credit agreement would make the consumer over-indebted.

Debt counsellors are registered by the National Credit Regulator to assist over-indebted consumers and those who received credit recklessly. If a debt counsellor has to decide whether a consumer is over-indebted, he must take these matters into consideration and must also consider whether the consumer's total monthly debt payments exceed the balance derived by deducting his or her minimum living expenses from his or her net income. He must calculate the net income by deducting from the gross income of the consumer, statutory and

other deductions that are made as a condition of employment. The minimum living expenses are based upon a budget supplied by the consumer.

The court may declare the credit agreement reckless after the recommendation made by the counsellor. If a court declares that a credit agreement is reckless, it may make the following orders:

- (a) setting aside all or part of the consumer's obligations under that agreement, as the court determines may be just and reasonable in the circumstances; or
- (b) suspending the force and effect of that credit agreement, and it may then issue an order suspending its force and effect until a date determined by the court, and restructuring the consumer's obligations under any other credit agreements, in accordance with the Act.

In order to improve the ability of a credit provider to do an affordability assessment, provisions have been included in the Act to improve and integrate the credit-information infrastructure. A National Credit Register of credit Agreements will be created in future in order to assist credit providers not to grant credit recklessly and it will be kept by the National Credit Regulator. It will contain all relevant credit information regarding consumers. A register will help credit providers to check all the existing credit agreements that the consumer has before the approval of the credit and this is a good mechanism to alleviate over-indebtedness.

## **THE PROHIBITION OF CERTAIN CREDIT MARKETING AND ADVERTISING PRACTISES**

Research has indicated that unsolicited credit offers cause consumers to take on more debt than they believe they should. Particularly at risk are first-time credit users and middle-income consumers who may be living beyond their means. Certain advertising practices are also regulated by the Act and the Regulations. Negative option marketing is prohibited by the Act. A credit provider must not make an offer to enter into a credit agreement, or induce a person to enter into a credit agreement, on the basis that the agreement will automatically come into existence unless the consumer declines the offer. In terms of the Act, a credit provider must not make the following:

- (a) an offer to increase the credit limit under a credit facility, or induce a person to accept such an increase, on the basis that the limit will automatically be increased unless the consumer declines the offer.
- (b) make a proposal to alter or amend a credit agreement, or induce a person to accept such an alteration or amendment, on the basis that the alteration or amendment will automatically take effect unless the consumer rejects the proposal. A provision of a credit agreement purportedly entered into as a result of an offer or proposal is an unlawful provision and void.

An advertisement must contain any statement required by regulation and must not advertise a form of credit that is unlawful. It must not contain misleading, fraudulent or deceptive statement; or contain any statement prohibited by regulation. It may contain a statement of comparative credit costs to the extent permitted by any applicable law or industry code of conduct, but any such statement must show costs for each alternative being compared; show rates of interest and all other costs of credit for each alternative; be set out in the prescribed manner and form; and be accompanied by the prescribed cautions or warnings concerning the use of such comparative statements. A credit provider must state or set out the interest rate and other credit costs in the prescribed manner and form when making an advertisement.

## **RIGHT TO DOCUMENTS IN PLAIN LANGUAGE AND AN OFFICIAL LANGUAGE**

### **What is a plain language?**

A document is in plain language if it is reasonable to conclude that an ordinary consumer of the class of persons, for whom the document is intended, with average literacy skills and minimal credit experience, could be expected to understand the content, significance, and import of the document without undue effort. A consumer has a right to receive any document that in an official language that he reads or understands. If the producer of a



document that is required to be delivered to a consumer in terms of the Act is, or is required to be, a registrant, that person must make a submission to the Regulator proposing to make such documents available in at least two official languages. A credit provider may offer each consumer an opportunity to choose an official language in which to receive any document, from among at least two official languages as determined in accordance with a proposal that has been approved by the Regulator.

Plain language must deal with the context, comprehensiveness and consistency, the organisation, form and style, the vocabulary, usage and sentence structure of the text and the use of illustrations, examples, headings, or other aids to reading and understanding the document. The Regulator also has the power to publish guidelines for methods of assessing whether a document satisfies the requirements on plain language.

## **Standards by which plain language is defined**

It is reasonable for debt counsellors, credit bureaux and credit providers to supply documentation in the language that the consumer reads or understands and this depends on the usage, practicality, expense, regional circumstances and the balance of needs and preferences of the population that is usually served by the specific credit role-player. The Act requires that every role-player required to register in terms of the Act should make a submission to the Regulator proposing to make documents available in at least two official languages, and offering each consumer an opportunity to choose an official language in which to receive documents from among at least two official languages as determined in accordance with the proposal approved by the Regulator. When the Regulator considers the credit role-player's language proposal, usage, practicality, expense, and regional circumstances, he must consider the needs and preferences of the population usually served by the credit provider.

## **The need for plain language legislation**

The courts have recognised the unfairness of enforcing unreadable, incomprehensible credit and they could not provide the needed comprehensive solution needed by both consumers and credit providers. To address this issue, countries worldwide have adopted plain language legislation. The need for a plain language was recognized by government and many pieces of legislation passed dealt with the issue of plain language.

The Consumer Protection Act 68 of 2008 adds to the protection of consumer in South Africa. The purpose of the Consumer Protection Act is to promote and advance the social and economic welfare of consumers in the country by inter reducing and ameliorating any disadvantages experienced in accessing any supply of goods or services by consumers whose ability to read and comprehend any advertisement, agreement, mark, instruction, label, warning, notice or other visual representation is limited by reason of low literacy, vision impairment, or limited fluency in the language in which the representation is produced, published or presented. The plain language legislation is needed so that the Consumer Protection Act can serve its purpose.

## **INDIRECT OR OTHER MEASURES THAT CAN BE USED TO PREVENT OVER-INDEBTEDNESS**

The National Credit Act contains several sections that can indirectly prevent over-indebtedness. They include the following:

### **Sections 121(1)-(5) of the National Credit Act**

Sections 121(1)-(5) of the Act provide for consumers' 'cooling-off rights' if the agreement was entered into at a location other than the credit provider's registered business premises. The cooling-off right applies only in respect of a lease or instalment agreement. It applies only in respect of a lease or an instalment agreement entered into at any location other than the registered business premises of the credit provider. This is another mechanism to alleviate the consumer's over-indebtedness.

A consumer may terminate a credit agreement within *five business days* after the date on which the agreement was signed by the consumer, by delivering a notice in the prescribed manner to the credit provider; and again by tendering the return of any money or goods, or paying in full for any services, received by the consumer in respect of the agreement. If, on an application above, a court concludes that the actual fair market value of the goods depreciated during the time that they were in the consumer's possession, a court may order the consumer to pay the credit provider a further amount not greater than the difference between the depreciation in actual fair market value and the amount that the credit provider is entitled to charge the consumer.

## **Section 118 of the National Credit Act**

There must be free reduction, by a consumer, of a credit limit under a credit facility in terms of section 118 of the Act. The consumer may under a credit facility by written notice to the credit provider, may require the credit provider to reduce the credit limit under that credit facility; and stipulate a maximum credit limit that the consumer is prepared to accept. This method serves as a mechanism to redress over-indebtedness of consumers. The credit provider must give the consumer written confirmation of the new credit limit after receiving a notice., which must not exceed the maximum limit stipulated by the consumer, if any; and the date on which the new credit limit is to take effect, which may not be more than 30 business days after the date of the notice from the consumer. The credit provider under a credit facility, by written notice to the consumer, may reduce the credit limit under that credit facility to take effect on delivery of the notice subject to sections 61 and 66 of the Act. If, at the time a new credit limit takes effect in terms of this section, the settlement value under that credit facility is higher than the newly established credit limit, the credit provider must not treat that excess as an over-extension of credit for the purpose of calculating the minimum payment due at any time. A credit provider must not charge the consumer a fee for reducing a credit limit.

## **Section 13(c)(iv) of the National Credit Act**

Section 13(c)(iv) of the Act gives provision of the Regulator's monitoring over-indebtedness and reporting it to the Minister. The Regulator is responsible to monitor some matters and report to the Minister annually in respect of levels of consumer indebtedness and the incidence and social effects of over-indebtedness. This will make the Regulator and the Minister to be aware of the level of over-indebtedness of consumers for proper regulation.

## **Section 69 of the National Credit Act**

According to section 69 of the Act, the Regulator's maintains a national register of credit agreements. The Minister may require the Regulator to establish and maintain, in the prescribed manner and form, a single national register of outstanding credit agreements based on the information provided to it in terms of this section. The register of credit agreements must contain the following information:

(a) The credit provider's name, principal business address, and registration number, if any; (b) The name and address of the consumer; (c) If the consumer is a natural person, their identity number, or in the case of a person who is not a South African citizen and who does not have an identity number, their passport number; or a juristic person, its registration number; (d) If the agreement is a credit facility, the credit limit under that facility and the expiry date of the agreement, if any; (e) If the agreement is a credit transaction or credit guarantee, it will contain the following information: (i) the principal debt under the agreement; (ii) the particulars of any previously existing credit agreement that was terminated or satisfied in connection with the making of the new agreement; (iii) the amount and schedule of each payment due under the agreement; and (iv) the date on which the consumer's obligations will be fully satisfied if the agreement is fully complied with.

This will not apply because the national credit register is not yet established. When this register is created, it will play an important role to assist credit providers to establish whether a consumer can afford the credit. It will also assist credit providers not to grant credit recklessly.

## **Sections 14, 40, 48 and 50 of the National Credit Act**

The Regulator's registering credit providers on certain conditions and suspending credit providers and maintaining a register of such suspension. The Regulator is responsible to regulate the consumer credit industry

by registering credit providers, credit bureaux and debt counsellors and suspending or cancelling any registration issued in terms of the Act. The Regulator is also responsible for establishing and maintaining the registries and by making information from those registries available to each provincial credit regulator; and other persons in the prescribed manner and form. The main purpose for keeping these registries is to control reckless lending and over-indebtedness. Both credit providers and credit bureaux play an important role to the consumer's over-indebtedness.

## **Sections 125 and 126 of the National Credit Act**

Another indirect method of alleviating the consumer's over-indebtedness is to allow early settlement and prepayments of debt without incurring extra costs. A consumer or guarantor is entitled to settle the credit agreement at any time, with or without advance notice to the credit provider. The amount required to settle a credit agreement is the total of the following amounts:

(a) The unpaid balance of the principal debt at that time; (b) the unpaid interest charges and all other fees and charges payable by the consumer to the credit provider up to the settlement date; and (c) in the case of a large agreement at a fixed rate of interest, an early termination charge no more than a prescribed charge or, if no charge has been prescribed, a charge calculated in accordance with the Act; or other than at a fixed rate of interest, an early termination charge equal to no more than the interest that would have been payable under the agreement for a period equal to the difference between three months; and the period of notice of settlement if any, given by the consumer. At any time, without notice or penalty, a consumer may prepay any amount owed to a credit provider under a credit agreement. A credit provider must accept any payment under a credit agreement when it is tendered, even if that is before the date on which the payment is due. A credit provider must credit each payment made under a credit agreement to the consumer as of the date of receipt of the payment, as follows: (a) Firstly, to satisfy any due or unpaid interest charges; (b) secondly, to satisfy any due or unpaid fees or charges; and (c) thirdly, to reduce the amount of the principal debt.

## **Section 127 of the National Credit Act**

A consumer may prevent over-indebtedness by settlement of debt by surrendering of the goods under the credit agreement without incurring costs for such action. A consumer under an instalment agreement, secured loan or lease may give written notice to the credit provider to terminate the agreement; and if the goods are in the credit provider's possession, require the credit provider to sell the goods; or otherwise, return the goods that are the subject of that agreement to the credit provider's place of business during ordinary business hours within five business days after the date of the notice or within such other period or at such other time or place as may be agreed with the credit provider.

The National Credit Act contains several measures aimed indirectly at preventing and resolving the problem of over-indebtedness. These measures are aimed at increasing levels of awareness, improving financial literacy and ensuring the disclosure of information.

Statistics released by the Regulator indicates the successes already achieved by applying these indirect measures in the South African credit industry. They measures can prevent further over-indebtedness and overspending because they address the basic issues of a lack of information, a lack of education, and low levels of awareness. Consumers will no longer be ignorant of important credit issues and, with more information available when these issues are fully addressed. They will be protected against taking up credit without proper thought. These indirect measures can prevent overspending and over-indebtedness. More focus should be placed on indirect measures aimed at preventing over-indebtedness and their potential to prevent overspending and over-indebtedness should not be underestimated.

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# EMPLOYEE SATISFACTION WITH PERFORMANCE REVIEW AND APPRAISAL SYSTEM IN THE SOUTH AFRICAN SOCIAL SECURITY AGENCY (SASSA)

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## ABSTRACT

*The South African Social Security Agency (SASSA) is mandated by Cabinet to deal with complex issues of ensuring effective and efficient delivering of services of high quality with regards to the management and administration of social grants (SASSA Strategic Plan, 2006-9:4). In order for SASSA to achieve its mandate, individual performance needs to be effectively managed by supervisors and managers. The rationale behind the study is derived from personal experiences and observation regarding the performance review and appraisal during the performance management workshops conducted in the entire South African Social Security Agency during the 2007/08 financial year. From the workshops conducted, it became evident that most of the employees were not satisfied with their performance review and appraisal. As at December 2008, almost 50% of employees did not enter into performance agreements in the first two quarters of the performance cycle, and out of 50% that have contracted; only 15% have conducted the performance reviews and appraisals as required in terms of the performance management system. Quantitative – descriptive design was utilized for this study. Data was collected through structured questionnaires which were sent electronically (e-mail attachments) and through fax to respondents. The target population of the study was all Senior, Junior and Middle Managers of the Agency (SASSA). Analysis of data was done through establishing the relationship between variables by making use of the frequency tables and graphic presentations. From the study, it is concluded that when employees are satisfied with their performance review and appraisals, their morale heightens. Conversely, when employees are dissatisfied, their morale become very low and result in low productivity, high absenteeism and turnover. The study indicated that few employees were satisfied with performance review and appraisal to some extent and this necessitates training for supervisors in order to gain knowledge of the appraisal system, involve employees, develop them in their current positions, establish goals and make appraisal follow-up with them.*

## INTRODUCTION

Performance Management is a strategic and integrated process that delivers sustained success to organizations by teams (Armstrong, 2000: 1). The author further rejects the cultural assumption that only managers are accountable for the performance of their teams, and replaces it with the belief that responsibility is shared between managers and team members. This can be deduced from the performance management workshops conducted by a researcher in the 2007/8 financial year at the South African Social Security Agency (Head Office and Regions), where most of the employees were of the opinion that only supervisors are responsible for performance management.

The South African Social Security Agency (SASSA) has a Strategic Plan document for 2006/7–2008/9, which clearly outlines the following strategic objectives, in order to provide world class social security services: to ensure a high performance institution; service delivery improvements; improvements of operational excellence; and, good governance (Strategic Plan, 2006/7–2008/9: 20). In order for the South African Social Security Agency to achieve its strategic objectives of enhancing service delivery, individual performances must be linked to the corporate strategy and operational plans of the business units. This statement is supported by

Castello (1994: 3), who states that performance management supports the organization's overall business goals by linking the work of each individual employee, or manager, to the overall mission.

According to a directive from the Department of Public Service and Administration, the South African Social Security Agency is required to develop its own performance management system for employees on salary levels 1-12 (*DPSA Framework for Remuneration, Grading and Performance Management*, 2005: 13). Furthermore, *Public Service Regulations* (2001: Part VIII) provide guidelines, in terms of the implementation of the performance management system for employees on salary levels 1-12, whereas the performance management applicable in the Public Service, as *per* the *Senior Management Handbook*, applies to employees on salary levels 13-16 (i.e., Senior, General and Executive Managers).

All employees in the South African Social Security Agency are required, in terms of the performance management policy, to enter into performance agreements at the beginning of the performance cycle (i.e., in April). Employees, who started in the middle of the performance cycle, must enter into performance agreements within two months of having assumed duties. It is mandatory for all employees to enter into performance agreements, in order to know what is expected of them, how they are performing (based on the expectations), what improvements can be made on the job, and whether they are doing a good job. According to Castello (1994: 6), when employees are clear about what is expected of them, and have the necessary support to contribute to an organization efficiently and productively, their sense of purpose, self-worth and motivation will increase. The statement made by the author is fully supported, in the sense that the majority of employees in the South African Social Security Agency, who have not entered into performance agreements, may be uncertain, as to whether they are performing to the expectations of their jobs, and this may impact on the organization's performance. Entering into a performance agreement will help supervisors and team members at the SASSA set performance standards, and measure achievements, in terms of the set standards.

After the employees would have entered into performance agreements, they are required to submit themselves to performance reviews on a quarterly basis, so as to monitor their progress against the set objectives, and also to get feedback and support, with regard to their performances (*SASSA Performance Management Policy*, 2008: 7).

It can be assumed, from personal observations, that poor performance contracting by employees of the SASSA in reviews and appraisals might be caused by some of the reasons mentioned by Bacal above. The challenges with performance contracting, reviews and appraisals led to this study, which, specifically, relates to employee satisfaction with the performance review and appraisal system at the SASSA.

## **PROBLEM STATEMENT**

The South African Social Security Agency is mandated by Cabinet to execute complex issues, relating to the effective and efficient delivery of high quality services, with regard to the management and administration of social grants (SASSA Strategic Plan, 2006-9: 4). In order for the SASSA to achieve its mandate, individual performances need to be effectively managed by supervisors/managers. According to Philp (1990: 7), the most important factor in organization effectiveness is the effectiveness of the individuals, who make up the organization. In ensuring organizational effectiveness, the SASSA has put in place and trained its employees on the performance management policy.

All employees are required by the performance management policy to enter into performance agreements at the beginning of each financial year (i.e., in April). At the performance management workshops conducted in 2008, it was evident that most of the employees had not signed performance contracts, nor had they conducted their performance reviews and appraisals. If employees do not have performance contracts, it will be difficult for them to know what is expected, in terms of their performances. Failure to submit to performance reviews and appraisals will pose a challenge in the measurement of their performances, identifying performance gaps, and recognizing 'good' performance. The problem to be investigated is, therefore, to determine why some employees had not signed performance contracts, and submitted themselves to performance reviews and appraisals, as required by the Performance Management Policy of the SASSA.

## **HYPOTHESIS**

The following hypothesis was tested in the study:

*If performance contracts are signed, and performance reviews and appraisals are conducted on a quarterly basis on all employees, without any subjectivity, then the work productivity and morale of the employees will improve in the South African Social Security Agency.*

The Pearson's Chi-square method was used to test the level of significance of the findings, and the score indicated a high level of significance ( $p = 0$  or  $0.99$ )

## **RESEARCH METHODOLOGY**

### **Research approach**

The research is quantitative in nature, and aims to determine employee satisfaction with the performance review and appraisal system at the South African Social Security Agency.

For this study, the researcher adopted a quantitative-descriptive approach to determine existing relationships, practices that prevail, and attitudes of employees toward the performance review and appraisal system at the SASSA.

### **Research design**

The research design constitutes the blueprint of the study for the collection, measurement, and analysis of data (Cooper and Schindler, 1998: 130). For the purpose of this study, the quantitative-descriptive design was used. Fouché and De Vos state that a quantitative-descriptive design requires questionnaires as a data collection method. The design focused on developing a questionnaire as the data collection tool.

### **Data collection**

Data were collected through structured questionnaires. The researcher designed a self-administered questionnaire, using a 5-point Likert scale. Each questionnaire was accompanied by a covering letter, explaining the purpose of the study, promising confidentiality and voluntary participation, the importance of participation, potential benefits, and contact information.

The questionnaire was divided into Section A (biographical data, consisting of seven (7) elicitation items, i.e., age, gender, race, post classification, salary level, and years of employment); and, Section B (categories of employee satisfaction with the performance review and appraisal system, consisting of the following dimensions: Appraiser's knowledge; Employee participation; Employee development; Goal establishment; Appraisal follow-up; and, Goal discussion).

Closed-ended questions were used in Section B of the self-administered questionnaire.

The advantages of using a questionnaire are as follows: it is inexpensive to administer; it can be completed anonymously by respondents; it is easy to compare and analyse; and, a large volume of data can be gathered (Clapper, 2004: 3). The questionnaire was sent electronically (as an e-mail attachment), or faxed, to the intended respondents.

### **Handling returned questionnaires and data**

The returned questionnaires were coded, and raw data processed on the Microsoft Excel Program by the researcher. A total of 5 questionnaires were incomplete, due to unanswered items. The questionnaires with unanswered items were removed from the data file. Notwithstanding the reminders issued, there was no response from North-West and KwaZulu-Natal. The questionnaire was very short, and consisted of 6 pages and 21 questions. Regular reminders were made (by telephone), and the Senior Human Resource Managers indicated that the non-responsiveness was due to the negative attitudes of some respondents toward performance reviews and appraisals. Ideally, 35 senior managers, and 70 middle and junior managers should have completed and

returned their questionnaires. Only 17 senior managers, and 53 middle and junior managers responded - a total of 70 questionnaires completed.

## Population

The target population of this study was all Senior, Middle and Junior Managers at the South African Social Security Agency (SASSA).

## Sample

This study made use of a systematic sampling method. Since the target population was made up of all senior managers (employees on salary levels 13-16;  $n = 229$ ) and middle and junior managers (employees on salary levels 9-12;  $n = 2,484$ ), a representative sample was obtained.

To determine a representative sample size, the following formula was applied:

$n = \sqrt{N + 20}$  ( $N$  = population;  $n$  = sample size)

1. Senior Management = 35

2. Middle and Junior Management = 70

Total sample: 105

## Data analysis

Analysis of data was achieved by establishing the relationships between the variables, using frequency tables and graphic representations – these made the data easily interpretable and analyzable. The statistical analysis of the data was done at the Statistical Support Unit, Tshwane University of Technology. The researcher and the statistician were involved in the planning and execution of the analysis. The Statistical Package for Social Sciences (SPSS) was used for data management and analysis. The following statistical procedures were used:

- Descriptive statistics (e.g., frequency tables and graphs) was used to describe and interpret the data.
- Cross-tabulation was used to check the frequencies and percentages of the responses to the elicitation items.

## Ethical issues

The following ethical principles were adhered to in the recruitment of participants, data collection and analysis: no monetary incentive or reward was offered at any stage of the study; the researcher respected the right of the individuals to refuse to participate in the research, and to withdraw their participation at any stage; all the participants had to sign an 'informed consent' document, to ensure confidentiality, voluntary participation, and freedom to withdraw without any penalty; all the research participants, who agreed to partake in the study were granted a period of at least 24 hours, to reconsider their participation in the study, to read the information page at their own pace, and, to discuss it with a friend or relative.

# PERFORMANCE MANAGEMENT

According to Zielinski (1996: 53), performance management is a blueprint for the classic approach to effective management. Its requirements and steps set objectives with employees, measure their progress, offer regular feedback on how they are doing, find out where problems lie, coach them when they need help, and offer rewards and reinforcement. The author further defines performance management as a system that helps people manage their actions to help their organizations achieve their goals.

To manage performance effectively, people use job descriptions, and appraisal criteria, such as: competencies; behaviors; skills; key result areas; targets; and, codes of conduct. Much of performance management is about helping individuals, in their day-to-day roles, to maintain good standards of professional or occupational practice (Holyfield and Moloney, 1994: 19).



Performance management supports a company's or organisation's overall business goals by linking the work of each individual employee or manager to the overall mission of the work unit. Generally, this is accomplished by establishing individual goals and objectives that are tied directly to the organisation's purpose or direction. An effective performance management process, generally, starts with identifying clear goals, which are used as the foundation for on-going coaching and performance review (Costello, 1994: 3). The author further emphasizes that performance management involves: (1) analyzing the objectives and goals for your department, or work unit, and ensuring that they relate to the overall goals of your company, or organization; (2) analyzing your employee's skills and assignments as they relate to the company's, department's, or unit's goals; (3) clearly communicating performance goals and expectations to each employee, and gaining agreement on same; (4) recognizing and acknowledging the good performances of employees; and, (5) recognizing where performance needs to be improved, and providing employees with the necessary support so to do. Performance Management is traditionally viewed as an approach to managing people, which entails planning employee performance, facilitating the achievement of work-related goals, and reviewing performance as a way of motivating employees to achieve their full potential, in line with the organisation's objectives (Spangenberg, 1994: xiii)

The aim of performance management is to optimize every employee's output, in terms of quality and quantity, thereby improving the organisation's overall performance and service delivery (EPMDS of the DPSA, 2007: 10).

In terms of the EPMDS of the DPSA (2007: 10), in order to achieve individual excellence, the objectives for performance management are to, namely:

- (i) establish a performance and learning culture in the Public Service;
- (ii) improve service delivery;
- (iii) ensure that all jobholders know and understand what is expected of them;
- (iv) promote interaction on performance between jobholders' development needs;
- (v) evaluate performance fairly and objectively;
- (vi) recognize categories of performance that are fully effective and better; and,
- (vii) manage categories of performance that are not fully effective and lower.

## **Performance appraisal**

According to Philp (1990: 7), the appraisal of performance should be geared toward: (1) improving the ability of the jobholder; (2) identifying obstacles, which are restricting performance; and, (3) agreeing a plan of action, which will lead to improved performance. It is widely accepted that the most important factor in organizational effectiveness is the effectiveness of the individuals, who make up the organization. If every individual in the organization becomes more effective, then, the organization, itself, will become more effective.

The author further states that, for appraisal to be effective - which means producing results for the company, each manager has to develop and apply the skills of appraisals. These skills are, namely:

- i. Setting standards on the performance required - which will contribute to the achievement of specific objectives;
- ii. Monitoring performance in a cost-effective manner, to ensure that previous, agreed performance standards are actually being achieved on an on-going basis;
- iii. Analysing any differences between the actual performance, and the required performance, to establish the real cause of a shortfall, rather than assume the fault to be in the jobholder; and,
- iv. Interviewing - having a discussion with the job holder, to verify the true cause of a shortfall, and developing a plan of action, which will provide the performance improvement required.

## **Alignment of individual and organisational performances at the SASSA**

Performance Management in the South African Social Security Agency seeks to align organizational and individual performances through a process of continuous improvement, ensured through stated formal performance measurement, personal development, and the linking of reward to performance (SASSA Performance Management Policy: 7). Furthermore, Sangweni (Public Service Commission, article No. 3 of

2003) states that performance management is the systematic process by which an agency involves its employees, as individuals and members of a group, in improving organizational effectiveness in the accomplishment of the agency's mission and goals. He further mentions that there is a definite need for an effective system to manage and monitor the performances of managers within the context of a public service in transformation. At the South African Social Security Agency, performance management at the Senior Management Service level is used to monitor whether Senior Managers succeed in achieving the strategic objectives of the agency. According to the strategic plan of the SASSA, there are four phases at which individual and organizational performances are linked: Phase 1 (The SASSA Strategic Plan) The Strategic Plan of the SASSA emanated from a number of strategic planning sessions conducted in conjunction with project stream leaders, as well as Social Security Provincial Heads. The Strategic Plan articulates the mandate, vision, mission and strategic objectives agreed on by the Panel of Ministers (i.e., the DPSA, Treasury and Social Development) (*SASSA Strategic Plan*, 2006-9: 10). Phase 2 (Programme-Strategic Plans) The Programme-Strategic Plans consist of the purpose and sub-programmes to be achieved by each branch and region over a period of 3-5 years (*SASSA Strategic Plan*, 2006-9: 10). Phase 3 (Operational Plans) The districts, departments and units need to align their operational plans to the programme-strategic plans for a specific financial year (01 April to 31 March of the following year). The operational plans are reviewed on a quarterly basis, to determine the achievements of the set objectives. Phase 4 (Individual Performance Agreement) All employees at the South African Social Security Agency are required to enter into performance agreements with effect from 01 April of each financial year, and align their performance agreements with the operational plans of their respective districts, departments and units.

## ANALYSES OF THE SURVEY FINDINGS

Questionnaires were distributed to the Human Resource Managers for completion by 20 employees (senior, middle and junior managers) at all the offices of the SASSA. 70 completed questionnaires were received - a response rate of 67%. The response rate from different offices of SASSA is indicated by means of a frequency table in Table 2.

**Table 1: The Response Rate of the Sample**

Office	Questionnaires Distributed	Questionnaires Received	Percentage
Head Office (Pretoria)	20	17	85
Gauteng Region	20	14	70
Mpumalanga Region	20	14	70
Western Cape Region	20	5	25
Northern Cape Region	20	11	55
Limpopo Region	20	9	45
KZN Region	20	0	0
North-West Region	20	0	0

Section B of the questionnaire discusses other variables on SASSA employee satisfaction with their performance review and appraisal system (i.e., V8-V28). In Section B, the questionnaire proposed elicitation items in a 5-unit Likert scale format – 1 ('Strongly disagree'); 2 ('Disagree'); 3 ('Undecided'); 4 ('Agree'); and, 5 ('Strongly agree').

### The Appraiser's Knowledge (V8)

Elicitation Item V8: *My appraiser/supervisor has a good understanding of the skills required to perform my job.*

The respondents were asked to indicate whether, in their opinions, their supervisors had a good understanding of the skills required to perform their jobs. In order for supervisors to manage effectively, and provide strategic leadership, they would need to have a good understanding of the skills required by the jobs performed by their team members. 43% of the respondents agreed, while 23% strongly agreed that their supervisors were sufficiently competent to perform their jobs. 24% of them, however, were undecided – which may suggest that these respondents had never seen their supervisors demonstrate a good understanding of the skills required to perform their jobs. 6% of the respondents disagreed, and 4%, strongly with this item, regarding

their supervisors' competence. This could be an indication that some of the supervisors need further training, in order to develop the requisite skills to perform these duties.

#### **The Appraiser's Knowledge (V9)**

Elicitation Item V9: *My appraiser/supervisor is familiar with all phases of my work.*

The majority of the respondents (43%) agreed, and 24% strongly agreed that their supervisors were familiar with all aspects of their work. This suggests that most of the supervisors have the relevant skills and experience in the positions they occupy.

However, 17% of the respondents were undecided, while 12% disagreed, and 4% strongly disagreed that their supervisors were familiar with their work. If employees do not receive adequate guidance at work, their performances will decline, and have an impact on day-to-day productivity. Furthermore, it would be difficult for the supervisors to achieve the strategic objectives of the SASSA, as outlined in the Strategic Plan.

#### **The Appraiser's Knowledge (V10)**

Elicitation Item V10: *My appraiser/supervisor has excellent personal knowledge of my performance level in my current position.*

The respondents were asked to indicate whether their supervisors had excellent personal knowledge of their performance levels in their current positions. Of the 70 respondents who participated in this study, 31.40% agreed, and 28.60% strongly agreed that their supervisors had excellent personal knowledge of their performance levels at work. This implies that most of the respondents had signed their performance contracts, and their performances were being reviewed in terms of the policy requirements of SASSA. Furthermore, if employees are in possession of performance contracts, they will be able to know what the expectations of performance are, and supervisors will be able to identify the performance gaps, in order to suggest the appropriate interventions. However, 17.10% of the respondents were undecided; 15.70% disagreed; and, 7.10% strongly disagreed that their supervisors had excellent personal knowledge of their performance levels in their current positions. Based on these responses, it is clear that some of the supervisors had not effectively managed the performances of some of their team members. Furthermore, this is an indication that these respondents were not in possession of performance contracts – which would result in these respondents not knowing the expectations of performance in their current positions.

#### **The Appraiser's Knowledge (V11)**

Elicitation Item V11: *My appraiser/supervisor does not have a good knowledge of my duties in this position.*

The respondents were requested to indicate whether their supervisors had good knowledge of their duties in their positions. 28.60% of the respondents disagreed, and 24.30% strongly disagreed. However, 27.10% of them agreed; 2.90% strongly agreed; and, 17.10% were undecided.

If supervisors had acquired good knowledge of the duties of their team members, they would be able to provide strategic leadership, and manage performances effectively. Otherwise, their lack of knowledge could impact negatively on the strategic objectives of the organisation, and the business plans of their units.

#### **The Appraiser's Knowledge (V12)**

Elicitation Item V12: *My appraiser/supervisor has observed my performance under both routine and pressured conditions.*

The respondents were asked to indicate whether their supervisors had observed their performances under both routine and pressured conditions. In order for employees to perform effectively, and become productive, their performances need to be monitored by their supervisors on an on-going basis. This would help in recognising good performances, and identifying performance gaps for remedial interventions. 35.70% of the respondents agreed, and 10% strongly agreed, that their supervisors had observed their performances under both routine and pressured conditions. However, 32.90% disagreed, 7.10% strongly disagreed, and 14.30% were undecided. It is clear, given these figures, that some of the supervisors did not give support, and manage, the performances of their team members. This could further lead to low morale and high staff turnover at the SASSA.

### **Employee Participation (V13)**

Elicitation Item V13: *I am given an opportunity to express my feelings during my performance appraisal.*

The respondents were asked to indicate whether they were given the opportunity to express their feelings during their performance appraisals. Of the 70 respondents, 37% agreed, and 23% strongly agreed, that they were given an opportunity to express their feelings at the performance appraisals. Employees, who are able to express their feelings during their performance appraisals, will be able to perform at the expected levels of performance because the performance barriers would be indicated well in advance. Furthermore, they would be highly motivated, and absenteeism and staff turnover would be reduced, on account of job satisfaction. However, 23% of the respondents disagreed; 3% strongly disagreed; and, 14% were undecided. Employees, who are unable to express their feelings, would be demotivated, unhappy, stressed, and the level of their productivity would be low. This could also lead to high levels of absenteeism and staff turnover, due to job dissatisfaction.

### **Employee Participation (V14)**

Elicitation Item V14: *There is ample opportunity to discuss all aspects of my job during my appraisal.*

The respondents were requested to indicate whether they were afforded ample opportunity to discuss all aspects of their jobs at their appraisals. 37% of the respondents agreed; and, 18% strongly agreed, that they did. This will help employees to discuss the set objectives, as *per* their business plans, with their supervisors, and should stimulate new ideas, innovation and creativity. 33% of the respondents disagreed; 3% strongly disagreed; and, 9% were undecided on this item. This may suggest that these employees were not provided with performance feedback. Furthermore, employees would be unable to determine whether they were performing optimally, or underperforming. It should also be noted that performance management is a two-way communication between the supervisor and the supervisee.

### **Employee Participation (V15)**

Elicitation Item V15: *I am encouraged to express my opinion on how my duties could be more efficiently performed.*

The respondents were asked to indicate whether they were encouraged by their supervisors to express their opinions on how their duties could be more efficiently performed. The majority of the respondents (50%) agreed, and 18% strongly agreed, that they were encouraged to express their opinions on this. This is an indication that the supervisors valued and recognised the presence of their team members. There is no autocratic leadership style, and supervisors here appear to be providing leadership support, which would ultimately develop their team members for career progression. However, 20% of the respondents disagreed; 8% strongly disagreed; and, 9% were undecided on this item. This is an indication that within the SASSA, some of the supervisors may need to be trained and inducted on management and leadership issues, in order to manage their team members effectively.

### **Employee Participation (V16)**

Elicitation Item V17: *I have a clear understanding of the reasons behind the appraisal I Receive.*

The respondents were requested to indicate whether they had a clear understanding of the reasons behind the appraisal they received. Of the 70 respondents, who participated in this study, the majority agreed (62.90%), and 20% strongly agreed, that they did. This is an indication that the majority had signed performance agreements with their supervisors, and fully understood the purpose of performance appraisals. Very few respondents stated that they did not understand the reasons behind their appraisals - 4.30% of the respondents disagreed; 4.30% strongly disagreed; and, 8.60% were undecided on the matter. If some employees did not have a clear understanding of the reasons behind the appraisal they receive, it is clear that such employees may not have signed performance contracts with their supervisors, and that no goals had been set for them.

### **Employee Participation (V18)**

Elicitation Item V18: *Possible means of self-improvement which I could take in my current position are not discussed during my performance appraisal.*

The respondents were requested to indicate whether the possible means of self-improvement which they could take in their current positions were not discussed during their appraisals. 37.10% of the respondents disagreed, and 5.7% strongly disagreed, that this topic did not come up at their performance appraisals. This is an indication that some of the supervisors at the SASSA do discuss with their team members possible means of self-improvement for their career progression, and personal development. However, most of the respondents (38.60%) agreed or strongly agreed (5.70%), while 12.90% were undecided, that possible means of self-improvement in their current positions were discussed. This clearly indicates that most of the respondents were not afforded an opportunity by their supervisors to discuss this vital career matter. This could negatively impact on the personal development of the respondents.

#### **Employee Participation (V19)**

Elicitation Item V19: *My personal development needs are discussed during my performance appraisal.*

The respondents were requested to indicate whether their personal development needs were discussed at their performance appraisals. Some of the respondents (38.60%) agreed, and 5.70%, strongly agreed, with this statement. However, 37.10% of the respondents disagreed, 5.70% strongly disagreed, and 12.90% were undecided on the matter. In order for employees to grow and perform effectively in their positions, their personal development needs must be identified at their performance reviews and appraisals. Failure to do this may lead to them viewing the performance reviews and appraisals as incentive-based, rather than developmentally-oriented.

#### **Employee Participation (V20)**

Elicitation Item V20: *Goals for my job are not discussed during my appraisal.*

The respondents were asked to indicate whether their goals were discussed at their appraisals. 37.10% of them disagreed, and 8.60%, strongly disagreed. This is an indication that the most supervisors had discussed the goals of the jobs of their team members, in order for them to clearly understand their job expectations. Thus, employees would be able to better-achieve the objectives of their business plans. 37.10% of the respondents agreed, 5.70% strongly agreed, and 11.40% were undecided on this item. This could lead to employees falling short of the objectives of their business plans.

#### **Employee Participation (V21)**

Elicitation Item V21: *Possible actions which I could take to improve performance in my present position are discussed during my performance appraisal.*

The respondents were asked to indicate whether possible actions they could take to improve their performances in their present positions were discussed at their performance appraisals. 37.10% of the respondents agreed, and 5.70%, strongly agreed. This clearly indicates that some of the supervisors allow employees to take ownership of their performances, in order to realise what is expected of them. However, 37.10% of the respondents disagreed; 8.60%, strongly disagreed, and 11.40% were undecided. Failure to recognise, and respect, the ideas of employees can lead to low morale and non-performance.

#### **Goal Establishment (V22)**

Elicitation Item V22: *My performance appraisal is based on specified performance standards for my position.*

The respondents were requested to indicate whether their performance appraisals were based on specific performance standards for their positions. The majority of the respondents agreed (42.90%), and 5.70%, strongly agreed. This implies that most of them had set performance standards with their supervisors; this would enable them to have some idea of the performance expectations for their positions. Furthermore, it is easy for the supervisor and supervisee to conduct performance reviews and appraisals, when there are clearly-set performance standards. 31.40% of the respondents disagreed; 4.30% strongly disagreed; and, 15.70% were undecided. If performance reviews, or appraisals, are conducted without clear performance standards, this could nurture higher degrees of subjectivity, on the part of the supervisors, given the absence of any clear objectives to guide them in the performance reviews and appraisals.

#### **Goal Establishment (V23)**

Elicitation Item V23: *My performance is appraised according to previously established responsibilities, standards and goals.*

The respondents were asked to indicate whether their performances were appraised according to previously-established responsibilities, standards and goals. Figure 21 indicates that the majority of the respondents were appraised according to previously-established responsibilities, standards and goals. 57.10% of the respondents agreed; 8.60% strongly agreed; 14.30% were undecided; 18.60% disagreed; and, 1.40% strongly disagreed.

#### **Goal Establishment (V24)**

Elicitation Item V24: *Any plans or objectives for my job are established and mutually agreed upon by my appraiser and myself.*

The respondents were requested to indicate whether any plans or objectives for their jobs were established and mutually-agreed upon with their appraisers/supervisors. Figure 22 indicates that, for the majority of the respondents, any plans or objectives for their jobs were established by mutual agreement (with their supervisors): 51.40% of the respondents agreed; 10% strongly agreed; 24.30% were undecided; 11.40% disagreed; and, 2.90% strongly disagreed.

#### **Appraisal Follow-up (V25)**

Elicitation Item V25: *My formal appraisals are connected to informal meetings between my appraiser and me which take place throughout the entire year.*

The respondents were requested to indicate whether their formal appraisals were connected to informal meetings with their appraisers/supervisors, which took place throughout the entire year. 55.70% agreed, and 15.70%, strongly agreed, that this was the case. This is a clear indication that the majority of the supervisors monitored the performances of their team members on an on-going basis. Furthermore, this may help to change the mindset of employees, in terms of simply viewing performance appraisals as incentive-based (rather than developmental). Small numbers of the respondents (5.70%; 4.30%, respectively) disagreed and strongly disagreed on this item, while 18.60% were undecided. It is clear that some of the supervisors still do not conduct informal meetings, which could guide the employees, prior to their formal performance appraisals.

#### **Appraisal Follow-up (V26)**

Elicitation Item V26: *Discussions and review of my performance is a continuous process, not one which occurs only during my formal performance appraisal.*

The respondents were requested to indicate whether the discussions and review of their performance is a continuous process, not one which occurs only during their formal performance appraisals. 42.90% of the respondents agreed and 5.70% strongly agreed that the discussions and review of their performance is a continuous process, not one which occurs only during their formal performance appraisals. It is clear that the majority of supervisors within SASSA continuously discuss and review the performance of their team members and not only during the formal performance appraisals. However 25.70% of the respondents disagreed, 20% strongly disagreed and 5.70% were undecided that the discussions and review of their performance is a continuous process, not one which occurs only during their formal performance appraisals. It can be deduced that there are some of the supervisors who do not discuss and review the performance of their team members on a continuous process.

#### **Goal Discussion (V27)**

Elicitation Item V27: *Overall, Departmental goals are not discussed during my performance appraisal.*

The respondents were requested to indicate whether the overall Departmental goals were not discussed at their performance appraisals. Of the 70 respondents, who responded to this item, 17.10% agreed, and 18.60%, strongly agreed with the suggestion of the statement. However, 34.30% of them disagreed; 25.70%, strongly disagreed; and, 4.30% were undecided. It is clear from this analysis that some of the Key Result Areas of the respondents were not linked to their overall Departmental goals.

### **Goal Discussion (V28)**

Elicitation Item V28: *The goals of my Department were discussed during my performance appraisal.*

The respondents were requested to indicate whether the overall Departmental goals were discussed at their performance appraisals. Of the 70% respondents, who responded to this item, 20% agreed; 12.90, strongly agreed; and, 8.60% were undecided that their Departmental goals were discussed at their performance appraisals. However, 35.70% of the respondents disagreed, and 22.90%, strongly disagreed, that their Departmental goals were discussed at their performance appraisals.

## **CONCLUSIONS AND RECOMMENDATIONS**

Data were presented and analysed, and graphs were used to analyse quantitative data collected with the questionnaire. The questionnaire consisted of two sections; namely, section A – biographical data (i.e., age; gender; race; highest qualification; post-classification; post level; and, years of service). Section B consisted of the following categories of employee satisfaction items with the performance review and appraisal system (i.e., appraiser's knowledge; employee participation; employee development; goal establishment; appraisal follow-up; and, goal discussion).

The analysed data revealed different levels of employee satisfaction with the performance review and appraisal system at the SASSA. Though most of the responses were positive, there were a number of respondents, who had negative opinions about the performance review and appraisal system at the SASSA. The challenges faced by some of the employees, with the performance review and appraisal system, need to be taken seriously by the supervisors, and the leadership of the SASSA.

While the findings of this study cannot be generalised, since it was limited to the management of the SASSA, the following conclusions are arrived at:

#### ➤ **Appraiser's knowledge**

Most of the respondents indicated that their appraisers/supervisors were familiar with their work, and how are they were performing.

Perhaps, the most important aspect is for the appraisers/supervisors to be more involved, and interact effectively on a day-to-day basis, in the work of their team members. Conducting meetings and performance feedback will make employees realise that the work they do is important, and that their tasks are meaningful.

#### ➤ **Employee participation**

The findings show that a higher percentage of the respondents indicated that their appraisers/supervisors afforded them the opportunity to participate at their performance appraisals.

In order for employees to contribute positively to the strategic objectives of the SASSA, appraisers/supervisors should recognise their subordinates' views, and delegate challenging tasks to them for their own personal development.

#### ➤ **Employee development**

The findings show that half of the respondents indicated that they were being developed in their positions, whilst the other half disagreed.

Employees need to be developed in the positions they occupy, in order to perform effectively, and contribute positively, to the strategic objectives of the organisation. Supervisors and their team members need to identify, and agree on, personal development plans.

#### ➤ **Goal establishment**

The survey findings indicate that a high percentage of the respondents did establish their goals (with their appraisers) at their performance appraisals.

Employees need to set goals that are in line with their business plans and the strategic objectives of the organisation, since this can only contribute positively to the achievement of the organisation's set objectives.

#### ➤ **Appraisal follow-up**

The findings showed a high percentage of the respondents indicating that there are follow-ups on their performance appraisals.

Employee performances need to be monitored on a continuous basis, and frequent meetings need to be conducted between supervisors and their team members.

#### ➤ **Goal discussions**

The findings show that a high percentage of the respondents indicated that the goals of their departments were discussed with them. If supervisors discussed the goals of the organisation with their team members, this would enable them to realise the vision of the organisation, and the performance levels expected of them.

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# WHO HAS THE POWERFUL EFFECT ON AUDIT QUALITY? MEN OR WOMEN

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## ABSTRACT

*This research attempts to study the effects of gender differences on audit quality. To determine audit quality three criteria were considered, namely problem solving ability, audit risk and audit independency (Hardies & Breesch, 2010). Information required for the research were collected through questionnaire distributed amongst auditors employed within the Iranian Association of Certified Public Accountants. Results of the bi-sample t test indicated that although gender differences influence the relationship between audit quality and problem solving ability of the auditor, they have no effects what so ever on the relationship between audit quality and audit risk as well as on the relationship between audit quality and audit independence.*

## INTRODUCTION

Auditing is a process based on judgment, thus audit quality, which is the possibility of the auditor discovering and reporting a significant misstatement in the financial statements within a logical range, would depend on his/her judgment and decision making quality (Knechel, 2000). Decision making and judgment quality relate to the individual traits of the auditor, namely problem solving ability (Bierstaker & Wright, 2001), professional expertise (Tan & Kao, 1999), level of risk (Amerongen, 2007), experience (Early, 2002) and independence (Moore, 2006).

Audit quality as the determining factor in audit performance, is subject to various factors including: auditor abilities (including knowledge, experience, adaptability and technical efficiency), and professional performance (including independence, objectivity, professional care, conflict of interest and judgment) (Eslami Bidgoli & Zareyi, 2003). Thus it sees that individual traits of auditors could influence the quality of independent audits. As certain individual traits vary across genders, the gender of the auditor could influence the quality of the audit. Awareness of this influence allows managers and audit partners to arrange audit plans and work division among members of the audit team with greater efficiency.

Differences among men and women relate to two factors namely sex and gender. Gender is the social belief and definition of feminine and masculine issues that may change throughout time. Sex is the basis for a two dimensional categorization where in a person is determined as a woman or a man. However this categorization emphasizes the genetic factor and not the hormonal aspect of sex, since it could be proven that part of individual behaviors could be defined within hormonal differences between men and women. Gender is a coherent categorization of all conditions and behaviors that may be considered feminine or masculine and it is based on the same categorization that a person's behavior can be classified as more feminine or more masculine (Hardies & Breesch, 2010).

To better explain behavioral differences among men and women, studies on gender have to consider both the biological (natural) and environmental (nurture) differences. Biological differences among feminine and masculine behaviors could be rooted in the different roles that they play in life. The biological differences in men and women's brains play a part in displaying different behaviors as well. Although research suggests that the brain of men and women is generally alike, major differences between the two can be seen in the micro approach (same source).

Problem solving skills is a rational and organized process of thought that helps a person select from among various alternatives when faced with challenges. D'Zurilla (2001) considers problem solving as a cognitive-behavioral-emotional process where in the person attempts to discover or identify an effective method or solution. O'Donnell and Johnson (2001) have considered gender differences in problem solving from the work efficiency approach. They found that when performing a scheduled and complex job that requires analysis, the amount of time a female auditor spends has a significant difference with that of a male auditor and is much less. Whenever a problem is less complex, male auditors spend less time solving the problem as compared to female auditors, but the difference is not significant. Research literature shows that in Iran a positive and significant relationship exists between the tendency towards masculinity and problem solving abilities. Among women, a positive and significant relationship exists between the tendency towards femininity and the generation of solutions, the decision to execute and the emphasis on a particular solution (SalehiHeidarAbadi, 2011).

A number of researchers (Shubert, 1999) believe that the difference between male and female approaches to risk is prejudiced compared to reality. Others (Rozkowsky & Grable, 2005; Damodaran, 2008) claim that despite the effects of gender differences on risk acceptance, there is more evidence suggesting that women are not more risk averse than their male counterparts. Gender differences in risk acceptance may be due to the fact that men are more confronted with risky situations or are more inclined towards risk as compared to women (Boyer & Byrnes, 2009).

International Auditing Standards defines audit risk as the possibility that an auditor provides incorrect opinion about erroneous financial statements or those with a material error. The discovery of any misstatement or material error plays a significant role in auditing. According to evidence, the auditing profession depends a great deal on the ability of the auditors to discover any material misstatement or error (Elliott, 2002; Wilks & Zimbelman, 2004). Reporting a material error in the financial statements of the reporting entity does not depend on the gender of the auditor; however if men and women select different samples based on the differences between their level of risk acceptance, the probability of discovering and reporting a material error may become subject to the auditor's gender. Since female auditors are more risk averse, it is expected that they would have a lower tolerance level for materiality and would choose a larger sample as compared to male auditors. This could lead to the discovery and reporting of higher instances of material errors by female auditors as compared to their male counterparts. The issue to be considered here is whether and how much the cost-benefit criterion is violated by women. Moreover, even if data examined by both men and women is uniform, since female auditors are more risk averse, it should be noted whether or not they estimate the same type of information or material errors or not (Hardies & Breesch, 2010).

The issue of conflict of interests in accounting and auditing is one of significant value. Major financial inability and accounting fraud indicate a potential conflict of interests that result in the reduction of the effectiveness and reliability of financial statements and ultimately investors' trust. Accounting professional ethics in Iran requires accountants to be unbiased and not to allow for any prejudice, bias, conflict of interest or influence by third parties to violate their neutrality in providing professional services (Nikbakht and Mehrabani, 2006). Independent audits contribute to the usefulness of this process and the efficiency of capital markets through enhancing reliability and increasing the validity of the financial reporting process. Audit quality depends on numerous factors especially auditor independence. Consequently, a decrease in auditor independence would directly affect the audit process and the opinion issued by the auditor, which helps explain why professional associations focus so much on the issue of auditor independence (Sajjadi & Ebrahimimand, 2002).

Auditor independence is being threatened from two aspects, namely prejudice (including bad faith) and unconscious behavior. It should be noted that the independence of an auditor is not attained under all conditions (Moore, 2006). However, within the issue of gender differences, the uncertainty on whether or not a significant difference exists between male and female auditors as related to the employer seems quite irrelevant. As a matter of fact, if there is less chance of the incidence of bad faith behavior in women as compared to men, adequate evidence should exist to indicate that women are less tempted to give in to their desires and personal gains or that the possibility of women requesting bribes is less than men or that women have a more negative opinion toward fraud as compared to men (Mocan, 2008). O'Fallon & Butterfield (2005), conducted a research on decision making based on ethics and found that no significant difference is usually observed between men

and women, however if any difference is observed it may indicate that women have a higher ethical devotion than men.

The issue that has been emphasized upon more than the bad faith behavior is the unconscious absence of independence (Moore, 2006). Research findings indicate that an individual's beliefs and conceptual context directs his/her perception of events and that a person when evaluating new information tends to induce from his/her knowledge. Thus, when a person's conceptual background contains blunders and errors, his/her perceptions can also be affected by the same blunders and errors (Heatherton & Gazzaniga, 2003). According to evidence, these cognitive deviations exist among both men and women; but psychological reviews indicate that the possibility of men being affected by this deviation and displaying double binary behavior is higher than in women (Soutar & Sweeny, 2003). Considering that influence of gender differences in one's overconfidence has already been proven (Bengston, 2005; Beyer, 2006) over confidence can result in a contrast between one's certainty in his/her judgments and the integrity of the judgment. Since over confidence is less probable in women than their male counterparts, it is expected that female auditors have less tendency to report a material error within financial statements. The other issue that can subtly hurt an auditor's independence is the possibility of displaying uniformity and empathy in one's behavior. It is believed that long term relationships add to the feeling of empathy among business partners and this feeling can influence audit quality (Richard, 2006).

The objective of this research is to examine gender differences on the quality of independent audits. Thus efforts have been made to respond to the question of whether or not gender differences can affect the relationship between audit quality and problem solving abilities, risk and auditor independence.

## **HISTORY OF RESEARCH**

Hardies & Breesch (2010), performed an analytic research on gender differences impacting the quality of independent audits. Statistical findings in this research indicated that in the student population, men have better problem solving abilities, however the difference is not significant and on average, women are more risk averse than men. Concerning independence, even though research findings indicated that no significant difference exists between the two sexes, no evidence was found suggesting that women have more empathy with their employer. Results from the population of auditors indicated that female auditors are a little more risk averse than their male counterparts but no difference was observed in other individual traits of auditors based on gender differences. The results conform to those obtained by Beckmam & Menkhoff (2008) indicating that female budgeting managers are more risk averse.

Ittonen & Peni (2010) studied the effects of gender differences on audit fees. Findings indicated that companies with female auditor partners have higher audit fees. The results conform to the theory that gender differences lead to variances in risk acceptance and ultimately accuracy in decisions.

Niskanen & Karjalainen (2011) examined the issue of whether or not the gender of an auditor influences the decorative display of the profit reported by the company or not. Findings indicated a positive result and that in companies where auditing is made by a male auditor, the possibility that income reported has a decorative style is higher.

## **RESEARCH HYPOTHESES**

We have examined the influence of gender differences on audit quality, and the relationship between "Auditor Gender" as an independent variable and the "Quality of Independent Audit" as the dependent variable has been studied. Three factors namely, "Problem Solving Abilities of Auditors", "Risk Acceptance of Auditors" and "Auditor Independence" were considered as influential on audit quality and subsequently the impact of auditor gender on the relationship between these factors and audit quality was examined. For this purpose, three hypotheses were formulated as follows:

- 1- Gender differences influence the relationship between the auditor's problem solving ability and audit quality.
- 2- Gender differences influence the relationship between auditor risk and audit quality.
- 3- Gender differences influence the relationship between auditor independence and audit quality.

## METHOD OF RESEARCH & STATISTICAL POPULATION

The measurement tool utilized in this research was a questionnaire. The primary questionnaire was distributed among the auditors and using the SPSS statistical software, the Koronbach $\alpha$  was calculated as 0.804. Moreover, in order to evaluate the validity of measurement tools, the auditors were requested to examine measurement tools and to suggest any changes they deemed necessary. Responses that were collected, led to minor changes within certain items in order to increase the understandability of the questionnaire.

The statistical population includes auditors of the Iranian Association of Certified Public Accountants (IACPA). According to information received from the website of IACPA on the date of distribution the questionnaires (15 June 2011) the number of auditors employed within the association, totaled 523. Since it was impossible to collect information from every member of the population, random sampling was utilized. With the assumption of normality of the distribution, equality of the ratio of approval and non-approval of the research hypotheses (equal to 50%), a 95% certainty level ( $z = 1.96$ ) and 0.05 accuracy, the sample contained 221 auditors. 108 questionnaires were collected from the 221 distributed from which only 106 could be used. The minimum number of auditors within the sample should be 100 in descriptive contextual and field researches.

## STATISTICAL TESTS

For the purpose of analyzing information obtained, tests were performed for general traits of the subjects following the calculation of research variables (Tables 1 to 5). According to the results, gender, education and employment status of the subjects were not uniform. Research hypotheses were first examined at the general level and subsequently at the level of the subjects' education and employment status through the Two Sample t-test. Statistical hypotheses were formulated as follows:

$$H_0: \mu_1 = \mu_2$$

$$H_1: \mu_1 \neq \mu_2$$

**Table 1: Absolute and Relative Frequency Distribution of Respondents**

Categories		Frequency $F_i$		Relative Frequency Percentage $R_i$	
Female		41		38.7	
Male		65		61.3	
Total		106		100	
Average	Median	Exponent	Standard Deviation	Minimum	Maximum
1.613	2	2	0.489	1	2

Source: Research Findings

**Table 2: Absolute and Relative Frequency Distribution of Education Levels of Respondents**

Categories		Frequency $F_i$		Relative Frequency Percentage $R_i$	
Associate Degree		0		0	
Bachelor's Degree		43		40.6	
Master's Degree		63		59.4	
Ph.D.		0		0	
Total		106		100	
Average	Median	Exponent	Standard Deviation	Minimum	Maximum
2.594	3	3	0.493	2	3

**Table 3: Absolute and Relative Frequency Distribution of Employment Status of Respondents**

Categories	Frequency $F_i$	Relative Frequency Percentage $R_i$
Partner	0	0

Manager		32		30.2	
Supervisor		44		41.5	
Senior Auditor		25		23.6	
Auditor		5		4.7	
Total		106		100	
Average	Median	Exponent	Standard Deviation	Minimum	Maximum
3.028	3	3	0.856	5	2

Source: Research Findings

**Table 4: Absolute and Relative Frequency Distribution based on Gender of Respondents**

Gender	Categories	Frequency $F_i$	Relative Frequency Percentage $R_i$
Female	Associate Degree	0	0
	Bachelor's Degree	15	36.6
	Master's Degree	26	63.4
	Ph.D.	0	0
	Total	41	100
Male	Associate Degree	0	0
	Bachelor's Degree	28	43.1
	Master's Degree	37	56.9
	Ph.D.	0	0
	Total	65	100

**Table 5: Absolute and Relative Frequency Distribution based on Gender of Respondents**

Gender	Categories	Frequency $F_i$	Relative Frequency Percentage $R_i$
Female	Partner	0	0
	Manager	7	17.1
	Supervisor	18	43.9
	Senior Auditor	12	29.3
	Auditor	4	9.8
	Total	41	100
Male	Partner	0	0
	Manager	25	38.5
	Supervisor	26	40.0
	Senior Auditor	13	20.0
	Auditor	1	1.5
	Total	65	100.0

## ANALYSIS OF FINDINGS

### First Hypothesis:

Gender differences influence the relationship between the auditor's problem solving ability and

audit quality. The significant level (P-Value) for this hypothesis at the overall level, educational status (Bachelor's and Master's) and employment status (Manager, Supervisor, Senior Auditor and Auditor) is 0.026, 0.072, 0.165 0.399, 0.046, 0.172 and 0.662 respectively. The hypothesis was approved for the general level, educational (Bachelor's degree) and employmentstatus (supervisor) but not for the other levels. In other words, it could be claimed that at the general level, Bachelor's degree and supervisor status a significant difference exists between male and female auditors concerning problem solving abilities, meaning that in these levels, gender differences influence problem solving abilities and audit quality.

## **Second Hypothesis:**

Gender differences influence the relationship between auditor risk and audit quality. The significant level (P-Value) of this hypothesis, for the general level, education (Bachelor's and Master's) and Employment status (manager, Supervisor, Senior Auditor and Auditor) has been obtained as 0.846, 0.453, 0.707, 0.657, 0.767, 0.961, and 0.506 respectively. The hypothesis has not been approved for any level (General, employment and educational status). In other words, it could be claimed that no significant relationship exists between responses provided by male and female auditors and audit risk at any level, and that gender differences do not affect the relationship between audit risk and audit quality at any level.

## **Third Hypothesis:**

Gender differences influence the relationship between auditor independence and audit quality. The significant level (P-Value) in this hypothesis for the general level, education (Bachelor's and Master's) and Employment status (manager, Supervisor, Senior Auditor and Auditor) has been obtained as 0.702, 0.896, 0.861, 0.611, 0.547, 0.518, and 0.059 respectively. The hypothesis has not been approved for the general level, educational and employment status (Manager, Supervisor, and Senior Auditor); but approved for the employment status (Auditor) level. In other words, it could be claimed that a significant difference exists between responses provided by male and female auditors concerning independence only at the auditor level. This means that at the auditor level, gender differences impact independence and audit quality.

# **CONCLUSION**

Overall, findings from tests performed on the hypotheses indicate that gender differences between auditors' influences their problem solving abilities and the audit quality, but has no impact on the relationship between risk and audit quality ; auditor independence and audit quality. Even though findings of this research on the issue of the influence of gender differences on audit quality conform with results of researches performed by O'Donnell (2000); Beckman &Menkhoff (2008); Hardies &Breesch (2009 and 2010), and Judy & Joan (2010). But since gender differences do not affect auditor risk and its relationship with audit quality, it varies from researches performed by Beckman &Menkhoff (2008) and Hardies & Breesch (2009). The research has also faced limitations as follows:

- ✓ The researchers had no control over the respondents decision to respond to the questionnaire.
- ✓ Research findings were merely formed based on analysis of information obtained from responses collected.
- ✓ Only three factors were considered in selecting the criteria for audit quality namely, problem solving ability, auditor risk and independence (Hardies & Breesch, 2010), results may have varied in case other criteria were selected.

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# THE ROLE OF WARD COMMITTEES TOWARDS ENHANCING PUBLIC PARTICIPATION: THE CASE OF THE MPUMALANGA PROVINCE, SOUTH AFRICA

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## ABSTRACT

*The advent of democracy in 1994, and the first non-racial local government elections in 1995 in South Africa, brought about a new era of leadership and promoted certain basic values and principles at all spheres of government. Such values and principles include the notion of active democracy through public engagement in planning and managing domestic development processes. This is core to any modern public management system in a democratic state. However, after fifteen years of democracy, South Africa is still faced with the daunting task of fully experiencing meaningful public participation in government institutions. This process entails a transformation from an inactive (unacceptable) to an active and democratic (acceptable) way of governance. Section 152(1) (e) of the **Constitution of the Republic of South Africa, 1996** mandates municipalities “to encourage the involvement of communities and community organizations in the matters of local government”. Thus, the notion of participation becomes a key cornerstone of good governance and constitutes an integral component in the policy making process. Within this context, public participation at the Local Government sphere is considered by some to be a primary value for democracy. It is the authors’ perspective that Local Government in South Africa is bestowed with the responsibility of driving the process of building participation in democracy at local level and that the ward committee system may be a mechanism to increase community participation. It is argued that voting alone does not constitute meaningful citizen participation and this paper forms part of a greater on-going research endeavour set to investigate the system-imposed structures designed to promote the ideal of participatory democracy. The case example of ward committees in the Mpumalanga Province of South Africa is presented where an assessment is made of the role of ward committees in relation to the enhancement of citizen participation whilst acknowledging other important stakeholders such as Community Development Workers (CDWs), ward councillors, Non-governmental Organizations (NGOs), and the Business Community. Finally, some postulates are presented en route to stimulating debate in this regard.*

## INTRODUCTION

Since South Africa is young in exercising democracy, it should be expected that citizens should be given opportunities to participate in local government issues. However, participation is often confined to the elections process only. In fact, experiences elsewhere on the continent seem to suggest that there is often commitment to citizen participation in theory only and, that important aspect of the governance process is often ignored in practice. If one of the ideals of democracy is maximum participation, then why should citizens still feel not been involved in the governance of local municipalities?

The introduction of a new system of local government in the year 2000, have seen a creation of Ward Committees as a vehicle to give practical meaning and subsistence to the basic political commitment as appears in the Freedom Charter stating that ‘the people shall govern’ (ANC, 1958). In fact, local government structures are conceptualized and placed at the cutting edge of addressing basic national challenges such as underdevelopment, unemployment, stagnation and poverty. According to the former Minister of the then Department of Provincial and Local Government (2005), Ward Committees are representative structures of the

community and citizens, and they need to inform the municipality about the aspirations, potentials, and problems of the people. He further argued that Ward Committees should form a bridge by facilitating proper communication between municipal councils and citizens they represent.

Furthermore, in 2003, government introduced the Community Development Workers (CDWs) system administered at the provincial sphere, but operating in municipalities according to the geographic demarcation of their wards. CDWs are appointed public servants governed by the Public Service Act (Act 103 of 1994) (Department of Public Service and Administration, 2007). According to the former Minister of Public Service and Administration (2007), CDWs are a fundamental building block of the public service registering an important step forward in South Africa's developmental agenda. Thus, it can be argued that CDWs are formed to bridge the gap between government and citizens in great need of services provided by it. It is a complimentary structure to existing structures in municipalities with different, and to a certain extent, some overlapping responsibilities. The researchers are of the opinion that both CDWs (of which is not forming part of this paper) and Ward Committees were formed to bring and enforce democracy to people where they live.

The above structures seem to be experiencing challenges in executing its legislative obligations in the sense that the year 2009 has been plagued with service delivery protests nationally, and the Mpumalanga Province was leading. The municipalities that experienced the most violent protests in the province are Thaba Chweu, Albert Luthuli, Emalahleni, Emkhondo, Pixley ka Seme, Govan Mbeki, Steve Tshwete and Msukaligwa <http://www.info.gov.za/speeches/2009/09072411551001.htm> 22/02/2010. In terms of the ministerial report on service delivery protest in Mpumalanga Province (2009), the following issues became the findings that perpetuated the protests:

- Lack of responsiveness to issues raised by communities,
- Tensions between the political and administrative sections of municipalities,
- Ward committees that are not fully functional, resulting in poor communication with communities,
- Financial mismanagement and allegations of fraud and corruption,
- Poor planning, maintenance and management of infrastructure resulting in poor service delivery, and
- Integrated Development Plan (IDP) and budgeting processes not aligned in some municipalities.

The above serves to illustrate some of the challenges that government experiences while structures to enforce citizen participation have been formed. The researchers are of the opinion that establishing and adding new governing structures to what it is now, are and will not be a solution to the problems of the society. Additionally, creating new structures with different reporting channels and unclear terms of references have potential of conflict to emerge. Furthermore, the researchers argue that greater citizen participation is likely to increase the overall satisfaction of communities with municipalities because of the increase in public understanding of the problems faced by the local officials and councilors in their attempts to deliver qualitative services.

## LOCATION OF THE MPUMALANGA PROVINCE

The Province of Mpumalanga is one of the nine post-1994 provinces in the Republic of South Africa. The Mpumalanga Province is a culmination of mainly the former KwaNdebele, KaNgwane, parts of the former Lebowa and Gazankulu homelands in the Bushbuckridge Local Municipality areas (Municipal Demarcation Act, Act 27 of 1998).

In terms of the above mentioned Act, the Mpumalanga Province is divided into three distinct districts, known as:

### **Nkangala District**

This District of Mpumalanga comprises mainly of the former homeland of KwaNdebele, former Witbank now known as Emalahleni, some north eastern parts formerly attached to the Province today known as Gauteng, Middleburg and the respective surrounding farmlands areas.

### **Gert Sibande District**

Gert Sibande is in Mpumalanga Province comprising of areas previously under the northern eastern KwaZulu-Natal homeland, the main power/energy supply industry areas of the pre-1994 Eastern Transvaal Province and their adjacent enormous streaks of farmlands.

### **Ehlanzeni District**

The Ehlanzeni District of Mpumalanga Province comprises among others, mainly of former KaNgwane homeland areas, also former Lebowa and Gazankulu homelands. Ehlanzeni is the biggest district in terms of the population in the province but it constituted by only five of the eighteen municipalities in the province, namely; Nkomazi, Umjindi, Thaba Chweu, Bushbuckridge and Mbombela, the capital city of the province. (Municipal Demarcation Act, Act 27, 1998).

The above identified local municipalities where the study forms base, is dominated by Gert Sibande District with five local municipalities, followed by Nkangala District with two local municipalities, and Ehlanzeni District has one local municipality.

The province had a population of 3 476,593 according to the 2001 census (Statistics South Africa). The current population is estimated to be approximately 4 600,000 in 1 165,000 households, (Statistics South Africa, 2001). Please see the attached annexure on the location of the Mpumalanga Province.

## **REGULATORY FRAMEWORK**

For the purpose of this study, it is necessary that the following documents, which enhance citizen participation are briefly discussed in order to clarify the fact that the environment has been made conducive by government for citizens to fully participate in government matters. According to Van der Walddt (2007: 40) in Mzimakwe (2010: 510) legislation can be regarded as a collection of rules devised and enforced by a government that has authority over the public. It ensures that government bodies adhere to the spirit and stipulations of a particular regulatory framework in the design and execution of policy programmes. It is therefore understandable that there would be enabling legislation which makes provision for the extension of citizen participation in the governance of local municipalities.

### **(i) The Constitution of the Republic of South Africa, 1996**

Nzimakwe and Reddy (2008: 668) points out that the concept of community participation derives from section 152(1) (e) of the Constitution (1996), which mandates municipalities to encourage the involvement of communities and community organisations in local government matters. In terms of the Constitution (1996), public institutions have a mandate to ensure that all citizens receive the services they require satisfying their basic needs. Municipalities throughout the country are encouraged to involve the public and community institutions in the affairs of local governance.

### **(ii) The White Paper of Transforming Service Delivery, 1997**

The White Paper on Transforming Service Delivery (1997) considers the citizens as customers who must be given priority in terms of the *Batho Pele* (People First) principles. Section 1.3.3 stipulates the enhancement of public participation. This implies listening to their views and taking account of them in making decisions about what services should be provided, treating them with consideration and respect, and making sure that the promised level and quality of service is always of the highest standard (Holtzhausen in Fox and Van Rooyen, 2004: 114).

### **(iii) White Paper on Local Government, 1998**

The White Paper on Local Government (1998) provides a new vision of a developmental local government system. It suggest ways in which municipalities across the country can engage the public and community institutions in the affairs of the municipality in their capacities as voters, citizens affected by municipal policies, consumers and end-users of municipal services, and partners in mobilising resources for the development of a municipal area.

### **(iv) Local Government: Municipal Structures Act (Act 117 of 1998)**

The Local Government: Municipal Structures Act of 1998 (Act 117 of 1998) provides for the establishment, functions and powers of ward committees in the South African local governance system (Chapter 4, Part 4 of the Act). A ward committee consists of a councillor who will act as the chairperson and includes not more than ten other persons from the ward concerned. The ward committee offers ordinary citizens who may not be interested in campaigning or being fully involved in municipal matters an opportunity to contribute to their communities by way of representation on ward committees. The ward participatory system of municipal government allows for the establishment of ward committees to facilitate citizen participation in the matters of local governance (Mzimakwe, 2010: 511). A detailed exposition on ward committees will follow after this section on legislation framework.

## **(v) Local Government: Municipal Systems Act (Act 32 of 2000)**

The Local Government: Municipal Systems Act of 2000 (Act 32 of 2000) requires municipalities in South Africa to develop a culture of municipal government that complements formal representative government. Section 16 states that the South African Local Municipalities must be encouraged to participate on the affairs of the municipality. Public participation takes place through political structures, public meetings, consultative sessions, report back sessions with the local community and through mechanisms such as *izimbizo* (informal gatherings with councillors where questions can be asked on any issue related to municipal matters (Craythorne in Mzimakwe, 2010: 511).

## **RESEARCH DESIGN AND METHODOLOGY**

The research design used on this paper was in accordance with the qualitative approach. Garbers (1996: 283) state that the objective of qualitative research is to promote better self-understanding and increase insight into the human condition. He further argues that in qualitative research the emphasis is on improved understanding of human behavior and experience and researchers try to understand the ways in which different individuals make sense of their lives and describe those meanings. In qualitative research, empirical observation is important as researchers need to study real cases of human behavior if they are to be in a position to reflect on human condition meaningfully and with clarity. The fact that this paper was conducted within a social sciences context or setting, the selected methodology was appropriate for probing in depth the complexities and processes involved and explored the operations of ward committees in Mpumalanga Province through observation and interviews. The qualitative research method applied in this paper was appropriate as it enabled the researcher to interact closely with the subjects in their natural settings.

## **WARD COMMITTEES**

The Education and Training Unit and the Black Sash (2005: 80) argue that ward committee model is being used in category A and B municipalities. For the purpose of this study, the different categories of Local Government are not discussed fully since they do not form part of the core problem statement of the research. However, it is suffice to mention that Chapter 7 of the South African Constitution (1996) creates a framework for local government. The different categories are dealt with in terms of the Local Government: Structures Act (Act 117 of 1998). Ward committees are mainly advisory committees which can make recommendations on any matters affecting the ward. The municipal council make the rules that guide the ward committees. The rule say how the members of the ward committee will be appointed, how often ward committee meetings will take place and the circumstances under which a member of a ward committee can be told to leave the committee. Furthermore, the Education and Training Unit and the Black Sash (2005: 80) present the purpose of ward committee as follows:

- To get better participation from the community to inform council decisions,
- To make sure that there is more effective communication between the council and the community; and
- Assist the ward councillor with consultation and report-back to the community.

Reddy and Sikhakane (2008: 681) argue that ward committees are seen as development partners working in close collaboration with the government. They are also viewed as a two way communication channel for both government and local communities on matters pertaining to local governance and delivery of basic services (Ababio in Reddy and Sikhakane, 2008: 681). The Local Government: Municipal Structures Act (act 117 of

1998) provides the role of ward councillor, and the framework for the powers, functions, terms of office, remuneration and dissolution of the committee. It is an advisory body which is independent and supposedly impartial in the performance of its functions (Reddy and Sikhakane, 2008: 681).

## **PERSPECTIVE ON WARD COMMITTEES**

Local Government in South Africa is bestowed with the responsibility of driving the process of building participation in democracy at local level and ward committees are a mechanism to increase citizen participation. The Education and Training Unit (2005: 23) solicit the argument that ward committees are an important link between government and the community. The South African approach to democracy is guided by the core values encapsulated in the Rural Development Programme (RDP) – democracy should be people-centred and development should be people driven. Ward committees are an important vehicle to mobilise, educate and empower people to become involved in addressing their needs and problems. Powerlessness can only be addressed when people have a say in the decisions that affect their lives and when they become active participants in development.

In practice, ward councillors are the elected representatives closest to the people and it is at this level that democracy and participation should be most vibrant and visible. Ward committees are used to help achieve the South African vision of people's participation. They advise the ward councillor and assist him/her with staying in touch with the community. Furthermore, ward committees should do research to understand the needs of residents, assist with consulting residents on key choices around development, budgets and service delivery and communicate municipal information residents need to access services (The Education and Training Unit, 2005: 23).

It is the researcher's opinion that ward committees should not be a substitute for other forms of consultation and accountability. It should be a mechanism that will assist the ward councillor to become a better representative of the people in the area, to do broader consultation and to become more accountable to the people. The ward councillor should remain accountable to the people who elected him/her and to a particular party, if they stood as a party candidate. The ward committee should never be the sole place where consultation takes place.

## **COMPOSITION OF WARD COMMITTEES**

A ward committee comprises of the councillor (as chairperson) who represents the ward as elected in the local government elections, and a maximum of ten people from the ward who are elected by the community they serve. The ten persons should be representing the diversity of interest reflected in the ward ranging from women, youth, religious groups, sports and welfare, environment, education, community-based organisations, rate payers associations, traditional leaders, the disabled, informal traders' association, employment agricultural associations to community safety forums (Reddy and Sikhakane, 2008: 681).

## **POWERS AND FUNCTIONS OF WARD COMMITTEES**

The main function of ward committees is to assist democratically elected ward councillor to effectively carry out their mandate to represent the people of the ward. The Local Government: Municipal Structures Act (Act 117 of 1998) states that the objective of a ward committee is to enhance participatory democracy in Local Government. According to a handbook for ward committees by the then Department of Provincial and Local Government in 2005, the ward committees have to perform the following functions:

- Increase the participation of local residents in municipal decisions making, as they are the direct and unique link with council;
- Are representative of the local ward, and are not politically aligned;
- Should be involved in matters such as the Integrated Development Planning (IDP) process, municipal performance management, the annual budget, council projects and other key activities and programmes as all these things impact on local people;
- Identify and initiate projects to improve the lives of people in the ward;

- Support the councillor in dispute resolutions, providing information about municipal operations;
- Monitor the performance of the municipality and raise issues of concern to the local ward; and
- Help with community awareness campaigns, for example, waste water and sewage, payment of fees and charges, as members know their local communities and their needs.

The Education and Training Unit (2005) in emphasising the above functions of ward committees put forward its arguments that ward committees should advise on and assist the councillor with:

- Doing research to understand the conditions, problems and needs of residents in the ward;
- Outreach work to sectors and general consultation meetings to consult and inform residents on municipal issues like IDP, budget priorities and service delivery options;
- Spreading relevant information to residents that will help them access municipal services; and
- Interacting with other forums like community police or development forums, playing resource and advice role for residents with problems, and co-ordinating ward programmes of council – for example HIV/AIDS.

Naidoo in Reddy and Sikhakane (2008: 682) argues that ward committees should play an important role in:

- Monitoring the progress of projects planned and implemented, as it inculcates a sense of ownership of projects and solidarity with the efforts of the municipality; and
- Providing feedback to council through minutes, setting key performance areas (KPA's) and key performance indicators (KPI's), and measuring efficiency and effectiveness of municipal service delivery.

The above functions serve to illustrate the fact that the ward committee system is a representative and consultative structure that should play a vital role in improving service delivery given the important link between the local community and the council.

## CHALLENGES FACING MUNICIPAL WARD COMMITTEES

Malefane (2007: 1) argues that the municipal ward system, from which many policy makers and practitioners had hoped for positive results, is failing. The reasons for the failure of the system have been linked to constricted, superficial and its under-representative composition of the municipal ward system, which makes it incapable of attracting broader inputs from other sectors of the environment. He further argues that the municipal ward system is inconsistent with the objective of democratic principles since it is often manipulated to focus on vested interest of municipal councillors. Furthermore, the operation of the municipal ward system is biased because of existing confusion between participation and the process of providing feedback. Even though initiatives for participation are said to be carried out, they are in the form of providing feedback about the development projects rather than initiative seeking and role playing from the part of local players, especially local communities (Malefane, 2008: 711). The phenomenon limits the amount of input from local players, and often limits local players to spectators in the development process. Moreover, these initiatives are often concluded with local committees, and exclude the major role players such as local business.

Tshishonga and Mafema (2010: 779) have summarised the challenges as:

- Lack of synergistic action plan taking to policies,
- Policies exist, but it's business as usual,
- Conservative and unchanged mindsets, and
- Dependency syndrome is still prevalent.

Based on the above identified challenges, the researcher may argue that the Mpumalanga provincial municipalities have no exception on these practices, hence the researcher developed interest in conducting the study. It is clear that structures can be formed with intent to fast track service delivery and be stipulated on its terms of reference that the structure is apolitical, in contrary, practice dictate the opposite.

## FINDINGS

For the purpose of this paper, the following section provide a summary of the research findings without a detailed discussion however, they cover matters relating to governance, financial management, and service delivery and infrastructure.

## **Governance**

- In most of the identified municipalities the relationship between the Mayor, Speaker, the Chief Whip and the Municipal Manager is strained;
- In municipalities where Municipal Managers hold positions in the political office as senior politicians, this resulted in the tilting of lines of accountability, for example, in Delmas, Dr JS Moroka, Nkangala, Emalahleni, Mkhondo, Nkomazi, Mbombela and Albert Luthuli municipalities;
- There is external political interference that seeks to undermine the decisions of council's, for example, the suspension of the eMalahleni and Mbombela Municipal Managers in 2009, and the these councils were forced to rescind the decision;
- Ineffective public participation and communication, through ward committees and CDWs;
- Lack and poor implementation of Performance Management Systems;
- The lack of monitoring systems for implementation of council resolutions has impacted negatively on good governance and the relationship between the councils and communities;
- Organizational structures are not aligned to key performance areas in municipalities;
- There is abuse of powers and functions by some political office bearers, that is, councilors and council officials;
- In some these municipalities, there is a lack of resources to support the functioning of ward committees; and
- High vacancy rate in these municipalities.

## **Financial Management**

- The Supply Chain Management regulations and policies are not adhered to;
- Limited revenue base, non-implementation of revenue enhancement initiatives contributes towards poor financial viability resulting in grant reliance;
- Lack of financial management capacity and capabilities in most municipalities due to the low grading which results in appointment of consultants
- Municipalities are facing challenges with the implementation of the Municipal Property Rates Act;
- Government departments and businesses are owing municipalities;
- Some municipalities are experiencing cash flow problems, to the extent that payment of major creditors like Eskom are not honored or paid timeously; and
- Municipalities do not attend to the Auditor General's recommendations on the management letters.

## **Service Delivery and Infrastructure**

- Insufficient funds to eradicate infrastructure backlogs;
- Incomplete infrastructure projects, for example, houses, roads, electricity and water;
- The quality of drinking water is poor due to contamination amongst other mining activities as well as VIP toilets;
- Poor workmanship and material utilized by the contractors affects sustainability of qualitative services;
- Fast growing informal settlements which are caused by the booming mining industry put pressure on the municipalities to provide more services with scarce resources;
- The aging infrastructure leads to constant interruption of the delivery of services;
- The non-maintenance of access roads in these municipalities is impacting negatively in the provision of other services;
- Development projects are implemented without considering the Integrated Development Plan priorities by sector departments. Districts municipalities implement projects without consultation with local municipalities; and

- Poor Spatial Planning and population growth result in overload of basic services, for example, water, electricity, etc.

## CONCLUSION

The preceding discourse highlighted the complexities associated with public participation in a relatively newly democratized society, and the role that ward committees may play therein. It may be stated that evidence seems to suggest that the ward committee system, at least for the most part in the areas under scrutiny, is under pressure. Three main areas of concern impact on the actual effectiveness and efficiency of this system, being governance, financial management and service delivery and associated infrastructure. These research findings may suggest that well-considered interventions are needed to improve the functioning of the municipalities under investigation. This research paper serves to merely reflect *initial* findings in an ongoing research undertaking currently underway toward the completion of a PhD.

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# LEARNING MANAGEMENT SYSTEMS' QUALITY ON E-LEARNERS SATISFACTION: LEARNERS' PERSPECTIVE

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## ABSTRACT

*With the advent of information and technology and the Internet, institutions of higher learning have adopted the use of learning management systems (LMSs) to enhance their day to day operations of learning and teaching. But the significance of these tools may not be realized if they are not fully utilized. This paper attempts to gain some insight into learner's satisfaction in explaining LMS's effectiveness. Early research by Usoro and Abid (2008) conceptualized factors that are components of quality of LMSs in higher education. Taking note of these factors, this research aims to see how they support a wide range of pedagogical principles, such as individualized learning, just-in-time remediation, learner-centered education, and active learning.*

## INTRODUCTION

New developments in information and communication technologies (ICTs) have brought about increasing interest to both academic and non-academic institutions in e-learning support (Usoro & Abiagam, 2009). Different institutions of higher learning in South Africa have adopted the use of LMSs to enhance learning. These learning management systems come in different forms and different categories addressing different needs and in the process giving universities a wide range of tools to choose from. Learning benefits of such systems are still not fully realized as both learners and instructors do not utilize them. Both learners and instructors need a system that addresses their needs. It is therefore important to note that LMSs can meet users' satisfactions if instructors make use of them in their day to day operations by giving classes, distributing assignments and displaying results.

Certain factors that could determine the acceptance of LMSs and their ease of use by new enrolled learners should be considered. These include background disparity amongst learners with regard to end user computing or internet skills they have. Some learners are competent Internet users, as they can search the Internet, send e-mails, chat and socially communicate online whereas others are first time users with no background on the use of such systems. Other factors might be that some learners have limited knowledge of technological infrastructures present in their learning environment. As a result, they may not take full advantage of the benefits of these learning facilities. As noted by Hall (2002), many LMSs are designed to meet the needs of the universities hoping that all learners are from the same background. Durey (2005) also noted that many electronic systems are developed in the context of developed countries, hence a need to reconfigure them to fit the developing countries' context.

A LMS is a set of software tools designed to manage user learning interventions including online, virtual classroom and instructor led courses (Mahajan & Chakravarty, 2008). As described by (Ellis, 2009) an LMS should be able to do the following:-

- a) centralize and automate administration
- b) use self-service and self-guided services
- c) assemble and deliver learning content rapidly
- d) consolidate training initiatives on a scalable web-based platform

- e) support portability and standards and
- f) personalize content and enable knowledge reuse.

Instructors and learners use the above mentioned points by (Ellis, 2009) in one or many ways to enhance learning. But it should also be noted that no matter what a learning management system does, it is not regarded as of high quality if it does not meet users' needs and satisfactions.

## **LMS Quality**

Learning management system's quality is a complex phenomenon that needs to be defined in context. Different researchers defined it from different perspectives. Pirsig *et al.* (1974), examines quality from a philosophical point of view where it is described as excellence, something hard to define but easy to recognize. Gamin (1984) defines it as neither mind nor matter, but a third entity independent of the two, even though quality cannot be defined one knows what it is. This research views the above two definitions as vague and not in the context of a LMS hence views quality in the context of LMS as a factor that has the potential to increase user satisfaction. As Lyman (1998) put it, it is regarded as a key factor in academic achievement and satisfaction levels. Holistically, it is considered as one of those factors that influence system adoption and ultimately systems full utilization such as technical factors, socio-technical factors and economic factors.

Later, cognitive and behavioral components were added to Lyman's definition. The cognitive aspect represents learners' belief about their studies. This means a learner may believe that his or her studies is made easy, interesting or otherwise, while the behavioral component represents a learner's behavioral tendencies toward his or her studies (Rethinam & Ismail, 2008). Related but slightly different is the value-based approach that defines quality as it relates to utility of the good or product in question. According to Edwards (1968), user satisfaction sometimes serves as a general measure of quality. Another researcher Leffler (1982) asserts that a user-based approach to quality is subjective while a product-based approach to quality is objective. However this research has adopted Edwards (1968) view point and it is from this view point that this research focuses in determining its influence on learner's studies and satisfaction.

## **Theoretical Background**

E-Learning has become one of the most significant developments in the information systems (IS) industry (Jong & Wang, 2004). This is because it provides many advantages such as cost reduction, simplified training, flexibility and convenience in terms of information dissemination. As Ozkan *et al.* (2009) put it - the role of e-learning and ICTs in education continues to expand in scope and complexity. Moreover, the increasing usage of Internet motivates many researchers to improve Internet technologies as well as web-based applications. However, the development of e-learning systems is quite a challenging issue for institutions of higher learning in South Africa. They face numerous difficulties in both theoretical and methodological concepts.

Different theories have been used to explain the student's preferences when using e-learning tools. This research adopts constructs from the Universal Theory of Acceptance and Use of Technology (UTAUT) by Vakantesh (2000), to come up with quality constructs and these include relevance of teaching modules, student involvement tools and content development which are facilitating conditions.

### **System quality**

System quality is measured in terms of ease-of-use, functionality, reliability, flexibility, data quality, portability, integration, and importance (Delone & Mclean, 2003). Delone and Mclean (2003) point out that different researchers like Emery (1988), have come up with different ways to measure system quality. Emery (1988), suggested measuring system quality by characteristics such as content of the database, aggregation of details, human factors, response time and system accuracy. While Hamilton and Chervany (1981), proposed data currency, response time, turnaround time, data accuracy, reliability, completeness, system flexibility and ease of use to measure quality.

### **Advancement of teaching modules**

According to Stewart and Wilkerson (1999), Advancement of teaching modules is the degree at which learners find what the instructor has posted on an LMS useful in carrying out certain tasks, the goal of which it is to provide resources to instructors that will allow them to transform their classrooms into active, student-centered learning environments.

### Student Involvement Tools

Student engagement occurs when students make a psychological investment in learning (Newmann, 1992). He points out that they try hard to learn what school offers on which they take pride in, not simply in earning the formal indicators of success grades, but in understanding the material and incorporating or internalizing it in their lives. There are a number of student involvement tools. These include but not limited to: Gmail – which offers email to staff and students, search tools to help them find information fast, and instant messaging built right into the browser. There is also Google talk to call or send instant messages, Google calendar where everyone can organize their schedules and share events, meetings and entire calendars with others and Google docs where they can create documents (Google Apps Education Edition).

### Content development

Content development encompasses authoring, maintaining, and storing the learning content. This is where the issues of authoring-tool compatibility, version control, and re-usable learning objects are considered (Ellis 2009). LMS should be able to certify the user and accessing courses should be as easy.

Sections (3.1 – 3.4) funnel this research’s hypothesis as follows, followed by a deduced model (*cf.* figure 1): [H= Hypothesis]

H1 – Improved quality factors influence e-learner’s satisfaction.

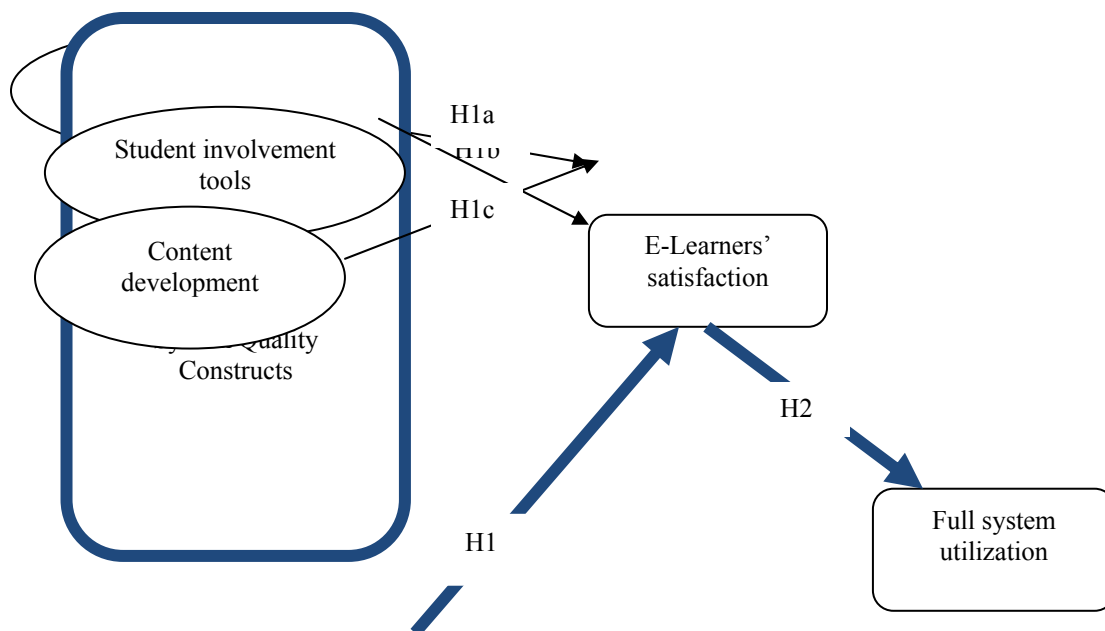
H1a – Improved relevancy of teaching modules influence e-learner’s satisfaction.

H1b – Student involvement tools influence e-learner’s satisfaction.

H1c – Content development influence e-learner’s satisfaction.

H2 – e-Learners satisfaction influence system’s full utilization.

**Figure 1: Research model**



### Data Collection

Quantitative research approach was employed in data collection. Overall 700 questionnaires were distributed and out of these 620 were returned showing a response rate of 88.8%. Out of the 620 returned questionnaires, 556 (79.4%) were usable while 144 (20%) had missing data, which led them to be discarded. A pre-test was conducted to validate the instrument with one class. It was agreed from the feedback to change the layout of the questionnaire since most students had preferred to start with strongly agree rather than starting with strongly disagree. Hence, changes were made as deemed appropriate. The collected data was analyzed using SPSS 18.0 and AMOS 18.0 was used for SEM.

## Data Analysis And Implications

The descriptive analysis of the data details shows how respondents/learners answered the questions in regard to their feelings relating to the questionnaire. Table 1 shows the results obtained from the descriptive analysis. The results of table 1 indicate that respondents were varying between neutral and agree. This implies that to some extent, learners agree that LMS used at TUT contains the relevant modules, tools they can interact with and content that can be developed at any time. However, it is important to note that the overall mean for the quality construct of 3.23 indicate that much as students do not disagree with the quality of LMS, they are not certain that they perform to their expectations and does not address their needs hence they are not interested in using the learning management system.

**Table 1: Descriptive statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
QC1	532	1	5	3.09	.940
QC2	535	1	5	3.32	.983
QC3	536	1	5	3.30	.934
QC4	535	1	5	3.30	.932
QC5	534	1	5	3.14	1.106

Quality constructs also showed an average significance value of  $p=0.045$ , this implies that the more the learner has system tools to enhance learning, the relevance of teaching modules, the quality of the system and the easier to develop content, the more it positively contributes to learners performance, hence important for their studies.

## CONCLUSION

All participants agreed that the efficiency of the current LMS is acceptable to most learners and instructors. However, the responsiveness and user friendliness of the system is still a big problem. As also indicated earlier different students come from different backgrounds hence they will have different needs. Therefore, the LMS's interface should also be flexible to different student groups. This is important as researchers (t Petrides, 2004; Kalema *et. al*, 2011) noted, institutions of higher learning spend huge sums of money on IT budgets. Therefore if an institution is to benefit from these investments there must be full utilization of the systems such that its benefits are fully recognized. This implies that, better recommendations of what LMS to acquire may be obtained from a contextualized model.

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# THE EXCHANGE RATE RISK IN THE JOHANNESBURG STOCK MARKET: AN APPLICATION OF THE ARBITRAGE PRICING MODEL

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## ABSTRACT

*The volatility of exchange rates has caused much concern among policy makers in government, the business community, financial institutions and financial markets as it contributes to international risks. Investors are also concerned about the impact of the exchange rates' movements on both the cash flow of companies' operations and the discount rate employed to value these cash flows. This paper inspects the pricing of exchange rate risk in the South African stock market, using a two-factor arbitrage pricing model. After examining the Johannesburg Stock exchange All Share Index Top40 (ALSI Top40) companies, the conclusion is reached that these companies tend to be negatively exposed to the exchange rate risk. The unconditional premium attached to the foreign exchange rate exposure is found to be 2.2% per month and is both economically and statistically significant. The exchange rate does not appear to be diversifiable (systematic risk) and active hedging policies by financial managers can affect the cost of capital. Investors should, therefore, earn a premium by being exposed to the foreign exchange rate risk.*

## INTRODUCTION

One of the concerns for investors is the issue of foreign exchange rate risk exposure, that is, exchange rate movements that affect both the cash flow of a firm's operations and the discount rate employed to value these cash flows. These foreign exchange rate risks are a result of currencies' movements and these movements have increased because many countries have shifted their policies toward independently floating exchange rates. The contribution of foreign exchange risk to international risk needs to be identified in order to decide whether these risks can be diversified. If foreign exchange rate risks cannot be diversified, investors would be willing to pay a premium on the assets that are exposed to currency risks. The foreign exchange rate is, therefore, recognised as one of the most important dimensions of foreign investment and international asset pricing. Thus, asset pricing can be used to incorporate the exchange rate risk premium that compensates for the exchange rate risk exposure.

Given the increasing openness of the South African economy, South African firms can be considerably affected by the fluctuation in the value of the rand (South African currency) compared to other currencies. The end of sanctions in 1994 and the abolition of the dual exchange rate in March 1995, have led to the increased foreign investment portfolio in the Johannesburg Stock Exchange (JSE) because of the increase in the trade between domestic and foreign companies (Jefferis and Okeahalam, 2000). Hence, the exposure of the South African stock market to exchange risk has increased because of the increase in the foreign capital flow and internationalisation of South African firms. Barr *et al.* (2007) indicate that the exchange rate volatility has pulled the JSE All Share Index and Top40 in different directions (both negative and positive) because the exchange rate has a more immediate impact on certain stocks and delayed or non-immediate impact on other stocks. If this aggregate effect of the exchange rate volatility on the JSE is not balanced and cannot be eliminated through diversification, it then becomes a systematic risk. The empirical evidence has produced mixed results on these issues and most studies have relied on U.S., European and Australian data. Since the South African economy may differ from the economies of these countries and the exchange rate exposure of the JSE companies has

increased from 1994, there is a need to identify whether the exchange rate risk is priced in the Johannesburg Stock Exchange or not. Hence, the objective of this paper is to make use of the APT to investigate the foreign currency exposure of the JSE Top40 companies and the pricing of exchange rate risk in the South African stock market together with the level of risk premium attached to this foreign currency exposure.

## LITERATURE REVIEW

### Empirical Evidence on the Exchange Rate Exposure

The overall conclusion from different studies on the exchange rate exposure indicates that stocks respond negatively or positively to a change in the exchange rate. These studies also distinguish the stocks or industries that respond positively to the exchange rate exposure from those that respond negatively. Adler and Dumas (1984) generated a definition for the exchange rate exposure in the case of Australian shares and illustrated that even domestic firms with no direct dealings in foreign exchange market can be exposed to an exchange rate risk through the exposures of their clients. Loudon (1993) concluded that listed Australian resource companies benefited from the exchange rate depreciation, while industrials benefited from the exchange rate appreciation. Moreover, the study of Di Lorio and Faff (2001) on the stability of exchange rate exposure in the Australian market concluded that there was evidence of exposure changing over time periods. Miller and Verschoor (2006) studied the exposure of the European multinational firms to the foreign currencies and concluded that a depreciation (or appreciation) euro against foreign currencies has a net negative (or positive) impact on European stock returns in the long term. Adjasi, Harvey and Agyapong, (2008) found that the exchange rate volatility had a negative effect on the stock market in Ghana. The exposure of the stock market to the exchange rate is also supported by Goldberg (1993), Granger, Huang and Yang (2000) and McDermott (2008). However, some studies were inconclusive or found no significant exposure of stocks or industries to the exchange rate. Khoo (1994) concluded that, in general, share returns were not sensitive to exchange rates. Benson and Faff (2003) conducted a study on the Australian international equity trusts and discovered that there was instability in exchange rate exposure. Dominguez and Tesar (2001) illustrated that the insignificant results may be caused by the use of a trade-weighted exchange rate would produce lower estimates of exposure as it may include currencies to which individual companies may not be exposed. South African studies that investigated the relationship between exchange rate and stock market include Reese (1993), Jefferis & Okeahalam (2000), Bah & Amusa (2003), Barr & Kantor (2006) and Barr, Kantor & Holdsworth (2007). For example Barr et al. (2007) mention that the spot exchange rate volatility has pulled the JSE ALSI in different directions (both negative and positive).

In addition to the studies that focused on the exchange rate exposure there are a number of studies that focused on the exchange rate risk to identify if this risk is diversifiable or priced, based on a conditional or unconditional asset pricing model. These studies include Dumas and Solnik (1995) and Doukas *et al* (1999). Carrieri and Majerbi (2006) supported the hypothesis of a significant unconditional exchange risk premium in emerging stock markets and emphasised that their result are different from most unconditional tests for major developed markets. Bartram and Karolyi (2006) concluded that the foreign exchange rate risk is in part a source of non-diversifiable risk. Abdalla and Murinde (1997) and Metghalchi and Hammervold (2004), also found some evidence of equity market premiums for exposure to these risks. However, Jorion (1991) found little evidence of pricing of the exchange risk in the U.S. stock market and demonstrated that the premium attached to the foreign exchange risk exposure was only 0.2% per annum and was statistically insignificant. He, therefore, concluded that exchange rate risk appears to be diversifiable and his results are also supported by Hamao (1988).

A number of studies also tested the pricing of risk in different stock markets with the use of the Asset Pricing Theory (APT). This model was used by different authors including Burmeister and McElroy (1988), Linley (1992) and Stampfli and Goodman (2001). Since Ross (1976) started the analysis with the use of a two-factor model, different studies have been conducted with the use of either a two-factor model or a multi-factor model. Roll and Ross (1980) and (1984) recommended the use of the APT approach to identify the risks that influence an asset's return. Fama and MacBeth (1973) also discussed the pricing of the common stock to reflect the attempts of risk aversion at investors to demand a risk premium in the efficient market. Jorion (1991) also used APT with two-factor and multi-factor models and both models reached the same conclusion. Carrieri and



Majerbi (2006) specify that the asset pricing models can be conditional or unconditional and that the results tend to differ.

## METHODOLOGY

### Data

The data used in this study consist of monthly observations of share prices for all the companies that appear in the Johannesburg Stock Exchange (JSE) Top40 and monthly exchange rate series (South African rand versus U.S dollar). The exchange rate movement  $S_t$  is taken to be the rate of change in the exchange rate, measured in South African rands as price of the one U.S. dollar. A positive value of  $S_t$  indicates rand depreciation. This requirement is appropriate if changes in the exchange rate are necessarily unanticipated. According to Jorion (1991), there is another possibility of using the forward rate premium on the exchange rate as the expected rate of change in the exchange rate. However, he illustrates that the forward rate may be a biased predictor of the future spot rate. Bilson (1981) also emphasises that the forward rate premium cannot be used as it reflects the expected movements of the exchange rate instead of unexpected movements. Furthermore, Reese (1993) emphasizes that the exchange rate factor should be unexpected at the beginning of the period as the APT specifies that only an unexpected movement in a variable constitutes a risk factor and should be used in testing. The actual movement in exchange rate are used in this study. The historical share prices are available at McGregor BFA library and changes in the value of the firm ( $R_{it}$ ) are measured by the rate of return on the companies' common stock. The total share return, used in this study, is the sum of capital gain and dividend yield (DY). Excess returns are calculated by subtracting the risk-free return, taken as the one month holding period on the shortest-term Treasury bill with no less than one month to maturity. This Treasury bill is provided by the South African Reserve Bank. The return on the JSE All Share Index is used as the market return. This analysis uses current members of the JSE Top40. The sample period starts in January 1995, which is the year when the exposure of the JSE to the exchange rates movement increased because of the end of sanctions in 1994, and ends in December 2007.

### Model

Roll and Ross (1980 and 1984) indicate that APT is a good model for measuring economic risks that have an impact on asset return. Brooks and Faff (1989) indicate that a two-factor APT model assists in determining the relationship between risk and return. Jorion (1991) indicates that there has been considerable interest in tests of Ross's (1976) APT as this model assists in specifying the factor that is considered to be priced. He further used this model to test the pricing of exchange rate risk in the U.S. stock market. Fama and MacBeth (1973) also used a two-factor model to calculate the relationship between risk and return. Hence, this paper will use the APT that includes market and exchange rate but it will follow Fama and MacBeth (1973) application of risk-return evaluation with a two-stage regression model. Jorion (1991) indicates that the existence of some correlation between exchange rate movement and stock market movement implies the appearance of multicollinearity that may lead to insignificant results. He uses the residual from the regression of the exchange rate movement against the rate of return on the stock market to avoid this problem. Hence, the next equation shows the relationship between the exchange rate movement and the market return and provides the residual values to be used for the next step.

$$S_t = \alpha_1 + \alpha_2 R_{mt} + e_t \quad (1)$$

Where:  $S_t$  = the exchange rate movement;  $\alpha_1$  = intercept;  $\alpha_2$  = the coefficient of the market return to the exchange rate movement;  $R_{mt}$  = the return on the market index (all shares) and  $e_t$  = exchange rate value that is not explained by the market or orthogonal to the market. The residual ( $e_t$ ) can be written as follows:

$$e_t = S_t - (\alpha_1 + \alpha_2 R_{mt}) \quad (2)$$

The risk premium can be identified through the use of a two-pass regression model. This model uses a first-pass regression to estimate betas for each asset and then a second-pass regression to estimate the risk premium. The return on a particular share is regressed against the market return and exchange rate value not explained by the market ( $e_t$ ) to estimate the market beta and exchange rate beta for each share.

$$R_{it} = \beta_0 + \beta_1 R_{mt} + \beta_2 e_t + u_t \quad (3)$$

Where:  $R_{it}$  = the expected rate of return on particular share (i) at time t;  $\beta_0$  = risk free rate;  $\beta_1$  = market beta

(risk);  $\beta_2$  = exchange rate risk;  $R_{mt}$  = the rate of return on the market at time  $t$ ;  $e_t$  = the exchange rate orthogonal to the market and  $u_t$  = residual.

The combination of Equations 2 and 3 involves replacing  $e_t$  by its value from Equation 2, and then the following results are obtained:

$$\begin{aligned} R_{it} &= \beta_0 + \beta_1 R_{mt} + \beta_2 (S_t - \alpha_1 - \alpha_2 R_{mt}) + u_t \\ &= \beta_0 + \beta_1 R_{mt} + \beta_2 S_t - \beta_2 \alpha_1 - \beta_2 \alpha_2 R_{mt} + u_t \\ &= \beta_0 + (\beta_1 - \beta_2 \alpha_2) R_{mt} + \beta_2 (S_t - \alpha_1) + u_t \end{aligned} \quad (4)$$

If  $(\beta_1 - \beta_2 \alpha_2) = \beta_m$ ;  $\beta_2 = \beta_s$  and  $(S_t - \alpha_1) = e_t$ ; then

$$R_{it} = \beta_0 + \beta_m R_{mt} + \beta_s e_t + u_t \quad (5)$$

The above steps explain how Equation 5 is obtained and this equation is used by the first-pass regression to estimate the betas for each share. There are, therefore, forty market betas and forty exchange rate betas assumed to be constant over the time and are used in the next stage to estimate the risk premium. According to Fama and MacBeth (1973), the expected rate of return on a security (i) is the expected return on the risk-free asset plus the risk premium.

$$E(R_{it}) = \alpha_0 + [E(R_m) - \alpha_0] \beta_m + \alpha_s \beta_s \quad (6)$$

Where:  $E(R_{it})$  = expected rate of return on asset  $i$  at time  $t$ ;  $\alpha_0$  = Expected return on risk-free security;  $[E(R_m) - \alpha_0]$  = Market risk premium and  $\alpha_s$  = Exchange rate risk premium.

The rate of return on asset (i) at time (t) can be statistically decomposed into expected component  $E(R_{it})$  and the component of exchange rate orthogonal to the market, with assumption of stationarity. Hence, the rate of return is written as follows:

$$R_{it} = E(R_{it}) + [R_{mt} - E(R_m)] \beta_m + F_t \beta_s + w_t \quad (7)$$

Where:  $F_t = e_t$  (shown in Equation 2)

Under rational Expectations, substituting Equation 6 in Equation 7 yields

$$R_{it} = [\alpha_0(1 - \beta_m) + \alpha_s \beta_s] + R_{mt} \beta_m + F_t \beta_s + w_t \quad (8)$$

Where:  $[\alpha_0(1 - \beta_m) + \alpha_s \beta_s]$  represent the intercept and is replaced by  $\delta_0$ .

$$R_{it} = \delta_0 + R_{mt} \beta_m + F_t \beta_s + w_t \quad (9)$$

The rate of return on asset (i) could be replaced by the access return ( $R_{it} - R_f$ ) without affecting the analysis in any substantive way. When  $\delta_0$  (intercept) =  $R_f$  the access return can be illustrated by the following model:

$$R_{it} = \delta_0 + \delta_m \beta_m + \delta_s \beta_s + w_t \quad (10)$$

$$\bar{R}_{it} = \delta_m \beta_m + \delta_s \beta_s + w_t \quad (11)$$

Where:  $\bar{R}_{it} = R_{it} - R_f$  (the total risk premium of a particular share);  $\delta_m = R_{mt} - R_f$  (the market risk premium);  $\delta_s = F_t - R_f$  (the exchange rate risk premium) and  $w_t$  = residual.

When the risk-free rate is endogenous (equal to intercept), Equation 10 should be used to determine the risk premium together with the appropriate risk-free rate. However, in the case of an exogenous risk-free rate, Equation 11 is used. Thus, the second-stage regression will run both equations 10 and 11 and the estimates will be compared to determine the best estimates of the market risk premium and exchange rate risk premium ( $\delta_m$  and  $\delta_s$ ). Thus, the exchange rate risk is priced if the coefficient  $\delta_s$  is non-zero.

## RESULTS

### Exchange Rate Exposure

The systematic risk and exchange rate exposure of the 40 companies are reported in Table 1. These coefficients are listed in the order of classification of companies based their global positioning. The larger the estimated exchange rate beta, the greater the degree of responsiveness of the share price returns to changes in the value of the rand and the coefficient of zero explains that the asset return will not be affected by unanticipated changes in the exchange rate (Roll and Ross, 1984). The p-values and t-statistics are included to indicate whether the coefficients are statically significant or not. The  $R^2$  statistic is included as a measure of overall model fitness.

**Table 1: Exchange rate exposure ( $R_{it} = \beta_0 + \beta_m R_{mt} + \beta_s e_t$ )**

	Exchange rate			Market			
Company Name	$\beta_s$	t- test	P-value	$\beta_m$	t -test	P-value	$R^2$
<b>a. Non-Tradable</b>							
ABSA BANK LTD	- 0.7034	- 5.8818	0	1.045	11.3228	0	0.5255
AFRICAN BANK INVEST. LTD	- 0.6146	- 2.3609	0.0196	1.0553	11.8028	0	0.1852
NEDBANK LTD	- 0.5948	- 5.1432	0	0.8011	8.976	0	0.4213
INVESTEC LTD	- 0.3615	- 3.1754	0.0018	1.0369	11.8028	0	0.504
FIRSTRAND	- 0.6108	- 4.4668	0	0.9592	9.0902	0	0.411
STANDARD GROUP LTD	- 0.5698	- 5.7025	0	0.9266	12.0153	0	0.5461
RMB HOLDINGS	- 0.6711	- 4.9885	0	0.9214	8.8748	0	0.4135
LIBERTY G. LTD	- 0.6115	- 4.3477	0	0.2512	8.8126	0.0055	0.3556
MTN GROUP	-0.005	0.0197	0.9843	0.3137	1.5975	0.1124	0.4487
TELKOM SA LTD	- 0.5371	- 2.4996	0.0155	0.5637	2.3791	0.0209	0.1956
MURRAY & ROBERTS HLD	- 0.6072	- 3.0077	0.0031	0.7353	4.7197	0	0.1756
NASPERS LTD	- 0.6076	- 2.9195	0.0041	1.2269	7.6388	0	0.3127
PRETORIA PORTLAND CEMENT	- 0.8322	- -6.283	0	0.624	6.1045	0	0.343
TIGERBRANDS	-0.608	6.0353	0	0.7158	9.2076	0	0.4519
SASOL LIMITED	0.4058	2.8179	0.0055	0.9744	8.7669	0	0.3658
SANLAM LTD	- 1.8206	- 0.6432	0.5211	-0.3889	-0.1781	0.8589	0.003
NETCARE	- 0.1998	- 1.1196	0.2649	1.1981	8.7073	0	0.373
<b>AVERAGE</b>	<b>- 0.4898</b>	<b>- -3.281</b>	<b>0.1071</b>	<b>0.76234</b>	<b>7.743565</b>	<b>0.0587</b>	<b>0.3548</b>
<b>b. Mixed</b>							
AVENG	- 0.3252	- 2.0705	0.041	0.5911	3.9667	0.0001	0.1606
BARLOWORLD LTD	- 0.4117	- 3.3059	0.0012	1.1021	11.4688	0	0.4922
THE BIDVEST GROUP LTD	-	-	0.0001	0.8344	0.8344	0	0.4677

	0.4108	0.4108					
INVESTEC PLC	- 0.2182	- -1.276	0.2067	1.2455	7.0086	0	0.4502
OLD MUTUAL PLC	- 0.2364	- 2.3816	0.0192	0.7627	8.0983	0	0.4112
REMGRO LTD	- 0.0025	- 0.0273	0.9783	0.365	3.8872	0.0002	0.1546
SABMILLER PLC	- 0.0044	- 0.0504	0.9599	0.9606	14.3519	0	0.5835
STEINHOFF INTERNATIONAL	0.1627	1.1441	0.2551	0.6986	5.5171	0	0.2301
<b>AVERAGE</b>	- <b>0.1808</b>	- <b>1.0473</b>	<b>0.30769</b>	<b>0.82000</b>	<b>6.89163</b>	<b>0.00004</b>	<b>0.3688</b>
<b>c. Tradable</b>							
LIBERTY INTERN. PLC	0.6115	6.5535	0	0.2512	2.8396	0.0055	0.3556
RICHEMONT	0.5047	4.8998	0	0.7145	8.9888	0	0.4162
ANGLO AMERICAN	0.4459	3.9635	0.0001	1.2069	13.9027	0	0.5871
ANGLOGOLD ASHANTI	0.2329	1.2596	0.2098	0.7498	5.255	0	0.1657
ANGLO PLATINUM	0.6762	4.2489	0	0.8489	6.8836	0	0.3237
BHP BILLITON PLC	0.3599	2.7378	0.0071	0.9641	9.5442	0	0.45
GFIELD LTD	0.3225	1.4484	0.1496	0.8695	5.0599	0	0.1586
HARMONYMINING GOLD LTD	0.7588	3.0109	0.0031	1.1993	6.1666	0	0.2426
IMPALA PLATINUM HLD	0.5701	3.2776	0.0013	0.9334	6.9535	0	0.2867
KUMBA IRON ORE	0.9688	1.0256	0.3292	0.936	1.4701	0.1723	0.1794
EXXARO RESOURCES LTD	0.0722	0.2637	0.7928	1.3745	4.4561	0	0.2313
ARCELORMETAL	- 1.0811	- 4.5458	0	0.7383	4.0231	0.0001	0.2004
AFRICAN RAINBOW M. LTD	0.0172	0.0769	0.9388	0.8938	5.1757	0	0.1542
LONMIN PLC	0.6299	4.7846	0	0.9993	9.8355	0	0.4487
SAPPI LTD	0.3898	2.1756	0.0312	1.0422	7.5368	0	0.2951
<b>AVERAGE</b>	<b>0.3653</b>	<b>2.1629</b>	<b>0.1642</b>	<b>0.9148</b>	<b>6.5394</b>	<b>0.0119</b>	<b>0.2997</b>

$B_s$  = Exchange rate risk (beta) and  $B_m$  = Market risk (beta)

The hypothesis test uses the t-statistic to test whether the estimated coefficient differs from zero at a significance level of 5% and is set as follows:

Ho (Null Hypothesis):  $\beta_s = 0$  and  $H_1$  (Alternative hypothesis):  $\beta_s \neq 0$

The critical value of the t-statistic of 1.96 is compared with the t-ratios reported in Table 1. The Ho is rejected in favour of  $H_1$  if the absolute value of the estimated t-value is greater than the critical value. It means that there is enough evidence to support that the coefficient is different from zero; hence, the coefficient is statistically significant. On the other hand,  $H_0$  is not rejected when the critical value of the t-statistic is greater than the estimated value and the coefficient is statistically insignificant. In overall, firms with an estimated t-statistic below 2 are not sensitive to the exchange rate movement. Table 1 shows that the exchange rate exposure differs from a firm to firm and that each classification responds to the exchange rate exposure differently but that firms of the same category tend to respond similarly. Thus, the exchange rate exposure will be discussed based on the three classifications.

### Exposure of Non-Tradable Companies

These companies have both their revenue and costs in the domestic currency. Section A of Table 1 reports a negative exposure for 15 out of 17 firms that fall under the non-tradable category. Only Sasol and Liberty Group Ltd show a positive exposure. Although Sasol has both its costs and revenue in domestic currency, it still charges the South African customers the world market price because of the absence of local competition. Thus, it is exposed to exchange rate risk as much as the tradable companies. The exchange rate coefficient is also

statistically significant for 14 companies, with 12 of them being significant above a 99% confidence interval and other two at a 95% confidence interval. The t-statistics also confirm that 14 out of 17 companies have coefficients that are statically significant at the level of significance of 5% and the average absolute value of the estimated t-statistics for this category is 3.28097. Overall, non-tradable firms tend to suffer from a depreciation of the Rand as shown by the average exchange rate coefficient of - 0.49. It means that a 1% increase in the exchange rate results in 0.49% decrease in the returns of no-tradable firms on average. These results are in line with other studies such as Jorion (1991) and Barr *et al.* (2007).

### **Exposure of Mixed Companies**

The firms in the mixed category earn revenues in both domestic and foreign currency and as shown in Table 1 Section B, they experience negative exposure. Thus, they suffer from the depreciation of the rand. Jorion (1991) emphasises that firms who suffer from rand depreciation are those firms that tend to import a substantial portion of their factor inputs. Besides the banks, other firms with negative exposure are technological and construction firms that are dependent on the import of their technological equipment. However, less than 50% of the mixed companies show a statistically significant exchange rate exposure and this is confirmed by the average absolute value of the estimated t-statistics of 1.04730. On average, mixed firms are not affected by exchange rate movements. This means that the exposure to the exchange rate movement is diversified through earning revenues in both foreign and domestic currency. The average estimated exchange rate coefficient for this category is -0.18081 and this implies that a 1% increase in the exchange rate will decrease the average returns of mixed firms by 0.18081%. Hence, a negative effect shows that mixed firms tend to have the same effect as non-tradable firms. These results are in line with Barr *et al.* (2007) who found that mixed companies tend to be rand-play (non-tradable).

### **Exposure of Tradable Companies**

Tradable firms mostly generate their revenues in foreign currency with costs being incurred in domestic or foreign currency. Section C of Table 1 reports the positive exposure for these companies and this implies that these firms benefit from the rand depreciation. Jorion (1991) demonstrates that the exchange rate exposure is positively related to the proportion of sales made overseas and these results are confirmed in this investigation as the tradable firms are mostly in the mining sector which exports a significant proportion of sales. The exchange rate is statistically significant for 10 out of 15 tradable firms at a 5% significant level and the average absolute value of the estimated t-statistics for this category of 3.28097 confirms the average significance of the exchange rate coefficient. The average exchange rate coefficient of 0.365287 implies that an increase of 1% in the exchange rate would increase the average return of tradable firms by 0.3653%.

### **The Overall Fitness of the Model**

Overall, the JSE Top40 is negatively related to the exchange rate movement, as shown by the average exchange rate coefficient of -0.10734. In this context, an  $R^2$  value that is in excess of 0.35 would be considered good, as is explained by Barr *et al.* (2007: 51): “Inherent share price volatility for actively traded stocks implies that a considerable percentage of movement is very difficult to explain statistically”. As is shown in Table 1, about 60% of the total number of firms has a value of  $R^2$  that is close or above the set value of 35%. Based on the categories, non-tradable firms and mixed companies seem to be affected by both market and the exchange rate risk as most of these firms have  $R^2$  values that are close to or above 35%, but most of the tradable companies present  $R^2$  values that are below this accepted level. Anglo American presents the highest  $R^2$  value of 58.75% in the tradable category followed by SAB (58.35%) in the mixed category and then Standard Bank (54.61%), ABSA Bank (52.55%) and Investec Limited (50.40%) of the Non-tradable category. Although most tradable firms present low  $R^2$  values an extreme case is shown by Sanlam, of the non-tradable category, with a value of 0.3%. Other firms with low  $R^2$  values include African Rainbow Minerals (15.42%), Remigro (15.46%), Gold Fields (15.86) and Kumba Iron Ore (17.94%).

## **The Risk Premium**

Tables 2 and 3 present the estimates of the exchange rate and market risk premium with their standard errors, t-statistics, p-values,  $R^2$  and Adjusted  $R^2$ . Table 2 reports the results from the estimation of the equation with an intercept (Equation 12, with endogenous risk-free rate) while Table 2 shows the results without the intercept

(risk-free rate is exogenous). In both tables, the use of the December 2007 share return is shown in part A and the use of the average returns for the whole sample period is presented in part B.

**Table 5.2: Risk Premium with Endogenous Risk Free Rate ( $R_{it} = \delta_0 + \delta_m \beta_m + \delta_s \beta_s + w_t$ )**

<b>A. Estimates based on recent return (December 2007)</b>					
	<b>Coefficients</b>	<b>Standard Error</b>	<b>t Stat</b>	<b>P-value</b>	<b>Regression Statistics</b>
$\delta_0$	0.0649	0.0310	2.0924	0.0433	Multiple R 0.467461
$\delta_m$	-0.0665	0.0336	-1.9753	0.0557	$R^2$ 0.21852
$\delta_s$	0.0560	0.0184	3.0475	0.0042	Adjusted $R^2$ 0.176278
<b>B. Estimates based on the average Return</b>					
	<b>Coefficients</b>	<b>Standard Error</b>	<b>t Stat</b>	<b>P-value</b>	<b>Regression Statistics</b>
$\delta_0$	0.069	0.008	8.573	0.000	Multiple R 0.532779
$\delta_m$	-0.026	0.009	-3.004	0.005	$R^2$ 0.283853
$\delta_s$	-0.006	0.005	-1.254	0.218	Adjusted $R^2$ 0.245143

**Table 3 Risk Premium with Exogenous Risk Free Rate ( $\bar{R}_{it} = \delta_m \beta_m + \delta_s \beta_s + w_t$ )**

<b>A. Estimates based on recent return (December 2007)</b>					
	<b>Coefficients</b>	<b>Standard Error</b>	<b>t Stat</b>	<b>P-value</b>	<b>Regression Statistics</b>
					Multiple R 0.4991
$\delta_m$	-0.0228	0.0113	-2.0205	0.0504	$R^2$ 0.2491
$\delta_s$	0.0463	0.0172	2.6979	0.0103	Adjusted $R^2$ 0.2030
<b>B. Estimates based on the average return</b>					
	<b>Coefficients</b>	<b>Standard Error</b>	<b>t Stat</b>	<b>P-value</b>	<b>Regression Statistics</b>
					Multiple R 0.8501
$\delta_m$	0.046	0.005	9.181	0.000	$R^2$ 0.7226
$\delta_s$	-0.022	0.008	-2.880	0.007	Adjusted $R^2$ 0.6890

Table 2 (part A) shows that the risk-free rate should be 6.49% per month as explained by the intercept ( $\delta_0$ ). The market risk premium is 6.65% per month but it has a negative sign which is unexpected. The exchange rate premium tends to be 5.6% per month with a positive sign. Although the exchange rate coefficient is statistically significant at a 5% significance level, the market tends to be significant only at a 10% significance level.  $R^2$  and adjusted  $R^2$  are too low and the exchange rate risk premium seems to be too high for the monthly return. In part B, where the average return is used, the risk free rate increased to 6.9% per month and both the monthly market and exchange rate risk premiums decrease to 2.6% and 0.6% respectively; as a result, the market has become statistically significant at 1% level of significance but still shows the unexpected sign while the exchange rate shows the most expected sign but becomes insignificant. Both  $R^2$  and adjusted  $R^2$  have increased. It is, therefore, evident that the use of the average return produces better results.

Table 3, part A, reports a risk premium of 2.28% per month for the market with a negative sign (unexpected) and a risk premium of 4.6% per month for the exchange rate with a positive sign (acceptable). Both coefficients are statistically significant at a 5% significance level, with  $R^2$  and adjusted  $R^2$  that are higher compared to those reported in Table 2 part A. Table 3, part B, portrays a risk premium of 4.6% per month with a positive sign (expected) for the market and a risk premium of 2.2% per month for the exchange rate with a negative sign (expected). Both coefficients are statistically significant at a 99% confidence interval; and both  $R^2$  and adjusted  $R^2$  are high enough to explain the fitness of data to the model (72.26% and 68.9% respectively). Thus, the model with the exogenous risk-free rate is better than the one with the endogenous risk-free rate and the use of a return averaged for the sample period is better than the use of the return from the last observation (return for December 2007). Therefore, the conclusions of this research are based on the results shown by Table 3, part B.

The results of the two-factor model confirm that the exposure of the South African stock market to residual exchange rate risk is systematically related to the expected return. This exposure varies between firms but in general South African firms tend to suffer from exchange rate depreciation. Consequently, investors appear to price the exchange rate risk, and the premium attached to this exposure tends to be 2.2% per month.

These results are similar to other findings from emerging markets such as Dumas and Solnik (1995), Choi & Rajan (1997), Doukas *et al.* (1999), Carrieri & Majerbi (2006) and Muller and Verschoor, 2006). However, these results are not in line with the findings of Jorion (1991) and other early tests, such as Hamao (1988), conducted in developed markets. The major contribution to the mixed findings may be the type of the model used, as the results from a conditional asset pricing model tend to differ from those of an unconditional one. The frequency of data is also another issue because the exchange rate risk tends to be priced as the frequency increases. Despite the appearance of these factors, the results tend to show constantly that the exchange rate is priced in the emerging markets.

## CONCLUSION

The exchange rate is a key economic variable in South Africa's open economy and the impact of currency fluctuations on the South African stock market cannot be ignored. This research has used the unconditional asset pricing model to investigate the exposure of the South African stock market on exchange rate risk and the pricing of this exchange rate risk in South African stock market. It has been shown that the exchange rate exposure is identifiable and the exposure differs across companies. The JSE Top40 companies were classified based on where they mostly generate their revenues (domestic or offshore). Three categories were identified: non-tradable, mixed and tradable companies. Tradable and mixed firms tend to be negatively exposed to the exchange rate and suffer from a depreciation of the rand while tradable firms show a positive exposure to the exchange rate and benefit from a depreciation of the rand. Overall, the JSE Top40 tends to be negatively exposed to the exchange rate risk. The results on the pricing of exchange risk in the South African stock market are consistent with most findings in emerging markets. The unconditional premium attached to the foreign exchange rate exposure is found to be 2.2% per month and is both economically and statistically significant. The exchange rate does not appear to be diversifiable (a systematic risk). Investors should, therefore, earn a premium for being exposed to this risk and should consider the impact of exchange rates' movements on both the cash flow of companies' operations and the discount rate employed to value such cash flows.

However, there is a matter of concern related the methodology used to determine risk premium. This research uses the unconditional asset pricing model to determine the unconditional risk premium, which is consistent with other findings, while some other evidence such as that of Jorion (1985) insists that foreign exchange rates are characterised by conditional risk premium. Furthermore, an exogenous risk-free rate model produces results that are different from an endogenous risk-free rate model. Most of the theory emphasises that these two rates should be equal but it does not indicate the most correct risk-free rate to be used, in cases where they differ. Whether there is a better way of testing the pricing of the exchange rate risk is still an open question, to be answered by future research.

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# **UNLOCKING CAPITAL FINANCE FOR AGRICULTURAL RURAL DEVELOPMENT AND ECONOMIC SUSTAINABILITY FOR THE COMMUNITY OF RANTLAPANE**

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## **ABSTRACT**

*The purpose of the paper will be to explore funding for agricultural rural development & mining projects for the Rantlapane Community. Governmental institutions, privately owned companies and foreign investors will be explored for funding. A business plan will be drafted and circulated online to those who are interested. The results will be analyzed using group focus interview to determine the needs of the 52 landowners; the business plan will outline what the sponsor/s should do to meet those needs and how the community will monitor projects on an ongoing process. If funding is nailed for these projects, this will imply wealth creation for the 52 landowners, job creation for Rantlapane Community and adjacent communities. Not only will Rantlapane community come to live but it will also help the South African government in achieving and accelerating its goals of developing the rural poor, empowering and make a contribution to sustainable economic growth of the country in general.*

## **INTRODUCTION**

Funding for agricultural projects in rural development areas has been a global challenge. In developing countries, the situation has worsened where land has been unevenly distributed and not utilized to the fullest and the rich have become richer at the expense of the poor which exacerbates poverty to an unacceptable level (Atuahene, 2011; Harnes, 2010; & Lahiff et al., 2007). In developed countries like China, also this problem has been there time immemorial. However, when authors elaborated and advise politicians and decision makers about relevant policies to be implemented to curb the deficiency, few or none is carried out by the decision-makers (Lahiff et al., 2007).

The utmost important thing for this empirical study is to find sponsors from governmental institutions or privately owned ventures who will be able to fund the agricultural projects that will be done at Rantlapane for the Rantlapane Community. The other main purpose is to create jobs opportunities for this community on their land and make use of it through utilizing it in various agricultural farming e.g. crops, cattle and so forth. Below is the profile of the Rantlapane community of how it has evolved until now.

## **BACKGROUND TO THE STUDY**

The Community of Rantlapane is based about 90km from the City of Tshwane in Pretoria. It is situated in North West Province and it shares boundaries with Winterveld, Lebalangwe, Mmakaunyana, Shakung, Moeletswane and Noriki (see Kalkbank map). The land was previously owned by Elizabeth Rebecca Smit who was married out of community of property to Lourens Johannes Benjamin Smit. Mr. Smit acted on behalf of his wife as an agent in selling 1710 hectares of land to 52 black individuals in pounds (deed of transfer, 1823-1925). The lawyers who administered the transfer, amazingly there are still in business today. This is Weaving & Weaving Attorneys and their offices are in the suburb of Brooklyn in the City of Tshwane in Pretoria.

Most of the landowners have already left this world, however, their dependents are mostly found in the village called Kgalatsane and only a handful are still residing at Rantlapane ( Kalkbank). The Rantlapane community established a Constitution called “Kalkbank General Council” which was designed to control the overall activities of the land (see Kalkbank General Council Constitution). The reason why the 52 individuals decided to buy the land was to own something, use the land for stock grazing and farming since there were living in that era where black people were illegally and forcefully removed from their own land by the apartheid regime in the 1960s.

The community’s wish now is to find a sponsor who will help them in developing the land by running several agricultural projects and exploring mining possibilities just like the Mamphodo Mushasha Begwa Community (Vhangona at work, 2000). The researcher will try to explore funding from the South African governmental institutions like: Department of land and rural development, Land bank, Development Bank of Southern Africa (DBSA), Agricultural Research Council of South Africa (ARC), and Industrial Development Cooperation (IDC). International donors and privately owned money lenders, will also be explored especially China and India. Reason been they are at the moment, the leading economically viable countries.

The world has been hit by the global recession where lots of things are expensive to have and some are impossible to maintain. Even the commercial banks, which are one of the main financiers for rural development, have taken a step backwards. Nonetheless, Dolan & Collender (2001) still believe that the Commercial banks are still the leading financier of rural agricultural developments for farmers. There are rural projects that are carried out in the name of rural development but sometimes there is no outcome/s. However, in the case of the McElwee & Annibal (2010), they have evaluated the Cornwall project which was assigned to train, support and finance the farmers at Cornwall as beneficial which was executed so well.

The situation in China is that, the policies and implementation regarding agricultural rural development businesses financing, have taken a positive turn and overall has improved immensely. But on the other side, new issues have immerse such as insufficient agricultural grants, insufficient funds for public services and ill treatment of migrant workers (Chen, 2010).In a study conducted by Skuras et al, (2003), they found that the four European Union (EU) countries that they were researching, which is Portugal, Spain, Italy and Greece; are quite different hence the farmers’ needs and strategies for each location is different. Each location needs its own decentralised strategies of support. For example, these include training, management and financial assistance.

## **RESEARCH QUESTIONS**

### **Research Questions- central questions:**

- What are good strategic ways to find a sponsor/s?
- How will the sponsor/s meet the needs of the community?

### **Research questions - sub questions:**

- What should the business plan contain to attract sponsors?
- What are the community needs and are they all outlined in the business plan?
- Which strategies are good for job creation for the community?
- How will sustainable economic rural development of farming take place?
- Who will be responsible and accountable for this development?
- How will the 52 landowners share their profits and losses?

## **SIGNIFICANCE OF THE STUDY**

The most critical aspect of this study, it is to find a sponsor/s for the Community projects. The support may be in training, donations, help in providing knowledge of how to access funding to run projects. These projects will be created for the Rantlapane Community people to manage and operate them. And as a result, job opportunities will be created and hence, poverty will be immensely reduced. Mostly women will be given

priority as more of them are household breadwinners( Vhangona at work, 2000).The study will also try to explore the opportunity of mining since the land has minerals like granite, coal, Lime and others. However, this may not be easy as the minerals belong to the government and application of mining rights is a tedious job.

## **METHODOLOGY**

The research method used will be an exploratory study which is qualitative in nature whereby information will be generated by the researcher from documents, internet and interviews with focus groups (land owners). The intention is to use this information to find a suitable sponsor/s for sustainable economic development in the rural community of Rantlapane. The internet will be used as a data search instrument to find sponsors in China, India and The South African government agencies that are providing financial supporting for farming activities. Reasons why these countries are the targeted ones are that both China and India are presently the leading nations that are financially stable.

As for South Africa, it has good financial support services that are highly relevant to finance this type of an investigation. Examples are the Land reform and rural development and the Department of agriculture and Fishery. However, there may be those sponsors that are based in other countries rather than the one specified and if that is the case, the researcher will use this opportunity to include such a sponsor/s.

The researcher will draft a business plan which will serve as an instrument to attract potential sponsors to finance the farming activities of the Rantlapane Community and create employment even for the neighboring villages like Lebalangwe and Rabosula in the North West Province. The documents investigation will be directed to documents held by the 52 land owners of the Rantlapane like deeds of transfer of 1924, map indicating the location and the constitution of Kalkbank General Council and other materials that will enhance the background of this research and support the data credibility and accuracy that will also be supported by existing theories in different texts.

The researcher will also draft family trees of the 52 land owners to confirm ownership and agreeing it with the names that appears in the transfer deed of 1924 from the deeds office. Since the land was purchase in 1924, there is the possibility that some of them are no long with us. These family trees will also be one of the data generated through peer debriefing (i.e. data sent to landowners to determine its validity/ credibility of ownership) sent to the potential sponsor/s to confirm ownership.

Another data gathering tool will be a pre-test focus groups interview to the landowners to determine their main needs so that there should be a mutual understanding between the donor/s and the Rantlapane Community.

## **RELIABILITY AND VALIDITY OF FINDINGS: DE-BRIEFING (ACCURACY)**

Qualitative reliability indicates that the researcher's approach is consistent \reliable across different researchers and different projects (Gibbs, 2007). According to Gibbs (2007), there is several reliability procedures that one needs to follow when conducting a qualitative study. In this study, cross checking the transcripts for errors detection and coding method of data collected will be used to make the data more systematically arranged and understandable.

As for Qualitative validity, Creswell and Miller (2000) suggest that information gathered, should be accurate to reflect trustworthiness, authenticity and credibility. To satisfy this procedure, a process called" De-briefing" will be used by the researcher. Data collected from the framers by the researcher will be documented and sent back to farmers to compare the accuracy thereof.

## **ETHICAL ISSUES**

Ethical issues are not merely a set of guidelines as provided by the professional associations. These are ethical dilemmas that may arise in different section of the research and should be addressed by the researcher (Berg, 2001; Punch, 2005; and Sieber, 1998). In this search, all the data collected from the Rantlapane land owners, if it is sensitive/confidential, will not be elaborated on this investigation. The participants will be reassured by the researcher that their rights will not be violated when carrying out this investigation.

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# THE EXPLANATORY VARIABLES OF INTEREST RATE SPREAD IN RWANDA: THEORY AND EMPIRICAL EVIDENCE

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## ABSTRACT

*Deposit-lending rate spread is closely related to the banking sector's ability to channel savings into productive uses. Several studies have investigated the causes and implications of high spread, but in some regions, particularly Africa, spread has received little attention. The purpose of this paper is to address this gap by examining the determinants of interest rate spread in Rwanda. The ADF, cointegration, error correction mechanism tests were applied. The results indicates that many of the factors commonly believed to be critical determinants of interest rate spread may not, in fact, be relevant to the size of the banking sector spread in Rwanda. Most surprising was the statistical insignificance of the reserve requirements, discount rate, and GDP per capita variables. Although these market characteristics have been highlighted in the literature as determinants of interest rate spread in Rwanda, they were unable to explain the variation in banking sector spread of the low income studied economy. This may be due to the inadequacy of the proxies used to represent these variables such as the level of income and level of competition in a relatively under-developed banking sector.*

## INTRODUCTION

The focus of interest rate spread (IRS) which is defined as the variation between average interest rate earned on interest earning assets (loans) and average interest rate paid on deposits, has been receiving attention for some time both in the popular press as well as among investors in Rwanda. Interest rate spread can have an upward or downward trend during a given period of time. An increase in the interest spread implies that either the depositor or the borrower or both stand to lose. In the context of developing economies, the lack of alternate avenues of financial intermediation aggravates the adverse impact of increase in spread. Peria and Moody (2004) posit that the impact of increase in spread could be severe as the capital markets are relatively less developed and a sizable percentage of agents depend on banks for their financial needs.

The implications of IRS to the growth and development of an economy have spurred numerous debates in developing countries. Many studies (e.g. Ho & Saunders, 1981; Barajas, Steiner & Salazar, 1999; Samuel & Valderrama, 2006) have shown that there is a pervasive view amongst some stakeholders that high interest rate spread are caused by the internal characteristics of the banks themselves, such as their tendency to maximize profits in an oligopolistic market, while many others argue that the spread are imposed by the macroeconomic, regulatory and institutional environment in which banks operate.

Interest spread also has implications for the effectiveness of the bank lending channel. An efficient financial intermediation is an important factor in economic development process as it has an implication for effective mobilization of investible resources. Consequently, banking sector efficiency plays a significant role in an economy. A major indicator of banking sector efficiency is interest rate spread, which has been found to be higher in African, Latin American and the Caribbean countries than in Organization for Economic Co-operation

and Development (OECD) countries (Callon, 1998: 2). For example, with a commitment to market based monetary policy, the central bank influences the yield on treasury bills which in turn affects the deposit and lending rates. The change in these rates influences the cost of capital that in turn which then affects the level of consumption and investment in the economy. If the pass-through of the changes in yield on Treasury bill rate to the deposit and lending rates is asymmetric then this changes the spread, for better or worse, depending upon the nature of asymmetry. If the increase in spread is due to lower return to depositors then this discourages savings; alternatively if it is due to higher charge on loans, investment decisions are affected. In either case the increase in spread has an adverse bearing on the effectiveness of bank lending channel of monetary policy and has therefore important implications for the economy.

For a depositor, a raise in IRS causes a concern about banks' tendency to maximize profits in an oligopolistic market. The banking industry in Rwanda is characterized by a couple of number of commercial banks. Further, most commercial banks happen to be either fully foreign owned or controlled by foreign interests. The customer worry gets compounded if commercial banks periodically raise fees and charges on banking activities. Consequently, there should be fears of collusion among the banks in fixing the interest on loans. Furthermore, likely factors of interest rate spread in Rwanda lead to high intermediation costs, which result in high spread. Specifically, these studies have identified one of the most obvious costs, which is associated with the ability to enforce debt contracts. Small borrowers with no property rights have no guarantee to offer. As such, they are perceived as high risk borrowers. Because of high transaction costs involved, such borrowers are charged punitive rates of interest. In the absence of a strong financial market for government bonds and other securities, coupled with an undeveloped stock market, the National Bank of Rwanda is likely to have no option but to keep their savings as bank deposits. Because of surplus funds, deposit mobilization does not require any serious effort on the part of the banks. Consequently, deposit interest rates may remain low (National Bank of Rwanda, 2008).

## **RATE SPREAD**

Several studies of bank spread have examined worldwide country sets or specific non-African regions. One of the more recent and broader studies of the determinants of spread in the banking system was conducted by Demirguc-Kunt and Huizinga (1998). They found several variables to be correlated with higher spread, including higher inflation, higher real interest rates, and lack of banking sector competition. They also found that some variables like institutional features such as lack of creditor rights or corruption, and reserves to matter more in developing countries than in developed countries. In a related paper, Claessens, Demirgüç-Kun and Huizinga (1998) found that foreign banks had higher returns to capital than domestic banks, and that entry by foreign banks lowered the returns to capital of domestic banks. Demirguc-Kunt, Laeven and Levine (2003) found that inflation was associated with higher bank net interest margins, and that concentration and tighter regulations were too, but that these latter relationships broke down when indicators of economic freedom and property rights were controlled for several regional studies have been conducted. Gelos (2006) found that Latin American banks had high spread because of higher interest rates, less efficient banks, and larger reserve requirements than banks in other regions. Brock and Rojas-Suarez (2000) found that higher operating costs and higher nonperforming loans were related to higher spread.

Randall (1998) found that the share of loans going to the public sector in the Caribbean was negatively correlated with spread (one possible explanation for this was that greater government involvement resulted in larger transactions that were more efficient to manage). Chirwa and Mlachila (2004) found that spread in Malawi increased after financial liberalization because of increases in reserve requirements and provisioning. Barajas, Steiner and Salazar (1999) found that in Columbia spread widened in the 1990s as a result of high NPLs of the public banks and private banks' greater responsiveness to credit quality and more careful approach to risks. According to Crowley (2007) credit risk, taxes, and overhead costs are the main determinants of the high ex-ante spread in Brazil (more important even than the high level of required reserves, which are nevertheless significant).

Higher costs would logically require banks to charge higher spread in order to remain profitable (Randall 1998, Gelos 2006). Most studies, including the regional ones cited above, have reached this conclusion. There are many sources of higher costs that have different implications for other aspects of bank management.

These include personnel costs, required reserve ratios, poor governance, nonperforming loans, and general inefficiency. Several measures of these variables are included in the analysis. Higher capital to asset ratios would also increase costs, though the direction of causation in this relationship could be uncertain. Berger (1995) noted that higher spread allows banks to accumulate higher profits to set aside to increase their capital stocks. Higher spread may be a result of higher costs, or they could be a result of factors that allow banks to become more profitable, such as a reduction in competition. Some studies have indicated that higher concentration in the banking sector leads to higher spread by reducing competition (Demirguc-Kunt & Huizinga, 1999). Berger and Hannan (1989) suggested that greater concentration could lead to higher profits, but possibly not to higher lending rates since higher concentration can be associated with greater efficiency. Claessens and Laeven (2004) suggested that concentration does not reduce competition. Several measures of competition are examined in this paper. Competition could also be affected by the size of the banking sector or the size of the economy. In a smaller economy the concentration of the banking sector would be greater and the number of banks smaller. However, in some small countries a very few large local companies represent the only reputable borrowers and banks compete fiercely to lend to them. The effect of reducing the size of the economy or the size of the banking sector on spread could be negative if the small size results in a greater reduction in the number of reputable borrowers than in the number of banks (Claessens and Laeven, 2004).

## **SYNTHESIS OF DETERMINANTS OF INTEREST RATE SPREAD IN RWANDA**

### **Inflation**

According to Crowley (2007) higher inflation might be expected to lead to higher inflation adjusted spread if it causes banks to charge a risk premium. Inflation would also be associated with the presence of large dominant banks that lend irresponsibly, and which have low spread because they are not fully accountable to their shareholders. Large state-owned banks and dominant banks that are not state-owned but which can be pressurised by the government would also fit this pattern. The relationship could even be affected simply by government interference in the banking sector, by a willingness of the authorities to subjugate sound economic management to political considerations, including by pressurising banks to lend at low rates to support the economy (Bulkley & George, 1981).

### **Broad Money Growth**

Higher spread is associated with broad money growth. If money supply grows while output does not, prices will have to increase so that money demand increases in line with supply. Since quantity theory of money emphasizes the role of the quantity of money for the determination of inflation. The commercial banks in Rwanda run for consulting the enacted monetary policy from the National Bank of Rwanda. Commonly, for the economic stability central banks use different targets, for the case of Rwanda, the National Bank of Rwanda opted to target money supply (Salerno, 1987).

### **Interest Rates**

Generally, a country with a small number of large banks may have low deposit rates. The well known principle is the profit maximising applied by all the commercial banks of Rwanda. Thus, most of banking institutions in Rwanda are commercial with a profit orientation. According to National Bank of Rwanda (2005) those banks which are licensed are Banque de Kigali (BK), Banque Rwandaise de Développement (BRD), FINA Bank Rwanda, Compagnie Générale de Banque (COGEBANQUE), Banque Commerciale du Rwanda (BCR), ECOBANK RWANDA, Banque de l'Habitat du Rwanda (BHR), Banque Populaire du Rwanda (BPR), Urwego Opportunity Bank (UOMB), ACCESS BANK SA, Kenya Commercial Bank (KCB). The afore-mentioned commercial banks in Rwanda define a high lending rate above 17% and fix low deposit rate at least 4% and above taking into account the deposited amount and saving period. Consequently, the high lending rate and low deposit rate noted from the commercial banks lead to high interest rate spread in Rwanda. A similar principle of profit maximising is also noted from microfinance institutions for paying interest to their shareholders.



## Operation Costs

Crowley (2007) states that “high overhead costs in the banking sector might be expected to be associated with higher spread since higher spread would be required to cover the additional costs. Increases in operating costs and salaries would be more closely related to a move towards retail lending”. Also, a high level of salaries may be more associated with other factors such as political pressure and nepotism than overall operating costs. This suggests that in some circumstances higher costs should be welcomed, as in cases where this is due to a movement of the banking sector into retail or small and medium enterprise (SME) services. The operation cost is a combination of different costs such as administrative, tax payments; accounting tax profit margin; loan provisioning and required reserves (Brigo & Mercurio, 2006).

## Time

Barajas, Steiner and Salazar (1999) found that in Columbia spread widened in the 1990s partly as a result of private banks’ greater responsiveness to credit quality and more careful approach to risks. Chirwa and Mlachila (2004) concluded that spread increased in Malawi as a result of financial liberalization, which led to increases in reserve requirements and provisioning. Generally the rates which have long term are more raised than those applied in short term because the risk to be run is high. For example interest rate applied to a 20-year loan in Bank Populaire du Rwanda (BPR) is above 18% interest rate per year; in case of a decrease in inflation this rate will be increasingly heavier on the investor.

## Competition

According to Crowley (2007) in a free-market-oriented financial system spread might be expected to be negatively related to factors affecting competition, including concentration, the number of banks and the size of the market, since reduced competition would allow banks to profit from higher spread. Concentration of the banking sector is probably expected to increase the spread by reducing competition. In countries with a small number of powerful banks, the large banks could restrict competition by keeping spread artificially low. In the case of a large public sector bank there would be less of a profit constraint because the bank could be recapitalized by the government, and even in the case of a large private bank there could be an expectation of assistance when needed.

Policy responses to this result are difficult to determine since there is more than one possible explanation. To the extent that increased spread is a result of banks successfully differentiating their products or their markets in order to gain market power, the authorities would need to be aware of this development in order to take steps to maintain competition, if necessary. Authorities should be alert to the possibility that large banks could stifle competition by maintaining low spread, particularly if they are able to rely on government support when they need it (Crowley, 2007).

# EMPIRICAL ANALYSIS

## Model Specification

The model used in this paper states that interest rate spread (IRS) in function of reserve requirements (RES), discount rate (DISRATE), money supply (M2) and gross domestic product per capita (GDPC). To express the variation in percentages we convert M2 and GDPC into a logarithm and the model will be as follows:

$$IRS_t = \beta_0 + \beta_1 RES_t + \beta_2 DISRATE_t + \beta_3 \log M2 + \beta_4 \log GDPC_t + \mu_t \quad [1]$$

$\beta_1 > 0$  means that the variation of interest rate spread goes in the same direction with the reserve requirements. If the central bank increases the reserve requirement, commercial banks increase the lending rate thereby increasing the interest rate.  $\beta_2 > 0$  implies that when the discount rate is increased by central bank it automatically

affects the increment of lending rate for the commercial banks and therefore the interest rate spread goes up.  $\beta_3 > 0$ : if the money supply increases, the inflation increases too when the GDP remains constant. It implies the increment of interest rate spread.  $\beta_4 > 0$ : the increase in gross domestic product per capita implies the decrease in requesting loans by the household. In order to assess the risk, commercial banks decrease lending rate to attract customers.

## Stationarity Test

The augmented Dickey-Fuller is a test that helps to indicate the length of lags on which a variable is stationary and indicate if a variable is stationary at level or at its differences. Time series are stationary when statistical ADF is greater than critical ADF in absolute value. Fisher test is used to verify the stationarity. Therefore, one needs to compare the critical value with the calculated Fisher value. When the calculated Fisher value is greater than the critical Fisher value, this means that the stationary test is done to the correct time series. If all time series fulfil the condition a model with the greatest calculated Fisher value is selected. This current study results indicate that IRS, RES and DISRATE are stationary at level while LM2 and LGDP are not stationary at level but become stationary at second difference.

## Cointegration

Regression of one time series variable on one or more time series variables can often give nonsensical or spurious results. This phenomenon is known as spurious regression. One way to guard against it is to find out if the time series are cointegrated. It means that despite being individually nonstationary, a linear combination of two or more time series can be stationary. The EG and AEG tests can be used to find out if two or more time series are cointegrated. Cointegration of two (or more) time series suggests that there is a long-run, or equilibrium, relationship between them. Since some of our variables are individually non stationary at level, it has been necessary to test if there is a long run relationship between them by performing a unit root test on the residuals. MacKinnon critical values at the level of 10%, 5% and 1% are -1.6285; -1.9677 and -2.7570 respectively. Therefore residuals are stationary because all the above Mackinnon critical values are lesser than -5.884698, the ADF statistic in absolute value. It is therefore concluded that all variables are cointegrated.

The long run analysis helps one to distinguish between short- and long-run responses of the dependent variable to a unit change in the value of the explanatory variable(s). Furthermore, the response from the long run analysis is considered as optimal equilibrium between IRS and explanatory variables.

**Table 1: Long run results**

Dependent Variable: IRS				
Method: Least Squares				
Date: 10-02-2012				
Sample: 1995 2009				
Included observations: 15				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
RES	0.209375	0.118769	1.762880	0.1084
DISRATE	-0.206312	0.132253	-1.559979	0.1498
logM2	2.851321	1.274629	2.236982	0.0493
logGDPC	-1.928180	1.808988	-1.065889	0.3115
C	-3.525766	8.598566	-0.410041	0.6904
R-squared	0.719708	Mean dependent var		7.480000
Adjusted R-squared	0.607591	S.D. dependent var		0.963031
S.E. of regression	0.603267	Akaike info criterion		2.088289
Sum squared resid	3.639314	Schwarz criterion		2.324305
Log likelihood	-10.66216	F-statistic		6.419264
Durbin-Watson stat	2.716785	Prob(F-statistic)		0.007956

The results provided in Table 1 refer to the particular economy because the coefficients of RES, DISRATE and GDPC are not statistically significant. Normally, the discussed variables explain the IRS. In the case of Rwanda,

the only variable which explains IRS in used model is LM2, when LM2 increases by 1%; the IRS will be affected up to 2.851321 %. The results obtained from this study suggest that M2 which is a macroeconomic policy variable plays a significant role in explaining variations in IRS in Rwanda. The Variable M2 in this study is the most important determinant of interest rate spread in Rwanda. Other coefficients of variables sound no statistically significant due to the following probable reasons: 1) The annual GDP per capita in Rwanda is too small (about 200 USD), comparably to developed countries where the GDP per capita is above 6000 USD. 2) a change in GDP per capita in Rwanda does not imply the change in IRS because the need for loans keeps increasing. 3) There is a no- matured culture of saving and requesting loans noted to Rwandan people.

The reserve requirements have remained constant for 8 years from 2000 to 2008 while IRS kept on changing from year to year which implies a non-significant influence on IRS. The commercial banks do not request much loans from the central bank due to the fact that their customers do not request beyond the banks 'capability which implies a non-significant influence of DISRATE on IRS. In general, this may be due to the inadequacy of the proxies used to represent these variables to accurately reflect the market size, low income and level of competition in relatively under-developed banking sectors.

## Error Correction Mechanism

Section 4.3 and 4.4 showed that the variables used in this paper are cointegrated; meaning there is equilibrium or a long-run relationship between them. Of course, in the short run there may be disequilibrium. The error term is used to tie the short-run behavior of IRS to its long-run value. The error correction mechanism (ECM) which was first used by Sargan (1984) and later popularized by Engle and Granger (1987) corrects the disequilibrium. An important theorem, known as the Granger representation theorem, states that if two variables are cointegrated, then the relationship between the two can be expressed as ECM. By having cointegration between variables, one can treat the residual as the equilibrium error and use it to tie short run behaviour of variable to its long run value. Equation 2 shows the results from estimation of short run relationship.

$$\Delta IRS_t = 0.722 + 0.488\Delta RES - 0.163\Delta DISRATE - 3.53\Delta \ln GPC + 0.543\Delta LM2 - 1.39ECM$$

[2]

t-Values	(2.597549)	(3.561063)	(-1.634673)	(2.752360)	(0.395249)	(-6.391908)
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Statistically, the ECM is significant suggesting that IRS adjust to RES, DISRATE, M2 and GPC with a lag only about 139% of the discrepancy between long term and short term IRS is corrected within 6 months ( $1/0.5/-1.39$ ). IRS was adjusted to four variables rapidly which was obviously corrected within a short time. Per capita GDP and Reserve requirement explain IRS in a short run because of their probabilities 0.0074 and 0.0250 which are lesser than 5%. This means that the increment of 1% on RES lead to the increment of 0.7% on IRS ceteris paribus and the increment of 1% on GPC lead to the increment of 2.5 % on IRS ceteris paribus.

## CONCLUSION

The results clearly indicated that many of the factors commonly believed to be critical determinants of interest rate spread may not, in fact, be relevant to the size of the banking sector spread in Rwanda. Possibly most surprising was the statistical insignificance of the reserve requirements, discount rate, and per capita GDP variables. Although these market characteristics have been highlighted in the literature as determinants of interest rate spread in Rwanda, they were unable to explain the variation in banking sector spread of the low income studied economy. This may be due to the inadequacy of the proxies used to represent these variables to accurately reflect the market size, low income and level of competition in relatively under-developed banking sectors. The fact that three of the four variables in the models used are consistently insignificant should not be viewed negatively, as this allows for more focused attention on the variables most likely to impact on spread. Overall, this study found that the commercial banks fix low rate on deposits which discourage individual savings. It is therefore recommended that the policy of encouraging the Rwandan people to mature their business horizon and work with capital market advisory council should be implemented. In return the government of Rwanda should spur the development of fair lending policy to financial institutions which defines the real time rates of their shares.

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# THE ROLE OF MARKETING IN LEADING ORGANISATIONAL CHANGE: PROSPECTS AND POSSIBILITIES

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## ABSTRACT

*In an era when collaboration is key to business prosperity, the ability to develop one truly coherent and agile brand lived by its employees and delivered to the external stakeholders has become extremely challenging. Unity between the internal brand and a company’s external image, when change is the only constant, has nearly vanished. The marketing function is frequently being underemphasised at the board level. Furthermore existing approach to leading business devalues the importance of marketing and its role in leading organisational change. This paper is about how marketing can partner with organisational leadership for a mutually beneficial exchange of skills and capabilities in order to be able to reinvent organisations rapidly enough to cope with shifts in the external business environment and create a sustainable future for the business. The paper explores the novel concept of “leadership marketing”, which challenges the conventional view of marketing and leadership as two separate fields and offers a holistic approach for business management and brand alignment.*

## INTRODUCTION

This study is aimed at establishing a new transformational concept of leadership marketing, which is based on the integration of the two academic and business terrains - leadership and marketing. Also, the study aspires to explore the role marketing plays in driving organisational change. With the speed of change in the current business environment, marketing practices quickly go out of date if not attuned to market needs. Companies are required to align their internal and external perceptions of the brand with organisational competencies. Prior to determining the role that marketing plays in leading organisational change, the novel concept of leadership marketing needs to be defined. It is also necessary to discover the components and prerequisites for the successful adaptation of leadership marketing. Hence, in order to attain the above stated aims and objectives, the following research questions have been addressed:

- i. What are the determinants of the new leadership marketing paradigm?
- ii. What is the role of leadership marketing in driving organisational change within the business and across its different functions?

## THEORETICAL ISSUES AND CONTEXT

An increasing number of companies are becoming customer-centred as a result of the long-standing recognition of the importance of marketing orientation in today’s highly competitive business environment. Adoption of the marketing concept, based on customer focus and integration of departments, has been accentuated as a foundation for maintaining long-lasting business success (Kohli and Jaworski, 1990). Furthermore, the nature of business has evolved such that companies have realised the significance of internal organisational culture and strong employee relations in achieving sustainable business performance (Carrig and Wright, 2006). From the marketing perspective, employees have become internal customers due to their ability to satisfy the needs of other employees inside the organisation, which is an antecedent to external customer satisfaction. As part of a natural evolution of marketing organisation, customer satisfaction has driven many companies to establish much

closer relationships with their suppliers, partners and others in the supply chain. This in turn has emphasised the importance of collaboration between all the organisations involved in delivery of the final product. As a result, lines between internal and external stakeholders have been blurred a long time ago and the distinction between the two will further lose its clarity. This implies a new way of thinking for organisations to remain successful in the face of advancing competition and new technologies. As business strategies become more complex, “culture is required to grow into the level of complexity required to implement them” (McGuire, et al., 2009).

The notions mentioned above bring out opposite sides of the marketing spectrum whereby external marketing centres around customers by developing an organisation’s outside image, while internal marketing focuses on employees by shaping organisational culture and identity. The link between the two lies with leadership that shapes the way employees perceive the organisation, which in turn influences the projection of the image to external audiences, including customers (Hogg and Carter, 2000). Predictably, the quality of leadership explains as much as 45 per cent of an organisation’s performance (Day and Lord, 1986). The challenge for many companies is to be able to effectively represent and maintain connections between their unique and compelling identity i.e. inside brand, embodied in employee culture, and external organisational image i.e. outside brand, portrayed by the company to its customers and other external stakeholders. Quite a few companies fall short by failing to deliver the brand promise made to target customers and even more fail to effectively adapt to the changes in the business environment and reconfigure their customer value-creating processes to match the new positioning.

Amongst the first to address this were Mark and Pearson (2001) who developed a meaning management framework that uses brand archetypes, whereby brand takes on symbolic significance and becomes an expression of meaning which leads to a consistent message being communicated to external audiences. Speak and Hanson (2008) proposed a neo-brand platform which argues that the brand needs to support employee engagement, i.e. brand inside-building, and exude creative possibilities to capture the fascination of prospective customers, i.e. brand outside-building. Both of these studies approached the problem from the brand management perspective. However, the dynamic nature of the business and ever-changing environmental conditions often demand organisational change which encompasses more than just repositioning of the company’s brand. Such changes often create a need for companies to alter their direction and re-define their value proposition to meet expectations of external stakeholders. The internal organisational environment also requires readjustment to support the creation of customer value internally. As such, marketing leaders’ ability to predict external trends and transform the organisation accordingly becomes imperative in achieving sustainable and superior performance. Given that organisational change and leadership are often studied within a strategic management context, but more seldom within the confines of marketing, studying leadership that is beyond the scope of the board of directors is critical to a better understanding of change management within marketing-oriented organisations. However, the three research streams – marketing, leadership and change – have yet to be integrated.

## **LEADERSHIP AND MARKETING: WHAT LIES WITHIN?**

Almost no academic research has been carried out on the topic of the role of marketing in leading organisational change, despite the long history study in both leadership and marketing individually. The link between the two fields has emerged following the recognition of the importance of continuous organisational development in a constantly changing environment. Many self-published articles of opinion leaders in the field of leadership marketing form a starting point for this research, despite the lack of thorough academic backing. The emerging concepts outlined in these articles are used to lay a foundation for this study and are further enhanced by drawing on an already established pool of academic marketing and leadership knowledge.

However prior to defining the concept of leadership marketing, the definition of the terms involved is provided to ensure uniformity and understanding throughout the study. This will also define the scope and the point of view on marketing and leadership for the purposes of this study. In its basic form, leadership is defined as the process of influencing others to achieve certain goals (Pass at al., 2006). As a personal quality, leadership enables a person to manage, administer, motivate and direct others, as well as earning respect of superiors (Davies at al., 2003). As noted by Drucker (1973) leadership involves “the lifting of a man’s vision, to higher sights, the raising of a man’s performance to a higher standard, the building of a man’s personality beyond its

normal limits". Moving beyond personality, leadership is based on trust and courage to delegate responsibilities to others to fully exploit their potential. Leadership, as a business management discipline, is a recent phenomenon, emerged in the post-war years and took off in the 1970s (Birkinshaw, 2010). On a strategic level, successful leaders "project a clear and consistent picture of a desired organisational identity and put in place conditions that increase the likelihood of desired behaviours through enhanced employee satisfaction" (Bradshaw, 1998). The concept of "transformational leadership" suggest that leaders transform followers' personal values and self-beliefs, move them to higher levels of needs and aspirations (Jung, 2001), and raise the performance expectations of their followers (Bass, 1995). Contemporary views of strategic leadership inevitably revert to Porter's classic "five forces" competition theory, which sees strategists as practitioner economists who analyse and manage market forces, as well as practitioner psychologists who analyse and manage their own and others' thought processes (Gavetti, 2011). Drawing on the Sustainable Marketing Leadership (SML) model, it can be stated that effective leadership rests on four main components – strategic visioning, integrated planning, managing performance and marketing controllership (Shapiro, 2005). Those are enabled by compelling vision, clear organisational identity, effective culture for employee alignment and deep understanding of consumer behaviour to facilitate customer satisfaction. According to Werbach (2009), when leaders at the top "instigate a strategy for sustainability and guide the organisation through the process of increasing transparency, engaging employees, and embracing network partners to accomplish important sustainability goals, they set the conditions to let everyone improve the company's strategy".

With regard to change, which perhaps is the only constant nowadays in the business environment, the true leader sees it as a challenge and the foundation for organisational growth and expansion (Billire, 2009). In choosing strategic direction, leaders are expected to estimate uncertainty and lay out a vision of future events sufficiently precise (Courtney, Kirkland and Viguerie, 1997). However there is a tendency for businesses to rely only on an explicit knowledge of numbers and data, which prevents leaders from coping with change (Nanaka and Takeuchi, 2011); this is because such knowledge is contextual and ignores people's values, goals and relationships. Hence, one of the substantial shifts in creating a sustainable future is that it must extend beyond the company – "it must be about pursuing the common good and serving the higher purpose" (Nanaka and Takeuchi, 2011). The main task of leadership nowadays, as argued by Martin (2007), is to create a space where employees can generate new ideas and departments can work closely together to build an organisation that is effective, agile and more prepared to respond to complex challenges. On the subject of marketing, the American Marketing Association's (AMA) provides an updated definition of marketing as "the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large" (Gundlach and Wilkie, 2009). Furthermore, the Chartered Institute of Marketing, the UK equivalent to the AMA, also revised its definition of marketing as "the strategic business function that creates value by stimulating, facilitating and fulfilling customer demand. It does this by building brands, nurturing innovation, developing relationships, creating good customer services and communication benefits. By operating customer-centrally, marketing brings positive return on investment, satisfied shareholders and stakeholders from business and the community, and contributes to positive behavioural change and a sustainable business future" (Charles, 2007). The modern concept of marketing is based on the idea that a business should discover and then satisfy customer needs rather than focusing on sales of its existing products or services produced without any deep insight into consumers' preferences, wants and desires and do so better than its competitors. What's more, four key areas of marketing competency, as revealed by a recent Accenture survey of 400+ marketing executives, comprise operations, customer analytics, innovation and customer engagement (Smith and Nunes, 2010).

## **LEADERSHIP MARKETING COMPONENTS**

This section presents a combined view on the essential parts of leadership and marketing. Firstly, the importance of marketing orientation and brand image is discussed, followed by the vital components of internal marketing, organisational culture and brand identity. Lastly, major theories on culture and leadership are presented. Many theories have been developed on marketing, nevertheless many researchers agree with Deshpande and Webster's (1989) view of marketing orientation as being: "a shared set of beliefs and values that puts the consumer into the centre of the firm's thinking". While Kohli and Jaworski (1990) define marketing orientation as an activity-based characteristic of the firm, Konopa and Calabaro (1971) and Felton (1959) view it as external consumer orientation, as opposed to product development orientation, and integration of all departmental functions within



the organisation. Along the same line of thought, Avlonitis and Gounaris (1999) stress satisfaction of customer needs and a business ability to adjust products and services as a response to the changes in those needs and wants so as to continue delivering customer value. Even though the main emphasis is still on customer satisfaction, Misiag (2001) defines marketing orientation as an internal driving force that influences not only customers, but also employees of the organisation. Narver and Slater (1990) present market orientation as the form of the organisationally spread culture, which in the most effective and efficient way supports necessary behaviour for the formation of higher value for customers, and by that it forms assumptions for better results of the business.

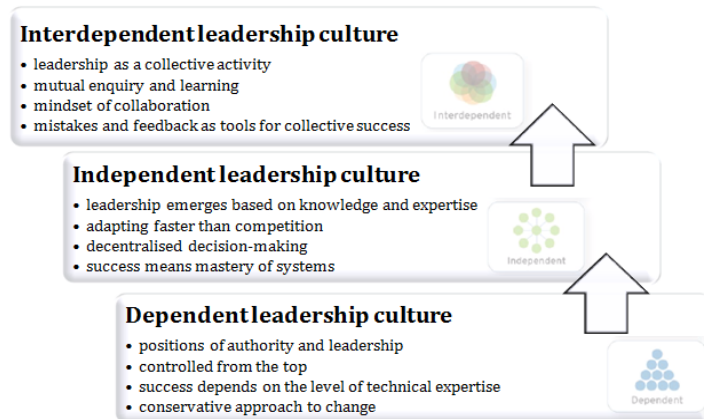
Branding is seen as one of the core elements of marketing which is used to build distinctive brand identities that will be recognised by consumers in increasingly crowded marketplaces (Low and Fullerton, 1994). Amongst many other benefits, a brand's ability to obtain a definite competitive advantage (Kim, et al., 2003) and add financial value (Murphy, 1992) has been widely acknowledged and many brand-building concepts have been developed with this in mind. Beyond a brand name that differentiates one product from others, Boulding (1956) developed the concept of brands as symbolic images. Gardner and Levy (1955) argued that a brand image, which is the external perception of the organisation in the eyes of consumers and other stakeholders, outweighs the significance of the "technical" product features. With differentiation as a purpose of branding, communications refocused on building deeper emotional connection with consumers based on values (Goodyear, 1996) and feelings about the brand (Gardner and Levy, 1955). The brand positioning concept introduced by Ries and Trout (1981) stated that brands create unique positions in consumers' minds through distinctive brand associations. However, as consumer perceptions are continually changing, companies need to focus on building a more stable brand reputation, which represents multiple images over time (Fomburn and Van Riel, 1997). Kapferer (1997) suggested that brand identity – what the brand stands for from the firm's point of view – should take precedence over brand image or how that brand is perceived from an external perspective. This raises the significance of internal communication and employee alignment with an organisation's culture, an important component of brand identity that shapes corporate brand values and plays a unifying role to maintain the consistency of the message (Olins 1995, Mitchell, 1994). On a similar note, Mark and Pearson (2001) addressed the critical need and tremendous opportunity to create, preserve and nurture brand meaning by leveraging its deep archetypal roots. More recent developments included Andersen's (2010) view that branding occurs when the company's projected self-identity aligns positively with the consumer's projection of the company's identity. This resonates with Ind (2007) suggesting that a successful brand's essence extends from the internal vision and values into the external personality and positioning. As a result, strong brand names often are used to support new product launches where consumer perceptions of the original brands are automatically transferred to the extension (Aaker and Keller, 1990; Andersen, 2010).

## **Internal Marketing, Culture and Brand Identity**

Having initially emerged from service industries, internal marketing shapes organisational culture to transform the orientation of the organisation to focus upon employees, who are paramount in delivering the brand to external stakeholders. Internal marketing literature emphasized the crucial element of "communicating by deeds" organisational values and offering employees a clear vision that is worth pursuing (Berry and Parasuraman, 1992). Internal marketing has been suggested as a key instrument to implement successful internal brand building, whereby employees better accept the brand values and align their attitudes accordingly (Vallaster and de Chernatony, 2003). According to Schein's (1992) conception, organisational culture consists of collective assumptions, values and artifacts that are shared by members of the organisation. A company culture is a mix of behaviours and attitudes of those who are part of it; often unsaid, intangible but deeply ingrained and embedded in every individual within the workplace can be summarised as "the way we do things around here" (Jacobs, 2011). Organisations have frequently tried to establish cultures through written rules, policies and procedures, but in so doing misunderstood the whole concept of "culture" and such an approach has potential to adversely affect employee engagement.

Webster and Deshpande (1989) were amongst the first to address the effect of organisational culture upon marketing. Hofstede (1980) and Pfeffer (1997) linked strong culture to high business performance. As proposed by many (Narver and Slater, 1990, Grönroos, 1990), internal marketing nurtures the culture that most effectively and efficiently creates behaviours that lead to the provision of superior customer value and motivates employees toward customer-oriented performance. It ensures that staff understand the brand's promise and can

deliver it thus aligning customer brand expectations with employee performance (Hatch and Schulz, 2003). From this perspective, Jacobs (2003) asserts that a brand represents the relationship an organization has with its employees just as much as it represents the relationship that it has with its customers. Therefore internal marketing and strong employee cultures represent a critical success factor in linking the external and internal view in the organisation (Dunne and Barnes, 2000). A new concept of leadership culture involves the meaning that people make of the organisation and its environment and the tools they have to create shared direction, alignment and commitment throughout the business (McGuire, et al., 2009). A hierarchy of leadership culture developed by Centre for Creative Leadership (CCL) is illustrated on Figure 1.



**Figure 8. Hierarchy of Leadership Culture (Source: McGuire, et al., 2009)**

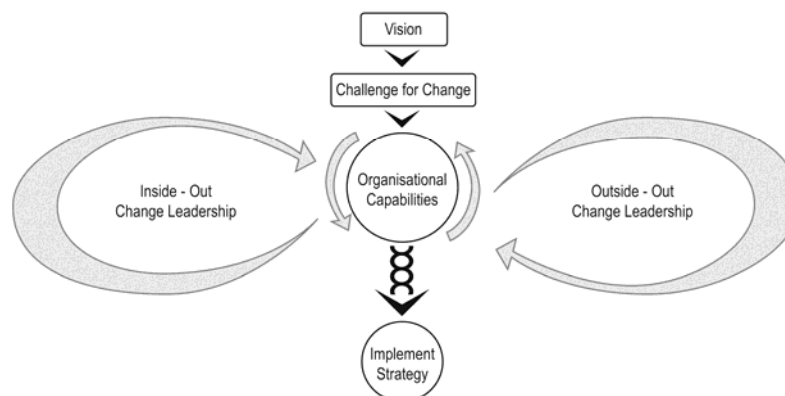
Closely linked with culture is the concept of an organisation's identity, which is defined as "a commonly shared understanding of the values of the firm held by employees". Organisation's image, on the other hand, is the way stakeholders view the firm from an external perspective (Hatch and Schultz, 1997). Although marketing culture is part of the broader corporate culture of an organisation, internal marketing initiative can be a catalyst to reshaping the entire culture within the firm, which leads to much greater integration between departments (Dunne and Barnes, 2000). By changing the attitudes and assumptions of the employees, so to align them with the desired organisational identity, cultural change will ensue. This is the topic of the following section of this study.

## ORGANISATIONAL CHANGE AND LEADERSHIP

Continuous change is a fact of life for organisations - significant shifts in consumer psychology resulting from recent economic turmoil and rapid technological developments are just two major changes that organisation must embrace. Those companies who capture changes in consumer mindset, and consequently transform their core practices are able to benefit from emerging opportunities and potential growth. And so, change places uncertainty in the way of company's strategic development, making it extremely challenging for leaders to predict the future of their businesses accurately enough to choose a clear strategic direction (Courtney, Kirkland and Viguerie, 1997). To successfully embrace change, organisations need to adopt new leadership mindsets, not just new skills (McGuire, et al., 2009). Felton (1956) was amongst the first to recognise that marketing is a very complex management function which is also affected by change. A company's ability to respond continuously to unanticipated changes that impact its performance is referred to as "strategic flexibility" (Evans, 1991, Aaker and Keller, 1990). However, the challenge presented here is how to develop business-wide capabilities that are sustainable in the ever-changing business environment by seeing organisation as a whole and recognising interdependence of its various functions, the view which is rooted in systems theory (Felton, 1959). As was expressed by Collins (2001), marketing is driving organisational change that goes beyond a change programme. For the purposes of this study, organisational change is defined not as an overnight sensation with a moment of breakthrough, but a process of continuous evolution, growth and development. This coincides with Collins' (2001) view on change, which described change not as a change programme with motivational stunts and big turnaround plans, but a rather slow progression with hardly any radical transformation. Organisations seeking to adapt during turbulent times cannot force change through purely technical approaches such as restructuring (McGuire, et al., 2009). One suggestion emerging from recent studies was to develop leadership capability,

which is capacity of the company to sustain its future leaders (Ulrich and Smallwood, 2007). According to the conventional approach, the right business structures ensure efficiencies, innovation and agility for organisations to succeed and sustain (McGuire, et al., 2009). However, in reality, there is insufficient leadership capability, which is evidenced by results of the survey, conducted by the Chartered Institute of Personnel and Development (CIPD) and talent management consultancy DDI – “one-fifth of leaders and HR professionals consider their companies’ leadership development programmes as ineffective” (Stevens, 2011). Moreover, Steve Newhall, managing director of DDI (2011), pointed out that while “identifying and nurturing talent is vital, most of the HR professionals in the UK revealed that they lacked the ability to fill vacant leadership positions”. This raises another challenge for the UK businesses.

At present “the ability to integrate systems, collaborate with partners and coordinate across the supply chain remains elusive” (McGuire, et al., 2009). According to the behavioural model of charismatic leadership (Conger and Kanungo 1998; Conger, Kanungo and Menon 2000), leaders are those who possess high sensitivity to the environment and followers’ needs, articulate an attractive vision for the organization and inspire subordinates to follow their attitudes and behaviours. Sisodia, Sheth and Wolfe (2007) argue that leadership from the top needs to be more inspired and catalytic rather than directive. Leadership provides direction for the whole organisation by creating a compelling vision and inspires the organisational change by motivating employees and convincing them to follow. Thus, leaders play an indispensable role in taking an organisation from where it is now to where it needs to be and instilling into employees the company’s culture, values and vision and continuously communicating these through deeds (Berry, Hensel and Burke 1976; Grönroos 1990). There are emerging views on leadership as a collective activity, rather than individual competency. As evidenced by CCL’s research, a view on leadership as a process that happens throughout the organisation through interdependent decision-making is becoming more dominant as considered with regards to the future (Martin, 2007). As a result of the research, CCL proposed a model, illustrated on Figure 2, for building shared direction, alignment and commitment by way of reaching the balance between inside-out leadership and outside-in management.



**Figure 2. Inside-Out Change Leadership Model (Source: Martin, 2007)**

However Ulrich and Smallwood (2007) went further to develop a concept of “leadership brand”. It argues that successful leadership requires identity of leaders throughout an organisation that bridges customer expectations and employee and organisational behaviour. Leading by example and inspirational communication are the key to persuading others to accept and support an organisation’s new direction and creating a culture conducive to change (Kotter, 1995). Unsurprisingly the nature of effective leadership is changing in itself. CCL’s research substantiated that flexibility, collaboration, cross boundaries and collective approaches to leadership are rising in significance as a response to challenges that are greater than individual’s own capabilities (Martin, 2007). As a result, relationship-building and change management skills escalated in importance replacing such traditional skills as resourcefulness and decisiveness. Marketing leaders’ concern over culture and their role in shaping it within their marketing teams - and even organisation as a whole - enables them to play a central role in driving the growth and success of the business (Brand Learning, 2011). Strategy will not succeed in a void, and leadership often makes the difference between merely reaching for great opportunities and actually realising their potential (Hsieh and Yik, 2005).

# RELATIONSHIP BETWEEN MARKETING AND LEADERSHIP

With an aim to integrate the roles of marketing and leadership in organisational change, an initial definition of the new concept is presented based on the theoretical foundation suggested by the literature review. Consistent with the assumption that marketing orientation initiates brand leadership in the market place and creates an internal brand culture amongst employees, the financial value of branding, inspired leadership and strong employee relations was proven in previous research (Kim, et al., 2003, Murphy, 1992; Rajagopalan and Spreitzer, 1997; Heskett, et al., 1994; Carrig and Wright, 2006; Day and Lord, 1986). While executive leadership has received significant attention in literature on organisational change (Kotter, 1995; Wu, et al., 2007; Elias, 2009), research on the role of internal marketing remains unclear, focusing more on employees' perspectives on organisational commitment and job motivation (Vrontis, et al., 2010). Furthermore, absent is research that integrates marketing, leadership and change. Companies that work in a networked or cross-functional manner are delivering their brand promise in a more holistic way. Hence, leadership becomes naturally crucial in creating alignment across the different functions of the organisation. The beliefs that drive leadership behaviours within the organisation need to ally with the operational business strategy (McGuire, et al., 2009). According to Maritz research sponsored by the Chartered Institute of Marketing, many respondents felt that having a brand-literate CEO is a massive benefit in aligning the company to the brand (Brooke, 2002). As marketing's scope goes beyond a department and drives the whole business (Kotler, 2001; Brooke, 2002; Brand Learning, 2011), marketing serves as an integral link between external branding, by building organisational image in the minds of consumers, and internal culture, by shaping brand identity amongst employees. An ability to create brands through people is highly enhanced by leadership capabilities of those marketers.

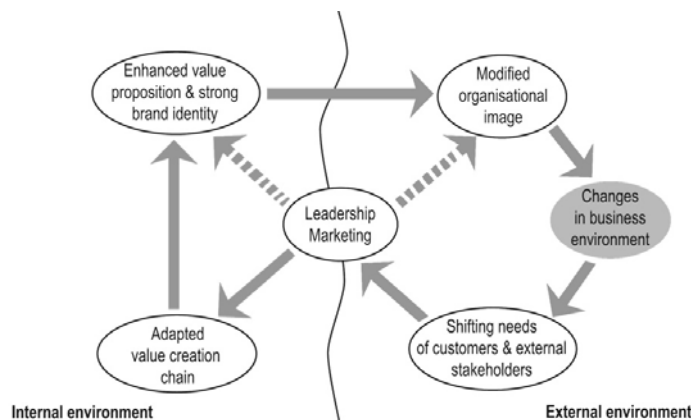
Leadership shapes the way employees view their organisations, which in turn influences the projection of the brand to customers. As was proven by previous research, the quality of an organisation's leadership accounts for almost half of its performance (Day and Lord, 1986). Other research, carried out by CIPD, highlighted three drivers of leadership quality - leadership development, talent managements and management culture (Stevens, 2011). In light of its definition, marketing is undoubtedly relevant to research on organisational change and should be an integral part of organisational change. This represents a promising area that deserves further investigation. Drucker was one of the first to refer to marketing in the context of leadership. In particular, he described leadership as a marketing job, which meant that "leaders must know and understand those they lead, and lead in way followers would relate to" (Cohen, 2010). However, he did little to develop this concept. Drucker's far-reaching idea was explicitly grounded in the following statement - "good leadership is essentially marketing". Deeply rooted in the concept of leadership marketing is the belief that marketing revolves around the customer, and insight generation and brand development play significant part, but leadership is needed to "engage the functions outside marketing that play a role in creating products, services and brand experiences that engage customers, earn their respect and retain their loyalty" (McGrath, 2009). With the emergence of the network society and collaboration, this view expands further beyond the organisation to its external network of partners - customers, suppliers and agencies – and, therefore, is of increasing significance. Radcliffe (2008) sets out three leadership challenges that marketing leaders should embrace - firstly, having a clear sense of purpose and vision of the company's future; secondly, the ability to engage with employees and partners to create that future, and thirdly, the capability to deliver the strategy in practice. This shapes the essence of the leadership marketing concept.

## LEADERSHIP MARKETING VS MARKETING LEADERSHIP

There are two terms "marketing leadership" and "leadership marketing", which sound very similar and can easily be confused, but have a completely different meaning. To ensure clarity between those two, a clear distinction needs to be made. Marketing leadership was a significant topic of the research back in 20<sup>th</sup> century, when automation and technological development were driving change in the business environment and the emphasis was only beginning to shift from production to marketing; back then, the idea of marketing leadership was gaining momentum, as it ascertained the importance of marketing for the success of any company, especially at the times of constant change. Marketing leadership emphasised the dynamism of marketing and evolved around a need "to see the enterprise as a whole and to understand how the various functions of the

company depend on one another” (Felton, 1956). This formed a foundation for what is now known as a “holistic view of the organisation”.

On the other hand, leadership marketing, which is the sole focus of this study, is an entirely distinct subject. Leadership marketing is a novel concept, and as it was not researched previously, there is no exact acknowledged definition of the term. Therefore, one of the aims of this study was to define “leadership marketing”. Based on the secondary research of the extant models and theories on leadership, marketing, culture and change, a comprehensive overview of leadership marketing concept is illustrated on Figure 3. Specifically, it proposes that marketing acts as an agent of change by being first to spot changes in the external environment and understand trends in the industry e.g. changes in customer needs, economic climate, new technology. And then, together with other departments, e.g. production, IT and research and development, create solutions to address those changes.



**Figure 3. Theoretical Model of Leadership Marketing**

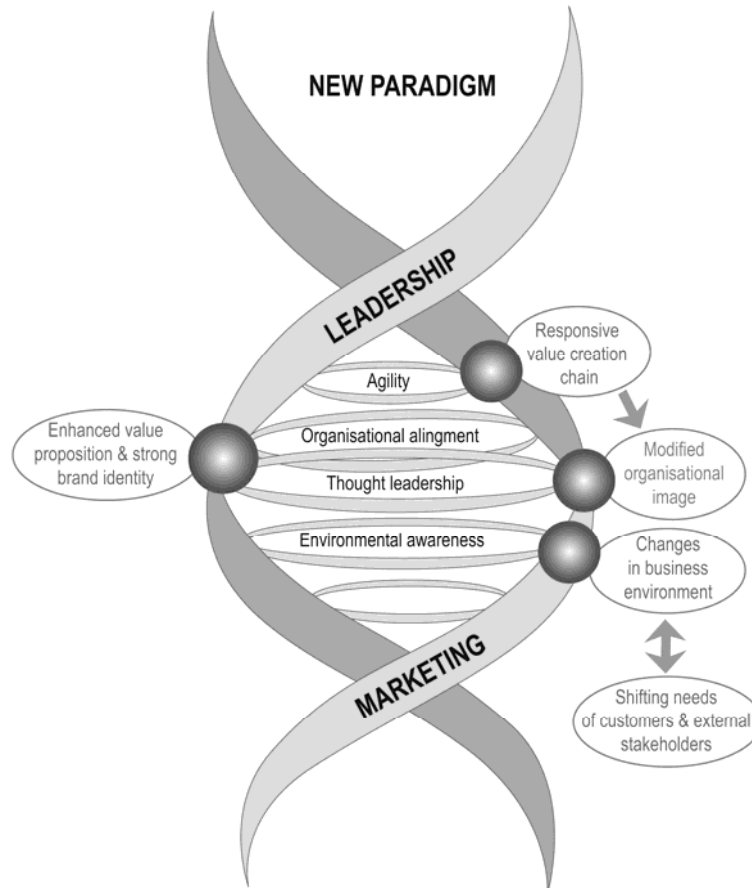
The process starts with changes in the business environment, which necessitate repositioning of the company’s external brand and often result in a need for realignment of the internal brand and culture amongst employees to reflect modified external image of the organisation. This consequently generates strategic change for the business. In particular, the theoretical model suggests that leadership marketing mediates the relationship between external positioning of the organisation and its internal culture and employee relations. These relationships and their underlying principles were further explored as part of primary research, which follows.

## CONCLUSIONS AND IMPLICATIONS TO MANAGEMENT

This study reveals that with the speed of change in the current business environment, marketing strategies quickly become out of date if not tuned in to market needs. While leadership develops employees to help organisation to adapt to external changes, marketing has external focus on the customer. The challenge that businesses need to address, as indicated in this study, is how to create alignment between organisational competencies and customer needs. Furthermore, it was discovered that internal and external perceptions of the brand need to be identical to ensure desired performance levels. As a result of the research, organisational alignment, agility and environmental awareness were established as key determinants of the new leadership marketing paradigm. It was also recognised that marketing drives change by anticipating future customer needs and communicating this information internally to adapt the organisation to the shifting business environment. Consequently, with the findings comes the challenge: conventional marketing lacks credibility and authenticity according to both - internal views of the leadership team and external views of customers – to lead the organisational change. Revolution of marketing itself is crucial for the discipline to regain its importance and respect within organisations. To achieve this, marketing needs to form a closer relationship with leadership by way of marketers becoming better leaders within their organisation as well as marketing gaining more significant presence at the top management board and having its own voice.

What follows is a framework for determining fundamental components of leadership marketing and essential interrelations of those elements with surrounding environment and stakeholders (see Figure 4). Based on

existing academic marketing and leadership theories and primary research findings, the framework represents the DNA of the new leadership marketing paradigm. It allows organisations to adapt the concept of leadership marketing internally, enables modification of its constituents and to tailor corporate strategy according to changes in external business conditions. Environmentally-aware, adaptive organisations, that deliver holistic consumer experiences and coherent messages to the market, reach high levels of creativity, alignment, innovation and collaboration, which helps everyone within the organisation to make a leap in a way that wins for the business.



**Figure 4. New Leadership Marketing Paradigm DNA**

Throughout this study it was recognised that strong leadership and effective marketing are equally necessary for sustainable development of the organisation. Both of them are indispensable, but nonetheless insufficient in today's rapidly changing environment. For that reason, organisational ability to adapt to those changes was identified as another crucial capability. As the new leadership marketing paradigm offers a whole systems approach that strengthens the link between marketing and leadership and also enhances organisational agility, encouraging leadership marketing within the organisation will help the business to overcome its marketing challenges. Unified brand message, motivated employees and innovative ideas will be promoted to differentiate the company and create a holistic consumer experience and get customers believing in a brand and its reputation. The main recommendation from this research is that organisations need to challenge the conventional role of marketing within the business and look for innovative ways of adapting the new leadership marketing paradigm. From the marketing perspective, leadership is necessary for creating engagement and driving change. Thus, one of the recommendations to marketing professionals is to develop leadership skills in order to fulfill their roles in the organisation more successfully and help the organisation to achieve its commercial goals. This in itself will become a catalyst for revolution of marketing and the role it plays in business, challenging the conventional view on marketing and raising awareness of the new paradigm.

From the leadership perspective, the importance of marketing needs to be formally and truthfully recognised by giving marketing a place on the board of management. In the last few years, marketing has lost its

significance due to the perception of being content-driven and not having its own voice and, hence, credibility, while other business areas such as finance and operations have grown in importance. Leadership needs marketing as it focuses on understanding the market and being in tune with the customers' desires. Leadership relies on marketing to anticipate changes in consumer needs, identify opportunities for business success and deliver products or services in the most effective and profitable way for organisation and the customer. The companies need to understand the dynamics of their organisation and how its various parts interconnect between themselves and external environment. The leadership marketing DNA model suggests the possible components and interaction between them as well as with the external environment. This allows for greater organisational agility to be developed as well as alignment of the internal and external view of the brand. By breaking silo barriers between the departments and increasing cross-functionality, organisations obtain a view of the bigger picture, enhance collaboration, mutual sharing of accountabilities, transparency and teamwork between its employees. It will also allow businesses to use resources collectively and innovatively to differentiate themselves in communicating and meeting customer needs. Furthermore, change in remuneration and bonuses is needed, by way of performance review being based on aligned goals and elimination of silo budgeting.

Marketers need to spend more time working with teams and be interested in engaging with other departments, which may lead marketing to the higher echelons of the organisation, granting it more power and gaining more respect on the board of management. Leadership marketing creates a vision about the development of the marketing function within the organisation and chooses efficient ways to implement it by getting other departments aligned. Marketing needs to rebuild its credibility by communicating with authenticity, transparency and meaning. Vision of how marketing operates as a whole comes from greater understanding of consumer values and experiences. Marketing enables shared understanding across the leadership team about customers, strategy and markets and how they all operate in a coherent way. Modern brands need to remember that nowadays customers appreciate collective experiences over individual ones - everything that the company does takes place in networks. This study offers a contribution that marketers may consider in managing their function, and to a certain extent, the whole business. Throughout this study, a pressing need for change in business management as well as marketing was recognised. Numerous benefits of adopting the new leadership marketing paradigm were also named. Effective integration of various organisational and marketing components results in greater responsiveness of the business to the changes in the external environment, as well as successful alignment of employee perceptions to customer perceptions of the brand. The current study highlights the need for marketers to develop leadership skills, such as those mentioned above, to fulfill their role within the organisation. By being a leader in marketing and promoting marketing so as to achieve leadership in the marketplace, organisations embrace the new leadership marketing paradigm. Leadership needs to be more involved in marketing and marketing needs to make more leadership decisions. Organisations need to ensure alignment of vision and integrity of marketing with company's values and direction - marketing is required to have sound awareness of market needs and, through leadership, to align company's vision with the marketing message and demonstrate integrity in doing so. The leadership marketing paradigm ensures strong awareness of leadership and marketing alignment within the business. It is a mindset of the way organisations can operate, combining leadership and marketing at a senior level.

To successfully adopt leadership marketing so to stay abreast of changes, the organisation's leadership needs to connect and empower marketing to transform and engage other functions and partners. Marketers should create a desire for change and also give the opportunity and resources for other departments to change in order to shift employees' behaviour. By addressing the point about redefinition of marketing, it should be recognised that leadership marketing involves shifting mindsets in its essence. It sets the tone and drives change, gets people on board and inspires them to lead the challenge, facilitating change of organisational culture to enable delivery of brand promise internally and externally. Leaders should bring in new ideas and have awareness of what is happening outside, and marketing needs to be creative in proposing ways to reach the market. Marketing is a catalyst of organisational change and should get other departments to buy into the changes and incorporate them into corporate strategy and activities. As previously mentioned, marketing should integrate more with other departments and adapt business internally by changing its offering externally. Ensuring that organisation has a united view on how it works with suppliers, partners and customers will assist in aligning value-creation chain with perceptions of external stakeholders. It is necessary to connect organisational culture with the desired creative evolving strategy, which is based on listening, awareness and anticipation of clients' future needs. Organisations need a leadership marketing approach to ensure that a company offers a clearly defined product or service, which is aligned with the company's vision and values and meets the needs of customers, and where the message is clear for both employees and potential buyers alike. Thought the mindset of leadership marketing, organisations can deliver

from the customer perspective by ensuring congruity between the way employees and customers perceive the brand. To strengthen the connection between internal employees' attitudes and external appearances of the brand to customers, organisations should analyse gaps in stakeholders' perceptions of the brand and use tailored marketing communication to translate brand values into customer experiences. Regular communication is necessary with an aim of aligning visions and building bonds between departments to ensure cohesive delivery of brand promise.

## FUTURE RESEARCH DIRECTIONS

This research has covered vital aspects related to the role of marketing in leading organisational change within a number of UK-based enterprises operating in a range of industries. However, due to limited time and resources, the research was not able to explore and analyse the opinions of a greater sample of marketing and leadership professionals. As this study introduced a novel concept of leadership marketing, information sources were limited and hence there was a higher reliance on extant conceptual theories. However, the amount of data collected on investigation of organisational change can be broadened to allow fuller exploration of some aspects, as well as the provision of practical examples and case studies to enhance the point. Additionally, quantitative research to justify the applicability of the findings to other organisations is necessary. Due to the exploratory nature of this research, further qualitative studies on the subject of the leadership marketing concept and quantitative studies on the impact of practical implementation of a new leadership marketing paradigm and implications for B2B and B2C organisations could be pursued as topics for independent research.

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# HOSPITALITY COMPETITIVENESS MEASUREMENT SYSTEM

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## ABSTRACT

*Many hotels around the world, such as the ones in Morelia, Michoacán, Mexico, are essentially family businesses that need to develop and improve their managerial skills in order to face competition from chain hotels and franchises. Mostly of these hotels have a small percentage of foreign tourists, offer standard lodging service, and lack training and information management tools for their decision-making processes. For these hotels business relationship should be a priority and not the sentimental or family issues that lead to centralized, intuitive, and reactive decisions. At the same time, hotel chains and franchises need to improve their systems and procedures in order to compete in many countries with a successful business model, so it is necessary to measure their efforts and contrast its own performance with the rest of the competitors. The research answers the following questions: Which variables must be monitored by hotels in order to design a competitiveness measurement system? How can hotels develop a competitiveness measurement instrument that provides useful information for managerial activities and decisions? This paper offers a hospitality competitiveness measure system with administrative recommendations for a hotel or an entire hospitality industry.*

## INTRODUCTION

Competitiveness must be understood as the ability of an organization, public or private, profitable or not, to obtain and maintain comparative advantages that enable it to achieve, sustain and improve a specific position in the socioeconomic environment. The term competitiveness is used in business to consider how to plan and develop any business initiative, which causes an evolution in the business model and its owner's job. (Porter, 2005)

Hotels are important for their employment contribution and for their indirect effects on the environment. The presence of a hotel in a given area can support the development of additional tourism, improve the welfare of the people in the tourist influence areas, and revitalize a number of economic activities that could disappear without the presence of the hotel. It is relevant to ask: Which are the variables that must be monitored by the hotels in order to design a competitiveness measurement system? With this system hotels will be able to improve their performance.

The "Hospitality competitiveness measurement system" was applied in hotels in Morelia, Michoacán (Mexico), but the purpose of this paper is to extend it to any other hotel or hospitality industry around the world. It identifies efficient management practices performed by the owners and managers to be reflected in their level of competitiveness, impacting economic and social development. It is important to mention that in this paper we will use data from the hotels of Morelia, Michoacán. The research identifies the forces and constraints for competitiveness generated by managerial practices, such as evaluating if the objectives and goals of the hotels are measurable and well communicated, if managers plan effectively at different levels, and if the job specifications and descriptions are clear. Within the marketing aspect the following will be analyzed: the practice of market segmentation, the positioning of the hotel, the way sales activities are performed, and if there is an effective strategy for promotion and advertising. In terms of infrastructure, the research considers the facility's conditions, equipment, and how the organizational structure allows optimal processes that influence in the

quality of services offered, as well as the training and administrative measures that develop technological skills and the information systems that generate indicators useful in the competitiveness improvement process.

## TOURISM AND HOTELS ENVIRONMENT

In 2010, world tourism recovered more strongly than expected from the shock it suffered in late 2008 and 2009 as a result of the global financial crisis and economic recession. Worldwide, international tourist arrivals reached 940 million in 2010, up 6.6% over the previous year. Asia and the Pacific (+13%) were the first regions to recover and among the strongest growing regions in 2010. Africa maintained growth (+7%) and the Middle East returned to double digit growth (+14%). While the Americas rebounded (+6%) from the decline in 2009, Europe's (+3%) recovery was slower than in other regions. International tourism receipts are estimated to have reached US\$ 919 billion (693 billion euros) in 2010, up from US\$ 851 billion (610 billion euros) in the previous year. When ranked according to the two key tourism indicators – international tourist arrivals and international tourism receipts – it is interesting to note that eight of the top ten destinations appear in both lists, even though they show marked differences in terms of the characteristics of the tourists they attract, as well as their average length of stay and their spending per trip and per night. The two countries that are missing are Malaysia and Mexico, in 9<sup>th</sup> and 10<sup>th</sup> place on arrivals, but they face the challenge of becoming an attractive destiny for the tourism that spends a relevant amount of money on their trips. An important fact for this goal is the lodging infrastructure and the networking between tourism services providers. (World Tourism Organization, 2011)

**Table 1: International Tourist Arrivals**

Rank	Country	Million		Change (%)	
		2009	2010	2009/2008	2010/2009
1	France	76.8	76.8	-3.0	0.0
2	United States	55.0	59.7	-5.1	8.7
3	China	50.9	55.7	-4.1	9.4
4	Spain	52.2	52.7	-8.8	1.0
5	Italy	43.2	43.6	1.2	0.9
6	United Kingdom	28.2	28.1	-6.4	-0.2
7	Turkey	25.5	27.0	2.0	5.9
8	Germany	24.2	26.9	-2.7	10.9
9	Malaysia	23.6	24.6	7.2	3.9
10	Mexico	21.5	22.4	-5.2	4.4

Source: World Tourism Organization (UNWTO), 2011.

**Table 2: International Tourist Receipts**

Rank	Country	US(\$)				Local Currencies	
		Billion		Change (%)		Change (%)	
		2009	2010	2009/2008	2010/2009	2009/2008	2010/2009
1	United States	94.2	103.5	-14.7	9.9	-14.7	9.9
2	Spain	53.2	52.5	-13.7	-1.2	-9.0	3.9
3	France	49.4	46.3	-12.7	-6.2	-7.9	-1.3
4	China	39.7	45.8	-2.9	15.5	-2.9	15.5
5	Italy	40.2	38.8	-12.0	-3.6	-7.2	1.4
6	Germany	34.6	34.7	-13.2	0.1	-8.5	5.3
7	United Kingdom	30.1	30.4	-16.3	0.8	-1.3	1.7
8	Australia	25.4	30.1	2.5	18.6	10.3	0.8

9	Hong Kong (China)	16.4	23.0	7.5	39.5	7.0	39.8
10	Turkey	21.3	20.8	-3.2	-2.1	-3.2	-2.1

Source: World Tourism Organization (UNWTO), 2011.

World Tourism Organization research “Tourism 2020 Vision” projects that international arrivals are expected to reach nearly 1.6 billion by the year 2020. Of these worldwide arrivals in 2020, 1.2 billion will be intraregional and 0.4 billion will be long-haul travelers. East Asia and the Pacific, South Asia, the Middle East and Africa are forecasted to grow at over 5% per year, compared to the world average of 4.1%. More mature regions in Europe and the Americas (including Mexico) are anticipated to show lower-than-average growth rates. Europe will maintain the highest share of world arrivals, although this share will decline from 60% in 1995 to 46% in 2020. (World Tourism Organization, 2011)

"There are 5 forces that are driving firms and sectors at their global business operations: political, technological, market, costs, and competitive. Competition is stronger, and companies in newly industrialized or developing countries have the necessity and opportunity to enter in the world market". And the hotel industry is not the exception; hotel chains and franchises have begun their expansion process. The traditional family hotels businesses must develop and improve their management skills in order to face competition from chain hotels, at the time they are trying not to be displaced from a lodging business that is growing around the world. (Bell, McCulloch, Frantz, Geringer, Minor, 2004)

As an example, the hotel industry in Morelia, Michoacán, Mexico is made up mostly of family businesses, not franchises, so the implementation of quality systems is not institutionalized and procedures and manuals are hard to follow. It is a common practice to use a quality label that certifies the hotel operations, but without specific criteria. Also there is a high personnel turnover, in which an employee working in one hotel is able to find a job at another one in the best of cases.

In some countries there are a few educational institutions concerned with tourism and hospitality, so they use their empirical knowledge to function, while at the same time there is a lack of coordination to organize and avoid tourists cannibalism and clumping, and to provide useful information for decision making processes. It was not until 2006 that researches in Morelia concerning tourist profile were performed, and their results began to be exploited by the hotel managers.

## DETECTED PROBLEM

Many hotels around the world, such as the ones in Morelia, Michoacán, Mexico, are essentially family businesses that need to develop and improve their managerial skills in order to face competition from chain hotels and franchises. Most of these hotels have a low share of foreign tourists, offer a lodging standard service, and have a lack of training and information management tools for their decision-making processes. For these hotels business relationship should be a priority and not the sentimental or family issues that lead to centralized, intuitive, and reactive decisions. At the same time hotel chains and franchises need to improve their systems and procedures in order to compete in many countries with a successful business model, so it is a necessity to measure their competitiveness effort to contrast it with its own performance and with the rest of the competitors.

## Research Questions

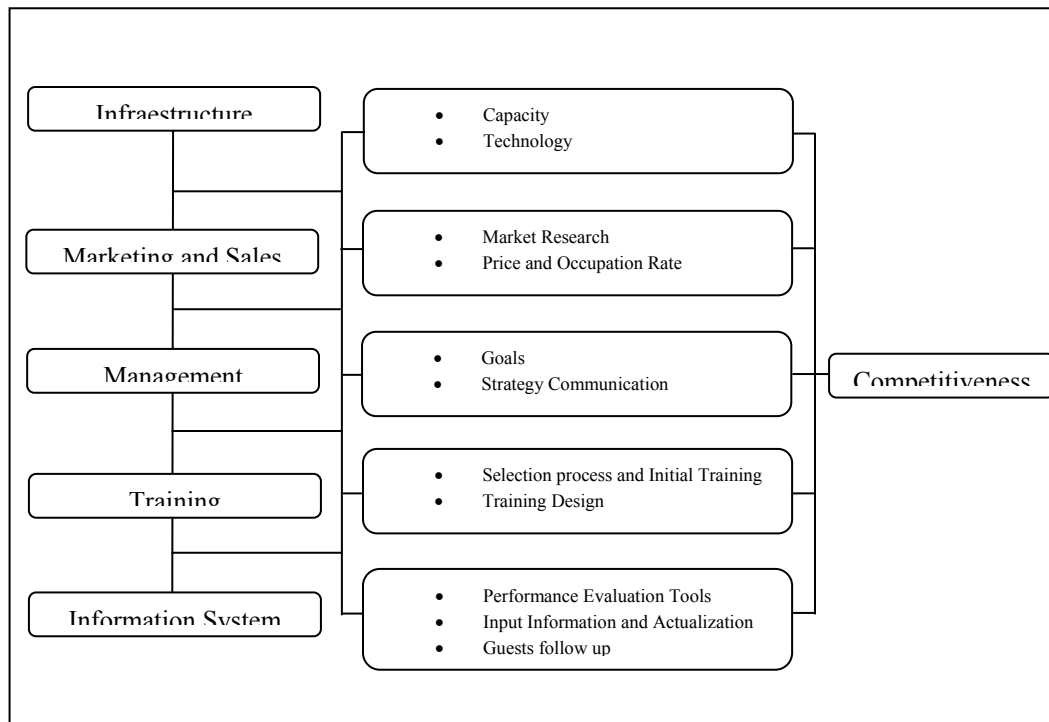
Which are the variables that must be monitored by the hotels in order to design a competitiveness measurement system?

How can hotels develop a competitiveness measurement instrument that provides useful information for managerial activities and decisions?

## COMPETITIVENESS VARIABLES

The diagram below shows the relationship between the independent variables: infrastructure, marketing and sales, management, training, and information system, with the dependent variable, competitiveness. These variables were determined by a focus group study including the participation of hotel owners, managers, tourism authorities, and the Tourism Sub secretary of Michoacán State in Mexico.

**Figure 1: Competitiveness Variables Diagram**



Source: Own elaboration.

## COMPETITIVENESS MEASUREMENT INSTRUMENT

For each hotel to obtain information, data must be gathered using a questionnaire consisting of 36 Likert Scale affirmations under the following structure:

- Six questions are related to the hotel infrastructure, capacity, level of customer service and the technology used in their processes.
- Ten questions examine the hotel marketing and sales activities, such as market research practices, guests' segmentation, prices, advertising and promotional strategy, and their after-sales follow-up activities.
- Five questions are related to management practices of the owners and managers of hotels, considering the establishment and communication of strategies and goals, the degree of involvement of managers in planning, organizational structure and the definition of staff roles.
- Eight questions consider the training provided by the hotel to its staff regarding its selection system and initial training, design, content and duration of the training programs, performance measurement indicators, staff turnover, and its remuneration system.
- Six questions refer to the information system used by the hotel and its ability to measure the performance of the organization, the use of reports for decision making processes, practices to obtain input data, data mining, and to solve complaints.

## Data Analysis

In order to establish the hotel administrative practices that promote competitiveness, the responses are ranked according to the Rensis Likert scaling system. An affirmation is presented to the participant to evaluate his



reaction by choosing one of the five-point scale. Each point has a numeric value. The participant obtains a score with respect to the claim and a total score is obtained by summing the scores of all claims. (Hernandez Fernandez and Baptista, 1998, p. 256)

**Example Question 1: The hotel has a complete infrastructure to fully satisfy the needs of its customers**

Strongly agree	5
Agree	4
Neither agree nor disagree	3
Disagree	2
Strongly disagree	1

The questionnaire consists of 36 questions: 35 related to the independent variables and 1 question regarding the dependent variable, with the maximum score for an affirmation of 5, and therefore the maximum total score is 180 ( $36 * 5$ ), and the minimum value in the scale is 1, resulting in a minimum total score of 36 ( $36 * 1$ ). The score interval is between the extreme values of 36 and 180.

For each variable are defined dimensions and for each dimension are established indicators considered in the Likert scale.

To analyze the hotel competitiveness performance, the following semaphore chart, which considers the score range for each variable, has been developed.

- Green zone: The hotel has a good performance in the variable.
- Yellow zone: The hotel has a regular performance in the variable.
- Red zone: The hotel has an improvement opportunity in the variable measured.

**Table 3: Competitiveness Semaphore Chart**

Variable	Minimum Score	Maximum Score	Score Range	Green Zone	Yellow Zone	Red Zone
Infrastructure	6	30	(6-30)	(24-30)	(13-23)	(1-12)
Marketing and Sales	10	50	(10-50)	(40-50)	(21-39)	(1-20)
Management	5	25	(5-25)	(20-25)	(11-19)	(1-10)
Training	8	40	(8-40)	(32-40)	(17-31)	(1-16)
Information System	6	30	(6-30)	(24-30)	(13-23)	(1-12)
Competitiveness Personnel Impression	1	5	(1-5)	(4-5)	3	(1-2)
Hotel Competitiveness	36	180	(36-180)	(144-280)	(73-143)	(1-72)

Source: Own elaboration.

For the following recommendations, were reviewed the competitive hotel models developed by: Michael D. Hartline, Barbara Ross Wooldridge, y Keith C. Jones (2003), Paul A. Phillips (2004), Rodríguez y Espino (2006), Sharlene Anderson and Chris Guilding (2006).

According to the hotel results, the managers must take into consideration the following recommendations.

**Table 4: Actions to improve competitiveness**

Variable	Green Zone Score	Recommendations	Yellow Zone Score	Recommendations	Red Zone Score	Recommendations
Infrastructure	(24-30)	1) Identify new infrastructure and technology that the hotel must have in order to continue with its advantage.	(13-23)	1) Compare the hotel infrastructure and technology with its competitors. (Benchmarking) 2) Actualize the infrastructure needed	(1-12)	1) Verify all the lack of infrastructure and technology that the hotel presents.

		2) Promote infrastructure as one of your competitive advantages. 3) Learn from the infrastructure and technology that other hotels around the world may offer.		for the essential processes and services for the hotel. 3) Actualize the technology needed for the essential processes and services for the hotel.		2) Acquire the infrastructure needed for the essential processes and services for the hotel. 3) Acquire the technology needed for the essential processes and services for the hotel.
Marketing and Sales	(40-50)	1) Verify if you could attend new market segment(s) for your hotel. If possible initiate efforts with a new business concept. 2) Continue with your market research and verify if an expansion strategy is appropriate. You may franchise or perform a joint venture. 3) Continue with the marketing and sales training program. 5) Diversification of your hotel may be an option. 6) Keep the improvement in your internet hotel access. 7) Improve the frequent program for your guests and surprise them.	(21-39)	1) Verify the market segment(s) for your hotel, may be you have an opportunity in a new segment. 2) Increase market research periodicity and verify your marketing mix. 3) Verify your marketing and sales force organizational design. There could be some areas where you need to concentrate efforts. 4) Actualize the training program for your marketing and sales personnel. 5) Review your price strategy; you may be out of market. 6) Verify the goals, positioning strategy, budget and media mix of your marketing plan. 7) Verify if you offer a frequent program for your guests. 8) Identify prospects for the low demand period. 9) Review your internet site and improve its capacity to perform sales on the web.	(1-20)	1) Identify the market segment(s) for your hotel. 2) Perform a market research to generate an effective marketing mix. 3) Review your marketing and sales force organizational design. 4) Design a training program for your marketing and sales personnel. 5) Review your price strategy. 6) Generate a marketing plan which includes: goals, positioning strategy, budget, media mix, and internet access. 7) Design a frequent program for your guests. 8) Identify prospects for the low demand period.
Management	(20-25)	1) Look for new strategies to maintain your leadership in the market. 2) Continue measuring the performance of the hotel managers and employees. 3) Verify if you may perform an integration, diversification or expansion strategy to get into new markets.	(11-19)	1) Verify the hotel goals and objectives. Make sure all the hotel employees know them. 2) Identify if you have a manager problem at a specific area. Design a continuous improvement plan. 3) Verify the strategic plan is designed with the participation of the personnel. 4) Verify there is a relation between the responsibilities of each employee and the remuneration system. 5) Verify the hotel's organizational chart and make a restructure if necessary. 6) Develop a recognition program for employees' improvements.	(1-10)	1) Clarify the hotel goals and objectives. Review your mission and vision. 2) Verify the performance of the hotel managers. 3) Generate a strategic plan and communicate it to all the personnel. 4) Communicate the job description and responsibilities to each employee. 5) Verify the hotel's organizational chart and make a restructure if necessary.
Training	(32-40)	1) Continue with your training effort. Identify new knowledge, and capacities that your personnel may need to develop. 2) Develop training programs for both executives and employees. 3) Promote the relation between the remuneration system and the performance indicators.	(17-31)	1) Actualize your training courses with content provided by your clients and workers. 2) Use internal and external instructors in the training program. 3) Review the coordination between the hotel goals and its remuneration system. 4) Verify learning objectives, trainers and duration of your training program. You may have an opportunity to train your personnel more frequently in important hotel processes.	(1-16)	1) Design a useful training program. Verify learning objectives, trainers and duration. 2) Hire trainers with experience. 3) Generate a remuneration system, paying attention to the performance indicators. 4) Provide an initial training to your new workers.
Information System	(24-30)	1) Make the hotel information system a competitive advantage. 2) Continue with your data mining activities to follow up the hotel guests. Perform a penetration strategy.	(13-23)	1) Verify if the information system and its reports are useful and opportune for your managers. 2) Verify the data mining activities to follow up the hotel guests. You may have the information, but it has no use purpose. 3) Redesign the information system if necessary.	(1-12)	1) Develop an information system for managers with useful and opportune reports. 2) Perform data mining activities to follow up the hotel guests. 3) Consider input data of the hotel main processes and activities for the information system.
Competitiveness Personnel Impression	(4-5)	1) Competitiveness as an important aspect for your hotel, managers and employees know it. Continue with this practice.	3	1) Verify competitiveness as an important aspect for your hotel. Develop a strategic plan with the participation of managers, employees and clients if possible.	(1-2)	1) Determine competitiveness as an important aspect for your hotel. Everybody needs to have conscious of competitiveness and his job.

Hotel Competitiveness	(144-280)	Overall evaluation score. Your hotel is competitive. Its main goal is to maintain its competitive advantage. Keep in mind that what was successful in the past may not be successful in the future.	(73-143)	Overall evaluation score. Your hotel has an opportunity to improve its competitive performance. Make a benchmarking effort in order to improve actions related to its strategy, infrastructure, marketing, management, training, and information system.	(1-72)	Overall evaluation score. Your hotel is below the standard level of competitiveness. Initiate important actions related to goals establishment, infrastructure, marketing, management, training and the hotel information system.
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Source: Own elaboration.

## Cluster Analysis

A cluster or conglomerates analysis is a multivariate technique that groups data that are similar. Its intention for a hotel industry analysis is to differentiate the highly competitive hotels from those that present great opportunities of improvement, in order to apply administrative actions. SPSS software is used for this purpose. For an Industry Analysis purpose, the questionnaire should be applied to all the hotels under study, considering that it must be a census, or to a representative sample. The semaphore competitive chart will look as follows:

**Table 5: Industry Competitiveness Semaphore Chart**

Variable	Minimum Score	Maximum Score	Green Zone	Yellow Zone	Red Zone
Infrastructure	6n	30n	(24-30)n	(13-23)n	(1-12)n
Marketing and Sales	10n	50n	(40-50)n	(21-39)n	(1-20)n
Management	5n	25n	(20-25)n	(11-19)n	(1-10)n
Training	8n	40n	(32-40)n	(17-31)n	(1-16)n
Information System	6n	30n	(24-30)n	(13-23)n	(1-12)n
Competitiveness Personnel Impression	1n	5n	(4-5)n	3n	(1-2)n
Hotel Competitiveness	36n	18n0	(144-280)n	(73-143)n	(1-72)n

Where: “n” is the number of hotels that participate in the study.

Source: Own elaboration.

With the data gathered from applying the measuring instrument to the industry hotels, you can obtain central tendency and variability of each independent variable and affirmation.

The recommendations for the hotels that participate in the industry will be the ones that appear in Table 4: Actions to improve competitiveness. The advantage will be that each hotel may compare its performance with the average of the industry.

## CONCLUSIONS

The variables that must be monitored by the hotels in order to design a competitiveness measurement system are: infrastructure, marketing and sales strategies, management practices, training, and information systems. To measure these variables a competitiveness measurement instrument has been developed, a questionnaire that provides useful information for managerial activities and decisions. The questionnaire consists of 36 questions: 35 related to the independent variables and 1 question regarding the dependent variable, with the maximum affirmation score of 5, and therefore the maximum total score of 180 ( $36 * 5$ ), and the minimum value in the scale is 1, resulting in a minimum total score of 36 ( $36 * 1$ ). The total competitiveness score interval for a hotel

is between the extreme values of 36 and 180. The hotel will find its score in a Competitiveness Semaphore Chart provided in this paper, which offers managerial actions in order to improve its competitiveness level. It is important to mention that the hospitality competitiveness measurement system may be applied to an entire industry analysis.

In terms of management practices it is important to define the hotel core competence, considering guests needs and identifying the alternatives that exist to satisfy them. A hotel must determine a consistent and appropriate mission that is shared by hotel members, ensuring that the objectives and activities of each department contribute to accomplishing the mission. It is important to make sure the structure is adequate to carry out the strategy and that each member of the hotel knows his or her job description.

In regard to marketing and sales activities, competitive hotels are those that are customer-oriented and that build their operations around guests' satisfaction. A hotel must define and understand the market segment which serves and look for the ones that offer the maximum profitability. It is important to perform market research as a regular practice, to design effective advertising and sales strategies, and to offer a fast loading website, updated with quality content. At the same time the hotel must develop a marketing plan to transmit the hotel central positioning idea and to generate a recurring program strategy for guests' retention and loyalty.

In terms of infrastructure is important to determine the core elements and additional services, to identify those that generate more value to the target market, and at the same time to ensure that the hotel has the appropriate technology.

A hotel should identify and promote attitudes, appearance, and performance of employees that contribute to the success of the organization. Training should be provided by internal and external instructors, at the same time the hotel must consider performance indicators that will be measured as result of the training. The remuneration system must recognize the performance of each employee.

In regard to information systems, competitive hotels are those that listen to their customers and employees. Information obtained through market research should include competitors' benchmarking and guests' perceptions. An information portfolio may consider: after-sales service-quality scales studies, mystery shoppers, and focus groups. Additionally it is concluded that businesses require a control panel system to measure the core elements of the hotel operation while it generates useful reports for decision making processes. The information system should allow the hotel to perform longitudinal comparative studies.

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# **SOME OF THE SNAGS TO CRIME PREVENTION AND POLICING IN NIGERIA AND SOUTH AFRICA**

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## **ABSTRACT**

*In this paper a qualitative research approach was adopted, Twenty crime prevention practitioners (senior police officials, senior Magistrates in the criminal cases divisions, senior officials of National Prosecuting Authorities, senior officials of nongovernmental organisations in crime prevention projects and prisons/correctional officials) were interviewed in Nigeria and South Africa for the purpose of data collection (Ten in each of the two countries). This paper argues that for any significant impact on crime prevention in Nigeria and South Africa each of the root causes of crime must be conceivably removed. This is because for many countries either developed (United States, Canada and Britain for instances) or developing (Nigeria and South Africa inclusive), the sheer volumes of the criminal justice reforms required to keep pace with safe communities are extraordinary. This paper identifies some of the snags on the way of effective crime prevention and policing in two countries under review and made possible suggestions for way forward out of the impasse. Finally, this paper is concluded on the empirical research findings that employing more security officers (and or police officers) might not reduce crime significantly and worse still, will not remove the fear of crime in the Nigerian and South African societies.*

## **INTRODUCTION**

Every country in the world has its peculiar criminal justice system. The administration of criminal justice in any civilized nation must be fair, credible and balanced (Conklin, 1995). A criminal justice system must take the role of crime prevention as its utmost priority. This is because the researcher is of the view (though contestable) that if crime prevention is relatively successful, then crime investigation becomes secondary. Former South African President Thabo Mbeki was quoted as boasting that “We [the South African government] shall kill crime”, (City Press: 2007), albeit through preventative measures.

The above comment by the erstwhile President of the Republic of South Africa cannot be regarded as a hyperbole because one of the ways to assess a country’s criminal justice system is by exploring the way it performs in its crime prevention efforts.

Needless to say, that the idea of crime prevention in the criminal justice system is as old as mankind. In an attempt to prevent mankind from deviant attitudes (criminal behaviour), God commanded man (Holy Bible, 1998) as follows:

“You are free to eat from any tree in the garden; but you must not eat from the tree of the knowledge of good and evil, for when you eat of it you will surely die”. Moreover, the Holy Bible relates that Moses gave the Israelites the Ten Commandments (Exodus chapter 20).

Similarly, in the Holy Quran Chapter 104 verses 1 to 8 Allah instructed Prophet Mohammed as follows:

‘Woe to the slanderer, defamer...,  
Who amasses wealth and considers it a provision (against mishap);  
He thinks that his wealth will make him immortal.

Nay he shall most certainly be hurled into crushing disaster,  
And what will make you realize what the crushing disaster is?  
It is the fire kindled by Allah,  
Which rises above the hearts?  
Surely it shall be closed over upon them...”

The above quotations are not to suggest the view that crime prevention has a religious imperative, but to emphasise the idea that crime prevention as a concept; predates modern human history.

However, the complexity of modern day society and the globalization of every spectrum of human endeavour have led to various issues which have prompted criminal justice reforms and the evolvement of new efforts of crime prevention and control. For instance, the issue of criminal justice reforms, including restorative justice, was the theme of a workshop held by Committee 1 of the Eleventh United Nations Congress on Crime prevention and Criminal justice held in Bangkok, Thailand between 18 and 25 April, 2005.

Many of the delegates who presented papers at the above referred conference attested to the urgent need for countries of the world to intensify their efforts to reform their respective criminal justice systems, especially in the area of crime prevention. At the conference, Yvon Dandurando (providing an overview), he noted:

“... for many developing countries (including Nigeria and South Africa) the sheer volume of the criminal justice reforms required to keep pace with the rest of the world was overwhelming. In many parts of the world, justice and law enforcement institutions were unable to transparently address basic public safety and human security issues. Developing strong justice and public safety capacity was difficult, and the success of comprehensive reforms was often quite precarious. Sustained criminal justice reform attempts failed because they did not anticipate the resistance they encountered” (UNO, online: 2005).

In the same vein, Yemi Akinseye-George (special assistant to the erstwhile Nigeria’s justice minister) noted at the same conference:

“...Nigeria’s system of criminal justice had suffered considerably during the decades of military rule. Following the return to democracy in Nigeria in 1999, the Minister of Justice implemented a 19-point programme to modernise the country’s justice sector. The reform programme included improving access to justice by reducing the cost of legislation and promoting legal aid. It also included internal reform of the ministry of justice and reduced prison congestion through alternative means of administering justice. Reforms that covered the economy were also necessary in order to attract foreign investors” (UNO, online: 2005).

Also, Shaw (1996), in an occasional paper tagged ‘Reforming South Africa’s criminal justice system’ opined:

“...South Africa’s system of criminal justice is in crisis. If its inability to prevent, process and deter crime is any measure of its effectiveness, then reforming the system is now not only a necessity but a national priority. Unfortunately, the system is not easily fixed; it is not characterized by a single problem that can be resolved speedily, but it is characterized by blockages, many of which cause delays in other parts of the criminal justice pipeline”.

## METHODOLOGY

Qualitative research method was adopted for this paper. In the process of data gathering for the study, twenty crime prevention practitioners (respondents) were interviewed. This consisted of ten respondents in each of the two countries (Nigeria and South Africa), namely Senior officers of the South African and Nigerian Police, Two magistrates in the criminal court divisions of the respective countries, Four officers of the Prosecuting Authorities in the Two countries, Four Prison/Correctional officials of the two countries and Four Directors of nongovernmental organisations actively involved in the crime prevention projects in the two countries. The officers interviewed for this study were purposefully selected. A letter of introduction was obtained from the Head of Department of Safety and Security Management of Tshwane University of Technology to all the

selected Crime Prevention Departments of the two countries. Thereafter interviews were scheduled and conducted.

An advantage for adopting qualitative approach for this paper is that such approach allows holistic study. This enables the researcher not to pick or choose any particular crime but to research into crime prevention holistically. Taylor and Bogdan (1998) noted that: in qualitative approach, the researcher looks at settings and people holistically; people, settings or groups are not reduced to variables, but are viewed as a whole.

In a qualitative approach there are different techniques of gathering data. The researcher has adopted qualitative technique of interview. One advantage of using interview over questionnaire is that, it is believed that interview allows the researcher the opportunity to see and talk to the respondents and report his findings in writing and to have on the spot assessment of the happenings and challenges faced daily by these role players in an effort to ensuring a crime free society (Oppenheim, 2001), (Hagan, 2005).

## **LITERATURE REVIEW**

Snags in a simple Microsoft synonyms language means either one or more of the followings; 'problems' 'difficulties' 'hitches', 'complications', 'obstacles', 'hurdles'.

Therefore, the crux of this paper is to point out some of the problems or difficulties in the way of efficient or effective crime prevention in the criminal justice systems of the two countries under reference.

What then is crime prevention?

From the literature consulted, it was found that different scholars and institutions have tried at different times to define the concept of 'crime prevention' but without uniformity in the definitions provided.

Siegel (2005) noted that there has been much confusion over what crime prevention is, and what crime prevention is not. This confusion, he says, is derived from the conflicts between the exact meanings of the concepts: 'crime prevention', 'crime control' and 'crime was combating'. The difficulty of getting a uniform definition of the concept of crime prevention was confirmed by Hughes (1998), who states that crime prevention is notoriously difficult to define. The 1996 National Crime Prevention Strategy Plan of South Africa (SA. Department of Safety and Security, 1996:5) notes that crime prevention is a deeper process than crime control. Schmallegger (2005) explains that crime prevention involves all proactive efforts against the occurrence of crime. Burger (2005) and Lab (2004) note that crime prevention and crime control are not synonymous. According to Lab (2004:23), crime prevention has to do with any effort or mechanism to eliminate crime, so that it does not occur, or to eliminate further criminal activity, whereas crime control has to do with maintenance or management of present levels of criminal behaviour.

Nevertheless, a working definition is required to provide a guide for us in this paper. And for this purpose, a simple and acceptable definition of the concept of 'crime prevention' would be taken from in a publication by the South African Police Service (SAPS, 2004), wherein crime prevention is defined as "...any effort predicting, and stopping criminal incidents before they happen". This definition perhaps made Liebermann and Landman (2000) to opine that in order to be able to prevent crime in any society; we need to know the root cause of crime.

In this paper, the researcher is not interested exclusively with 'the police'; that is with people in uniforms paid and directed by government, rather we are interested in all efforts to create visible agents of crime control, whether by government or non-governmental institutions hence we are dealing with policing not just police. Thus the scope of our paper is bigger than police but smaller than the elephant of social control (Bayley & Shearing, 2005).

## **RESEARCH FINDINGS**



The first snag inhibiting efficient crime prevention in Nigeria and South Africa has to do with weaknesses of social institutions.

It was pointed out by the respondents interviewed for this paper that an increase in the moral decadence of the Nigerian society is a major factor contributing to the rise in the crime rate in Nigeria. Many parents no longer spend time with their children. The career parents (most especially) are spending money on the Western education on their children at the expense of the African traditional and communal methods of raising children. It was also claimed by the Nigerian respondents that most educated Nigerians (these days) delegate the upbringing of their children to the care of house-helps (better known in South Africa as domestic workers); the biological parents are busy looking for economic power. The direct consequence of this is lack of a natural bond between the children and the biological parents. Examples were given as, “parents come home late from the office when the children are fast asleep or they leave home early in the morning before the children are awake”. “...such children are quite aware that the house-helps are not their biological parents, hence they show them little or no respects, which in turn leads to lack of home training and respect, which often results in deviant and criminal behaviour in the community outside the home environment”.

Evidence has also shown that stable family relationships are linked with lower rates of participation in criminality. It was emphasised by Barbarin and Soler (1993) that children from single parent households have in some situations been found to have more anxiety-depression symptoms, oppositional behaviour, immaturity and difficulties with peers than those who live with two parents. The weakening family structure vis-à-vis crime in the society could best be appreciated by consulting the marriage and divorce statistics released by the Statistician General of South Africa in 2010 (Marriages and divorces, 2008). This survey shows that the marriage register has been fluctuating in South Africa between 37, 098 and 28, 924 per annum in the past decade (1999-2008). The distribution of couples divorcing by population group shows that there were more divorces among the African population group compared to the other groups (Barbarin & Soler, 1993:423-446).

The median duration of marriage in South Africa in 2008 was 9 years. The largest number of divorces (7 859 or 27, 2 per cent) lasted five to nine years. This group is followed by marriages that lasted less than five years (6 143 or 21, 2 per cent). In other words, almost half (48, 4 per cent) of the 28 924 divorces in 2008 were from marriages that lasted less than 10 years. In 2008 there were 26 947 children (under 18 years old) involved in the divorce cases of their parents (Barbarin & Soler, 1993:423-446). Data for comparison were not available in Nigeria at the time of writing this paper.

The religious sets were also alleged to have failed the modern society of Nigeria and indirectly contributing to the increase in criminality. The respondents compared the efforts of the missionaries who brought Christianity to Africa with those of the present-day Pentecostals in Nigeria. The missionaries brought free education and primary health care, and the most important concern was the salvation of the soul. Presently, however, preachers are modern and prosperous. The more you give to your religious leaders in Nigeria today, the closer you are to them. Many of the religious leaders do not ask the source of your wealth, for as long as you can give, ‘you are blessed’. According a newspaper report (Prosperity sermons thrive, 2010), prosperity sermons thrive in Nigeria because people are poor.

In addition, the teachers in the Nigeria schools have been rendered powerless and cannot instill discipline in the learners because most principals of schools (i.e. nursery, primary and secondary schools) rely on the parents for their survival through the payment of school fees and special gifts. The more pupils enroll in the private schools, the more profits for the proprietor or the owner of schools. The direct consequences, according to the respondents, are a lawless society and an increase in the crime rate (Nakpodia: 2010:144-151). The respondents views are corroborated by Nakpodia (2010:144-151), who notes that disciplinary methods employed in the Nigeria schools have changed over the years, resulting in an increase in the wave of poor discipline and its resultant ill effects and the major problems associated with educational management.

Furthermore, the rural-urban drift is another factor identified as a contributory factor to the increase in the crime level in Nigeria. Young people want to live in metropolitan areas where employment is a challenge. The direct result is a high level of nefarious activities such as unemployment, high levels of poverty, wide inequality gaps, and high levels of crime in urban centres (Wosu & Anele, 2010).

The South African respondents were asked the same questions as the Nigerian respondents regarding snags of crime prevention and policing in South Africa. It was gathered by the respondents' "that the current supreme law of South Africa, which is the 1996 Constitution, seems to be morally neutral. The social structures are getting eroded day by day. According to the respondents, "...some aspects of the South African Constitution have negative impacts on the South African society". It was pointed out that dysfunctional families are a serious problem in the country "...some homes are being headed by teenage parents or very old grandparents as a result prevalence of HIV/Aids or the divorce rates. Some of the respondents believed that numerous and unimaginable negative consequences of legalising civil unions are hovering like a fragile balloon over the country".

Some suggestions raised by the South African respondents which could reduce the rate of crime are the following: There is a need to strengthen parent-teacher associations in schools. It was pointed out that this would create an atmosphere where teachers and parents discuss issues of concern regarding the learners. Teachers nowadays are always wary to discipline learners for wrongful behaviour for fear of "criminal charges of assault in South Africa".

"...although our Constitution [South Africa] is perceived to be one of the most liberal Constitutions in the World, it has over emphasised freedom at the expense of responsibilities and discipline. The negative consequence of this is that husbands cannot talk at home, parents cannot discipline their children because of gender equality and the so-called rights of children" "Without condoning the offence of child abuse, I think we need to give disciplinary power back to our teachers in the schools. You will recall the recent incident where a learner (name withheld) killed another learner in one of our schools. This is equally becoming rampant these days" "Do we still have Parent-Teacher Association in our schools? I doubt it, or maybe we have but [they are] not as effective as in those days. We need to strengthen PTA; it will go a long way in bridging the communication gaps between the parents and the teachers concerning the progress or otherwise of the learners in our schools"

Like the Nigerian respondents, the South Africans (respondents) pointed out that if the religious sets would be more outspoken on the issue of moral degeneration, the crime situation in South Africa would probably be different (lower) It was pointed out that although some religious sets speak the truth about morals, others are "too money conscious".

It is not uncommon in South Africa "...to question the calling of some of these religious sets, and to wonder if their aim is to preach salvation or wealth acquisition".

Another snag to crime prevention and policing in Nigeria and South Africa is over reliance on the criminal justice structures for the prevention of crime. One fact noticeably clear in this study is that crime is a difficult and knotty phenomenon, and investing in the criminal justice system alone may not adequately eradicate crime in Nigeria and South Africa, or anywhere else for that matter. This is because the usual response to an increase in the level of crime in any society whether developing or developed, has been to increase the expenditure of the criminal justice institutions. In other words, the response to 'eradicate' crime has always been more money for the courts, more prisons or corrections and more police.

In this regard, Braithwaite (1989) states that:

"...the criminal justice system cannot prescribe policies that will work to reduce crime; we cannot in all honesty say that the societies spending more on criminological research get better criminal justice policies than those that spend little or nothing on criminology".

Again in Nigeria and South Africa the idea around crime prevention has always been reactive rather than proactive, and there is no doubt that any scheme or idea implemented through the criminal justice system alone has always failed human society, because those that are arrested through the criminal justice system are not necessarily rehabilitated.

Another important area of priority in this study was to consider the propriety of community policing in crime prevention of Nigeria and South Africa. Community policing is a partnership that subsists between community institutions and the formal-legal institutions of the state (Sekhonyane, 2002) The following factors

were identified as those that make community policing a necessity in the modern day war against crime: (i) the failure of traditional policing in the fight against crime; (ii) the inability and unsatisfactory approach of the long-ago established traditional and reactive policing styles of crime prevention; and (iii) citizens' sense of insecurity in their communities. These factors substantiate the argument that community policing originates from the reality of present day life where the police as an institution of government cannot win the war against crime on their own (Sekhonyane, 2002). It therefore follows that there must be a multi-agency approach to crime fighting to see a drop in the criminal activities in Nigeria and South Africa.

However, notwithstanding the above mentioned characteristics of community policing, same model has consistently failed in Nigeria and South Africa for many reasons. In Nigeria, community policing was introduced in 2003 when some police officers were sent to England courtesy of the British Department of International Development (DFID) to understudy community policing as practiced in the United Kingdom (Ikuteyijo, 2009). Dickson (2007) identifies some obstacles to the successful implementation of community policing in Nigeria, such obstacles include: lack of support from the members of the public; inadequate support from the government; poor welfare package for policemen and most importantly rivalry and hostility from ethnic groups in the country and corruption with the police hierarchy.

Additionally, Rotimi (2001) noted that the police-citizens feud in Nigeria has strength in history. According to Rotimi (*supra*), in the colonial times police stood as symbol of authority, which were responsible for most government policies like the collection of taxes and enforcement of traffic regulations, they were never in the good memory of the Nigeria populace. Alemika and Chukwuma (2000) also note that the relationships between the Nigerian Police and citizens are largely branded by suspicion, prejudice, mutual disrespect, conflict and violence.

However, community policing as a method of policing in a democratic South Africa was first mentioned in the 1993 Interim Constitution of South Africa (Act 200). Section 221(1) and (2) of the Interim Constitution of the Republic of South Africa directed that an Act of Parliament was to "...provide for the establishment of community policing forums in respect of police stations". Dixon (2004:370) notes that community policing forums in South Africa were closely modelled on arrangements earlier established in England and Wales a decade earlier in the wake of Lord Scarman's (1981) report into disorders in the Brixton area of South London.

Further, in 1996 the government of South Africa enacted the National Crime Prevention Strategy (NCPS). The basic aim of Pillar 2 of the NCPS was to promote community participation in crime prevention through public education. By 1998, the intention and the attitudes of the then government became more obvious in the White Paper on Safety and Security released and published by the Department of Safety and Security. The 1998 White Paper on Safety and Security provides, among others, that the police must be viewed as trusted vehicles of law enforcement in the new democracy (SA, 1998:24).

However, Shaw and Shearing (1998:8-9) note that while community policing is supposed to be a measure that ensures police reform in South Africa and that guarantees a shift of focus in policing resources to poor areas, it has not done this. Rather, "South African community policing has become a mechanism to achieve better bandit catching strategies than a way of involving the police in wider strategies to enhance community involvement in crime prevention" (Shaw & Shearing, 1998:8-9). Given the high levels of crime in South Africa in the years 1995-2007, De Vries (2008) ponders why workable policies based on the needs of the citizens (i.e. reduction in crime) did not materialize. He refers to "...the lack of police effective management" and cites the example of the appointment of the National Commissioner of Police in January 1995 and that of the deputy position only in February 1996, ± 14 months later, which he identifies as a clear management vacuum.

Corruption was identified by Baker & Welsch 1995 to be one of the reasons for failure of community policing in South Africa. Reasons given for such corruption include (but not limited to the following); lack of formal control in the field (external environment in which policing is performed; Inadequate salary scales; lack of management skills; prejudiced recruitment and or training; the attitude of the communities; the increase in profitable crimes e.g. white collar crime, organised crime and drug trafficking), poor leadership among others.

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# **CRIME PREVENTION AND SOCIAL-CAPITAL IN NIGERIA AND SOUTH AFRICA: THE NEXUS**

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## **ABSTRACT**

*This paper points out some definitional crises of different school of thoughts on the knotty subjects of 'crime prevention', 'crime control' and 'crime combating', and reveals the impacts of social-capital on the effectiveness or otherwise of crime prevention in Nigeria and South Africa. The researcher hypothesises that efforts on social cohesion are necessary impetuses to the reduction in the crime rates, fear of crime and criminal activities in the two countries under reference. The propriety of the total reliance on the criminal justice systems of Nigeria and South Africa to prevent crime has been dealt with elsewhere in another paper.*

## **INTRODUCTION**

The intention in this paper essentially is to briefly explicate the controversies among scholars on the exact meaning of the concept of 'crime prevention'; 'crime control' and 'crime combating'; the author also intends to demonstrate the nexus between the rate of crime and social capital in Nigeria and South Africa. It cannot be over emphasised that crime is a universal phenomenon and does not discriminate against nations, religion, race or gender. The Nigerians and the South Africans are not immune to this fact. Violent crimes, such as murder, armed robbery, car hijacking, serial killing, gang warfare, political acrimony affect human existence; it threatens the rights to life; human dignity; bodily integrity and personal security of mankind. Nonviolent crimes such as official corruption and fraud have their harmful impact on the socio-economic development of Nigeria and South Africa. This is more so, as the money meant for the health care, education and infrastructural developments of these two countries is embezzled by the countable few; thereby denying the majority of the people access to basic social amenities of life (Olutola, Dvries & Smit: 2008).

Furthermore, crime is a threat to the moral integrity of the nation. Nigeria's profile is downcast among the committee of nations as one of the World most corrupt nations; the 2007 Transparency International World report on the most and least corrupt countries in the World rated Nigeria as number 147 of the most corrupt nation in the World (Olutola, Dvries & Smit: 2008 ). On the other hand, violent crime has continued to dent the profile of South Africa at the International level. According to the First National Bank survey conducted in 2005, South Africa was said to be the World capital for violent crimes (FNB:2005)

## **THE CONCEPTS**

### **Crime prevention**

Wright and Miller in their book ' Encyclopedia of Criminology' (2005), note that crime prevention is an amorphous term. Wroblewski & Hess (2006) argued that 'Crime prevention and crime control are regularly used as synonyms. Truly the two concepts contributed to a decrease in crime'.

Crime prevention has also been described by Frank Schmalleger (2005) as ‘the anticipation, recognition and appraisal of a crime risk and initiation of action to remove or reduce it’ Crime prevention represents a proactive approach to the problem of crime.

Wright & Miller (supra) concludes that in general term ‘crime prevention includes any efforts that either stops a crime from ever occurring or reduces the likelihood that further crimes will occur in future’.

## **Crime combating**

Burger (2005) notes that although the term “crime combating” is used frequently, no definition for the term could be found. “It is apparent that in many cases the term is inconsistently applied, and users are often confused about its correct meaning. For example, the term is sometimes used when crime prevention is intended, or *vice versa*. However, it is obvious that “combating” is much more than “prevention” alone. The term should be construed as an inclusive term for both crime prevention and policing (proactive and reactive police measures). This would mean that “crime combating” could be regarded as an overarching term for all kinds of legal activities aimed at fighting crime, whether it is to prevent, reduce, control, deter or to solve crime, and may also include policing activities such as law enforcement, the maintenance of public order and visible policing”.

## **Crime control**

The term “crime control” is another example of terminological confusion. It is widely used to refer to the business of policing, but it is unclear as to what specific type(s) of activity are referred to. For example, Moore, Trojanowicz & Kelling, (1996) make the following statement. “The core business of the police is to control crime”. According to Hale (1994) the concept of crime control includes: the detection of crime; the suppression of crime; and the prevention of crime. He believes that crime is not just a police problem, but much rather a community problem. As its causes and cures are beyond the control of the police, crime control cannot be the core function of the police. It should be a shared responsibility. Used in this sense, however, the term crime control, once again, seems to be understood to mean much the same as “crime combating”.

## **Crime deterrence**

Crime deterrence should be seen as a form of crime prevention, but should not be confused with it (Burger, 2005). Burger distinguishes types of crime deterrence into “general and direct”. General deterrence is achieved through the existence of certainty or a belief that the commission of crime will be followed by detection and arrest, and by prosecution and punishment; through effective law enforcement; and by the nature of the punishment, which should be sufficient to deter. Direct deterrence has to do with the blocking of potential opportunities. This can be achieved through police visibility and omnipresent. Technology of surveillance can be appropriate in this regard.

It is important to reiterate at this juncture, that the contention in this paper does not stop at the above definitional issues of ‘crime prevention’, ‘crime combating’, ‘crime control’ and ‘crime deterrence’ but include the nexus between crime and social capital in Nigeria and South Africa.

# **SOCIAL CAPITAL**

Scholars at different times have defined Social capital in different ways. From the literature it is undisputed that Social capital as a theory or concept lacks precise or concise definition (Dolfsma and Dannreuther 2003; Foley & Edwards, 1997). Therefore defining social capital depends largely on which angle a scholar wants to investigate or in which a scholar intends to apply the theory (Robison, 2002). Grootaert and Van Bastelaer (2002) opine that definition of social capital depends on whether one is focusing on the substance, the sources, or the effect of social capital. Again Social capital can be the value of social networks, bridging diverse people together, with norms of reciprocity and bonding (Dekker and Uslaner 2001; Uslaner 2001). Pennar (1997) defines social capital as 'the web of social relationships that influences individual behaviour and thereby affects economic growth'

Most importantly, one need to acknowledge that the subject of social capital cannot be exhausted in a single piece; as space is always limited, however all studies must discuss social capital in relation to the particular discipline, study level, and context and that a set definition for such is not required, only an identification of operationalization or conceptualization (Claridge: 2004).

To this end this researcher will adopt the definition given by Encarta Dictionary online which defines social-capital to be the advantages which somebody from middle to upper classes are believed to possess (the advantage can either be educational, social, and cultural) over the populace below the middle class. Therefore this paper will not create a new definition of social capital except for the definitions already provided above. The researcher is only interested in this paper to briefly show that social capital has a link in the overall crime rates of Nigeria and South Africa.

## **SOCIAL CAPITAL AND CRIME PREVENTION**

The relationship between social capital and crime may function through behavioural and psychological routes which include stress reduction activities (Ferlander, 2007). If a person has someone to share his/her burdens with, anxiety and troublesome ideas are reduced. A study conducted in Russia demonstrated that people living in areas with low social capital have lower life expectancies than people living in areas with higher social capital (Kennedy, Kawachi & Brainerd, 1998). Diana Fishbein (2000) notes that persistent abnormality in the way brain metabolises glucose to be linked to abuse. Fishbein in her research of causes of crime focuses on hypoglycemia; a condition that occurs when blood glucose (sugar) falls below normal and efficient brain functioning. Siegel and Sienna (2008) note that symptoms of hypoglycemia include irritability, anxiety, and depression, crying spells, headache and confusion.

One of the erstwhile Inspector General of Police in Nigeria on the 17<sup>th</sup> April 2008 (IGP); Mike Okiro admitted before the House of Representative that there are serving members of the Nigeria Police that are mentally unstable.

*I want to let the Honorable members know that in doing police job, one has to be in sound mind to be effective in securing life and properties. After the re-screening exercise, we found out that some new recruits were not mentally disciplined*

However, as a result of advances in technology, social capital and support have taken a new turn – the way many people communicate with friends and family has changed from being restricted to face-to-face interaction, the use of landline phones and mail to include the use of cell phones and the internet (Stern & Messer, 2009). In Africa, four in ten people have a cell phone, which is compensating for bad roads and poor postal services (Economist, 2009) which may lower social capital. In South Africa, the percentage of households with at least one cell phone rose from 32.3% (as recorded during the 2001 census) to 72.9% (as recorded in a community survey in 2007). (Community Survey, 2007 cited by Olutola, 2012). Thus, communication possibilities such as those offered by cell phones may cut across social strata in a developing country such as South Africa and Nigeria.

Notwithstanding diversity of opportunity brought about by the usage of cell phone in bridging the gap of social cohesion and networking among families and neighbourhoods in Nigeria and South Africa as demonstrated by (Olutola, 2011).

However, the ever presence menace of corruption within the cycle leadership of the two countries has meltdown whatever gains brought about by technology of mobile phones.

A National Newspaper in Nigeria reported recently quoting Former Lagos State Commissioner of Police (Massive Corruption Provoked Current Insolvency, 2012). The problems we have in this country (Nigeria) (*sic*) today are unemployment and corruption. Severe unemployment predisposes these young people to getting easily influenced to participate in crazy projects, no matter how deadly they may be..... Sometimes you find in government, senior officials talking about corruption, but they are deeply involved in the corruption”.

In an article titled: “Legislotters”: How Nigerian Lawmakers Feed Fat on Constituency Project Funds!,” It was succinctly pointed out that the loopholes in Nigeria’s Presidential system of Government, have



been exploited by corrupt politicians in milking the nation dry...Countless cases of corruption have been heard in the country, quite unfortunately, none of those cases has served as a deterrent to others (Information available online: <http://thestreetjournal.org/2012>. Accessed on 10<sup>th</sup> May 2012).

Further, in an official report delivered by the Statistician-General of the Federation of Nigeria on the 13<sup>th</sup> February, 2012. It was revealed that the HNLSS 2010 of 2010 (Harmonized Nigeria Living Standard Survey) that poverty and inequality in Nigeria have increased since 2003/2004. In addition, the Nigeria Bureau of Statistics (NBS) indicates that this trend may have increased in 2011 if the potential positive impacts of several anti-poverty and employment generation intervention are not rigorously pursued. In this same report the Statistician-General defined what is meant by “absolute poverty in terms of the minimal requirements necessary to afford minimal standards of food, clothing, healthcare and shelter” and concludes that using this measure it means that 54.7% of Nigerians were in poverty in 2004 but this increased to 60.9% in 2010 (Nigeria Poverty Profile, 2010)

In the same token, a South African national newspaper recently reported (Mail & Guardian: March 31<sup>st</sup>, 2012), “Corruption is costing the *South Africa* (sic) R30bn (approximately \$3, 75bn) annually”. In the year 2011 the head of the “Special Investigating Unit in South Africa (SIU) told the Parliament’s portfolio committee on justice: “We have received new cases (corruption in government); some of them are very big” Information available online: see <http://za.news> Accessed 2<sup>nd</sup> April, 2012. As if the above were not enough, a nongovernmental organisation (Polity org.za) reported recently in an article titled: “South Africa’s most disturbing problem”. It was revealed in that article that the greatest and most worrying contradictions of South Africa relates to the issue of inequality and the differences in income distribution between South Africa’s poorest 40% and its richest 10%. Further, in his recent work Professor Gabriel Palma, a senior lecturer at Cambridge University’s economics faculty explained that in his sample of 135 countries, only in Namibia, Angola, Bolivia, Colombia and Haiti fare worse than South Africa in inequality ratio. Professor Palma concludes that inequality in South Africa is not only incredibly high, but also stubbornly resilient against global tendency for inequality to reduce as a country’s wealth expands.

A conference entitled “Being Poor Matters” was held recently in the year 2011 in South Africa by the programme to Support Pro-poor Policy Development (PSPPD), a partnership between the Presidency of South Africa and European Union (EU). The conference served as a platform for policy-makers, academics and development practitioners to explore the reasons for decline in the level of poverty but increased in the level of inequality between the haves and the have not continues to grow in South Africa.

The National Planning Commission ‘s Diagnostic Overview released in June 2011 sets out the key challenges that the country confront in fighting poverty and inequality and in achieving the objectives set out in the Constitution. It found that, over and above the historical disadvantages which continue to dominate, two of the most pressing challenges facing the country are unemployment and education. In spite of the significant improvement of education, the quality of education remains very poor. The conference also highlighted other critical issues related to poverty and inequality (which is considered to be structural in nature because of systems, like apartheid, that have inherently created different opportunities for people based on gender, race or class), including child poverty, social cohesion, health (crime inclusive) (sic).

## GEOGRAPHICAL DEMARCATION

Nigeria and South Africa are two major African countries and this paper is borne out of the curiosity of studying the nexus between crime and social capital of these two countries as the problem of crime is becoming insurmountable. This presentation is important for two immediate reasons. Africa deserves peace after long years of slavery and colonialism. She also desires great foreign investments at this time but many of the investors are scared away because of the menace of crime and corruption.

Nigeria is a multiethnic, multicultural, multilingual and multi-religious society. Suffice it to say that, Nigeria is situated in West of Africa bordering the Republic of Benin in the west, Chad and Cameroon in the east, Niger in the north and the Gulf of Guinea in the South Olagunju (2008:13). Nigeria is also the eight largest oil producers in the World and the largest in Africa.

It has been opined by Olagunju (2008) that, the 160million population of Nigeria means that one of every four Black African is a Nigerian, thus making it easy for many other Africans to fake Nigerian citizenship, especially for illegal purposes. It is incredible but real that more than 400 languages are spoken in Nigeria. Two of the dominant languages are also spoken in other nationalities. Hausa is spoken in seven other African countries and Yoruba is spoken in other African countries such as Togo, Benin, as well as in Brazil, Caribbean, Cuba and Haiti, Olagunju (2008:13) information also available online: <http://encylopedia2.thefreedictionary.com/yoruba+states>

On the other hand, the Union of South Africa was created on May 31, 1910; became sovereign state within the British Empire in 1934 and a republic in 1961, left the commonwealth in 1968 and rejoined the Commonwealth in 1994 (available online): [www.state.gov/p/af/ci/sf](http://www.state.gov/p/af/ci/sf) Accessed on 4<sup>th</sup> July 2011.

South Africa is endowed with almost all essential commodities, except petroleum products and bauxite and she is the only country in the World that produces oil from coal (available online: [www.state.gov/p/af/cis/sf](http://www.state.gov/p/af/cis/sf) Accessed on 4<sup>th</sup> July, 2011.

According to the midyear estimates for 2011 released by Statistic South Africa (Stats SA), South Africa population is estimated at 50, 59 million. Approximately 52% of the population is female. Blacks are in the majority (approximately 40million and constitute about 79, 5% of the total South African population. The white population is estimated at 4.5million (9, 0%), the Coloured at 4.5 million (9, 0%) and Indian/ Asian population 1.2million (2, 5 of the total population). Available online: [www.statssa.gov.za](http://www.statssa.gov.za) Accessed on 13<sup>th</sup> May, 2012.

## **Reasons for comparisons**

An important reason for the comparison or geographical demarcation of this presentation is that, a comparative study in all areas of social research is an excellent way for learning more from other researchers. Second, it is important to broaden our understanding of other countries because, as globalisation occurs, we are more likely to fall prey to the problem of ethnocentrism—the belief that one’s own country or culture does things ‘right’ and all other ways are ‘wrong’ or ‘foreign’. Fairchild and Dammer (2001:8)

## **Crime and Corruption in the eyes of the Criminologists**

One reason identified as the root cause of crime or corruption in the society, is what former Deputy Commissioner of Police of Nigeria Police (DCP Rugbere (2004) called ‘Biological foundation’. Cesare Lombroso an Italian physician is the father of biological explanation of causes of crime. Lombroso opined that crime was caused not as a human choice but by inherited and uncontrollable biological and psychological traits.

Conley and Bennet (2000) asked; Is Biology Destiny? This is more so, as low-birth-babies have been found to suffer poor educational achievement; academic deficiency has been linked to delinquency and drug abuse (Siegel and Senna, 2008)

Secondly, a significant cause of criminal behaviour according to Bio criminologist is the relationship between brain activity and behaviour. In one of her works Psychologist Dorothy Otnow Lewis and her associates (1985:1161-67) found that youth murderers suffer signs of major neurological impairment (such as Electroencephalograms, multiple psychomotor impairment and severe seizure)

It is therefore submitted that if the above theories of either the Biological and Bio criminologist theories regarding the causes of crime is true (which one has no justifiable reason to doubt) then there is need to consider other initiatives for the purpose of crime prevention in Nigeria and South Africa. This point is logical because more than 90% of the efforts of these two countries do not take cognizance of these two important theories of root cause of crime. Much of the crime prevention efforts in Nigeria and South Africa are directed at the symptoms (criminal justice institutions) rather than the root cause of crime.

Thirdly, Social Disorganisation Foundation is another School of thought on causes of crime and corruption in the society (inclusive of Nigeria and South Africa), Hooley (1962) noted that the mass movement of people from rural to urban area is destructive in nature as this cause frustrating experience as a result of social dislocation and disorganisation of individuals; consequently deviant behaviours. This has a huge burden on the social and criminal justice institutions for their inability to cope with absolving the mass movement to the citizens.

Fortunately, for South Africa the above point was recognised as the third pillar in the 1996 National Crime Prevention Strategy. However, the argument of this researcher is that recognition is not enough as the rural urban drift continued unabated; leaving most people in the cities jobless and prone to various criminal activities. Also, the Nigeria government had introduced a number of programmes to guide against rural-urban drift but this to no avail. Such programmes include MAMSER (Mass mobilization for economic recovery), DFRRI (Directorate of rural and road infrastructure) in the 1990s; one of the reasons for the failure of such programmes in Nigeria is that it was introduced by military regime; an illegitimate government and well known for its corrupt practices.

Furthermore, Critical Criminologist believes, that economic and political forces have direct linkage to the Criminal behaviour. The people in government control and direct the legal system. Siegel and Sienna (2008) notes that the theft of property worth five dollars by poor person can be punished much more severely than the misappropriation of millions by a large corporation by the criminal justice system. It was further contended by Sienna and Siege (supra) that history of criminal sanctions have shown that those sanctions have corresponded to the needs of the wealthy and that the police, the court and the correctional agencies have almost always served as tools of the powerful members of the society. This is similar to what happened during the 2007 general election in Nigeria though alleged to be peaceful but it was said to be far from being fair. Some of the State governors that allegedly won the election have now been removed and replaced by election tribunals, information available online: [www.nigeriaworld.com](http://www.nigeriaworld.com). The National Crime Prevention Strategy of South Africa (1996) confirms that crime is deeply rooted 'both in history as well as in the process of transition'.

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# **IMPLEMENTING THE USES OF ICT IN AGRO - PRODUCTS TO IMPROVE MARKET INFORMATION SERVICES: CHALLENGES AND OPPORTUNITIES FOR TANZANIA**

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## **ABSTRACT**

*The need to provide agricultural information for improving agro products market information has led to emergence of numerous ICT-based projects in developing country. These projects aim at promoting commercialization of smallholder agriculture products and subsequently their welfare. This research project examines the welfare effects of the use of ICT for marketing of agro-products in Coastal regions of Tanzania. It encourages the applications of websites designing and access to the internet as alternative to increasing market access to the Agro products. The study finds that farmers that use ICT-based market information are more noticeable and have better access to market services than their counterpart. It also discusses challenges and opportunity of technologies in particular ICT applications to the agriculture.*

## **INTRODUCTION**

Agriculture has been long described as the backbone of Tanzanian economy, accounting for nearly 45% of GDP and employs around 70% of labor force. The sector accounts for 60% of merchandise exports and represents a source of livelihood to 82% of the population. Agricultural income is the main source of income for the poor, especially in rural areas. Sale of agricultural products accounts for about 70% of rural household incomes according to Agricultural Sector Development Programme (ASDP) report in performance review (ASDP, 2006/07-2009/10). Agricultural GDP has been growing at more than 3 percent per year since 1985. The government's macro-economic reforms have had a significant impact on the sector and have opened the sector up to private investment. Most of the production, processing, and marketing functions are now being handled by the private sector. Farmers are now free to sell their crops to cooperatives or private traders. Due to increased competition it has led to higher prices and faster trading, and farmers are no longer confined to a single source for their inputs for crops and livestock. In support of the sector the government increased its budgetary allocation to the agricultural sector by more than 100 percent in the 2008/2009 budget. In an effort to increase crop and livestock production, marketing, and exports of semi processed products, as well as to create an attractive environment for agro-processing industries, the Tanzanian government establishment a National theme of Agriculture First "KILIMO KWANZA" in the year 2009.

Linking smallholder farmers to markets remains a major challenge in Africa and is associated with the lack of smallholder commercialization in the continent (Poulton et al., 2006; Barrett, 2008; Tarazi and Breloff 2011). Taking Tanzania as case study a number of factors contribute to this problem. First, smallholder farmers are usually price-takers and deal with traders who often are more informed about input and output markets.

Second, when visited several regions we found that majority of smallholders lack the information on quality and quantity parameters used by traders in the selling process. This have been found not in Tanzania only

even from our literature study lack of information prevents farmers from adopting profitable production alternatives and also keeps them supplying low-paying marketing outlets (Ashraf et al., 2009).

Third, seasonal variations in prices often expose smallholder farmers to greater price risks than the larger farmers, causing the former to dispose of their produce soon after harvest. This was mainly due to the lack of storage facilities and knowledge across. Fourth, smallholder farmers trade in small village markets with long and fragmented value chains (SEWA 2011). In addition to the above market-based (incentive) factors, smallholder farmers also encounter a number of capacity-based constraints. The majority of smallholder farmers are asset-poor (Barrett, 2008). They lack financial capital needed to acquire the inputs required to commercialize production, the human skills (capital) needed to function in better-paying but competitive markets and the social capital that is instrumental in organizing production (Oreku., 2010). In addition, smallholder farmers often face poor infrastructure in the form of roads for example it takes two hrs from Muheza district to Amani in Tanga region a distance which could have been covered within an hour, poor telecommunication and electricity that impede their market access are also hindering this sector.

Further more, smallholder farmers, given their geographical dispersion tend to be characterized by organizational failure (Rich & Narrod, 2005). That is, majority of smallholder farmers are often unable to mobilize themselves into farmer organizations and take advantage of benefits of collective marketing such as economies of scale and collective bargaining power. For example in Mtwara region we found to have multiple groups who were producing same product such as cashew nuts but in a very small quantity.

Information and asset poverty make the cost of doing business (i.e., transaction costs) unaffordable to majority of smallholder farmers (Shiferaw et al., 2007, UNCTAD 2011a). Consequently, such farmers prefer selling their produce in nearby village markets or at the farm rather than travelling to the market where they could get better prices (Fafchamps & Hill, 2005). Such village markets however tend to offer low prices and are characterized by significant price variation (Aker, 2008).

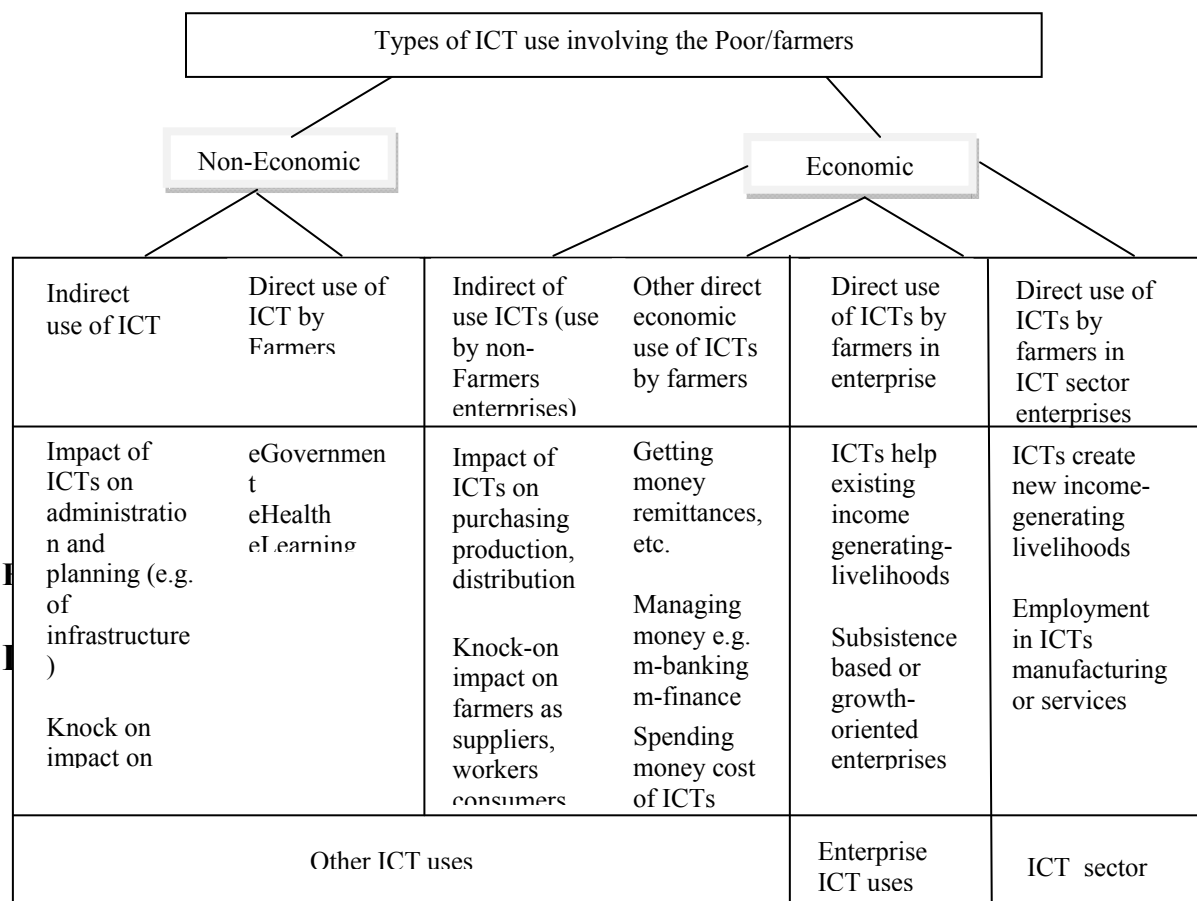
For many Tanzanian regions, commercializing smallholder agriculture provides the only engine for agrarian and rural development. However, commercializing the small scale farm sector requires efficient markets which in turn require access to market information, transparent and profitable pricing system, and capital (especially credit and better production practices). Where market information is not readily available and accessible, opportunistic behavior (by traders and other market actors) tends to develop. One such behavior is the cheating on quality and quantity (especially scale) which in turn results into the failure of traders to establish long-term business relations in Africa (Fafchamps & Gabre-Madhin, 2006). Due to the opportunistic behavior between buyers (traders) in Tanzania and sellers (farmers), transactions tend to be relational (i.e., selling only to those previously known and hence trusted), are in small volumes and are based on visual inspection.

Tanzanian Agro-products have been facing a number of challenges in reaching out the market. Some of the major concerns are its quality, compliance with safety and standards, packaging techniques, finding market for her products in particular food-products, the use of traditional marketing mechanism, rural businesses tending to lack propensity for growth and diversification making accessibility for rural businesses to be an issue.. These constraints have been discouraging processors to produce more and lack confidence in trying to reach markets beyond their borders locally and internationally. Despite of the opportunities presented through Tanzania's membership in regional trade groupings (East African Community- EAC and Southern African Development Community- SADC) and as a signatory to international trade protocols, Tanzania still hasn't been able to capitalize these opportunities in increasing the rate of export of her products. Early this year the EAC Countries signed an agreement of common market which again is a bridge that our local Entrepreneurs should embrace and make use off. To compliment the Government's efforts on emphasizing KILIMO KWANZA, Tanzania Industrial Research and Development Organization in collaboration with Small Competitive Facility (SCF) initiated a project to support agro processors to utilize ICT facilities in expanding their market reach instead of the traditional marketing mechanisms. This included ICT components in their activities for example the use of mobile phones to transmit real time price information to farmers, the use of computer/electronic screens to display market information and the use of radio and TV to disseminate market information.

## **FOSTERING GREATER USE OF ICT TO FARMERS.**

Reflecting the information provided in the introduction part, possible relations between ICTs and the Agro products as mediated through enterprise can be identified. Two different roles for ICTs in Agro product can be distinguished. The majority of ICT applications takes an existing activity and alters it in some way through digitization; perhaps reducing its cost or improving its quality (Porcaro and Jorge 2011). This involves an intensification of that existing activity. In this study, it will be referred to the ways in which different ICTs are used by farmers along the value chain. New ICTs can also give rise to activities that did not exist before. The main example would be anything that implies an expansion of the ICT sector, from manufacture of hardware to writing software, providing telecommunication services, selling airtime, repairing PCs or providing computer training (UNCITRAL 2011). It is thus possible to distinguish between the use (demand side) and production (supply side) of ICTs by farmers. A conceptualization of the relations between ICTs, enterprise and the farmers are depicted in figure 1.

Figure 1: Conceptual map of ICTs, enterprise and the farmers



Rural enterprise is of particular relevance to the farmers. Many farmers households produce for their own needs, earning relatively small incomes by trading surplus produce for local consumption, or as part of producer or farmer groups reaching distant markets via intermediaries (Ellis, 2000; Sagun 2011). There are also examples of growth-oriented rural enterprises among farmers communities. Earnings from growth-oriented “off-farm” enterprise tend to increase for those who become less poor, and become an important source of income for those who have climbed above the poverty line (Shaw, 2004; Ellis and Bahiigwa, 2003). Case study evidence from various developing countries suggests that use of ICTs – especially mobile phones – is increasing among rural enterprises, and is contributing positively to enterprise growth in rural areas (Frempong, 2007; Esselaar et al., 2007; Goodman, 2007).



Information needs in rural enterprises directly linked to farmers can be considerable. A study of the value chain of poor vegetable farmers in Sri Lanka measured the information search costs for all core enterprise operations, such as land preparation, growing and harvesting, as well as for seed purchase and selling (de Silva and Ratnadiwakara, 2009). It found that the relative proportion of information search costs in the total costs of production, were highest in the early decision stages and the latter selling stages. Overall, information search costs amounted to 70 per cent of all transaction costs (the transaction costs themselves were recorded at 15 per cent of total costs incurred).

The main information search costs were related to (a) transport costs (time and money); (b) time expended in meetings and visits to elicit materials (such as fertilizer); and (c) costs of comparing prices and those associated with transporting produce to the market. Costs were accounted for in both direct financial expenditure and the opportunity costs of time expended (de Silva, 2008). The study concluded that better quality and more timely information, combined with faster and cheaper communication, would help to reduce operational costs. There is growing evidence that enhanced access to ICTs has helped farmers address some or all of these needs, and this conducted project could be a testimony for that. In many instances, this has been achieved through the spontaneous uptake of mobiles by farmers; in other cases information supply has improved as a result of deliberate assistance by government or other ICTs actors.

## METHODOLOGY

*Study Areas/Regions:* The project was conducted in five coastal regions which are Dar es Salaam, Tanga, Coast, Lindi and Mtwara. These regions were chosen due to their potential in Food Agricultural products and processing industries. The regions are known to be producers of cashew nuts, cassava, fruits and vegetables, edible oil and sea products. It was interesting to note cashew nuts are grown in 33 Districts in Tanzania. However on agro business it was encouraging to find that there were some supportive initiatives in place such as Government reform policies, Local Authority District Agriculture Development Program, Aga Khan Foundation, SIDO, CBT, Ministry of Agriculture, UNIDO, and FAO which were also trying to facilitate these food agriculture initiatives in these regions though in different approach with carried out research.

*Study design:* The study approach used was a cross-sectional study design was both Qualitative and Quantitative data were collected. The Qualitative data was collected to compliment the quantitative data and to get a more insight and understanding of what the processors thought of Information technology, what challenges they face in finding market for their products. These data were collected through a semi structured questionnaire, training meetings and in depth interviews with different processors group's representatives.

ICT for marketing sounded a new technology for many people in regions surveyed except for Dar es Salaam were many people consulted seemed to be aware of the technology. In Tanzania, most of the people use traditional marketing system. People are not using ICT for marketing due to the reasons mentioned previously in introduction above. In Tanzania, most of the customers are influenced by physical advertisement only in recent years with the coming of mobile phones and spread of TVs, many Tanzanian have started becoming interested with electronic adverts. With farmers due to "Kilimo kwanza" its now also they have become more conscious about their agro products.

*Data source and collection techniques:* Both primary and secondary sources were used for the research purpose. Secondary data were used for providing the theoretical background to the research problem. The secondary data sources were-journal, books, internet etc. Primary data were collected through household survey, training sessions and field survey by using appropriate research instrument. In the primary data collection procedure every individual respondent was considered as potential respondent in the research.

More data also were collected through questionnaires with both open and closed ended questions covering a wide range of interesting topics, meetings were conducted and some of the key issues were revealed during such meetings and lastly in depth interviews were conducted with representatives of the processors groups and farmers.

*Data analysis:* The questionnaire starting with introductory questions such as name, age, occupation, education, income and address were used. These questions provided the basic information about respondents. These types of questions made respondents comfortable to respond to the study. The respondents were asked the

questions to know their knowledge and perception about ICT like “Have you ever heard about website, ICT?”, “Do you think you should use it?”, “Do you think website can increase your market potentials?” etc.

*Sampling Method:* The basic sampling procedure for the study was convenience with cluster sampling. The study made the decision to carry out the research and visited 70 agro-processors. The respondents in each region to all different four coastal regions covered namely Dar es Salaam, Tanga, Coast, Lindi and Mtwara included managers, food processors and middle scale farmers.

*Research instruments:* Information was collected through interviewer administered questionnaire method and through different secondary media. The questionnaire contains several questions for different respondents. Data were collected by the researchers through personal interviews, visits, phone calls, emails with the respondents

*Data Collection and Accuracy of Data:* Generally most of the people are not interested in answering questionnaires. So it was very difficult to collect actual data because the information of the respondents were collected by approaching them to answer the question directly. To overcome this problem, all possible efforts were made by the researchers to ensure the collection of reasonably accurate information from the respondents was made. Consequently it was not possible to apply any other method of investigation. Survey method has the advantage that it facilitates quick investigation but involves higher cost. In order to collect relevant information before taking interview, the purpose of the study was clearly explained and made clear to the respondents. The researcher collected the relevant data from the respondents through face to face interview and training. Data collected were checked and verified in the field for accuracy and consistency.

*The Research Objective 1* aimed to improve the sale of agro products and services through the use of websites and internet.

*The Research Objective 2* was established to develop and operationalise single SMEs portal for agro-products marketing of food products such as tea, honey Coffee, cashewnuts, fruits, meat, vegetables and grains

*The Research Objective 3* implied to effective and efficient establish information infrastructure (LANs, shared databases, IP standards and Common access centre) of grouped agro-product SMEs dealing with food products

ICT for marketing sounded a new technology for many people in regions surveyed except for Dar es Salaam where many people consulted seemed to be aware of the technology. In Tanzania, most of the people use traditional marketing system. People are not using ICT for marketing due to many reasons, some have been mentioned previously in introduction part above. In Tanzania, most of the customers are influenced by physical advertisement only in recent years with the coming of mobile phones and spread of TVs, many Tanzanians have started becoming interested with electronic adverts. With government initiatives in agricultural first “Kilimo kwanza” its now many farmers are become more conscious about their agro products.

Basically the research was descriptive in nature. Qualitative data were analyzed critically using judgment. The study made the decision to carry out 70 respondents in each mentioned region which included seven projects managers, fifty agro-processors and ten middle scale farmers to each region. Several statistical and analytical methods and tools were used for analyzing the gathered data from the survey. Column and round chart has been used as graphical tools to show the analysis of data. See the figures below. The package used in the study was, Microsoft Word, Microsoft Excel

## MAJOR FINDINGS

The main objective of the project was to *facilitate market access information for agro produce*, however during finding we found that it was paramount to highlight the importance of using ICT for agricultural, identify agricultural sectors, potential crops for export, constraints in agricultural sector, regions which are source of materials and the potential of value additional creation to agricultural sector – a pathway already embraced under the Government of Tanzania’s “Kilimo Kwanza” or “agriculture first” strategy.

The research was able to identify the following five commodity/sub sectors; Sunflower, Horticulture with specific reference to tomatoes, mangos, pineapples and oranges; Cassava, Beef and Cashew which could be found into mentioned surveyed regions. These also were material which could be sourced to facilitate the whole process of developing websites and use of ICT for marketing in order to meet the projects objective at large.

The local market accounted for only 10% of cashew nut consumption since Tanzanians generally prefer to eat groundnuts vs. cashew nuts. Development of the cashew industry was originally intended to service export markets in order to generate revenues for the Government. However the Cashew Nut Board is trying to promote local consumption and to raise awareness on health benefits and value added processing. Regional markets accounted for 2% of export with main markets being Kenya, Uganda, Rwanda, and Burundi. The remaining exports are destined to international markets - mainly India for processing. However there are 10, smaller processors steadily increasing production (with assistance from UNIDO) from southern and coastal regions. These included UVUKI, DEMPHOS, Kitangali, River Valley Foods, Kernel Processors, Merasi High Quality Foods, Kitina Processing (UNIDO), Ari – Nalicidele, Rufiji Group Processors, Bagamoyo Group Processors.

Mango is grown in Tanga, Morogoro, Pwani, Tabora, Dares Salaam and throughout the country. Several larger companies engaged in processing include: Natureripe Kilimanjaro, UNNAT (fruit processing), Mali JuisiMaleba, and Azam. Tomatoes are widely consumed in Tanzania on a daily basis as abundant quantities and varieties are available on the market. The farmer/entrepreneur impact potential of further value added processing is enormous. The markets are divided according to TAHA statistics: 60% local consumption, 30% regional export and 10% international export.

Most cassava is produced by small holders using poor technology but cassava grows fairly easily withstanding severe drought conditions. It can also fill a food gap when other staples are off season which helps farmers sustain longer seasons. Cassava is grown in Mtwara, Lindi, Ruvuma, Pwani, Mwanza and Kigoma. RUBADA (the Rufiji Basin Development Authority) mentioned another program designed to develop over 1,000 ha of cassava, but more information needs to be obtained. The Kibaha Research Institute is in the process of preparing R&D studies on how to maximize development of cassava products. The market is primarily local but there are regional buyers in: Rwanda, Burundi, Somalia and the DRC. Under a new RUBADA initiative, Brazil is collaborating on an initiative to develop by-products and more information must be obtained on that program.

The beef industry is highly underdeveloped relative to sheer volumes of cattle and livestock in Tanzania. It is important to note there are approximately 20 million cattle in the country, 20% of which are slaughtered each year, leaving a residual population that is consumed and slaughtered locally. Yet a niche market seems to be growing for certain cuts of beef and product diversification such as producing skins/hides for leather tanning would be an ideal value addition. Tanzanian beef exporters supply both live animals and processed meat to the Comoros, DRC and a few regional markets. Yet there is poor standards compliance with US. European regulations and low product diversification.

The Kenya Choice Meat Company has penetrated the Tanzanian market in the last few years servicing retail outlets as well as commercial supermarket chains and hotels. A few investors have succeeded in setting up commercial processing facilities including SAFI Meats (in Sumbawanga) and Happy Sausages in Arusha.

With an exemption of Dar-es salaam, the usage of ICT by the visited agro processors is very low. Observations from Mtwara and Lindi was that only 7% of processors own computers and 14% use internet in business communication, in Coastal region 17% use internet and Tanga 13% use internet and 21% own computers. However, all of the agro-processors 100%, own and use mobile phones in business communication. In contrast, most agro processors in Dar-es salaam, 75% are computer literate, own business cards and email address, 50% own computers and 10% are connected to internet with pre-paid connections, the rest using cyber café.

In summary the table below shows the usage of Internet and computers among the processors visited in the selected regions.

Figure 2: The use of computer among Agro\_processors

REGION	Processors owning Computer	Internet Usage
Dar es Salaam	50%	75%
Coast	10%	17%
Mwara/Lindi	7%	14%
Tanga	21%	13%

Figure 3:

The use of

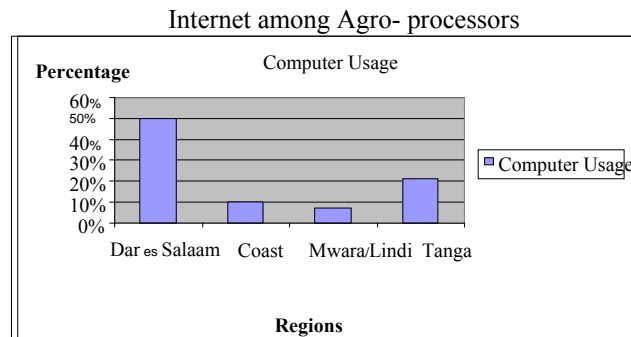


Figure 4: The readiness of use of ICT for marketing among Agro- processors

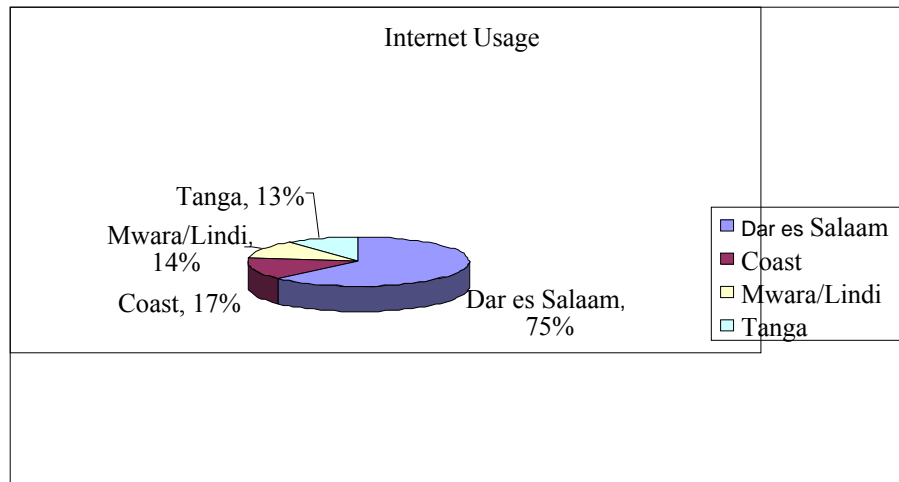
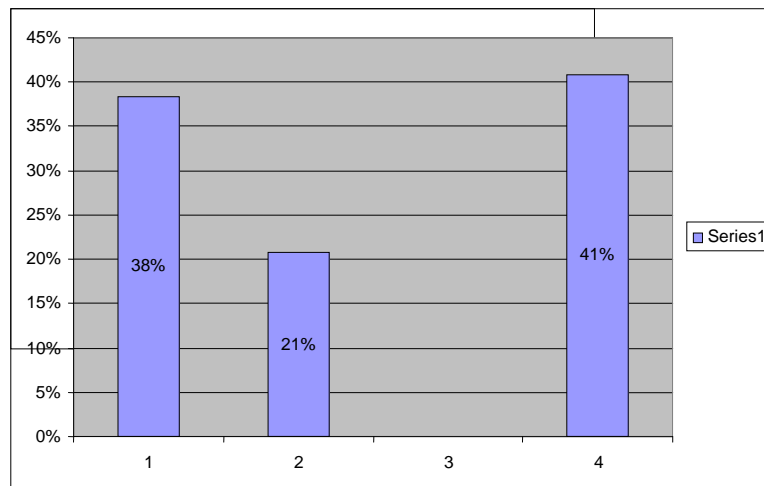


Figure 5: Class of people who are able to use ICT for marketing

Characteristic	Respondents	In%
Upper class	46	38%
Middle class	25	21%
Poor	0	0
All	49	41%
Total	120	



Source: Field Survey

## MAJOR OBSERVATION

The research done looked on the relationship between technology and the export performance of small, locally-owned Agro-processor in Tanzania. The literature argues that technology is an important variable in influencing the export performance; however, the results from empirical studies are not always consistent. The results revealed that firm size, not the social capital of the owner of the firm or the technological intensity of the firm is the most critical factors that determine export performance but it's rather the vicinity in particular through websites. This result resonates with some aspects of the project undertaken. From the study conducted among 120 agro processors involved in the research 49 admitted the involvement of their firms and business with the use of websites have facilitated in increasing their profit in agro-business.

None of the visited agro-processors have established or implement food quality /safety systems. The knowledge of food processing is generally low. Majority (64%) in Mtwara and Lindi have received short training through SIDO and UNIDO. Only 14% are certified with TBS and or TFDA. In Dar-es salaam some have been trained by TBS and some by SIDO, most are certified with TBS.

It was noted that, majority of agro-processors SMEs have no workers with professional qualification and skills in ICTs, agro-Processing, quality of food products. However in the last phase of the project 50 website were developed to agro-processors SMEs which have shown significant improvement in use of appropriate online service and marketing in Tanzania agriculture sectors.

## CONCLUSION

The research was able to identify key commodity/sub-sectors from the entire Tanzanian agricultural spectrum that are seen as providing high growth potential; offer opportunities for a significant number of entrepreneurs to develop agribusinesses; and have potential for significant stakeholder support.

The research also identifies sectorial constraints such as lack of infrastructure, electricity and communication facilities, Management constraints like farmers do not receive inputs on agricultural issues at the right time and do not know how to rectify the situation, Documentation delays in product certification, grading and packaging, as well as marketing Technology

One hundred and seventy two (172) processors, (out of which 120 being women) from 79 groups were sensitized on the use of websites in market search and e-commerce, product promotion and advertisement.

The research team agreed to carry out further research to the remaining key agricultural regions in Tanzania in form of interviews, telephones call and emails as necessary to limit personal bias in the choosing of one or two that offer the best opportunity for ICT strategy intervention to marketing of agro produces. Since the research was exploratory in nature it was felt that there is a need of in-depth survey within the all key agricultural regions in Tanzania which will give the more accurate results in due course.

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# **WOMEN FARMERS' EMPOWERMENT: A CASE STUDY OF NEW JERSEY AND TURKEY**

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## **ABSTRACT**

*Two Rutgers University led projects, one local, the other international, recognize and develop the managerial and technical capacities of women farmers. Annie's Project in New Jersey, USA is an educational program to strengthen women's roles in the ever-evolving agricultural sector. Suzanne's Project in partnership with Akdeniz University was adapted from Annie's Project to provide training in business management and production systems to help Turkish women farmers improve their businesses. Lessons learned from each program were used to improve the other while adapting to local conditions. All participants have completed portions of their business plans as a result of the educational projects.*

## **INTRODUCTION**

### **The New Jersey Case**

Approximately 14% of U.S. farm operators are women and the percentage is growing (29% increase from 2002 to 2007 according to the United States National Agriculture Statistics Service's Census of Agriculture (2010). There were 306,209 female U.S. principal farm operators in 2007. The overall economy in the United States is challenging farmers to examine and re-examine everything from production methods and costs, finance and credit, new crops, fuel efficiency, energy sources, credit, labor efficiency, and marketing like never before. In addition, they need to consider legal liability, interpersonal relationships in a stressful economy, business succession, and estate planning. Unlike farmers, who produce field crops, floriculture and nursery firms bear the entire price, market, and production risks because these crops have had minimal government support programs. Thus, to stay competitive, small farms and specialty crop producers must develop their own risk management strategies. Producers are requesting more assistance from Rutgers Cooperative Extension (RCE) on risk, business, and financial management rather than actual production methodologies.

### **The Turkish Case**

Agriculture is a major economic sector in Turkey, employing one out of four people. Many of the small stakeholder farms are family run, most employ female workers, very often without pay especially if they are part of the family. Furthermore, women farmers do not have access to many of the agricultural resources including Extension services, credit, inputs, and productive assets as their male counterparts do, limiting their own progress in professional skills and societal status (Özkan, B. and Brumfield, 2012).

## **LITERATURE REVIEW**



## **Annie's Project in New Jersey, USA**

In the United States, north-eastern producers have some of the highest costs in the nation for land, labor, and other inputs. Female owners account for 21% of New Jersey farmers (New Jersey has 2,261 women farmers who define themselves as the principal operators on their farms). The greenhouse and nursery industry is the number one agricultural commodity in the state. The majority of New Jersey's farms are designated as small farms by the National Agricultural Statistics Service (2010).

*Annie's Project* nationally has been successful in providing a comprehensive educational program and support network for women farmers, in helping them to learn to understand and manage their farm business. The curriculum focuses on farm and family financial management with opportunities to learn specifics about legal aspects, marketing, business planning, estate planning, insurance, communications and other important topics. A significant component of *Annie's Project* is the opportunity for women to network with other women who are involved in agriculture in their geographical area (McKinney, 2012).

## **Suzanne's Project in Turkey**

Statistics show that women in Turkey have important roles in the agricultural sector although they are not equal in terms of economic returns and employment. Women are less literate than men and they are also paid less in agricultural jobs compared to men (Uysal-Kolasin and Guner, 2010; Ediz, 1998).

Antalya is the center of Turkey in terms of the greenhouse vegetable production with 20% of the exports of fruit and vegetables produced in Antalya (Yilmaz, et al., 2005; Brumfield, et al., 1997, and Brumfield et al., 1998). Antalya is the main tourism region in the country, and off-farm opportunities are available; but, greenhouse production demanding a large labor force provides substantial employment opportunities. The Extension service in Turkey is not part of the university system as it is in the United States (Ozcatalbas, et al., 2004). This makes knowledge transfer to women (and men) farmers difficult.

# **MATERIALS AND METHODS**

## **Annie's Project New Jersey**

In February 2011 *Annie's Project New Jersey* was launched to address these farm business management and risk management issues during this "teachable moment" created by tough economic times. Previous Extension workshops and a series of targeted listening sessions conducted in 2010 revealed that women are often in charge of the financial accounting and marketing, either as the sole owner, or in partnership with their husband or others. As a result, women in agriculture were the target audience for these workshops to provide them with information relevant to farm management, foster ideas, and showcase tools that will help their businesses not only survive, but thrive. In 2011, *Annie's Project New Jersey* was held in three locations: North (Hackettstown), South (Cape May), and Central (Bridgewater) New Jersey.

*Annie's Project New Jersey* is tailored to New Jersey farmers and differs from *Annie's Project* in other states in five key areas: 1) the focus on creating a farm business plan throughout the training, 2) the use of social media education and adoption for marketing and business development, 3) the use of social media tools to assist the participants in networking that is sustainable and interactive, 4) using a unique combination of in-person education and distance learning opportunities to expand the audience within the program, and 5) recording the distance learning sessions for asynchronous education of participants and additional women farmers following the completion of the 'live' course.

The purpose of the 2012 *Annie's Project New Jersey* was to educate women, mostly small and new farmers who predominantly produce specialty crops on: 1) The kinds of risks addressed by existing and emerging risk management tools; 2) The features and appropriate use of existing and emerging risk management tools; and 3) How to make sound risk management decisions.

To meet these project goals, the Rutgers Cooperative Extension team:

1. Developed and conducted a promotional program. This program included using print and electronic media, press releases, newsletters, publications, e-mail, the Rutgers Farm Management website and Facebook™ to: a) raise awareness for crop insurance and risk management; b) inform women farmers of the availability of crop insurance and risk management tools; and c) inform women farmers and agribusiness leaders in the region of training and informational opportunities.
2. Delivered crop insurance, risk management training and informational opportunities to agricultural producers and agribusiness professionals. This included organizing and delivering educational activities using the instructional materials assembled by RCE to meet the needs of the farmers of New Jersey.
3. Documented all educational activities conducted and the results of such activities, including criteria and indicators used to evaluate the success of the program.

To assist RCE in meeting project goals the funding agencies:

1. Collaborated in assembling, reviewing, and approving crop insurance and risk management materials.
2. Collaborated in reviewing and approving a promotional program for raising awareness for crop insurance and risk management and for informing producers of training and informational opportunities.
3. Collaborated on the delivery of education to producers and agribusiness leaders including: a) reviewing and approving in advance all producer activities, b) advising the project leader on technical issues related to crop insurance education and information and, c) assisting the project leader in informing crop insurance professionals about educational activity plans and scheduled meetings.

Components of the educational program included:

- Production: Crop insurance, Specialty Crops and Delayed Planting
- Legal: Legal and Succession Planning
- Marketing: Strategies and Farm Products Branding
- Financial: Financial Tools, Planning and Farm Management Strategies
- Human: Farm Labor; Farm Safety; Food Safety, leadership in employment and human resource management.

The *Annie's Project New Jersey* course consisted of 7 classes of 3 hours each (21 hours). The team finalized the exact content for each day and identified local experts and colleagues as workshop instructors. The project team also researched and assembled additional related resource material. During the 2012 course, instructors used the Blackboard Collaborate™ platform to reach each group of students at three sites around the state. Each site had a local facilitator who was responsible for local promotion, registration, course facilitation including homework review, evaluation and networking facilitation. The participants were encouraged to share how they have managed each issue lead by the site coordinator and homework was reviewed for the first 20 minutes of each session.

The project team researched and assembled additional resource material related to understanding and managing risks associated with marketing, production, estate planning, business succession, and farm management. For example, the workshop curriculum included the use of existing materials such as the Center for Farm Financial Management's AgPlan online database (2010), the Rutgers Business Plan workbook, the Rutgers Cost Accounting Software, Rutgers "To Market, To Market" workbook, Barbara O'Neill's book "Money Talk, a Financial Guide for Women", and the Later Life Farming website. Rutgers Cooperative Extension has a very comprehensive personal finance website with dozens of worksheets (see <http://njaes.rutgers.edu/money2000>) as well as a farm financial management website (see <http://www.cook.rutgers.edu/~farmmgmt/index.html>) and a crop insurance website (see <http://salem.rutgers.edu/cropinsurance>).

Social media such as Facebook™ and Twitter™ were used to reach participants and to create a virtual network of women farmers and agri-professionals that continues after the course has finished. Links and files for

project-related materials were identified through a search of the National AgRisk Education Library. Thus, the curriculum was a combination of new and existing materials related to helping women successfully and profitably manage their farm businesses. The goal of *Annie's Project New Jersey's* electronic media effort was and is to help promote sound risk management solutions to improve the economic stability of New Jersey agriculture.

## Suzanne's Project – Turkey

*Suzanne's Project* is aimed at helping Turkish women smallholder farmers develop technical, entrepreneurial and managerial skills through specialized training. The mission is to help realize their full-potential to operate and sustain profitable farms as small businesses and to gain self-confidence. The Antalya region was the focus as this Mediterranean region generates 33% of Turkey's agricultural exports and 50.9% of Turkey's greenhouse production (Yilmaz, et al, 2005).

In August 2011, Rutgers, the State University of New Jersey and Akdeniz University in Antalya, Turkey formed a team with the goal of adapting the *Annie's Project* model to train Turkish women farmers on the best practices and basic skills necessary for them to sustain profitable agricultural businesses. Whereas in the United States the land grant university model includes research, teaching and extension; in Turkey, the extension is uncoupled from the university making knowledge transfer from the university to women (and men) farmers difficult. The team felt that to scale the project, they needed to partner with the Turkish Ministry of Food, Agriculture and Livestock (MINFAL) which also includes the Turkish Extension service.

Partners at Akdeniz University worked with a select team of agricultural extension educators at MINFAL to conduct a needs assessment and preliminary feasibility study to determine the scope and program of the Turkish Women Farmers Project. We interviewed Extension educators and women farmers in the villages of Elmalı, Kumluca, and Korkuteli. As a result, a pilot 28-hour course was developed to train 40 women farmers from Kumluca, Turkey. The pilot courses were offered to small-scale citrus and greenhouse producers, and ran from October 24th to November 18th, 2011. The training included hands-on instruction in computer literacy, instruction in the technical aspects of citrus and greenhouse production, and business management topics. Technical topics included greenhouse construction and ventilation, soil productivity and plant nutrition, pesticide safety, plant protection and biological insect and disease control, sustainable production, and protection of soil and water resources. The business management topics were structured around developing a business plan. The women were given worksheets to develop their business plans. At the end of each session, they were given homework to develop the next section of their business plan and homework was reviewed during the first 20 minutes of each class. This networking helped build a sense of community and empowered the women as they gained confidence in sharing their plans and in helping each other develop their business plans.

The women in the pilot project renamed the project *Suzanne's Project* in honor of Robin Brumfield's daughter who is half Turkish and who inspired her to take the idea of *Annie's Project* to Turkey. A Facebook Page was created for *Suzanne's Project* (Suzan'in Projesi) to post information and for participants to network with each other: (<http://www.facebook.com/#!/pages/Suzan%C4%B1n-Projesi-Suzannes-Project/277565572275625>) as well as a website: ([http://aesop.rutgers.edu/~farmmgmt/suzannes\\_project.html](http://aesop.rutgers.edu/~farmmgmt/suzannes_project.html)).

As a result of the success of the first Turkish *Suzanne's Project* pilot, the municipality of Elmalı funded a second pilot from February 16 to March 6, 2012 to train 20 more Turkish women farmers.

## RESULTS AND EVALUATION

Results of the extensive baseline intake survey on demographics are shown in Table 1.

**Table 1. Baseline Characteristics of women farmers in the first class on risk management education held in New Jersey and Turkey in 2011.**

	Turkey	New Jersey

<b>Number of respondents</b>	40	30
<b>Demographics:</b>		
<b>Age</b>	38.4	48.4
<b>Marital Status</b>		
Married	86.6%	80.0%
Single	12.8%	10.0%
Widowed	2.6%	3.3%
Divorced	0.0%	6.7%
<b>Average Family Size - (Number of people)</b>	4.3	3.7
<b>Average Years Farming</b>	18.7	13.5
<b>Characteristics of the farms at the beginning of the course:</b>		
<b>Gross Farm Income</b>		
Under \$50,000	65.8%	63.3%
\$50,000-\$150,000	29.0%	6.7%
\$150,000-\$300,000	0.0%	6.7%
Over \$300,000	5.5%	6.7%
No Answer	0.0%	16.7%
<b>Average size of farm</b>		
Hectares	5.3	38.0
Acres	13.1	94.0
<b>Percentage who carry crop insurance</b>	20.5%	20.0%
<b>Percentage who grow some crops under contract</b>	13.2%	0%

As is illustrated in Table 1 there are many similarities between the two groups. The most striking differences are average age. The American producers' average age was 10 years more than the average age of the Turkish producers. Another notable difference is the average acreage or number of hectares farmed by the producers. American producers enrolled in *Annie's Project New Jersey* on average farmed 94 acres (38 hectares) versus their Turkish counterparts who farmed an average of 13.1 acres (5.3 hectares).

Table 2 illustrates the percentages of women who had positive attitudes and actions towards completing the various portions of a business plan.

It is possible that the reason a larger percentage of the Turkish women completed the more detailed portions of their business plans was due to the use of the formally unpublished workbook developed by Dr. Robin G. Brumfield specifically for the Turkish producers. In future *Annie's Project New Jersey* classes we will use a workbook adapted from the original one to American conditions.

A key component of this program was that women networked with each other in the workshop and shared ideas. *Annie's Project New Jersey 2012* brought together an equine professional from one end of the state and a hay grower from another end, a farm market owner and a market grower from neighboring counties, and alpaca breeders who had never met before, only to realize how many similar experiences they have had.

**Table 2. Percentage of participants who completed, are in the process, or plan to complete sections of their business plans as a result of the 2012 courses.**

	Done prior to course	Do not plan to finish	Plan to finish	In process	Complete	Done prior to course	Do not plan to finish	Plan to finish	In Process	Complete
Components	Turkey					New Jersey				
Mission Statement	6%	0%	0%	0%	94%	4%	0%	2%	19%	76%
Goals	0%	0%	0%	11%	89%	0%	0%	4%	35%	62%
Farm Description	0%	0%	0%	0%	100%	4%	0%	6%	27%	64%
Production Plan	0%	0%	0%	0%	100%	2%	4%	24%	43%	28%
Marketing Plan	6%	0%	0%	0%	94%	0%	4%	20%	54%	22%
Financial Plan	0%	0%	39%	11%	50%	4%	2%	22%	61%	10%
Exec. Summary	0%	0%	0%	94%	6%	2%	8%	29%	39%	23%
Management Plan	0%	22%	6%	33%	28%	2%	4%	28%	45%	21%
Estate Plan	0%	67%	6%	6%	6%	10%	10%	44%	20%	16%

The Facebook™ and Twitter™ messages, website and videos contributed to the overall success of *Annie's Project New Jersey* because our students have used these electronic components to create their business plans, add new enterprises, secure farm loans, develop websites, Facebook™ pages, and point-of-purchase materials for their farms. The project team's educational programming on social media has lead to over half of the graduates using the "Annie's Project NJ" Facebook page. *Annie's Project New Jersey* fostered problem solving, record keeping, and decision-making skills in women farmers. Graduates have continued to meet to continue learning about aspects important to women farmers, to network with each other and have farm tours. "At the first post-Annie's Project farm tour we enjoyed learning about Ripple Hill's history, touring the pick-your-own operation and helping with parking lot suggestions for the next pick-your-own peach season. It's a great way to continue the *Annie's Project* farming connection."

Sixty-two women completed the first two offerings of the *Annie's Project New Jersey* course in 2011. The third distance education course, held in 2012, was completed by an additional 75 women farmers for a total of 137 women farmers who completed *Annie's Project New Jersey* in 2011-2012. All 137 women completed components of their farm's business plans.

When surveyed on the last day of class in 2012, 42 respondents replied that they had already completed many components of a business plan:

- 75% developed a mission statement.
- 62% developed goals and objectives.
- 64% wrote a farm description to be used for marketing (or other purposes).
- While only 27% have completed a production plan, 43% were in the process of doing so and 24% planned to do so.
- 14% have calculated their net worth, while 70% were in the process or plan to complete it.

When asked to take an online survey about their progress 9 months after participating in *Annie's Project New Jersey* (2011), 17 out of 40 women surveyed responded (42.5%). Highlights of the results are as follows:

- 59% completed their mission statement component of their business plan.
- 53% completed their goals and objectives and their company descriptions.
- 47% were in the process of completing their net-worth calculation 9 months after the course was completed, and 18% had completed this task as a result of the course.
- 35% designed and completed a Facebook page for their farm business as a result of the course.

- 35% of the women plan to participate in in person meetings with other participants, have phone conversations with other participants, and e-mail other participants as a result of the course, 41% were already in process of these components as a result of the course.
- 31% of respondents evaluated their Farm Transfer Plans, Estate Plans, Personnel Management and Farm Liability Policy as a result of the course.

The variances in results from 9-months after the 2011 course was completed to the results of the 2012 course on the day of completion may be due to the improvement of *Annie's Project New Jersey* due to the experiences and learning opportunities of the course developers while conducting the Turkish *Suzanne's Project* course in the fall of 2011.

Both the women in Turkey and the women in the United States have benefitted from the courses as is evident in the data as well as their testimonies. Some quotes from the *Annie's Project New Jersey* participants after the course include:

"I believe... I can do this."

"I feel more confident adding new components to our business."

"I plan to apply what I have learned and share this experience with my family."

Across the globe, Turkish participants in *Suzanne's Project* shared:

"I have more confidence now. Our local network here is strengthened. I have been farming for 20 years. This is what I do and what I love. And the business planning worksheets you provided, well, my husband is using them, too. For the first time, we have a vision for the farm and we are beginning to develop a plan for the future." "A significant change in me is my willingness to learn, and I feel better for it. I am happy. I have already begun to keep records in a notebook, of both pesticide use and my expenses. My personal goal is to produce higher quality product and to develop a 5-year plan – to organize my farm as a business." "As a women farmer with two daughters, one with an education in greenhouse production, I am more positive about my future. We took this course together. The most beautiful part of this training is coming together to learn. And there was this gap in my knowledge of agricultural management. Now my husband and I can understand the outputs and inputs and how to track and analyze them." "The biggest change in me is a feeling of appreciation. We must give a prize to our husbands for supporting us in taking this course, which I hope will be open to them soon. The idea of producing healthier food for society is what drives me, and the technical and computer skills I gained and have put to use will help me get to this dream. For me it starts with my new Mission Statement, practicing on the computer and sharing what I learn." "As a result of this experience, I feel our importance in society is recognized. Before I was thinking of our job as a small thing, now I believe I run a business. And we all feel better because we feel we can work as men do. This education has put things into perspective, with our community of women farmers as an organization of our own making, and sharing what we know is our responsibility to one another." "Now I know why we need to market what we grow and how to do it. Most importantly, I learned about pesticide application and storage, and how these chemicals can harm our health and our soil. My husband and I have already changed our practices and set a goal of growing tomatoes without residues, and selling them for a higher price. If I earn more, I can buy a house."

## CONCLUSION

These two courses were ideal opportunities for new and beginning farmers seeking to sustain themselves with value added crops and new marketing efforts for these highly desirable small, specialty crop market opportunities. Additionally, our adoption and adaptation of *Annie's Project in New Jersey* has successfully developed six small groups of well-informed women with an increased confidence in their ability to contribute to the farm and make farm business management decisions. Participants have become stronger partners in their agricultural operations through a better understanding of business planning and finances, and the impact it has had on their families. They also have an increased awareness of organizations that can provide assistance and timely and accurate information.

The ultimate goal of *Suzanne's Project* is to train the trainer, followed by setting up the system enabling trainers' implementation. Candidates would receive hands-on training on how to use materials, methodology and an integrated approach to effectively train women smallholder farmers on new enterprise skills and

production methods to make their farms more profitable. This will eventually provide safer food for their communities and for export. This project will help build local networks, discover new tools for disseminating knowledge and best practices. *Suzanne's Project* serves as a new bridge between Turkey and the United States, contributing to bilateral academic, cultural and economic relationship. The partnership formed by three parties, Rutgers University, Akdeniz University, and Antalya Provincial Directorate will continue in future projects and in the area of extension.

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# JOINT TRADING VENTURES BETWEEN THE ENGLISH EAST INDIA COMPANY, THE FRENCH EAST INDIA COMPANY, AND OTHER TRADING ENTITIES: AN INTERDISCIPLINARY STUDY OF COLLABORATIONS IN THE SLAVE TRADE AND COMMODITY EXCHANGES BETWEEN 1600 AND 1750

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## ABSTRACT

*This paper is located in the broad arena of identifying and exploring mutual impacts between trading companies, particularly, but not exclusively, the English East India Company (EIC) and the French East India Company (FEIC), and parties contributing to and affected by their activities, during the period 1600-1750. Such mutual impacts include the formation of joint ventures between interested parties in the contexts of i) furthering trade activities, ii) improving asset utilization through the elimination of idle capacity of the key assets of ships, and iii) the achievement of scales of economy of overhead spend. Accordingly, it illustrates how frameworks usually associated with developments in trade, financial and management theories during the twentieth and twenty first centuries were being applied in a much earlier period. The paper thus reflects an interdisciplinary perspective. A particular characteristic of the joint ventures established is the furtherance of the Africa to Caribbean slave trade by the EIC. This company is invariably associated primarily with trading activities between England and India and south-east Asia. This research reveals the financial significance to the EIC of its involvement as a third party within the Atlantic slave trade. The methodology involves research of primary and secondary sources. It goes beyond traditional research primarily concerned with the study of a company's history and financial and trading-related facts and figures, by examining selected aspects of relationships between, and consequences for, the particular parties involved in joint ventures. By 'parties' is meant individuals and organizations associated with and impacted by the work and sphere of influence of trading companies. This extends the scope of the paper across the boundaries of national studies into comparative, regional and transnational history, connecting with social studies in the broader sense.*

## INTRODUCTION

This examination of the drivers for, characteristics, and resultant consequences of the alliances formed between the English East India and French East India companies, and associated parties in the seventeenth and eighteenth centuries is undertaken in the context of going beyond traditional pre-Annales research, which is primarily concerned with the study of a company's history and financial and trading-related facts and figures (Stern, 2009), by examining selected aspects of relationships between, and consequences for, particular parties involved, reflecting socio-economic and socio-cultural perspectives. For example there exists a wealth of work concerned with the history of the EIC as a trading company (e.g. Lawson, 1993; Robins, 2006), supported by more specific aspects of trade (e.g. Chaudhuri, 1978; Rothermund, 1999), and wider connections (e.g. Khan, 1923). The same is true of the FEIC and Dutch and Portuguese trading companies connected with India and other parts of Asia. Stern (*ibid*, pp1148-1149) argues that the late twentieth century witnessed an explosion in research concerning both the company itself and wider aspects, resulting in two constituencies:



*'the work of historians of the Company and of British India, on the one hand, and the almost cacophonous interest in the Company amongst a wider group of scholars in British, European, Atlantic, and world history, as well as in a range of disciplines beyond, on the other'.*

This extends the field across the boundaries of national studies into comparative, regional and transnational history, connecting with social studies in the broader sense. As such this paper endeavours to include, certainly, trading and related matters pertaining to India (as might be expected), but to go beyond to discover other matters and geographical areas forming part of the sphere of influence and activities of trading companies such as those cited above.

A specific academic justification for this approach is illustrated in work by Nayar (2010), which draws upon an account of interactions in 1617-19 between Jahangir, the Mughal Emperor, Sir Thomas Roe, the first English Ambassador to the Mughal court, illustrated by the role of personal objects. He argues that: *'...recent postcolonial scholarship has embraced more than mere literary representations, extended to material cultures reflecting lifestyles and official processes, and thus by implication the conduct of commercial and business arrangements and relationships'*. This wider context, and hence interpretation, is addressed in this paper through the selection and study of a number of differing forms of encounters relating to the conduct of commercial and business arrangements and relationships.

A further justification is represented in work by Chaudhury and Morineau (1999), which provides an overview of the challenges presented for historians, through a critique of what they refer to as the limitations of a *'Eurocentric approach'*. They contend that this has given rise to sets of mythologies regarding the state of play of trade between Europe and Asia, not least the consequences. They cite a number of examples of such mythologies. One is the assertion by Moreland (1920) of Portuguese maritime dominance of the Indian Ocean in the sixteenth century with great trade benefits to Portugal resulting from the spice and pepper trade. They reflect how more recent research debunked that myth. As another example, they comment on the notion that India's merchants were small and welcomed the trade opportunities presented by Europeans. Morineau (1999) discredits this by an examination revealing many wealthy magnates orchestrating extensive operations even to the point of rivalling the Medicis, Fuggers or Tripps of Europe. Further examples of myths arising from a Eurocentric approach include the demise of overland route trading as a consequence the European incursions by sea, and Indian exports were focused predominantly on Europe. Regarding the former, they cite evidence revealing that the value of overland trade far exceeded the sea-borne European trade well into the eighteenth century, despite the success at that time of the English East India Company. Regarding the latter, they assert, through reference to documented sources of trade in the region, that non-European trade was many times the value of its counterpart.

An area which has stimulated debate is that of the use of aggressive power involving armaments by the Europeans in India. Lawson (1993) records the change in approach across the seventeenth century by the English East India Company, moving from spoken and written diplomacy to reinforcing words with guns. The official Company directive, endorsed by the English government, was to adopt a diplomatic approach with a view to gaining footholds one by one (as evidenced by the Sir Thomas Roe cameo referred to earlier, above). Yet, clashes with the Portuguese in 1612 at Surat and 1622 at Ormuz illustrated how local agents and commanders were happy to disregard official directives to tread softly. The spectrum of research debate concerning such an approach ranges from Marxist views of exploitation by the West (see Mukherjee, 1974), to pragmatic opportunity seized when higher profits enticed, to pragmatic opportunity without thought of longer term consequences (see Chaudhuri, 1978, and Marshall and Williams, 1982). Watson (1980) contends that in its early years the English East India Trading Company tended to use force only when attacked by locals and/or other European powers, and, indeed, the logistics of expanding trade through force and arms was logistically, financially and physically beyond it.

increasing the use of force to get its and European parties.

Chaudhury and Morineau (1999) take issue with the myth that European traders exploited Indian merchants on the grounds that they were more able, with greater business acumen. They cite Arasaratnam (1986):

*'Whenever there was free and open competition, the Asian merchants in fact triumphed over even the European companies. One of the main reasons for this was the ability of the Asians to thrive on low profit margins while the Companies always sought a high profit margin to compensate for their heavy overhead costs'.*

There is evidence that Asian merchants understood more about the now common-place management accounting technique of cost-volume-profit (CVP) analysis, recognising that lower unit selling prices will produce higher overall profit if volumes rise disproportionately higher than the price rise. Glamann (1958) argues that in reality European companies were only ever really successful against Asian merchants when they used fire power to good effect.

Two further myths associated with supposed one way trade and all one way trade occurs within the areas of textiles and silver and gold bullion used to buy such textiles. The import of textiles into England had an impact in two ways. Calicoes, cottons and Madras prints and silks emerged during the later seventeenth century as the most profitable of the English East India Company's products (Lawson, 1993). Silks had an impact on fashion and style for the elite of society, and lightweight cottons took over from more traditional broadcloth and wool clothing. In the 1690s the once flourishing English silk industry found itself under threat, and the wool industry slumped. Workers attacked and set fire to the East India Company's London warehouse. The government was petitioned to impose taxes and duties on the imports. Despite such measures being applied, the industry slumps continued and a financial consequence for the government was protectionist measures for workers for the next century. The matter of bullion exports, particularly silver, also became a matter of national significance. To pay for Indian spice, textiles and other commodities, the Asian merchants demanded not bartered goods, but bullion. A commonly held view in the pre-revisionist era was that the perceived major imports of bullion into India was a major influence on the marked and sustained price increases that occurred, particularly in Bengal, in the first half of the eighteenth century. Chaudhury (1995) shows that, first, economic evidence suggests strongly that price rises were very limited; food prices remained relatively constant in real terms and even the price of textiles did not soar. Regarding bullion, Europeans were not, in fact, the largest importers of silver into the sub-continent; it was the Asians themselves, partly through strong trade links with other trading partners (as referred to earlier) and a desire to create a cushion of wealth as part of a strive towards prosperity by merchants and rulers.

Evidence above suggests that the view on there being only one beneficiary arising from European trade with India – The Europeans, should be reconsidered. The Asian merchants and rulers certainly benefited, and, particularly so before the aggressive post-1750 stance of the English East India Company. There were consequences too for the trading companies, companies which, as is related below, did not benefit solely from trade in the traditional areas of spice and textiles. There is an area of the activities of more than one trading company which receives less attention, but clearly had marked consequences for participants, both willing and unwilling: the slave trade.

The notions of the slave trade heading from Africa west across the Atlantic, and trading companies heading east to India and China is well established in the psyche of the generalist reader of history. Harms (2003) makes a specific and telling, point:

*'While many are aware of the 'triangular' slave trade between Europe, Africa, and the Americas in the 18th century, few people realize that Asian-European trade was also instrumental in sustaining the exchange of human slaves. For example, French ships taking European goods to Asia returned with cowry shells and Indian textiles valued by West Africans. On the African coast, traders exchanged these Asian products for slaves who, in turn, were sent to France's New World colonies. The circle was completed when sugar and other goods from the Americas were loaded on board and shipped back to France. The Asian-European trading relationship, as a fundamental step in the African slave trade, thus played a crucial role in the development of an integrated global economy in the early modern era'.*

Bringing matters to a more localised arena, Murphy (1999) use the English East India Company as a focus of a significant dimension to Harms' point:

*'Although the (English) East India Company was not itself engaged in the transatlantic slave trade, the link was very close and highly profitable.'*

The Atlantic slave trade was in fact, and without being revealed in the accounts, a vital contributor to the financial strength of the English East India Trading Company. The mechanism for this subterfuge involved a close relationship between that Company and the Royal African Company. Kitson (1999) records the Royal African Company roots in the foundation of a slaving company by the Stuart Royal family in 1660, under the direction of James, Duke of York, Charles II's brother and the future James II. It was granted a monopoly under Royal Charter. Slaves had either the initials 'RAC' or 'DY' (*Duke of York*) branded on their chests. Between 1672 and 1689 it transported between 90-100,000 slaves from West Africa to the Caribbean – and East India Trading Company ships were utilised on many journeys. The link was Sir Josiah Child, a founding member of the RAC. In 1671, he became a shareholder in the EIC and by 1679 he was the largest EIC shareholder (Robins, 2006). Between 1674 and 1699, the year of his death, he was an EIC Board member; indeed, he was either governor (chairman) or deputy-governor throughout the 1680s. The duality of the two positions was realized through the awarding of contracts by the Royal African Company to the East India Trading Company for the carriage of cargoes, including those other than textiles: slaves. Davies (1999) reports that, as a consequence, the ports of Liverpool and Bristol in particular were to see the comings and goings of East India Trading Company ships to and fro across the Atlantic with the transportation of slaves from West Africa. The 'at a distance' involvement – acting as a third party carrier across the Atlantic – was not the sole engagement of the East India Trading Company. A more 'hands on' engagement was also undertaken.

Logan (1956) reports that whilst much research has taken place into the transport westwards from Africa to the Caribbean, transportation the other way, across the Indian Ocean to Asia, has received less attention. A significant number of slaves were transferred from Africa into Asia, particularly into India and south-west Asia. The East India Trading Company was a pro-active participant:

*'Among the companies to engage in this traffic to the East, the British East India Company took an auspicious part. Thus while another English company, the Royal African, was busily transporting slaves westward into the then new lands of North America and the West Indies, the East India Company was similarly occupied, although on a smaller scale, with shipping Madagascar slaves to India and the East Indies'.*

Unlike the trade to the New World, where enslaved labour worked on sugar and cotton plantations, other motives were behind the transportation of the slaves from Madagascar. This 'hands on' engagement was connected with the establishment in 1686 by the East India Trading Company of a factory, York Fort, at Benkulen on Sumatra. The Company had originally transferred its England-based employees to York Fort but had become alarmed by the ill health suffered and deaths taking place due to the unfavourable climate and conditions. So alarmed was the company that correspondence between London and Benkulen referred to 'Englishmen being sent to their everlasting homes' if sent to that 'fever infested island' (Logan, 1956). One option was to abandon York Fort but it was Company policy to retain a foothold on Sumatra to counter the activities of the Dutch. Thus, the slaves were to be sent as direct replacements for English employees, English employees however, did more than work in the factory. Logan (*ibid*) identifies slaves being used in a victory of pragmatism over ideology, as armed quasi-soldiers, rather than chattels within the factory. Logan's examination of ship records and slave documentation at York Fort indicates that some of the slaves on Sumatra had been transferred not from Madagascar but from Fort St. George, the company's location near Madras in India. This suggests that the Company may already have been involved in slaving from an earlier period.

The English East India Company was not alone in either the collaboration with the slave ships of other companies or its own activities. Harms (2003) reports of the involvement of the French East India Company in the slave trade, emphasising its key role in forming what he terms '*a vital link in the trading system that connected the continents and formed the backbone of the global network of commerce*'. As with the role of the East India Trading Company related earlier as a key cog in the slave trade, Harms contends that the popular view of slave trade routes being connected in a triangular fashion, linking the circuit of Africa, Europe and the Americas, is understandable but a fallacy; in fact it formed '*an essential bridge between Europe's New World trade and its Asia trade*'. As part of this bridge, the French domestic commercial dealings came to rely heavily on the interactions between slave traders – referred to as 'circuit traders' given the term used immediately above, and 'direct traders' who dealt in goods such as cloth, spices and sugar.

Through direct traders, France sent its own domestic produce such as wine, wheat and metal to the New World, trading for primarily sugar, but also for cotton, cocoa and coffee. Circuit traders, including many private

traders who had been licensed by the French East India Company, sailed from France with commercial goods to West Africa. There, goods were bartered in exchange for slaves who were subsequently transported to the Americas. A fiscal reality of both sets of trading was barter, with little money exchanging hands. This became a key driver in the need for traded goods to be readily available. Citing Meyer, Harms (*ibid*) goes further to describe the economics of the barter process: the 'exchange' rate.

A typical 'batch' of slaves was equal in value to twice the weight of sugar a typical ship could ferry back to France. Accordingly, the first fifty percent of sugar – half the payment, was transported back immediately, with balance to be collected one year later. This delay in payment by the slave purchasers carried no financial penalty, and thus the sellers were effectively providing the sellers with an interest-free loan, equivalent to fifty per cent of the contract value. In regular commercial dealings, a penalty-free delay of twelve months of fifty percent of a contract would be both unthinkable, and in the normal course of events, untenable. A complicating factor was that the return next year of a ship, with a new batch of slaves but still capable of carrying only 50% of the sugar, meant that there would be a continuing fifty per cent of any contract outstanding. The direct traders provided the solution. The 'direct trader goods' taken from France to the New World were usually much lower in value than slaves. Consequently, the sugar obtained in exchange for the goods would fill only about one third of the hold space. This left room for transportation of the sugar not collected by the circuit traders to be ferried to France by the direct traders. This mutually beneficial arrangement shuddered to a halt in 1722 when the French East India Company banned all private traders from participation. A consequence was a negative impact on direct traders who did not transport the 'fifty per cent excess' sugar as before, as the Company refused to pay for that service. Harms cites Martin in illustrating the wider impact felt back in France with the Mayor of Nantes stating:

*'Two major bankruptcies have just been declared in Nantes, and we greatly fear that there will be more. The returns from our colonies have shown a loss ever since the Company of the Indies began to enforce its monopoly...the colonies will fall along with the trade of our cities'.*

Pressure from French cities combined with the reality of a 'closed' circuit to restore the state of play in 1725. The 'closed' circuit reality was that there existed no profitable mechanism for the FEIC to return the excess sugar to France. On occasions the FEIC resorted to sending empty ships to the Caribbean to retrieve excess sugar needed to fulfill contracts - a clearly unprofitable venture. Harms (*ibid*) records:

*'It was estimated that the company recovered only about a third of the money it invested annually in the slave trade. Because the company's board of directors could not figure out a way to maintain its monopolistic practices and still conduct the slave trade at a profit, it voted in 1725 to abandon its monopoly and open up the slave trade to private traders. The symbiotic relationship between the slave trade and the direct New World trade was quickly restored'.*

The above account reflects how closely the slave trade was inter-twined with more usual commercial practices across the Atlantic. The fact that circuit traders needed goods to barter within Africa involved the direct traders in another mutually beneficial relationship. The ships leaving France would carry large amounts of Indian textiles and cowry shells. The latter were significant as cargo loads as they were used as a form of currency in many parts of West Africa. The shells originated in the Maldives and French East India Company ships from India and China would purchase them en route to France, to be used by circuit traders later in the cycle. Two further uses for the shells were as packaging in the holds of the direct traders' ships, providing protection for porcelain and other delicate goods from the East, and as ballast. Again the economics of trade entered the reckoning. Given that the goods brought back from Asia were of a much higher value than the goods taken there from France, ships had unfilled holds, space which was invariably filled with cowry shells. Once in France, the shells were then taken by circuit traders for slave purchase in West Africa. Textiles were also carried but were more susceptible to risk than shells given that tastes and fashions could change from year to year. Accordingly, a mix of both Indian and European textiles was usually carried.

1706 witnessed the demise of the French East India Company, following competition from, amongst others, a re-energized English East India Trading Company. This resulted in a lack of cowry shells for the French circuit traders, as no French ships were in a position buy the shells. The need for shells and Indian textiles was impacting severely on the slave trade and the profits and economic stimulation that invariably

accompanied it. Merchants raised one million livres and petitioned the government for permission to create a new company. The government, having had the opportunity brought to its attention, denied the petition. Instead it formed the Company of the Indies (COI), awarding it monopoly status over both the slave trade and Asian ventures; this completed the integration of the two sides of the world within an inter-dependent trade cycle, yielding vast profits for local and national French economies, the financial success of sugar plantations in the Caribbean, and, paradoxically, for the indigenous population of West Africa actively involved in selling slaves from their own region to the slave traders. Harms (2002) provides further evidence of this mutual dependency between circuit and direct traders in a case study tracing the voyage on particular French ship. This has been read as background reading to this paper although is not directly referenced.

The thrust of this paper has sought to show that the notion of 'one way trade' with exploitation of Asian, particularly Indian, parties as the 'norm' is open to contention and debate. Evidence exists that the consequence of West-East trade were more far-reaching than had been thought originally. Chaudhury and Morineau (1999) make two particularly salient points in this context. The first is that it is not enough to study Europe and Asia as two different systems; rather, it is necessary to establish and examine the similarities and dissimilarities between the two. The second is that whilst the simplistic Eurocentric approach has existed for (far) too long, this does not mean that an Indocentric view should be adopted instead - far from it. The trading parties co-operated with each other on partnership terms, but also competed. The drivers of the necessities of survival and profit resulted in pragmatic collaboration, with national, cultural and economic differences held in abeyance.

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## ENDNOTES

- i. By 'parties' is meant individuals and organizations associated with and impacted by the work and sphere of influence of trading companies
- ii. The Annales philosophy of research emerged in the 1920s and 30s in France. It programmatically examines social and cultural phenomena and their underlying causes, in contrast to dogmatic location of research in dates, facts and figures
- iii. The spelling of *Mughal* has been used although it is recognized that there are other variations. Similarly, throughout this paper, where place names are referred to, the English spelling originally used is applied, although it is acknowledged that different spellings may apply
- iv. Jean Meyer in *L'Armement Nantais dans la Deuxieme Moitie du XVIIIe Siecle* (Paris, 1969), p. 228
- v. Gaston Martin, *Nantes au XVIIIe Siecle: L'Ere des Negreiers, 1714-1774* (Paris, 1993), p. 181

# THE INFLUENCE OF THE ORGANIC SEAL ON THE CONSUMER BUYING BEHAVIOR: A STUDY OF CONSUMPTION OF TEA MATE AND JUICES.

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## ABSTRACT

*The article presents the results of two pieces of research on the importance of organic production and the certification seals in the consumer buying decision process of tea “mate” and fruit juices ready for consumption in the Rio de Janeiro city. The objective was to evaluate the importance of these attributes for consumers in simulated situations of purchasing, and identifying if these certified products are perceived. The method was the conjoint analysis, complemented by a qualitative analysis based on the content of comments made in questionnaires and interviews carried out after the simulations. The results are based on samples composed of 80 consumers of tea “mate” and 30 consumers of fruit juices, in total of 110 simulations. The results show that the organic products and the certification seals are perceived by respondents, but not valued as highly as other variables such as brand and price. There is also some evidence of unfamiliarity in relation to the organic products as well as a strong rejection to the perceived flavor of these products. Some skepticism in relation to the certification seals was also observed. Those who attribute a relative importance to the organic certification seals seem to be more concerned with their own health and quality of life, rather than with the environment.*

## INTRODUCTION

Due to the growing concern of humanity with environmental issues around the world, it is believed that the interest of people in general for products with ecological attributes has been increasing. Thus, consumers' environmental concerns have become a target for marketing professionals. According to the point of view of these professionals it is interesting to investigate how buyers make their choices and how they are informed about the products they buy and consume.

This work seeks to investigate how buyers' choices occur with the so called “organic” products which are products produced under the rules of organic agriculture: cultivated exclusively with organic fertilizers and whose control of pests and diseases must be made biologically (Ferreira, 2007). These products may be defined as being of less impact on the environment and people. In the same manner, they can be considered “more ecological”, such as it happens with recyclable, reusable products which use less electricity, or a small volume of packing, as defined by Ottman (1994). This study aims to understand the importance of this attribute and the relevance of the certification seal of organic production in the process of choice by the consumer of ready-to-drink beverages, such as tea *mate* and fruit juices.

Seals can be considered attributes of a product, which aim to signalize or certify one particular aspect of it, from the endorsement of an independent institution that guarantees this aspect (MMA, 2002). According to Carlson *et al* (1993) and OECD (2011) there are evidences that consumers are looking for environmental information on the products and are reading the labels for relevant information. The analysis of the profile of the respondents, classified by characteristics of gender, social class, age, values and life style allows for a better understanding of how these segments judge the products available in the market and how they make use of certification seals. This makes it possible for the marketing manager to direct his efforts at meeting the expectations of each group identified.

## Research Problem and Objectives

Before the context of the increase in consumers' ecological consciousness, and considering the several attributes offered by the so-called ecologically correct products, especially the commercial appeal of the organic production, it is relevant for marketing professionals to have an answer for the following question: What is the relevance of the organic production and certification seals in the consumer buying decision process?

This study has as its main objective to understand the importance of the organic productive process and the seals that certify this characteristic in the consumer buying decision process of buyers of ready-to-drink tea *mate* and fruit juices, as well as to identify their perceptions in relation to these variables. To attain this main objective, this study sought to reach the following intermediate objectives:

- (a) Verify whether the presence of the organic origin certification seal is among the main variables considered by buyers when choosing tea *mate* or ready-to-drink fruit juices;
- (b) Identify eventual differences in patterns of decision and preference of buyers in relation to organic products, based on gender, age and values of the respondents;
- (c) Verify the reasons behind the choices made and their opinions on organic characteristics and the seals on the products studied.

This study is structured in the following manner: theoretical references containing a review of literature pertinent to organic certification, labelling, consumers' behavior and their attitude; methodological procedures made in the empirical research; analysis of obtained data and results; and the final considerations of the work.

## THEORETICAL REFERENCES

### Green Products and Ecological Certification Seals

To define a product as ecologically correct, "green", or as having less environmental impact is not a simple task, given the several approaches available to measure the impacts of its productive process, use and discharge in its life cycle. Generically it can be assumed that ecological products are those that present one of the following characteristics: it is recyclable, it can be reused, it is produced with recycled material, contains natural ingredients, uses less energy than other alternatives, demand less resources to be produced or it is produced in a less pollutant manner (Ottman, 1994; MMA, 2002; OECD, 2011). As examples of products with such a name, food or beverages produced in an organic way can be cited.

However, there are indications that consumers many times mistrust the alleged ecological characteristics or "green" shown in the product, being necessary that an idoneous intitution certify the products through an independent process of averiguation and consequent certification. That is, ecological seals or environmental labels (Ottman, 1994; Childs; Whiting, 1998; Baena, 2001; Andrade, 2001; MMA, 2002; D'Souza *et al.*, 2006; Rocha, 2007; Louzada; Rocha, 2010; Orange, 2010; OECD, 2011).

According to Giridhar (1998), ecological seals refer to general and collective enviromental performance of the products. They are indicators developed in order to try to warn consumers confused with what they state to be ecologically correct (Childs; Whiting, 1998). Environmental labels serve as a guide for consumers who wish to choose eco friendly products, according to D'Souza *et al.* (2006).

For a better definition of the types of ecological seals, Rachid *et al* (2009) list the origins of the seal designation. According to the authors, ecological seals may be classified into two categories: self-designation seals and seals by determination of others. Self-designation seals are attached to the product by the maker, seller or dealer and may be made based on one attribute only. The designation by others is based on conformity with pre-determined criteria which are independently verified by a competent authority.

Other authors emphasize the capacity of communication of the seals. According to Carlson *et al.*(1993), ecological seals modify buying behavior potencilally since consumers, while willing to look for environmental information on the products, may trust the seals when making a decision. However, green attributes are generally



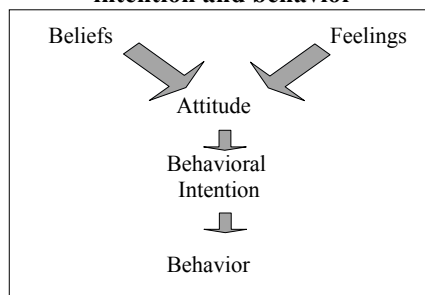
hard to identify. Because of this difficulty, many consumers rely on advertising, on certified seals or information on the labels of the products (D'Souza *et al.*, 2006).

A research made by Chase and Smith (1992) indicated that 70% of the buying decision of the analysed respondents were influenced by environmental messages in advertisements and seals of the products. Louzada e Rocha (2010) identified a relatively low influence of energy certification seals in the buying process of electric bulbs and also skepticism from the respondents. In a recent article on “ecologically friendly products”, which include environmental labels, Orange (2010) affirms that the allegations have been so diversified from the manufacturers of these products that there is a risk of becoming inexpressive, increasing the skepticism of the population.

## Consumers Behavior, Attitude and Purchasing

Engel, Blackwell and Miniard (2000) define attitude as the likes and dislikes consumers present in relation to a certain product. This way, these would be better understood “as representing a general evaluation” and that “they play an important role in the moulding of the buying behaviour of the consumer”. Thus, attitudes can be very useful for a better understanding of consumers’ behavior. Theoretically, it is assumed that people’s behavior is compatible with their beliefs, feelings and opinions. The following diagram shows this logic in a simplified manner.

**Figure 1: A contemporary vision of the relationship between beliefs, feelings, attitude, behavioral intention and behavior**



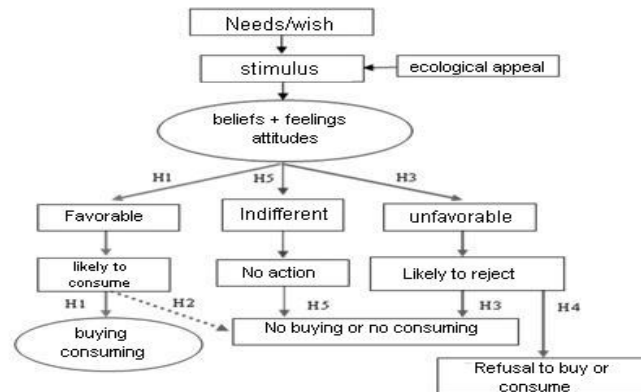
Source: Engel, Blackwell and Miniard, 2000, p 241

As it can be observed, beliefs, feelings, and consequently opinions, make up the way people interpret the world around them, guiding their attitude in regard to varied objects and situations. Attitude, in this sense, represents a predisposition or judgement about something. This predisposition, in principle, leads people to acting according to what they think or feel. Thus, actions or behaviors derive from attitudes: however, nothing guarantees they will be realized in the same direction. Figure 2 illustrates this process.

The illustration shows situations in which a person may have a favorable attitude to some stimulus and consequently tendency to buying or consuming. His action may be coherent (H1) or not (H2) with his intention or wish. In fact, there are several conditions that may lead a person to act differently from his or her predisposition. For example, lack of resources needed at the moment of decision, the convenience of any other choice, lack of the desired product at the moment of buying, human mind’s own incoherence which processes many variables when making a decision, among others. Thus, even though it is expected that buyers and consumers concerned with environmental questions behave in such a manner as to cause less impact on environment, this logic is not always confirmed (Ottman, 1994; Rocha; Marques, 2006; Cornelissen *et al.*, 2007; Baisch, 2008; Louzada; Rocha, 2010).

Some studies conducted in Brazil on the behavior of ecological product consumers seek to identify the attitudes of people and not necessarily their actions (Crespo; Leitão, 1993; Cuperschmid; Tavares, 2002; Almeida *et al.*; 2007; Instituto Akatu, 2008; Baisch, 2008; Louzada; Rocha, 2010). So, the results indicate an increasing interest for eco-friendly products, but not necessarily behaviors of buying and consumption.

**Figure 2: An amplified vision of the relationship between beliefs, feelings, attitude, behavioral intention and behavior**



Source: Louzada and Rocha, 2010

Different from other literature on the theme, the present study aims at measuring the weight of the ecological variable in the choosing process from purchasing simulations, in order to assess what would be the likely behavior of people. After that, data are analysed to help understand the attitudes towards these products. Thus, Engel *et al*'s (2000) model is used in the opposite direction to avoid the halo effect, or bias with a favorable response, according to Cornelissen *et al* (2007), known as “politically or ecologically correct speech”.

## METHODOLOGY

The objective of the study is to measure the weight of the variable “organic product” in the consumer’s buying decision process, through an exposition of a certification seal, using purchasing simulation process. In the first fase, a quantitative approach was used, complemented by a qualitative analysis to help explain the results. The quantitative method was based on a buying simulation applying the technique of conjoint analysis (Green; Srinivasan, 1990; Herman; Klein, 1995). This method allows for an evaluation of weight of different attributes and levels of attributes when exposed at the same time. This method seeks to reflect the real situation consumers face when having to decide on buying products. It was tried to include the most relevant variables in this process, as identified in a previous exploratory research.

The quantitative analysis was complemented by a qualitative technique that evaluates the content of the answers given in the applied questionnaires after simulation with each respondent. The objective is to observe their perception in relation to organic products and certification seals. Demographic data of the respondents were used to identify signs of segmentation.

The first step of the research was to select products with an ecological characteristic, in this case organic production. Later, an exploratory research, based on non-structured interviews, was made with small groups of consumers and buyers of tea *mate* and ready-to-drink fruit juices to identify the attributes considered more relevant in the process of choosing their purchases. The definition of the main variables of the study (attributes) and their levels (their variations) was reached from these considerations. Then, analysis of frequency was made to identify the variables most cited by respondents, which were selected to take part in the processes of simulation and mensuration. From the total of the cited variables, four were selected which had the greatest number of citations. Since the variable of interest in the research (organic product) did not appear among the four most commented on in this phase, one of the four variables was replaced. This procedure had the objective of reducing the study to four variables (brand, price, flavor, organic production) and twelve levels for each product, detailed next. The reason is that with this number of variables and levels it is possible to restrict the number of combinations and choices to a manageable level when the field research is conducted.

The levels of each variable were initially determined based on interviews with consumers and buyers in this initial exploratory phase, later complemented by field work. For example, the variables “brand”, “price”, “flavor”, “organic production” were selected for the experiment. A field research was performed to identify different brands and their prices (their levels). At this point, four prices and four brands were selected: a low price, related to a brand known by its prestige, two medium prices, related to two other intermediate brands. The other two variables selected were represented by two levels each. The variable “flavor” was divided in “natural” and “lemon” and the variable “production” was presented as “organic” and “non-organic”, identified by the presence or absence of a seal.

A combination of the four selected variables and the twelve levels of each product were transformed into sixteen different options for each product, presented as cards, in the case of fruit juices and personalized glasses, in the case of tea *mate*. These cards and glasses were exposed to the people interviewed as an instrument of simulation of purchasing, as if they were looking at a promotional folder (juices) or in front of a shelf (tea *mate*). The participants were asked to put in order of preference the 16 alternatives, revealing which pleased them more or less. In this way it was possible to observe how the respondents evaluated the variables in relation one to another. The combination of variables and their levels in 16 alternatives was made from a fractionary arrangement, elaborated by the full-profile method, so the variables are based on the levels and not on the attributes (Motta, 1997).

In all, 110 simulations were used, whereas the simulation of the buying process of ready-to-drink tea *mate* involved 80 consumers, analysing the following brands: *Nestea*, *Rei do Mate*, *Mate Leão* and *Mega Mate*, with prices varying from R\$2,00 to R\$3,50 for 300 ml glasses. The flavors were: natural and with lemon. As to the variable “type of production” it was linked to the presence (organic) or absence of a seal (traditional). The process for fruit juices involved 30 consumers, analysing the variables: brand, price, calorie content, and organic or non-organic product. The following brands were considered: *Del Valle*, *Sufresh*, *Mais* and *Native*. Prices varied from R\$3,69 to R\$7,99 for packages of 250 ml. Caloric types were divided into “light” and “common”. As for the productive process, it varied between “organic” and “non-organic”.

The mensuration of the levels varies from 0,0 to 1,0 and the higher the number, the greater the value (utility) attributed by the respondents. In these studies, it is assumed, by restriction, that the four variables selected represent 100% of what is considered in the buying decision process of these products. The evaluation of the variables weights varies from 0% to 100% each. Thus, the sum of weight of the four variables selected is 100%. Data collected at this phase were processed in a specific software made within Excel, as developed by Silva (1998) and used by Hill (1999), Rocha (2007), Baisch (2008), and Louzada and Rocha (2010).

After defining the products, the variables and their levels, their combination and preparing the cards and packages, we started field work, when the consumers were invited to classify the options in order of preference, assuming that it was the purchasing moment. Only regular buyers of tea *mate* and juices were chosen to take part in the research. The purpose of the study was not revealed to the participants.

Before the 16 packages of tea *mate* and the 16 options of fruit juice in the folder, the participants made their choices classifying them in order of preference. After the choices, a questionnaire was presented to the participants to be filled. Whenever possible an interview was conducted after the filling of the questionnaire. The objective was to collect information on the opinions, attitudes and perceptions of the participants in relation to the studied products, the ecological variables involved and their choices. Information was presented by the respondents orally and written, that is, analysed in its content. Extracts of the explanations were selected to form categories of answers. The questionnaire also served to collect demographic data and describe the profile of the respondents.

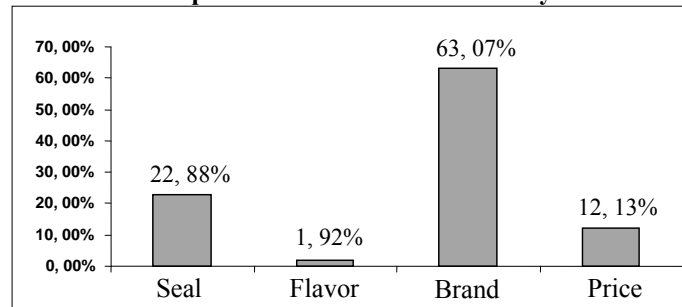
## ANALYSIS OF DATA AND RESULTS

### Ready-to-drink Tea *Mate*

Figure 3 shows the weight of the four variables studied in the buying simulation process made with 80 consumers of ready-to-drink tea *mate*. The sample was made up of young people between 18 and 25 years of

age, mostly single with no children, all university students. The average family income was R\$10.190,00 monthly, which defines them as belonging to a high economic class. As to gender, the sample included 40% men and 60% women.

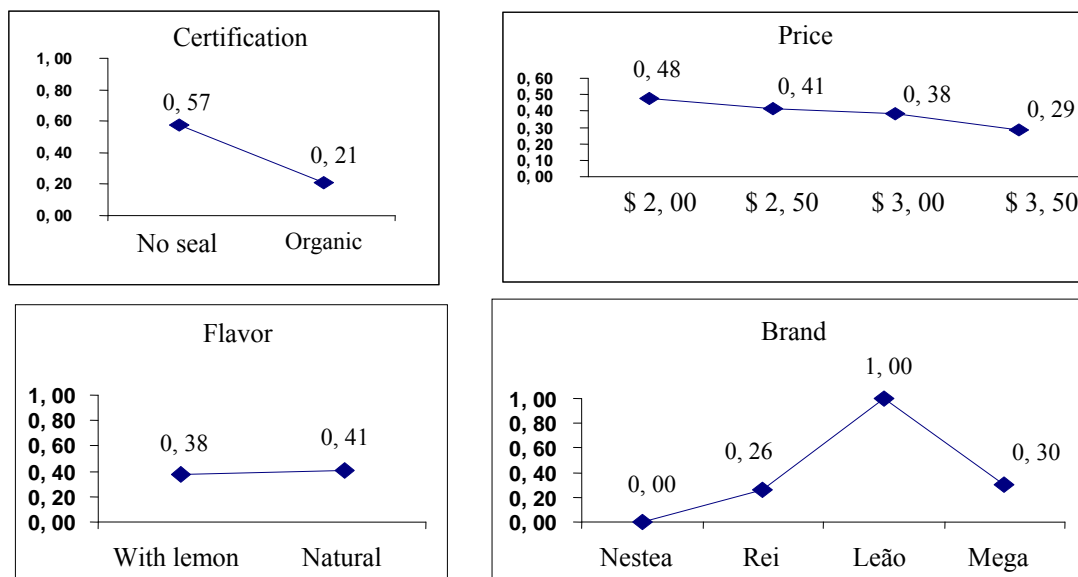
**Figure 3: Relative Importance of Attributes of Ready-to-drink Tea *Mate***



Source: Research Data

It was observed that these consumers strongly consider the brand as the principal choice criteria, with 63% of the decision weight. The presence of an organic seal comes in second place, with approximately 23% of the choice weight. Price comes in third place, with 12% in the participation process and flavor only 1,0% of the total. Figure 4 reveals with more details the levels of utility attributed to each variable included in the simulation.

**Figure 4: Utilities Noticed by Levels of Attribute – Tea *Mate***



Source: Research Data

Data show that there is a strong preference for the brand *Leão*. There is a strong rejection to *Nestea*. There is some sensibility to price, which is expected, since the levels of utility decrease as prices rise and there is an apparent indifference in relation to flavor, since the utilities of both are very similar. As to the variable related to the organic production of tea *mate* (certified by the presence of a seal), even though it comes as the second criteria of choice in Figure 3, when analysing the utilities attributed to the two levels presented, it shows that the respondents place a higher value on the product without the seal (non-organic) than on those with seals (organic). This result is surprising, when considered the hypothesis that people prefer natural products or those less damaging to nature. This is an unexpected result, especially among youngsters living in Rio de Janeiro, a

city known for the concern of people with healthy bodies and belonging to the “health generation”. The comments made in the questionnaires about this fact offer indications on the reasons for this choice.

Analysing the content of answers favorable to organic products given to the question “If you gave any importance to the variable “organic production”, according to the seal, explain why”, some answers stand out. *“It is important to have environmental concerns, but even if it is not an ecological product, the brand I choose should have this concern for me”*. This suggests that the presence of the certifying seal has the role of showing that the manufacturer of the product is taking environmental measures that protect the consumer’s decision, even though it is implicit also that the respondent is not sure about the type of measures that classify the product as ecological. Other quotations refer to the “healthier” character of the organic product. For example: *“I prefer to consume a natural beverage, good for my health”*. *“I give more importance to these products since they care for our health”*. *“I prefer them because they must be healthier than others”*.

In a general way, these explications make reference to the “natural” aspects of the product and its contribution to the “health” of the respondent. There are still a few answers that link this preference to some expectation of a “better flavor”. In short, most of the respondents who demonstrated more interest for the organic product showed non-ecological reasons, but were concerned with their welfare and health. Most of the comments, however, were those of the respondents who did not show preference or a higher value to organic products. The most frequent explanations suggest a perception that the flavor may not be good. Others show strong preference for a special brand, not willing to try something new, such as option for the organic. Others show some skepticism related to the seals. The following quotations support these conclusions: *“I choose products of my favorite brand”*. *“I don’t care whether the product is organic or not, I care about the brand”*. *“I’m automatically inclined to choosing the product by its brand, even though I care about the environment”*.

The arguments favoring the brand are explicit, in detriment of the others. The following passages show a negative attitude in relation to the flavor the organic products, by those who have tried them as well as those who have not. *“Consuming product? I give more importance to the flavor”*. *“Organic product? I don’t know what it is, but it must not taste good”*. *“Organic mate must taste like soil”*.

The quotations that follow summarize an apparent skepticism in relation to organic products, even in the presence of a certification seal. *“Certification seal? Well, I don’t know who has them. Who guarantees that the product is really organic?”*. *“Organic products are in fashion. They became banal.”*

In short, the impressions suggest that these respondents show a disfavorable attitude as to organic product for lack of knowledge, expectation of an altered flavor when compared to the products they are used to and skepticism in relation to the veracity of the production process. Analysing data by gender it was possible to identify some variations of opinion. Tables 1 and 2 illustrate the differences between men and women respondents. Table 1 shows that in both cases there is a clear valorization of the brand. As to flavor, despite a slight variation, it seems to be of little significance to both. However, it is observed that men of the sample are more sensitive to price than women.

**Table 1: Relative Importance of Attributes of Ready-to-drink Tea Mate Comparing Women and Men**

Attribute	Men	Women
<b>Brand</b>	56,94%	67,80%
<b>Seal</b>	18,87%	25,98%
<b>Price</b>	20,37%	5,77%
<b>Flavor</b>	3,82%	0,45%

Source: Research Data

In relation to the presence or not of a certification seal, Table 2 shows that although women give a stronger weight in their decision process than men when the product is certified by a seal, what may suggest at first that they are more inclined to consuming organic products, they also give a stronger weight to products without the certification seal. The explanations given in the questionnaires emphasize the aspect of the flavor noticed by those who have tasted the product and the expectation of a worse flavor of organic products by women who do not know them, showing negative attitudes.

**Table 2: Utilities Noticed by Type of Certification of Ready-to-drink Tea Mate Comparing Women and Men**

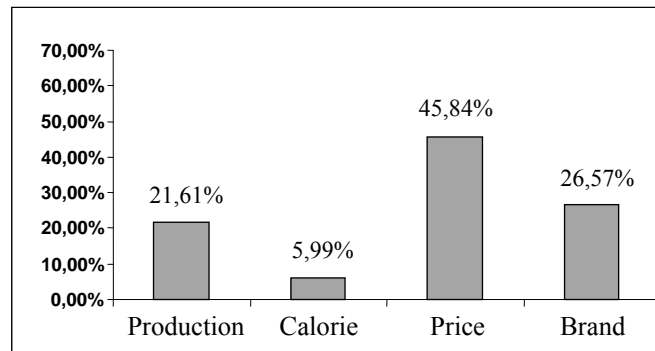
Attribute Level	Men	Women
No Seal (Non Organic)	0,49	0,63
With Seal (Organic)	0,15	0,25

Source: Research Data

## Ready-to-drink Fruit Juices

The results of the research made with fruit juices are shown below. Figure 5 shows the weight of the four variables studied in the buying simulation process with 30 consumers of ready-to-drink fruit juices. The sample up to the moment is made up in the following way: 43 % young people, from 18 to 25 years of age, university students and post-graduates, 1% from 26 to 30 years of age and 56% adults from 31 to 50 years of age. Young people (18 to 25) are mostly single and do not have children, while the older ones are married with children. The medium income varied much, even though economic class A1 be predominant, according to the Brazilian Economic Classification Criteria (ABEP, 2012). As to gender, 60% are men and 40% women. Due to the size of the sample, it has not been possible so far to make segmented evaluations.

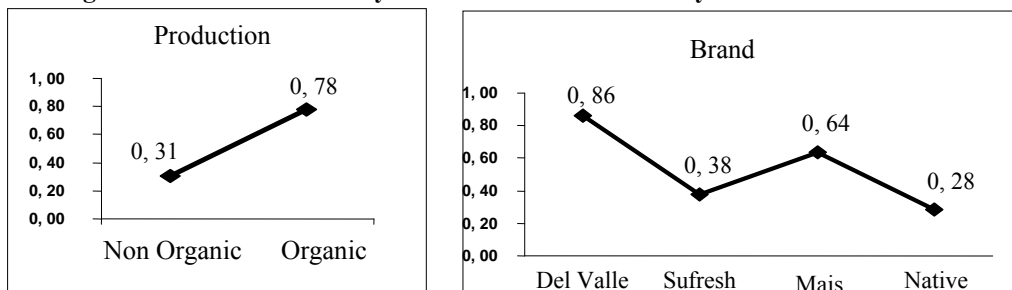
**Figure 5: Relative Importance of the Attributes of Ready-to-drink Fruit Juices**

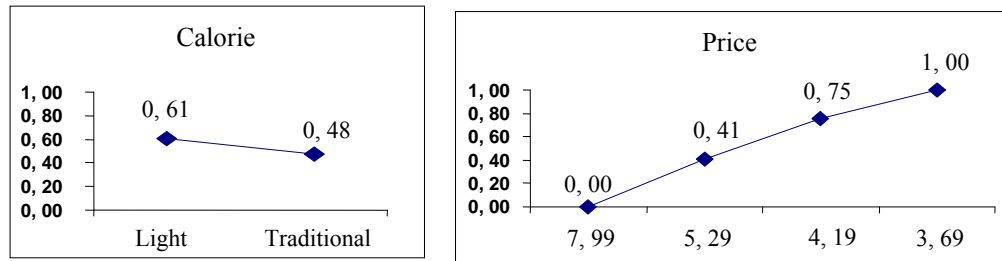


Source: Research Data

It was observed that these consumers strongly consider price as main criteria, with approximately 46% of decision weight. Organic ready-to-drink juices are usually more expensive than those non-organic. Brand comes in second place, with 26,57% of the decision process total weight, followed by type of production with 21,61%. Calorie content was the variable with less weight in the simulation, representing only 6% of the total. The figures bellow show the levels of utility attributed to each variable included in the simulation.

**Figure 6: Utilities Noticed by Levels of Attribute – Ready-to-drink Fruit Juices**





Source: Research Data

Data show a preference for the brand *Del Valle*, followed by *Mais*, *Sufresh* and *Native*, the latter specialized in organic products. There is a strong sensibility to prices, with considerable reduction of utility as prices rise. As to calorie content there is, apparently, a preference for the light version, while in relation to the productive process a better appreciation of the organic type. This finding differs from that of the simulation with tea *mate*. The comments made in the questionnaires about this preference offer indications of the reasons behind the choices.

Analysing the content of the answers given to the question “If you have given some importance to the variable “organic production”, explain why”, the following remarks stood out: “*I prefer them because I’m contributing to a healthier environment to all*”. “*I prefer these products because they give me a clear conscience*”. “*I believe that preserving the environment there will be a better quality of life to all*”. “*The juice should not be produced harmfully to the environment so that we may have a healthy soil in the long run in the production of food*”.

These comments mention aspects of the organic products related to the environment and were mostly made by older respondents. Other explanations showing favorable attitudes towards organic juices were: “*Thinking firstly about my health, everything that is natural seems better and healthier*”. “*The most important thing in life is to be healthy*”. “*I prefer natural ingredients because they are good for my health and will help me not to get fat*”. “*They harm neither nature nor my health*”. These arguments express a link between organic products and the concern of the respondents with their health and welfare. In short, the explanations are divided into two factors: concern with the environment and concern over one’s health. Even though the sample is reduced to allow for a trustful conclusion, the comments showing concern over the environment, soil, quality of life and conscience were made by older respondents, all married and with children, while concerns over one’s own health were made by older and younger people alike.

Other explanations help understand the low value attributed to the organic option. They refer to the lack of concern with the environment in general, the perception of high prices of these products, major concern over one’s health and lack of knowledge about the product. These conclusions came from answers such as: “*Right now I’m more concerned about my health and welfare than with the planet*”. “*I generally look for a brand I already know and check the price*”. “*If the price is the same, it doesn’t matter which one I buy*”. “*I’m not very much concerned about the environment*”. “*I haven’t chosen because I’m not familiar with the product*”. “*All products come from nature*”.

## CONCLUSIONS

As mentioned before, the objective of this study was to verify the relevance of organic production and its certification seals in the buying decision process of consumers of tea *mate* and ready-to-drink juices in the market of Rio de Janeiro. It is not a simple task to define a product as ecologically correct, “green”, or showing less impact on the environment, given the several approaches available to mensurate the productive process impact, use and discharge during its life cycle. Thus, the study touched the definition of green products and seals of ecologic certification and also explained behavior relationships of the consumer, attitude and purchasing through the contemporary vision of Engel, Blackwell and Miniard (2000).

The study used as methodology a quantitative research that included a conjoint analysis, complemented by a qualitative analysis based on the study of the content of questionnaires and on interviews made after simulations. The results shown were those of initial samples made up by 80 consumers of tea *mate* and 30 of fruit juices, in the market of Rio de Janeiro, with a total of 110 simulations. According to the analysis of data, obtained through the results of the quantitative research and the rich information of the qualitative research, we came to the following conclusions.

The first conclusion is that the relative importance of the organic product is not more important than the other variables present in the product, such as brand and price. In this sense, the managers should be aware that, besides offering organic products, they must have a well known brand, as well as affordable prices.

The second conclusion is that even though the seals on the labels help the consumer with information about the origin and the productive process used in the product, they do not necessarily represent an evidence of superiority especial for skeptical consumers. The research shows that most consumers do not know organic products well and their perception in relation to the final result is not necessarily satisfying, as it can be noticed in the case of ready-to-drink *mate*. On the other hand, their benefits seem to be clearer to those who took part in the simulation of buying ready-to-drink fruit juice. Some questions arise: Why were there different results? The explanation would be in the type of the product or in the perception of the people in the sample?

A possible explanation is the profile of the samples. The consumers who participated in the simulations with tea *mate* are mostly university students, single and without children. The participants in the simulation with fruit juices, however, gathered young people and adults, married, with children. It is possible that the sensibility regarding the environment and a major interest for organic products, while helping in the reduction of their problems, may be present in older people, what requires new researches.

The third conclusion is about the interest in the variable “ecologic”, inherent in the organic product, in which several favorable comments mention the concern with welfare and health of the respondents. Past studies are coherent with this result, since they show a major concern of people in considering their own needs or interests instead of worrying about environmental problems or other major problem of society (Ottman, 1994; Rocha, 2007; Baisch, 2008; Orange, 2010).

A fourth conclusion is related to the analysis by gender. The results found with the simulation of buying *mate* show traces that there is a distinction in perception by men and women. In the present study, women placed less value to organic product and the presence of a certification seal on the packages, contrary to the results by Ottman (1994), Hill (1999), Rocha (2007), Baisch (2008), among others. For both genders though, it is important to take into consideration the attributes of the products in the satisfaction of their specific needs, making the organic into a complementary argument of sale. Still regarding the perception of both men and women, it seems relevant that the manufacturers of such products should advertise in a better way their attributes, mainly as to their flavor. They should consider degustation in selling areas, offering of samples, besides other forms of communication.

As a final conclusion, the results found here help us to understand the logic of the behavioral model proposed by Engel *et al* (2000), once it identifies behavioral patterns coherent with attitudes and others that go against the perceptions before favorable. That is, comments taken from questionnaires, when compared with the results of a conjoint analysis, show that the preference for a certain brand, sensibility to prices, the search for other benefits, among other arguments, explain the logic behind the favorable attitudes towards the environment or products with ecological appeal, but which lead to other choices. In many cases, these preferences are supplanted by the weight of the variables such as brand and price, for example.

Therefore, the results suggest at least in part, the need for future researchers to use alternative methods when studying the behavior of “green” consumers in particular, seeking to measure their actions rather than their intentions or opinions. The model here presented has opened a number of interesting paths for future research. Testing by qualitative and ethnographic methods such as in-depth interviews can help to provide more detailed information about green consumers’ buying behavior. Furthermore, other products from other sectors (such as organic cosmetics) could be explored for a better understanding of gender influence. Ethnographic techniques



my also help to identify situational variables and attributes that green consumers consider important when making their decision.

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# PREDICTIVE MODELING AND OPERATIONAL ASPECTS OF INFLATION TARGETING IN RUSSIA

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## ABSTRACT

*The article presents some results of study of inflation in the economy of the Russian Federation (RF). It identified and evaluated the specificity and the rate of price volatility for several decades of existence of the new economy in Russia. Based on international experience and evidence of Russian statistics several specific types of inflation have identified. There are results of model researches of the inflation, some proposal were made to eliminate specific practical problems connected with short- and medium term forecasts of inflation.*

## INTRODUCTION

Inflation is a key indicator of economic health of any state. Due to this, developed and few developing countries made transition to new modes of management, when the maintenance of acceptable inflation is one of the main priorities of economic performance targets, ensuring the reliability and relative stability of financial system. As a result, indicative planning and inflation targeting holds a strong position in the end of XX, beginning of XXI century as solution of the support price stability problem in the overall uncertainty of the future growth of the global economic system, its specific regional and sectoral clusters.

Inflation targeting has proved its efficiency in practice (Lars O.E. Svensson, 2010). These results can be attributed to the particularity of developed economies, as the most stable systems, if not the facts of its successful application in developing countries (S. Gerlach and P. Tillmann, 2012, G.O. Martinez, 2008, A. Bollard and O. Karagedikli, 2006). The economic system in New Zealand is one of the standard examples of successful stable prices policy implementation. For two decades its economy has moved to price stability (E. Castelnovo, S. Nicoletti-altimari and D. Rodríguez-palenzuela, 2003). The secret of success lies in a systems approach to solving the problem. The basic types of inflation were allocated by the mechanisms and drivers of its formation. They have reformed legal sphere for the compliance purposes to the resources: legislatively fixed authority of the Ministry of Finance and the Reserve Bank of New Zealand. Taken together openness consistency and the impressive results of the reforms have increased trust of the business and confidence of its members in the future. Justification of the decisions and their transparency is the main secret of the success of inflation targeting in the economy of New Zealand (NZ). This is an incentive to study and use experience of emerging economies in reforming and developing the management tools of inflation during the formation of the normal functioning of the financial market of RF.

Russia entered the XXI century as a country with high rate of inflation according to standards of developed countries. Given the galloping inflation and hyperinflation in the 1991-2000's, we can say that for the population and Russian economy steady growth in prices is some form of stability in recent years. International comparisons and state of open economy put pressure on the inside economic policy. Ongoing institutional reforms and economic policies led to decrease rate of inflation in the consumer market: from 20.2% in 2000 to 6.1% in 2011. The Central Bank of Russia (CBR) have improved quality of decisions at the expense of experience, increased transparency of policies and increased public confidence in the state – all this is expressed in a declining rate of prices growth. In the directions of monetary policy for 2011-2013 CBR notifies about gradual transitions to inflation targeting. The goal is to maintain inflation within the range of 5-7%. As a result in

2011 CBR reached this target, but current monetary policy and format of the decision-making are far from “perfect New Zealand” model. Because of this Government of the Russian Federation and the CBR board of directors have some problems with constructing a rational schema of decision-making. A special role in it should take medium and long term prediction method of inflation as the main way to assess the level of the target and develop an effective mechanism for timely action on it. Authors researched possible acceptable solutions of those problems and some of them presented in this work

## RESEARCH METHODOLOGY

*The purpose of the research* – was a study of approaches to explain nature of inflationary processes, their modeling and use in the practice of inflation targeting. It is dictated by necessity to fill gaps in understanding the mechanisms of inflation, taking into account the specifics of the Russian economy. In this context special consideration requires following *three key points*. *The first* involves the study of theoretical approaches and different understandings of inflation nature, with an explanation of its causes in RF. *The second one* to find adequate models of inflation in the Russian economy based on the study of international experience and evaluation of its application. *The third* is connected with justification of inflation targeting mechanism, since the actual state of governance, legal framework and the existing developments of Russian economists in this area may not be recognized satisfactory so far. *The object of the research* was the formation of macro-economic level of inflation in the economy of Russia. Information sources of this work were the various open state-of-the-art reviews from the Russian and world press, the official statistical data of the Federal Agency for Statistics of the RF (<http://www.gks.ru>), the Central Bank of the Russian Federation (<http://www.cbr.ru>), the Federal Customs Service of RF (<http://www.customs.ru>), the Reserve Bank of NZ (<http://www.rbnz.govt.nz>), the US Bureau of Labor Statistics (<http://www.bls.gov>) and organizations of the International trade statistics ([www.intracen.org](http://www.intracen.org)).

The foundation of modern inflation concepts was laid in the works of classical D. Yuma’s and A. Smith’s economic theory at the beginning of the XIX century. At the core of their concept lay claim that the rise in prices always result of monetary growth. Later this point of view developed W.S. Jevons, A. Wagner, A. Marshall and others. In the late 30’s – early 40-ies twentieth century their followers, like H.C. Simons, J. Engel, C. Warburton formulated tenets of monetarism, which adopted its final form in the works of M. Friedman (1952). In parallel with the development of the classical theory understood the role of the government in the regulation of money circulation. A radical revision of interpretation the role of money in national economy development was undertaken in a series of papers J.M. Keynes (1923-1936) and further has developed in works J. Tobin, N. Kaldor, J.R. Hicks and others. As a result of scientific research they created IS-LM model, which further developed in the Mundell-Fleming model (model describes an open economy). There are currently consolidated general approaches (in the Neo-Keynesian (T.A. Lubik and W.L. Teo, 2012) and monetarism (C.L. Weise, 2012)) in the study of inflationary process divided into private, which in turn are a practical application, and become independent directions in the theory of inflation, such as: theory of adaptive and rational expectations, real business cycle theory and etc.

## SPECIFICATION OF INFLATIONARY PROCESSES IN THE RUSSIAN ECONOMY

Today, building on the work of such eminent economists as M. Friedman, P. Cagan, E. Phelps, M. Milgate published in collection of articles edited by J. Eatwell, M. Milgate and P. Newman (1991), on the papers of J. Muth, T.J. Sargent, R.E. Lucas (1988), S.J. Grossman, as well as the works of their predecessors, it is possible to make an unambiguous conclusion about the complexity and diversity of the modern understanding of the inflation phenomenon. Based on the works of these authors we can pretty clearly specify the types of inflation, in other words, a definition in the narrow sense (table 1).

**Table 1: The specification of macroeconomic inflation**

Inflation type	Definition	Main factors
Demand-pull inflation	The rise in prices triggered by a sharp increase in the effective demand for goods and services	<ul style="list-style-type: none"> <li>- increasing the money supply;</li> <li>- the budget deficit;</li> <li>- growth in real incomes;</li> <li>- expectations;</li> </ul>

Cost-push inflation	Price growth in the market of goods and services caused by reduced supply and rising costs of enterprises	<ul style="list-style-type: none"> <li>- increasing the cost of the basic factors of production;</li> <li>- monopolization of commodity and energy sectors of economy;</li> <li>- growth of mandatory payments to the budget.</li> </ul>
Inflation caused by authority	The rise in prices caused by decisions of public authorities	<ul style="list-style-type: none"> <li>- high proportion of natural monopolies with state participation;</li> <li>- policy decisions;</li> <li>- reforms.</li> </ul>
Structural inflation	Uneven growth of prices for commodity groups	<ul style="list-style-type: none"> <li>- cross-sectoral imbalances between supply and demand in various industries;</li> <li>- changes in the economy's structure;</li> <li>- inconsistency of the existing structure of production and distribution of social needs.</li> </ul>
Price-on-Food inflation («Foodflation»)	A special kind of inflation due to rising world prices for agricultural products (such as the global food crisis 2007-2008)	<ul style="list-style-type: none"> <li>- a sharp rise in food prices;</li> <li>- reduction of stocks of food;</li> <li>- low productivity of the world agricultural sector;</li> <li>- world population growth.</li> </ul>
Imported inflation	Rising prices in domestic markets due to increased cost of imported goods	<ul style="list-style-type: none"> <li>- changes in world commodity markets (including speculative);</li> <li>- import dependence of certain industries.</li> </ul>
Export inflation	The increase in domestic prices caused by the deficit due to excessive exports of goods and services at higher world prices	<ul style="list-style-type: none"> <li>- changes in world commodity markets (including speculative);</li> <li>- high degree of monopolization of the industry.</li> </ul>
Stagflation	The rise in prices at a high level of unemployment	<ul style="list-style-type: none"> <li>- a general crisis in the various sectors of the economy;</li> <li>- the transition period caused by the necessity to renovate capital.</li> </ul>
Expected inflation	The rise in prices caused by the desire of economic agents neutralize the negative changes in real terms of income associated with their judgments about inflation in the future	<ul style="list-style-type: none"> <li>- political instability;</li> <li>- high degree of differentiation of the material condition of society;</li> <li>- the lack of a systematic program of anti-inflationary policy;</li> <li>- psychological pressure from the mass media.</li> </ul>
Unexpected inflation	The sharp spike in prices due to the action of random factors	<ul style="list-style-type: none"> <li>- a sharp distinction between declared and actual policies;</li> <li>- a significant error in the forecasts of the main socio-economic indicators, including inflation.</li> </ul>

The inflation identification in each country to determine its type is not confined to one definition but may be a combination thereof. This allows us to define a field of factors important to control and provides an opportunity to focus on specific tasks. The problem of specification of inflation in RF could only be solved by successive examination of all of the significant factors. For today's Russia is first of all: dependence on import of a large numbers of industries; high monopolization of raw materials and energy sectors and their dependence on world market prices; growth in the share of natural monopolies with government participation; "bouquet" of the institutional problems of transition economy, the constant threat of budget deficit. In addition, unfortunately, there is an increase in differentiation of the degree of society welfare (according to the UN data Russia on the 66<sup>th</sup> place in the HDI, according to the IMF – 51<sup>th</sup> place with GDP per capita). A fluctuation in the price of food has a significant impact on overall inflation because Russia's consumer basket for 37.27% (2012 data) consists of food. Thus at present it can be argued that the inflation rate in RF is a multidimensional character. It clearly seen as the cost-push and demand-pull inflation, inflation caused by authority and structural inflation, imported and export inflation and the recent increase in expected inflations. All this makes it very difficult to study the phenomenon of Russian inflation and especially the development of effective measures for its management.

# THE KEY PROBLEMS OF MODELING AND FORECAST INFLATION IN RUSSIA

The purpose of modeling inflation is twofold. First, the researcher, while he is creating a model of inflation, is trying to understand and explore the mechanism of this phenomenon. The economy of every country has its own unique set of factors. Secondly, he tries to make better predict inflation behavior. Current approaches to modeling and prediction of inflation used by various methods. As a rule they are based on a less informative econometric build: from simple algorithmic models to systems of simultaneous equations models and complex simulation. In addition to the methods using factual information methods of forecasting with judgment also successful apply. A striking example is the personal forecasts head of executive authorities of RF.

Today there are many universal approaches of modeling inflation, e.g. researchers are using the Phillips curve and its modifications (G. Koop, D. Korobilis, 2009), equation of the quantity theory, proposed by I. Fisher (J. Frait, L. Komarek, L. Kulhanek, 1998), conclusions of the theory of rational expectations (J.F. Muth, T.J. Sargent, 1988) and others. These models can serve as basis for systems of simultaneous equations models, models of general equilibrium in economy and other. Summarizing successful development in this area we can distinguish their base circle (table 2). Feature of the practice of modeling inflation is exceptional attention to a small number of facts and the modeling of inflation itself. Obviously, all models mean inflation especially as demand-pull inflation (according to the classification introduced above) except the model 2 (table 2). Model 2 takes into account inflation expectations, which gives reason to take it to a class of mixed models of demand-pull and cost-push inflation. Last makes this an interesting theoretical model of empirical research on it.

$$I = I_e - b(u - u_e) + v \quad (1)$$

Table 2: Basic inflation models

Model name	Type of model	Legend
1. Phillips curve	$I = a - b \frac{1}{u}$	$a$ – semi – stretch money demand, n/q; $I$ – inflation, Consumer Price Index (CPI), %;
2. Phillips curve modification	$I = I_e - b(u - u_e) + v$	$I_e$ – expected inflation, expected CPI, %; $I_T$ – inflation tax, billion rubles;
3. P-star model	$GAP = \frac{F}{F^*} = \frac{Y}{Y^*} \times \frac{V}{V^*}$ $I = F(GAP)$	$M$ – money supply, billion rubles; $m^d = \ln M^d$ – logarithm of the demand for money, n/q; $F$ – price level, rubles;
4. P. Cagan model	$I = m^d + aI_e$	$F^*$ – equilibrium price level, rubles;
5. Model of inflation tax (Laffer curve)	$\frac{dF}{dt} \times \frac{1}{F} = \frac{F}{M} \times I_T$	$u_e$ – natural unemployment rate, %; $u$ – real rate of unemployment, %;
6. M.Friedman model	$I = f\left(\frac{M}{P}\right)$ $\left(\frac{M}{P}\right) = f'(I_e)$	$V$ – velocity of money, turnover for the year; $V^*$ – equilibrium velocity of money, turnover for the year; $Y$ – GDP, billion rubles; $Y^*$ – equilibrium value of GDP, billion rubles; $y$ – the real income of the individual, rubles; $\frac{dP}{dt} \times \frac{1}{P}$ – rate of inflation, n/q.

We can see from this equation (1), that when natural unemployment rate  $u_e$  is equal to the real rate of unemployment  $u$  inflation rate is not changed by the influence of this factor. This is a reflection of the concepts of natural or not accelerating inflation rate of unemployment introduced by M. Friedman. Supply shock  $v$  is random, so it is often excluded from consideration in the early stages of research.

«P-star» or inflation pressure model is now one of the most effective tools of predict inflation, it used by central banks (e.g. in Czech Republic). The main advantage over traditional models is that it takes into account both the

deviation of Gross Domestic Product (GDP) and liquidity from their equilibrium levels. This model is derived from Fisher's equation (J.Frait, L.Komarek, L.Kulhanek, 1998). The basic idea is to evaluate short-term changes in inflation through the deviation of the real price level from its equilibrium value. Rejection rate from its equilibrium level is indicated by the term "gap". Thus the model uses the price gap to forecast inflation. The price gap is constructed by combining a quantitative equation (2) with equation of the equilibrium price level of long-term (3):

$$P = \frac{MV}{Y}, \quad (2)$$

$$P^* = \frac{MY^*}{Y^*}, \quad (3)$$

$$M = \frac{PY}{V} = \frac{P^*Y^*}{V^*} \rightarrow \frac{PY}{V} = \frac{P^*Y^*}{V^*}, \quad (3a)$$

$$\frac{P^*}{P} = \frac{Y}{Y^*} \cdot \frac{V^*}{V}. \quad (3b)$$

Logarithm of (3b):

$$\ln\left(\frac{P^*}{P}\right) = \ln\left(\frac{Y}{Y^*} \cdot \frac{V^*}{V}\right), \quad (3c)$$

$$\ln(P^*) - \ln(P) = [\ln(Y) - \ln(Y^*)] + [\ln(V^*) - \ln(V)]. \quad (3d)$$

Replacing in (3d):

$$p^* = \ln(P^*), p = \ln(P), y^* = \ln(Y^*), y = \ln(Y), v^* = \ln(V^*), v = \ln(V), \\ \text{gap} = p^* - p = (y - y^*) + (v^* - v) \quad (4).$$

We obtain that the price gap (4) depends on the gaps  $(y - y^*)$ ,  $(v^* - v)$  of GDP and velocity of money. We assume that the future value of inflation at time t will depend on the price gap and the previous CPI's value at time t-1 (5).

$$I_t = I_{t-1} + F(\text{gap}). \quad (5)$$

$$\Delta I_t = I_t - I_{t-1}.$$

$$F(\text{gap}) = a_1(y_{t-1} - y_{t-1}^*) + a_2(v_{t-1}^* - v_{t-1}) + \varepsilon_t, \quad (4a)$$

$$\Delta I_t = a_1(y_{t-1} - y_{t-1}^*) + a_2(v_{t-1}^* - v_{t-1}) + \varepsilon_t. \quad (5a)$$

During empirical research authors have done comparative analysis of the modified Phillips curve and P-star models (equations (1), (5a)). Estimation performed by using least squares method. In the process of model identifying we considered different specifications of the original base models. Modifications different from original lack of insignificant variables and they include additional variables such as lagged values of the dependent variable. Changes needed to improve the quality of the approximation model, predictive properties and comply with the consistency, efficiency and unbiased OLS estimates.

Separate inflation forecasts with judgment from different official sources (<http://www.gks.ru>, <http://www.cbr.ru>, <http://www.lenta.ru>) were combined in unique database. These data accurately reflect inflation expectations, as later they are replicated in the media, thereby impact on society. To estimate the equilibrium values of unemployment, GFP and velocity of money used in method of smoothing the initial series with the release of the trend and the cyclical component of the series – the Hodrick-Prescott filter. This method has been implemented with a special MS Excel add-in. During computing on the stage of model identification and verification were calculated and analyzed 24 species of regression models, based on identified above basic and modified models. A large number of models turned out by testing different modeling techniques. First estimation of competing model performed on the original data. Then all investigated time series, which are measured in currency, converted to constant price by deflating; we also held decomposition of time series and seasonality factor was excluded (new variables  $\hat{I}_t$  – CPI, %;  $\hat{I}_{t-1}$  – expected CPI, %;  $\hat{u}_t$  – rate of unemployment, %;  $\hat{Y}_t^{\text{const}}$  – GDP in constant prices of 2003, billion rubles;  $\hat{v}_t$ ).

There are four the most successful specifications at the moment to illustrate the results of the work (table 3). Model residuals were tested for compliance with the terms of the Gauss-Markov. In some models, such as model 1, parameter estimates are not statistically significant. This is due to the fact that their elimination model loses accuracy in the prediction. From the column 4 we conclude that standard error is better in models

with inflationary expectations. Generally we cannot say that one of models is absolutely the best. Model 3 and 4 have worse  $R^2$ , MAPE, U characteristics, but better in DW. Before we choose a model it needs to make some addition researches.

**Table 3: Comparison of alternative models**

No	Model (t-statistic)	F	SE	$R^2$ (%)	$\bar{R}^2$ (%)	DW
1	2	3	4	5	6	7
1	$I_t = 0.896I_{t-1} - 0.04gap\ u_t$ ( 14.08      -0.98 )	161.4	0.355	88.25	87.97	1.59
2	$I_t = 0.14gap\ y_{t-1} + 7.346gap\ v_{t-1} + 0.894I_{t-1}$ ( 2.30      2.89      13.2 )	58.7	1.074	88.45	87.45	1.7
3	$I_t = 0.36I_{t-1} + 0.473I_{t-1} - 0.071gap\ u_t$ ( 3.02      4.27      -0.93 )	24.2	0.211	63.87	62.1	1.89
4	$I_t = -0.0008gap\ \hat{Y}_{t-1}^{TSP} + 9.08gap\ \hat{V}_{t-1} + 0.73I_{t-1}$ ( -0.20      1.23      0.07 )	15.6	1.843	64.22	61.47	2.06

**Table 4: Characteristics of forecast accuracy**

No	Model	MAPE	U	Lower 95%	Upper 95%	Forecast	Actual
1	2	3	4	5	6	7	8
1	$I_t = 0.896I_{t-1} - 0.04gap\ u_t$	15.02%	0.098	- 0.43%	1.01%	0.29%	0.5%
2	$I_t = 0.14gap\ y_{t-1} + 7.346gap\ v_{t-1} + 0.894I_{t-1}$	17.35%	0.13	0.16%	4.54%	2.35%	3.8%
3	$I_t = 0.36I_{t-1} + 0.473I_{t-1} - 0.071gap\ u_t$	31.32%	0.205	0.25%	1.11%	0.68%	0.5%
4	$I_t = -0.0008gap\ \hat{Y}_{t-1}^{TSP} + 9.08gap\ \hat{V}_{t-1} + 0.73I_{t-1}$	38.52%	0.356	- 0.64%	6.88%	3.12%	3.8%

Comparison of the models was carried out on the basis of calculation of the following system: **F** – computed F-statistics; **SE** – standard error;  $R^2$  – coefficient of determination;  $\bar{R}^2$  – adjusted coefficient of determination; **DW** – Durbin-Watson statistic; **MAPE** – mean absolute percent error; **U** –Thiel's inequality coefficient. To separate original data and cleaned from trends and seasonality introduce next system.

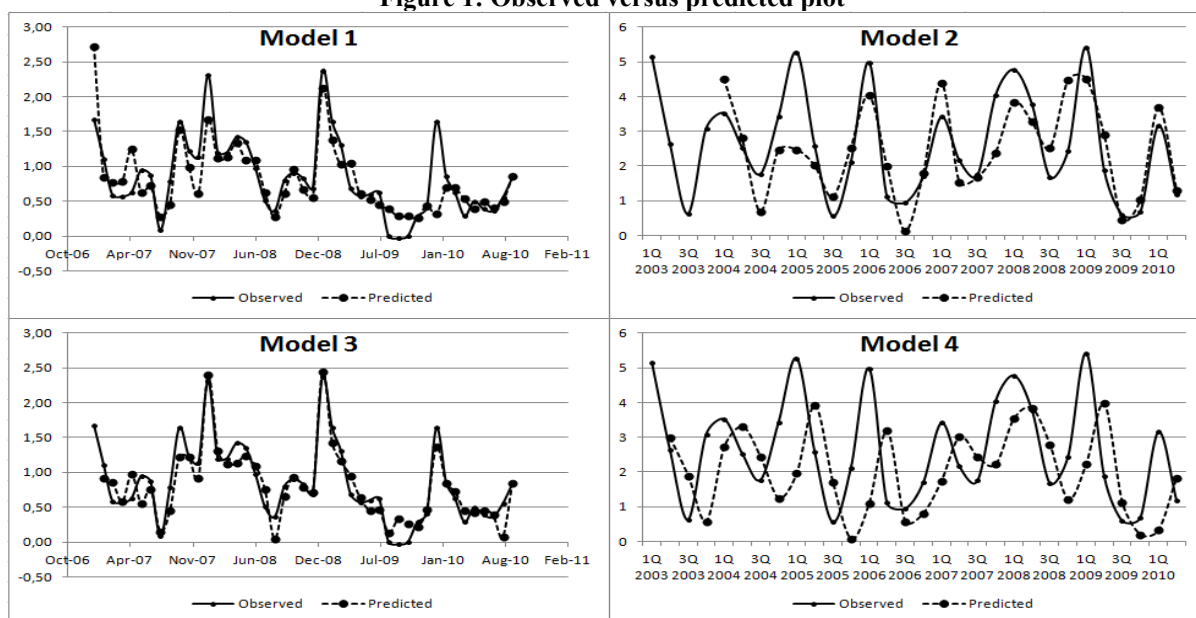
An important step is the interpretation of the parameter estimates for exogenous variables of models. Model 1 (table 3) corresponds to the theoretical representation (1), up to the signs of the variables. It indicates direct relationship between inflation expectations and the level of actual inflation. Increase in gap of the real and natural rate of unemployment is cause inflation decrease and vice versa. Greater weight in the final dynamics has inflation expectations. It should be noted that the parameter estimate of variable  $I_{t-1}$  is less than 1. This means, expectations are always exceed actual results, which gives a positive signal of confidence society to the economic policy. P-star model specifications and parameters estimates give us reason to make conclusion. Both equations contain lagged dependent variables with different lag order. Model 2 is based on the untransformed data and model 4 on purified from the trend and seasonality. This can explain lag difference. It also can be indirect effect of inflation expectations. These lagged variables more significant according to the value of t-statistics. So GDP and liquidity gaps are not major factors and we can see this in model 4.

Calculated parameters of forecast accuracy give us possibilities to analyze the quality of forecast, which is able to generate using models (table 4). For model 1 and 3 we used monthly statistic and test sample volume was 11% from all sample. For model 2 and 4 we used quarterly statistic, test sample was 10%. On a test samples models 1, 2 and 3 are systematically overstate inflation forecast and model 4 on the contrary underestimates forecast. But as we can see after estimation of the model on a full sample situation have changed. Although approximation parameters and estimates not changed significantly, we can see that model 1, 2, 4 underestimates and model 3 overstate forecast (column 7, 8 table 4). As we can see model 4 made mistake on 18%, and it is the most accurate forecast. That means model with the worst characteristics of forecast accuracy, give us best result in the end. Usually model accepted if value of the MAPE less than 15% (column 3 table 4). So we can argue that model 1 in general better in the most of characteristics, but it made 42% mistake if we compare column 7



and 8. From the figure 1 we can conclude, that model estimates content some systematical component. This may be additional factors. That means the research should be continued in way of search this factors.

**Figure 1: Observed versus predicted plot**



Despite some negative facts the estimated econometric models have satisfactory statistical properties and able to describe original data. The main advantage of these models: their prediction accuracy on inflation is not worse than published forecasts with judgment. Main difficulty is choosing one of them. Model 1 is a leader in most characteristics, calculated on education and test samples. But model 4 show best results on practice. Other models in some ways better, in some worse than 1 and 4. So we cannot conclude that one of the models is good, but according to properties and given estimated confidence limits, we can make a conclusion: prediction models are suitable for short- and medium-term inflation forecasting.

## CONCLUSION AND RECOMMENDATIONS

Conducted research has proved the absolute relevance and diversity of problems in the study of inflation in economy, the need for working out the mechanisms of its regulation. This is why price stability is one of the main criteria of quality management of the economic system in a majority of developed and developing countries. Inflation is fairly well understood on the one hand, but on the other – the evolution of the global economy and the processes causing its transformation and the emergence of new factors, such as for example the rise in world food prices. It should be noted, that in each case the general hypothesis and the theory of inflation require careful handling and individual adaptation. Based on the world experience Russia must come with its own model of inflation. In the next few years authors suggests an increase in demand for ready-made solutions for forecasting inflation and models that explain the impact of changes in various factors on the price level in the economy. Successful prediction of inflation is not only an important task for the state, but also for business. Adequate estimation of inflationary risks and the development of adequate and reliable mechanisms to reduce them are the basis of course for modernization of the Russian economy, a pledge of its prosperity. This work allows us make three essential recommendations to enable an informal policy to control inflation. First, Russia needs to develop a national model of inflation. It may be called, by analogy with the New Zealand's research, model of inflation targeting. It is necessary to take into account international experience. Russia should model not the fact of inflation, but its formative processes. Secondly, during estimation of inflationary factors, Russia should pay attention to the study of food prices dynamics and raw materials, consumed by agribusiness companies. The world population growth, changes into climate, increase in the number of new viruses and diseases of plants and animals are factors that could cause supply shocks on the food markets, which in turn directly causes inflation shocks. Third, during the transition to inflation targeting it is necessary to correct the

legal framework of the country circumscribing the powers of the CBR and the Ministry of Finance clearly. A precise separation of competencies is the basis of quality policy so RF needs to consolidate and maintain functions of forecasting inflation under the CBR. In authors view Ministry of Finance has to control the budget only. It is unacceptable to mix the references as it does at present.

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# **A MERGER OF HIGHER EDUCATION INSTITUTIONS – REFLECTIONS AND EXPERIENCES OF ACADEMIC STAFF FROM TSHWANE UNIVERSITY OF TECHNOLOGY**

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## **ABSTRACT**

*The last few years saw the restructuring of the higher education landscape which took a form of mergers and acquisitions. The purpose of this study was to explore the experiences of and lessons for staff belonging to a University of Technology which resulted from a merger of three Technikons. Twelve senior academic staff members were interviewed and provided invaluable input to the study. One of the main findings of the research was that the three merging partners and the newly formed institution treated technical issues around the merger with priority at the expense of staffing or people issues. The research also established the vital importance of strong, visionary leadership on the part of management during mergers.*

## **INTRODUCTION**

Soon after the 1994 general elections, the new democratically elected government established the National Commission on Higher Education (NCHE) which was to become “the policy platform for the development of higher education in South Africa” (Pityana, 2004,p.3) and to start the process of transformation in the HE system. In 1996 the NCHE reported its work which promoted the concept of “cooperative governance, seeking broad participation with commonly held objectives” (Hall & Symes, 2005, p.200). The following year, in 1997, the White Paper on Higher Education and subsequently the Higher Education Act were published and promulgated respectively.

In December 2001, the National Working Group (NWG) proposed a fundamental restructuring of the institutional landscape of South African higher education by reducing the number of universities and technikons from 36 to 21. Its proposals included the merger of the three technikons in the Pretoria area. The NWG (2001) proposed that Technikon Northern Gauteng, Technikon North-West and Technikon Pretoria should be merged into a single unitary institution. On 30 May 2002, then Minister of Education announced that Cabinet had approved “*the government’s groundbreaking proposals for the transformation and reconstruction of higher education.*” Thus the merger of the three Pretoria Technikons was confirmed, and the process of establishing TUT could now begin.

## **LITERATURE REVIEW**

While universities have always valued and jealously guarded their autonomy, from time to time they have one form of a cooperative arrangement or another with each other on a wide range of things within the realms of teaching, research and community engagement. Such relationships are not synonymous with a merger. An institutional merger can be defined as “an amalgamation in which two or more component institutions give up their legally independent identities in favour of a new joint authority” (Reddy, 2001,p.141) A merger takes place when “two or more institutions combine to form a single new organisation with a single governing body and chief executive” (Eastman & Lang, 2001,p.17).

Broadly speaking, there are two types of mergers in higher education. First, there are voluntary mergers which are initiated by one or both of the merging institutions without any external inducement. Second, there are forced mergers which result from some inducement from an external party, usually the government (Skodvin, 1999). Mergers and incorporations in higher education have been used by governments to address problems of institutional fragmentation, falling student numbers, lack of financial and academic viability, and low efficiency and quality (Harman & Harman 2003, p.29).

Mergers can also take two basic forms of mergers, namely federal and unitary structures. In federal structure, specific responsibilities remain with participating institutions or are delegated to particular units with the overarching or central body taking other responsibilities. There is autonomy in particular powers and administrative responsibilities of each unit or level are autonomous. This model is not suitable if the merger aims to achieve academic and administrative rationalization and can fail when merging institutions differ markedly in size and strength (Mabokela & Wei, 2007, p.161). Federal mergers are losing popularity due to disappointing results (Kotecha & Harman, 2001). On the other hand, in unitary mergers there is a single governing body, with a single CEO and a single set of structures for academic governance with considerable administrative devolution of responsibility to major academic units (Mabokela & Wei, 2007, p.162).

Mergers might be driven by five categories of factors: professional, academic, strategic, funding incentives and compulsory government mandates. The factors at play may include similar commitments and student profile, geographical proximity, institutional equity, new organizational cultures, cost control, enhancement of administrative efficiency, sustained investment in facilities, improved academic offerings and research, or even simply a matter of survival (Curtis, 2002; Kotecha & Harman, 2001; Reddy, 2000; Woodward, 2001). Other factors that may encourage mergers may include geographic proximity, previous cooperation, complementary instructional programmes, an enhancement in the quality of academic programmes, common political interest, decisive legislation and strong steering by government, and skillful and committed leadership (Reddy, 2000).

Denisi and Shin (2005, p.236) observed that mergers may result in employees losing their organisational identity and still others find it difficult or refuse to give up their pre-merger identity. Employees from the merging institutions may also suffer a decline in their level of trust now that they are part of a newly formed institution. They may have just lost their social networks, support systems and comfort zones to their previous institutions. It may take some time to rebuild their trust and confidence in the new leadership and how it handles matters related to human resources.

Lawlor and Boyle (2007, p.136) believe that newly merged institutions underestimate the multitude of problems and human issues triggered as institutions come together. According to Hay and Fourie (2002, p.121) the human issues include: perceptions of unfairness and symptoms of depression, stress, fear of change, loss of commitment, unwillingness to do anything beyond the required minimum, feelings of not being kept well informed and a loss of confidence in oneself and in management.”

## **ANALYSIS, FINDINGS, AND DISCUSSION**

Twelve senior academics were interviewed for this study. Their responses were corroborated against what is documented in the university's reports. Also, as the interviews were being completed, the transcripts were e-mailed back to the respondents to ascertain the accuracy of the accounts. As far as documentation is concerned,

All the interviews in this study were transcribed. The researcher read the transcriptions over and over again until he was immersed in the data, so to speak. Data was then categorised, synthesised and the researcher looked out for patterns or themes emerging from the data. Following such patterns, a list of codes were developed and assigned to particular sets of data. The analysis was then refined by determining if there were any relationships across the various themes. From the analysis of the various respondents in the exploratory study, the following four themes emerged: diversity issues, trust, management of people issues, and technical aspects of the M&I process.

### **Diversity issues**

The three merging institutions were diverse in terms of historical background, size, student and staff demographics, programme qualification mix, resources, research profiles, and location. Diversity issues manifested themselves in various ways and were thus experienced differently by different people. Initially, staff from smaller and less resourced institutions tended to view the merger more as a takeover whereas those from the more privileged institution's fears were more about the perceived dilution of their institutional brand and the lowering of the quality and standards of their programmes.

To illustrate, in one case of incorporation of a campus of one university into the other university, when asked to comment on key areas in which there was culturally a difference prior to the merger, **Respondent 4 (15/03/2011)** reflected:

The major merging partner was predominantly white with more westernized approaches and a strong entrepreneurial spirit while the other two institutions were not. Technikon A saw itself as the only credible institution of the two and that the technologically driven education served no role in their perception of academia. There was also in my opinion a desire to maintain an apartheid status quo, racially speaking although not shown in policy statements.

**Respondent 5 (08/03/2011)** remarked:

Our Technikon had a very small executive management team and operated on a flat structure and believed in a broad consultative approach, which was underpinned by a bottom-up approach whereas Technikon A was more authoritative in its approach.

In this regards, **Respondent 12 (18/03/2011)** made the following observation:

Of course we had different cultures and in each institution, there was a culture of how things were done. The challenge that we had was dominance of the staff members from the institution which was declared a seat of the new institution. They saw themselves as superior of the three merging partners. In the context of the merger, they have not embraced the fact there we are now diverse workforce with different cultures.

Interestingly, Havenga (1993:11) had predicted that one of the biggest challenges that would face higher education institutions in South Africa in the future would be to manage diversity. He further stated that accepting the challenge of diversity would mean, among other things, changing the organisational culture, reconceptualising appropriate leadership styles, restructuring organizations, reformulating what constitutes good teaching, and developing staff and students to work and learn in an institution that is very different from what it used to be.

Managing diversity entails enabling people to perform up to their maximum potential. It focuses on changing an organization's culture and infrastructure so that people provide the highest productivity possible (Buelens et al., 2006:153). No wonder in hindsight **Respondent 2 (08/03/2011)** saw the value of managing diversity issues when he reflected that:

Much more should have been done to prepare staff for the merger – for example compulsory attendance of cultural diversity workshops.

The observation made by Norris (2000:3) is especially enlightening in the cases of certain mergers and incorporations in South Africa when he stated that “the historical ‘white-eurocentric’, male-dominated culture that still exists in many institutions portrays the assimilation or ‘melting pot’ syndrome where the institution remains the same and the minorities are expected to change.” He concluded that the institutional culture would have to change to reflect a diverse culture with revised beliefs and value systems.

Mergers could provide an opportunity to transform the curriculum and pedagogical approaches as the institution seeks to be more responsive to diverse student and staff profile. The newly merged institution could now pursue a fresh research agenda as it begins to engage the community at new levels. Leveraging on diversity may also lead to more innovative institutions. Trust is the next theme that emanated from the study.

The empirical data presented show the differences that existed culturally between the three merging partners. The fact that one of the merging partners was a much bigger institution and that its management and staff were predominately white and its campus based in the city, while the other two were much smaller, with predominantly black staff and student population, with one located in what was previously a homeland and the other in a black township, meant huge cultural differences existed between the merging partners. For the staff members who came from the other two smaller institutions, the merger was experienced as a takeover while for

staff members from the more privileged institution the merger was seen as taking over burdens and inefficiencies which they had never experienced before, and thus losing some privilege in their status.

## Trust

Communication is an essential ingredient in building trust. The leadership of the newly merged institution need to be open and frank in their communication. This involves communicating not only news that staff would like to hear, but also news that is not so positive. This also calls for honesty on the part of institutional leadership. Timely communication also adds to trust that is so necessary during the uncertain times of the merger process. It is vital for leadership to resolve disputes speedily and be seen as trustworthy, dependable and predictable. Encouraging a climate where staff can share ideas and information freely will also build confidence in the newly merged institution. According to Ngalo (2011, p. 111) one of the dynamics of trust is that it is self-reinforcing and is evidenced in instances when staff regard leaders as trustworthy. In that case, staff will also aspire towards being trusting and trustworthy.

When asked about the most challenging aspect of the merger process, **Respondent 8 (08/03/2011)** admitted that:

The biggest challenge after the merger has been establishing a common loyalty to the new institution and designing a new post establishment for the new University.

**Respondent 11 (11/03/2011)** put it this way:

The most challenging was the resistance to change of the merging partners, the tendency to dominate the other partners. The organisational politicking and power struggles were very exhausting.

These sentiments are consistent with the observation made by Denisi and Shin (2005: 236) that mergers may result in employees losing their organisational identity and still others finding it difficult or refusing to give up their pre-merger identity. Employees from the merging institutions may also suffer a decline in their level of trust now that they are part of a newly formed institution. It may take some time to rebuild their trust and confidence in the new leadership and how it handles human resources-related matters.

According to Nooteboom (2002, p. 37) trust is a “state of mind, an expectation held by one trading partner about another, that the other behaves or responds in a predictable and mutually expected manner.” Reina and Reina (2006, p. 17) define trust as a mutual understanding that the people in the relationship will do what they say they will do in keeping to agreements, honouring intentions and behaving consistently.

This self-reinforcing characteristic of trust is promoted by honesty and openness, i.e. giving appropriate information where distrust is characterized by withholding or distortion of information. Honesty and trust reinforce each other as suspicion and dishonesty do (Nooteboom, 2002, p. 95).

Having observed how one newly merged organisation sought to build trust, Chua, Engeli and Stahl (2005, p.392) report that the leadership ensured that they constantly updated employees and managers on new developments, provided direction and engaged in open forums.

Trust should be seen as glue that holds institutions together. It can be built. It takes time and thus requires patience on the part of all stakeholders. It can also be damaged. Repairing a damaged trust will take an institution more resources than to build one. It is vital that management of the merging partners get the commitment of staff during the merger process. This would require open and frank communication on the part of management and inform staff of any developments, especially those that affect staff personally. This may be all that is needed to build trust and allay the fears and insecurities experienced by staff. This should especially be so where merging partners are of such diversity and unequal sizes as is the case in this study. The next theme emanating from the empirical study is the management of people issues.

## Management of people issues

Many organizations in private and public pride themselves on the fact that people are their most valued assets. Yet when such organizations are faced with challenges of economic or other nature, staff is often the most exposed and usually the first to feel the negative consequences.

Mergers denote radical change and staff are often the most affected. Mergers bring with them a certain degree of distress that is unavoidable. It is important for institutions to seek consultation, get staff actively involved, and participate in decision-making processes. Institutions need to get staff to focus on the opportunities for personal

growth and skills development while maintaining social and professional networks. It is also vital that institutions make professional counselling services available for staff during these turbulent times of mergers.

This theme came out strongly from the various respondents. In one case **Respondent 9 (11/03/2011)** stated that:

The most challenging aspect of the merger was dealing with personnel issues and trying to boost the morale of staff as there was a lot of uncertainty about the jobs ... the merger process should not be about finances; rather it should be people about the people since it is difficult to motivate staff when their morale is low.

**Respondent 12 (18/03/2011)** stated:

The most challenging part of the newly merged institution was to change the organisational structures. Most of the people did not agree with the concepts of restructuring and as such some indicated that they were permanently employed in those various positions, therefore they will not apply for their own positions.

Perhaps the above two accounts explain the reason why Evans and Pucik (2005, p.418) believe that the illusion of cultural compatibility is one reason why mergers of organizations with supposedly similar cultures can be less successful than is generally thought to be the case. Schein (1999, p.179) expressed a similar concern about the merging organizations whose products and markets seem to fit as they are more likely to assume that "they will figure each other out and make necessary accommodations to work together." As a result, he recommends that the merging partners each conduct their own cultural assessment just before the merger and that "once the new organisation is about to be formed, it is essential to create cultural dialogue groups to explore each other's shared assumptions."

Bijlsma-Frankema (2001, p.5) attributes the lowered levels of productivity in newly blended institutions partly to a lack of unity and quality of leadership at the level of top management in designing and implementing the changes in culture necessary to make the new organisation successful in coping with its environment. To illustrate, during the course of the merger, UNISA (2005, p.9) admitted that unless and until such time that there is a *creation* of a common organisational culture, uncertainty will prevail and that productivity, efficiency, morale and effectiveness would be adversely affected.

The empirical data presented in the preceding chapter corroborated some of the claims made in the literature as evident from the interviews. The empirical data indicate that staff experienced intolerance, domination, and resistance as some of the most challenging aspects of the merger. The fact that some employees had to apply for their own positions during the restructuring process did not sit well with staff as it brought feelings of insecurity.

## Prioritisation of the technical aspects

It would seem that many leaders were bogged down by other aspects of the mergers and incorporations that seemed more important at the time. These aspects include ensuring that there is compatibility in systems such as information, communication and technology, bringing about parity in the salary structures of the merging partners, creating a single organisational structure, merging of budgets and finances, branding of the new institution, programme qualification mix, and the harmonisation of policies.

These aspects can be both time and resource consuming and institutions find that issues affecting people directly are relegated to the level of relative unimportance.

This can be seen from what **Respondent 10 (10/05/2011)** said when he recounted that:

In the pre-merger phase, a task team was established to attend to matter of institutional culture. Although valuable contributions were made, it became clear that the formal technical aspects of the merger first had to be attended to. It is only now that the new institution has taken shape and after the levels of trust has reached maturity that interventions regarding the institutional culture of the institution can be introduced.

For other institutions, dealing with the technical aspects of the mergers was tantamount to addressing the matter of institutional culture. This can be read from what **Respondent 11 (11/03/2011)** stated:

Institutional culture was viewed as an important aspect from the start. Attempts to address this included an integrated management system. Furthermore, the incorporating university's policies and procedures were made applicable to the incorporated campus and a process was embarked upon to align the

conditions of service of the two institutions. Staff at the campus was connected to the Intranet upon incorporation and there was staff training, regular information sessions to the campus staff members and students

Having experienced the challenges brought about by the merger process led **Respondent 5 (08/03/2011)** to acknowledge that:

Building an appropriate institutional culture is an ongoing process - one can never complete the process. Strategy and circumstances dictate the institutional culture appropriate for any given moment in time.

In highlighting the role of leadership in this regard, Keyton (2005, p.155) acknowledges that executives and managers have a huge influence on the organisation as far as institutional culture is concerned. That the role of leadership in M&A should not be underplayed can be seen in what Schein (1992, p.275) stresses as the need for leaders to be sensitive, perceptible and sympathetic when dealing with M&A issues affecting employees. Furthermore, Keyton cautions that structural change does not amount to cultural change as many leaders tend to believe that all that is needed to lead or influence cultural change is by changing organisational structure.

Haapaniemi (2005, p.3) posits that once the two institutions have decided to merge, executive managers need to devote time to overseeing the actual integration of cultures. As a guide, Cameron and Quinn (2006,p.90) also stress the need for institutions to first of all reach consensus on the current culture, then reach consensus on the desired future culture and finally determine what the changes will and will not mean. Hence the Ministry of Education (2003,p.13) urged the merging institutions of the vital importance of bringing issues to the surface and being explicit so that the new institution and the people within it operate from a shared, mutually accepted set of assumptions and values that govern relationships and practices.

Unless the leadership within the institution understands clearly the nature of institutional culture issues confronting them it will be very difficult for the rest of the organisation to grasp the importance of dealing with cultural issues. In addressing the question of why the top executives so often fail to come to grips with culture clash when bringing two institutions together, Haapaniemi (2005, p.2) argues that often the question of culture mismatch does not seem to be a big problem – at least in the beginning. He urges that to avoid problems brought about by cultural mismatch, executives need to develop a clear understanding of the cultures in both organizations early on in the merger process.

## CONCLUSION

The literature seems to be in concert on the need for strong and visionary leadership during these uncertain times. Such leadership would see it as a priority to build a common purpose and strong sense of loyalty. The issues raised by the literature do not seem to make a distinction between the different levels and professional backgrounds of staff affected. Hence the focus on academics, whose jobs have generally been viewed as secure and whose loyalty has been said to be identified more with their disciplines than the institutions, will make for an interesting contribution to the literature.

It does seem that the merging process can provide some invaluable lessons not only for the institution under consideration but for others who might face a similar situation in the future. Such lessons can be read into what the respondents reflected on during the interviews. One of the key lessons respondents referred to is the question of a strong, visionary management and leadership during these unstable times of mergers – the type of leaders who prioritize people issues over technical aspects of the mergers. Another lesson that came through is the need to elevate people issues over managerial or technical issues. Yet another lesson is the need for ‘after-care interventions’ following the merger; that the actual merger from a legal point of view does not mean the end of the story, rather it means the beginning of a situation that requires strong leadership. All these lessons are consistent with what the literature recommends.

It is clear from the study that it is very important to recognize and acknowledge the different institutional cultures of the merging institutions, and to try and leverage on such diversity. This clearly calls for a strong and astute leadership. Ignoring and putting such cultural differences on the backburner is only postponing a problem. While it is not something that can be addressed immediately, talking about it after the merger has



taken place will show employees that the leadership of the newly formed institution still takes their fears and uncertainties into cognizance. Building trust does take a while and is a process that is worth the patience.

With higher education institutions under so much pressure from government to open up access and improve success, the question is whether mergers and acquisitions were the right way to go. A further question is whether the mergers and acquisitions of higher education institutions have been able to assist in achieving the transformation agenda of government insofar as the HE landscape is concerned.

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# A LEGAL APPROACH TO CYBER BULLYING IN SOUTH AFRICA

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## ABSTRACT

*Cyber Bullying is a global phenomenon. The use of Information and Communication Technologies has changed the face of bullying forever. The change in communication patterns have resulted in sometimes misbehavior among children through the use of technology. It has also drastically altered the type and content of the information they share with each other. All countries should implement legislation preventing and eradicating cyber bullying. The aim of this paper is to give a background on cyber bullying with reference to the different forms of cyber bullying and the factors giving rise to this phenomenon as well as the comparison with traditional bullying. The Convention on the Rights of the Child and The Convention on Cybercrime, addressing cyber bullying at international level, are also discussed. The paper also investigates the present position in South Africa. A critical discussion concerning current legislation and the proposed harassment-specific legislation follows, with reference to the effectiveness of existing and proposed legislation. In conclusion the author will make recommendations with reference to the effectiveness of existing and proposed legislation.*

## INTRODUCTION

Internet technology and the development of cyberspace have taken society to the next level of evolution. The use of Information and Communication Technologies (ICT) are universal among children. Nearly all children are online, own cell phones, and use social networking sites. The widespread use of computers and the internet provides many advantages to children as well as adults. It serves as a medium to communicate with one another, uniting people with similar interests, and provides access to a vast array of information and online resources for research.

Some researchers suggested that excessive internet use is associated with decreased performance in other life domains, including financial difficulties, physical health, loneliness as well as aggressive behaviours such as cyber bullying. Several features of the internet may make it a place where miscommunication and misbehaviour are rampant.

Cyber bullying is a fast growing trend in today's technological society that experts believe is even more harmful than traditional bullying. It is a global phenomenon that is manifested across cultures. Cyber bullying occurs when students use electronic means, including the use of internet web sites, chat rooms, instant messaging, text and picture messaging on phones, and blogs, to bully peers. The term "cyber bullying" was first defined by Canadian educator and anti-bullying activist, Bill Belsey, as "*the use of information and communication technologies to support deliberate, repeated and hostile behaviour by an individual or group, that is intended to harm others.*"

Cyber bullying has subsequently been defined as "when the internet, cell phones or other devices are used to send or post text or images intended to hurt or embarrass another person." It can also include threats, sexual remarks, pejorative labels, ganging up on victims and posting false statements aimed at humiliation. Cyber bullies may even disclose a victim's personal data, or may pose as the identity of a victim.

It is clear that cyber bullying has continued to exert a harmful and at times even fatal effect, upon those targeted with such harassment. Recent years have witnessed a surge of interest in this particular form of misbehaviour. The increased interest is due in part to the number of suicides that have been linked with cyber bullying.

## **CYBER BULLYING VS TRADITIONAL BULLYING**

Cyber bullying shares key features with traditional bullying. Firstly, aggressive behaviour that is intended to harm another. Secondly, it is often repeated and thirdly, bullying occurs between individuals with unequal levels of power. This power could be, physical strength, social status, or in the case of cyber bullying, technological expertise.

Cyber bullying and traditional bullying differs from each other in that anonymity often surrounds cyber bullying. The victims are often unaware of the identity of the perpetrator. Also, traditional bullying usually occurs at school whereas cyber bullying can occur at any time of the day or night, as long as there is access to the necessary technology.

Cyber bullying is more psychological than physical and parents and teachers can not intervene in the same manner than with traditional bullying. Certain characteristics inherent in online technologies increase the likelihood that they will be exploited for deviant purposes. Unlike physical bullying, electronic bullies can remain virtually anonymous using temporary email accounts, pseudonyms in chat rooms, instant messaging programs, cell-phone text messaging and other internet venues to mask their identity. This perhaps frees them from normative and social constraints on their behaviour. Electronic forums often lack supervision. In addition, when teenagers know more about computers and cellular phones than their parents they are therefore able to operate the technologies without concern that a parent will discover their experience with bullying (whether as a victim or offender).

With both types of bullying, victims rarely report their victimisation but for different reasons. Victims of traditional bullying rarely tell others for fear of further victimisation. Victims of cyber bullying rarely report their victimisation out of fear that adults will take their technology away.

Children and their cellular phones are usually inseparable, making them perpetual targets of victimisation. Cyber bullying thus penetrates the walls of a home, traditionally a place where victims could seek refuge from other forms of bullying. Compounding this infiltration into the home life of the cyber bully victim is the unique way in which the internet can create simultaneous sensations of exposure (the whole world is watching) and alienation (no one understands).

For youths who experience shame or self-hatred, this effect is dangerous because it can lead to extreme self isolation. Cyber bullying and bullying are often interrelated. Cyber bullying is considered to be more serious than traditional bullying as it is constant and has an infinite audience.

Bullies can gang up on their victims on electronic pages more efficiently than they do in traditional bullying. There is no limit to the number of people who can join in, following a bullying statement. One possible advantage for victims of cyber bullying over traditional bullying is that they may sometimes be able to avoid it simply by avoiding the site or chat room in question. Publishing of defamatory material about a person on the internet is extremely difficult to prevent and once it is posted millions of people can potentially download it before it is removed. Despite policies that describe cyber bullying as a violation of the terms of service, many social networking websites have been used to that end.

## **THE CYBER BULLYING PHENOMENON**

Children grow up spending a lot of time in a virtual world, where there is no personal contact with others, only messages and images. The virtual world makes it easier for them to lose their inhibitions and to act in ways they would not normally do in personal interactions. Various types of cyber bullying have been identified, including denigration, impersonation or identity theft, outing, happy slapping and harassment.

Individuals regularly make comments about the physical appearance, intelligence, or sexual activities of other students. This may be due to the fact that these characteristics are easily mocked or exaggerated by others. In addition, such comments may have a particularly harmful impact on their target's psyche. Bullying posts consistently involves disparaging, violent, and obscene language. There are two variants of cyber bullying. Direct attacks (messages sent to children directly) and by proxy (using others to help cyber bully the victim).

Exchanges over the internet are more likely to lead to miscommunication than face to face communication for many reasons. When two individuals are having a conversation in each other's presence, one can see the expressions on the other's face, his posture and quality of his voice. These elements will give additional information about the conversation. The same message can be misinterpreted quite easily when these elements are missing. Another feature that may lead to miscommunication is the fact that feedback is often delayed or absent.

Several features of the internet make it inherently a place where individuals can easily misbehave. Features that may contribute to online misbehaviour are perceived anonymity, reproducibility, lack of emotion, perceived uncontrollability, relative permanence and constant accessibility.

## **PREDICTORS**

A number of predictors of cyber bullying victimisation have been identified, including demographic characteristics like age and gender, personality characteristics such as self-esteem and previous experience with bullying or cyber bullying.

Victims of cyber bullying are frequently younger than the perpetrator. In some but not all studies of cyber bullying, many researchers have noted that females tend to be victims more often than males. Victims of cyber bullying have higher social anxiety scores than individuals who were not involved with cyber bullying. In addition, children who had no experience with cyber bullying had higher self-esteem than bullies or victims. Another predictor is that cyber bully victims usually had prior experience with cyber bullying or face-to-face bullying. Additionally it was found that individuals who harassed others online had an increased likelihood of being a victim of online harassment compared to non-harassers.

Victims are more likely to have social problems than children that were not harassed. Youths who are harassed are significantly more likely to also harass others. While most of the instances of cyber bullying involved relatively minor behaviour such as disrespect and name calling, others were physical threats. Some students have indicated that a person has taken a picture or video of them via a cellular phone camera, consequently making them feel uncomfortable, embarrassed or threatened.

## **PREVALENCE**

Studies show an increase in the prevalence of cyber bullying from 2000 up to date. The prevalence of cyber bullying among children is difficult to pin point exactly. The statistics vary depending on definition of bullying used as well as the different ages of the children and time parameters. The National Crime Prevention Council reports that cyber bullying is a problem that affects almost half of all American teens.

Cyber bullying instances have been increasing over the last several years. Children are being cyber bullied even from the age of 12. According to a recent study, 10% of young students have been cyber bullied in the last 30 days and 17% have been cyber bullied at least once in their lifetime.

Older youths use the internet more frequently and are more likely to experience cyber bullying than younger children. In some areas the research showed that up to 60% of students were victims of cyber bullying. Some studies have found that of students between grades 4-8, 42% have been bullied online, 35% have been

threatened online, 21% have received mean or threatening e-mails, and 58% have not told their parents or an adult about something mean or hurtful that happened to them online.

A Canadian study found that 23% of children between the ages of 12-15 years had been bullied via email, 35% in chat rooms, 41% by text messages on their cell phones, and that 41% did not know their perpetrators. Another study found that of children from the ages 10-17 one third felt distressed by the incident especially if the harassment was aggressive.

Many youths are not comfortable telling an authority figure on their cyber bullying victimization for fear that their access to technology will be taken from them. According to certain statistics, 24% told a parent, 28% did not tell anyone, and 41% told a friend.

In Europe 18% of European youths had been bullied, harassed or stalked via the internet and mobile phones. Cyber harassment rates for young people across the EU member states ranged from 10%-52%. Rates of cyber bullying increased with age. The legal complexity and clinically volatile phenomenon of cyber bullying is surprising, given that such behaviour has only emerged in our society fairly recently.

## CONSEQUENCES

The consequences that follow cyber bullying also vary with the severity of the cyber bullying incident. Young people who were bullies or victims had the highest rates of anxiety, depression, and school absences. Victims of cyber bullying were 1.9 times more likely to have attempted suicide, and perpetrators of cyber bullying were 1.5 times more likely to have attempted suicide. One of the most damaging effects is that a victim begins to avoid friends and activities, often the very intention of the cyber bully. Sometimes the bullying is so damaging that victims commit suicide. The suicide of Megan Meier is a recent example that led to the conviction of the adult perpetrator of the attacks.

## INTERNATIONAL POSITION ON CYBER BULLYING

The Convention on the Rights of the Child, (UNCRC) 1989 is the first legally binding international instrument to incorporate the full range of human rights. The Convention sets out these rights in 54 articles and two Optional Protocols. UNICEF's mission is to advocate for the protection of children's rights, to help meet their basic needs and to expand their opportunities to reach their full potential.

The Convention protects children's rights by setting standards in health care, education, legal, civil and social services. By agreeing to undertake the obligations of the Convention (by ratifying or acceding to it), governments have committed themselves to protecting and ensuring children's rights and they have agreed to hold themselves accountable for this commitment before the international community. State parties to the Convention are obliged to develop and undertake all actions and policies in the light of the best interests of the child.

Article 19.1 of the UNCRC declares that "*State Parties shall take all appropriate legislative, administrative, social and educational measures to protect the child from all forms of physical or mental violence, injury or abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse, while in the care of parents, legal guardians or any other person who has the care of the child.*" In 2011 The United Nations Committee on the Rights of the Child expanded on Article 19 of the UNCRC to include acts committed via information technologies (ICT), for example cellular phones and social networking sites such as Twitter and Facebook. Psychological bullying was also included in Article 19.

The UNCRC acknowledges the seriousness of cyber bullying. Children are the perpetrators of cyber bullying and as such the UNCRC requires that the response to such incidents be proportionate to the circumstances and nature of the acts. A purely retaliatory approach should be avoided as far as possible in these cases.

On 23 November 2003, the Council of Europe and non-member states Canada, South Africa, and the United States signed the Convention on Cybercrime, an agreement that requires participating nations to enact legislation that facilitates investigation and prosecution of crimes committed through the internet.

Legislation geared for penalising cyber bullying has been introduced in a number of countries. A recent ruling in the UK determined that it is possible for an Internet Service Provider (ISP) to be liable for the content of sites which it hosts, setting a precedent that any ISP should treat a notice of complaint seriously and investigate it immediately.

There are multiple non-profit organisations that fight cyber bullying and cyber stalking. They advise victims, provide awareness campaigns, and report offences to the police. Wired Safety's International Stop Cyber Bullying Conference took place in 2008. Topics addressed included "*cyber bullying and the law, and how to distinguish between rudeness and criminal harassment*". Other issues that were addressed were parent's legal responsibilities, the need for more laws, how to handle violent postings, as well as the difference between free speech and hate speech. The adult behaviour was classified as stalking harassment and behaviour by children classified as bullying harassment.

A number of businesses and organisations are in coalition to provide awareness, protection and recourse for the escalating problem. Some aim to inform and provide measures to avoid as well as effectively terminate cyber bullying and cyber harassment. Steps to prevent cyber bullying, include educating children on the consequences of cyber bullying and educating children to respect the boundaries of all people. Developing cyber bullying prevention strategies is a challenge for schools.

There are a number of ways to combat cyber bullying, such as intervention, counseling and educating teachers and parents. It is important that students be taught how to avoid becoming victims of this phenomenon.

## **SOUTH AFRICAN POSITION**

The criminal abuse of the internet created legal uncertainty as the criminal and procedural laws designed for a physical medium were not flexible enough to address the commission of crimes by means of the internet. Cyber crimes proved different from crimes committed in a physical medium. In 2002 South Africa criminalised conduct in cyberspace by means of the Electronic Communications and Transactions Act 25 of 2002. This was the first legislation that deals exclusively with the electronic medium.

Research on cyber bullying in South Africa is limited. The number of children that are victims of cyber bullying is unknown. In 2009 the Centre for Justice and Crime Prevention (CJCP) conducted a study amongst 1726 young people between the ages of 12 and 24 years. Almost half of the respondents had experienced some form of cyber bullying. There also appears to be a correlation between bullies and victims of cyber bullying. More than a third of respondents who bullied had themselves been bullied.

### **Current South African Legislation dealing with Cyber Bullying**

Present legislation used to combat cyber bullying is spread between different acts and no clear statutory offence for cyber bullying exists. The laws are applicable to all perpetrators and victims, irrespective of their age. A definition for cyber bullying does not exist in South African law. No distinction has been made between cyber bullying (children) and cyber stalking (adults) as is the case in some other countries.

The perpetrator may be charged with common law crimes, such as extortion, assault, criminal defamation and crimen iniuria. In terms of cyber bullying, extortion could be committed where a person intentionally and unlawfully threatens to electronically distribute compromising images or information about another person unless the victim supplies the perpetrator with some advantage. The perpetrator could be charged with assault where the perpetrator threatens the victim with personal violence (using the internet or other form of

technology) and this conduct inspires fear or belief in the victim that such personal violence is to take place. The victim should believe that the perpetrator intended to carry out the threat.

A person who uses defamatory remarks on social networking sites, text messages, e-mails, or instant messages to third parties could be committing criminal defamation. Finally, *crimen iniuria* is defined as the unlawful, intentional and serious violation of the dignity or privacy of another person. By communicating to somebody else a message containing, expressly or implicitly, an invitation to or a suggestion of sexual immorality or impropriety, or by sending indecent photos, will violate the dignity of that person and the perpetrator could be charged with *crimen iniuria*.

Section 384(1) of the Criminal Procedure Act 56 of 1955 provides a remedy to the victim of cyber bullying by way of a peace order. The perpetrator may be ordered to appear before a magistrate and if necessary arrested, whereby the magistrate in his discretion may order the perpetrator to give recognisances with or without sureties in the amount of R2000 for a period not exceeding six months to keep the peace towards the complainant. The magistrate could order the perpetrator to pay the costs of the inquiry.

There are also civil remedies available to the victim. The complainant can institute a civil claim for defamation in the District, Regional or High Court depending on the claim amount. A victim can also approach the District, Regional or High Court for an interdict restraining the perpetrator from committing a threatened wrong or from continuing an existing one. An interdict is not a remedy for past invasion of rights, but is concerned with present or future infringements.

According to the preamble of the Child Justice Act 75 of 2008, the purpose of the act is to create a criminal justice system for children who are in conflict with the law and are accused of committing offences. Other objectives include, providing for the minimum age of criminal capacity of children, to make special provision for securing attendance at court and the release or detention and placement of children. Two very important objectives of the act in terms of cyber bullying, is to divert matters away from the formal criminal justice system in appropriate circumstances, and to encourage the use of restorative justice in respect of children in the criminal justice system.

The instant online life of cell phones combined with poor impulse control make children particularly vulnerable to cyber bullying. However the same poor impulse control and immaturity of children is why less harsh reactions to child offenders are needed. Children usually do not realise the consequences of their actions as adults would.

Some of the objectives of diverting a case are to try to meet the specific needs of the child, to reintegrate the child into the community and reduce the possibility of the child re-offending. The most significant part of diversion is that the child will not have a criminal record if he complies successfully with the diversion order. The prosecutor in the case has the discretion to decide whether or not to divert the case. A child and an adult that commits the same criminal offence will be charged with the same crime. The Child Justice Act only dictates additional considerations to be taken into account when dealing with a child.

## **The Protection from Harassment Bill 1 of 2010**

In 2003 the South African government began work on a draft bill on stalking. In 2010 the government introduced the draft anti-stalking legislation (The Protection from Harassment Bill 1 of 2010). The Bill was presented to Parliament and is still awaiting Parliament's approval. The Bill does not provide for a separate definition of cyber-bullying. The definition of harassment contained in the Bill is wide enough to include acts of cyber-bullying.

The object of the Bill, for the purposes of cyber bullying, is to provide for the issuing of protection orders against harassment. The Bill makes provision for the complainant to apply for a protection order against harassment in any magistrate's court. The court will then issue an interim protection order against the respondent. The respondent should then show just cause why the protection order must not be made final. If the respondent fails to comply with the protection order, he could be arrested. Should the respondent be convicted, he will have to pay a fine or be imprisoned for a maximum of five years. The victim may still lay criminal charges against the perpetrator, such as *crimen iniuria*, extortion and criminal defamation.



## RECOMMENDATIONS AND CONCLUSION

From a South African point of view it is important to promulgate and implement the Protection from Harassment Bill 1 of 2010. However not all the challenges faced will be addressed by this Bill. Amendments should be made to some of the existing laws to adjust the impact on child offenders and to include cyber bullying as a specific crime with accompanying remedies available to the victim. Awareness must be raised amongst government officials, such as judges, magistrates, prosecutors, probation officers and police officials as well as the general public. The media and schools should participate in awareness campaigns and prevention measures. All schools should have specific policies on how to deal with cyber bullying and must not hesitate to enforce them strictly. The prosecutors should do everything to divert matters out of the criminal system and rather investigate alternative measures to deal with these children. The bullies should have access to the diversion programmes addressing the causes and effects of cyber bullying. Finally, South Africa needs to address the root causes of cyber bullying. Children should be educated on cyber bullying and be taught to take responsibility for their actions and maybe most importantly, children should be taught to treat all people with respect.

The Convention on the Rights of the Child and other related international instruments emphasize cyber bullying all over the world. It is essential that all countries should introduce cyber bullying legislation in order to effectively eradicate this phenomenon. Cyber bullying is a major challenge for schools, teachers, parents and ultimately children.

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# **HUMAN TRAFFICKING: A COMPARATIVE STUDY OF THIS PHENOMENON IN AUSTRALIA, JAPAN AND SOUTH AFRICA**

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## **ABSTRACT**

*Human trafficking is a phenomenon affecting all countries, irrespective of culture, level of development or even economic stability. It is a multidimensional phenomenon and as such poses a challenge for different international role players to develop an approach which will address all aspects of human trafficking. This paper will take the form of a comparative study of the different aspects of human trafficking in Australia, Japan and South Africa to determine the approach of these countries in terms of the four P's of human trafficking (prevalence, prevention, prosecution and protection) and the success of the various approaches in order to make recommendations to the South African situation.*

## **INTRODUCTION**

The United Nations define human trafficking as “an act of recruiting, transporting, transferring, harbouring or receiving a person through a use of force, coercion or other means, for the purpose of exploiting them”. Human trafficking amounts to gross abuse of fundamental human rights.

Human trafficking is not a new phenomenon, it is as old as human the human race. Trafficking in women originated as far back as the nineteenth century. A hundred years later women were being trafficked from South East Asia to Western Europe for sexual exploitation. Trafficking for this purpose has never ceased to exist. Human trafficking only started making headlines in the 1990's and the public awareness gave rise to more publications, reports and articles mostly by NGO's and governments. This resulted in the development of policies pertaining to human trafficking. Human trafficking is the fastest-growing criminal industry in the world and the third most profitable crime in the world. It operates in a worldwide market where the sale of human beings responds to a demand for the use of the people in various capacities. In 2001 Interpol estimated that human trafficking was a USD19 billion enterprise and still growing. Exact and reliable data is difficult to collect and the estimates are far from complete. Forms of human trafficking include forced labour, sex trafficking, debt bondage and involuntary domestic servitude.

## **INTERNATIONAL POSITION**

The transnational element, human trafficking as a crime, requires a comprehensive approach, but until 2000, there was no internationally agreed definition of human trafficking. In 2000 the United Nations created the first international protocol that recognized the gravity of the crime and also established an international standard by which to define human trafficking, namely the protocol to Prevent, Suppress and Punish Trafficking in Persons, especially Women and Children (the Trafficking Protocol). An additional objective of the protocol is to protect and assist victims. This Protocol came into force on 25 December 2003. By March 2012 the Protocol had 117 signatories and 147 countries adopted it. The Palermo Protocol obliges ratifying states to prevent and combat human trafficking, and to protect and assist the victims of trafficking and to criminalize human trafficking by introducing trafficking-specific legislation to deal with human trafficking cases which occurs within the borders of that specific country.

Human trafficking was also formally defined in the Palermo Protocol for the first time as:  
*‘... the recruitment, transportation, transfer, harboring, or receipt of persons, by means of threat or force or other forms of coercion, of abduction, of fraud, of deception, of abuse of power or a position of vulnerability or of giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of exploitation, forced labor or services or practices similar to slavery, servitude or the removal of organs’.*

The only United Nations entity which focuses on the criminal justice element of human trafficking is the United Nations Office on Drugs and Crime (UNODC). This is then also the UN body that acts as the guardian of the Protocol, and is responsible for assisting ratifying countries with the challenges faced when dealing with human trafficking and the implementation of the requirements set out in the Palermo Protocol in terms of prevention, prosecution, protection and implementing legislation relevant to human trafficking. The UNODC achieves this through its Global Programme against Trafficking in Persons.

The UNODC is very active in lending their support to the international community in fighting human trafficking. They have made various tools, as well as resources, available to ratifying countries in an attempt to assist the states to draft legislation and develop comprehensive national anti-trafficking strategies.

The Blue Heart Campaign was established by the UNODC to raise awareness of, and to rally international public opinion against, human trafficking. This campaign is open to all who wants to take a stand against human trafficking. Supporters can “wear” a blue heart by incorporating the symbol to the packaging of products or changing profile pictures on social networking sites to a blue heart.

Another international tool launched, in March 2007, to fight human trafficking is the United Nations Global Initiative to Fight Human Trafficking (UN.GIFT). UN.GIFT aims to join all stakeholders (e.g. governments, business, academics, industry and the media) in the fight against trafficking to support each other’s work, create new partnerships and to develop effective tools to combat human trafficking.

The Trafficking in Persons (TIP) Report by the United States State Department was implemented to monitor and increase efforts worldwide and to serve as a measure for funding anti-trafficking programs abroad.

Despite all these international initiatives the practical implementation of fighting human trafficking remains a challenge. Very few traffickers are convicted of this monstrous crime, and the majority of trafficking victims are never identified or assisted.

## AUSTRALIA

### Prevalence

Australia was classified by the Trafficking in Persons Report of 2011 (TIP Report 2011) as a Tier 1 country by the United States Department of State. To qualify as a Tier 1 country the government must fully comply with the Trafficking Victim’s Protection Act’s (TVPA) minimum standards in terms of prosecution of traffickers, protection of victims of trafficking and the prevention of human trafficking in the country.

Australia serves mainly as a destination country for victims of trafficking in persons. The majority of these victims are trafficked for the purpose of sexual slavery, as Australian women are unwilling to work in the sex field. The remainder of the trafficking victims is used as forced labourers.

Reliable data on the prevalence of human trafficking in Australia is challenging due to the fact that no organized method of reporting trafficking cases exists. The available statistics indicates that from 1999 to 2003 105 matters relating to trafficking in persons were investigated by the Australian Federal Police (AFP). 305 investigations were carried out by the AFP in the period January 2004- June 2011, of which 45 were investigated in the year from July 2010- June 2011. A total of more than 400 trafficking-related cases were investigated since

1999. The investigations indicated that Australia were initially the destination country for mainly Thai- and South Korean nationals (2003 to 2010). Recent investigations (2010-2011) indicate that victims are sourced mainly from the Philippines (39%), India (26%) and China (9%). The other victims were primarily drawn from different North- and South-East Asian countries.

## Prevention

The Australian government is constantly striving to prevent trafficking in persons through various strategies. In November 2010 the 3<sup>rd</sup> annual National Roundtable on People trafficking (NRPT) was convened to strengthen Australia's response to trafficking in persons. The NRPT seeks to prevent human trafficking through a partnership between the government, NGO's, industry and labour unions. The NRPT also assists in the protection of human trafficking victims and the prosecution of traffickers.

The granting of financial resources to various institutions, to assist in the fight against human trafficking, is another way in which the government attempts to fight this crime. \$600 000 per annum were granted to the Australian Institute of Criminology to analyze trends in trafficking in persons in Australia. Four NGO's will receive \$1.4 million to assist victims of trafficking by giving *pro bono* legal services to the victims, financial support to victims and for awareness programmes on human trafficking. In an effort to prevent labour trafficking, the government will make \$200 000 available, which was ceased from criminals in terms of the Proceeds of Crimes Act of 2002.

Australia also continues to fight human trafficking by focusing on the source countries through training, victim assistance programmes and prevention activities in the Pacific-Asia region.

## Prosecution

No formal anti-trafficking legislation exists in Australia. Offences relating to trafficking are covered by various pieces of existing legislation. The Criminal Code Act of 1995 was amended in 1999, and again in 2005 to include the Palermo Protocol. Divisions 270 and 271 of the Criminal Code make human trafficking illegal in the country and punishable by law. Division 270 covers the offences of slavery, sexual servitude and deceptive recruitment for sexual servitude and prescribes the maximum for these offences, namely: 25, 15 and 7 years respectively. Trafficking-related crimes, such as rape, kidnapping and assault fall under the jurisdiction of existing legislation.

Division 271 deals with offences relating to trafficking in persons and debt bondage. The maximum sentences as prescribed by Division 271 are: 12 years for trafficking in persons, 25 years for trafficking in children, 12 years for domestic trafficking and 12 months for debt bondage. Offenders found guilty of contravening Division 270 and 271 can also be ordered to pay a fine of up to \$152 000.

Employers are prohibited from exploiting non-citizen workers by the Migration Amendment (Employer Sanctions) Act 2007. An employer found guilty of these offences can be sentenced to a maximum of 5 years imprisonment or a \$33 000 (AUD) fine. If a company contravenes this act the fine can be a maximum of \$165 000 (AUD).

From January 2004 – June 2010 only 39 trafficking cases were referred to the Commonwealth Department of Public Prosecutions (CDPP). For the period covering July 2010 – June 2011, 35 cases against suspected traffickers were referred to the CDPP for prosecution. A total of 13 convictions were made against offenders under Divisions 270 and 271 since its introduction (9 for slavery offences, 3 of sexual servitude and 1 of people trafficking). Of these 13 convictions 5 were made in the 2010-11 period. These 5 convictions were made under Division 270 of the Criminal Code for sex trafficking. These offenders were sentenced to imprisonment ranging from 2-12 years. In the past year no traffickers have been prosecuted in Australia for offences relating to labour trafficking. All offenders prosecuted for trafficking-related offences in Australia have been foreign nationals. No Australian citizens have ever been prosecuted for trafficking-related offences in the country.

## **Protection**

Australia established a Victim Support Programme, called Victims of Trafficking Care (VoTCare) in 2004 to protect the victims of human trafficking. Since its inception to June 2011 a total of 184 victims have been assisted and cared for through this programme. 165 victims were female, of which 149 were trafficked into the sex industry and 19 victims were male. None of the male victims assisted were involved in the sex industry. VoTCare assisted trafficking-victims by providing accommodation, financial assistance, legal advice and services, training and social support. The Australian government allocated \$885 000 in 2010 to VoTCare.

Another way, in which the government attempts to protect victims and their families, is through granting eligible victims various types of visas which allows them to stay in Australia, such as the Witness Protection (Trafficking) (Temporary) Visa, the Witness Protection (Trafficking) (Permanent) Visa, the Bridging Visa and the Criminal Justice Stay Visa. A victim will only qualify for these visas if the requirements pertaining to the specific visa are met.

## **JAPAN**

### **Prevalence**

Japan, in contrast to Australia, is a Tier 2 country, indicating that the Japanese government does not fully comply with the minimum requirements set by the TVPA, but the government is making significant efforts to comply with the set requirements. These efforts were introduced after Japan was placed on the Tier 2 watch list in 2004, where after the government began to implement a series of laws and regulations that criminalized trafficking and tightened visa controls.

Japan is not only a destination country, but also a source and transit country for men, women and children. These victims are trafficked not only for the purpose of sexual slavery, but also to work as forced labourers. Japanese organized crime syndicates (the Yakuza) play an intricate part in this phenomenon. As a destination country, Japan is the end of the road for victims from, mainly, the People's Republic of China, South Korea, South East Asia, Eastern Europe and Russia. These victims are mostly women and children who have been trafficked for commercial sexual exploitation. The fact that organized crime is involved in human trafficking in Japan makes it very difficult for victims to approach the authorities for assistance, as they fear reprisal by the traffickers. Japan also serves as a transit country for victims trafficked from the country of origin to destination countries in East Asia to their destination country in North America.

### **Prevention**

The Japanese government established the Inter-Ministerial Liaison Committee (Task Force) on trafficking in persons in April 2004 as part of the fight against human trafficking in the country. In December 2004 Japan announced the "Action Plan of Measures to Combat Trafficking in Persons". This was followed in 2009 by the publication of "Japan's 2009 Action Plan to Combat Trafficking in Persons".

In 2010 the Inter-Ministerial Liaison Committee agreed on a "Public Awareness Roadmap" to make the public aware of the dangers and effects of human trafficking. The Japanese government released more than 33 000 posters and 50 000 leaflets to local governments, police stations, community centers, universities and other relevant places in an effort to prevent trafficking in persons.

### **Prosecution**

The country does not have a comprehensive anti-trafficking law. In 2005 the government amended its Criminal Code which criminalized the buying and selling of persons. The Criminal Code also contains articles and laws that could be used to prosecute some trafficking offences. Other laws which can be utilized to prosecute traffickers include the Employment Security law, the prostitution Prevention Law, the Child Welfare Law and

the Law for Punishing Acts related to Child Prostitution and Child Pornography (which allows the Japanese government to prosecute offenders committing these offences outside Japan's borders). All trafficking-related complaints are investigated by the National Police Agency (NPA).

Recent data on trafficking-related prosecutions in Japan is inadequate. In 2006, 17 suspected traffickers were prosecuted, of which 15 were convicted. The number of sex trafficking prosecutions decreased in 2007 to 11 prosecutions. 12 trafficking-offenders were convicted in 2007, of which one offender was convicted for labour trafficking under the Labour Standards Law. 7 of these offenders were sentenced to 2-4 years imprisonment, with labour and the other five received suspended sentences.

In 2010 the Japanese authorities investigated 19 offences relating to human trafficking, which resulted in the arrest of 24 suspected traffickers. 14 of these individuals were convicted for trafficking-related offences, under various pieces of legislation. 6 offenders were imprisoned for 2.5 – 4 years, another 6 offenders received suspended sentences and had to pay a fine and 1 offender only received a fine. The other 10 suspects were not prosecuted due to a lack of evidence.

## **Protection**

A very important organization to assist in eradicating trafficking in Japan is the Polaris Project. It is a grassroots organization with its sole aim to combat human trafficking and modern-day slavery. The Polaris Project offers a range of activities such as victim protection, law enforcement training, victim identification and raising public awareness.

Victim support provided by the Japanese government includes legal protection, temporary stay permits, medical- and psychological support, shelter and repatriation assistance. The majority of victims receiving government support are from source countries, such as the Philippines, Indonesia and Thailand. The Japanese government also established the Women's Consulting Office to assist and support female victims of trafficking for sexual exploitation. Victims receive food, shelter, clothing and medical- and psychological support at the Women's Consulting Office.

# **SOUTH AFRICA**

## **Prevalence**

South Africa is also classified as a Tier 2 country in the 2011 TIP-Report. From 2005 to 2008 South Africa was placed on the Tier 2 watch list as a result of the failure of the South African government to provide evidence of their efforts to combat human trafficking and a lack of victim support. The country was removed from the watch list in 2009 and is continuously making an effort to meet the minimum requirements in the combat against human trafficking.

South Africa is regarded as a source, transit and destination country where human trafficking is concerned. South Africa serves as a source country mainly for internal human trafficking from extremely poor rural areas in the country to more affluent urban centers. A large percentage of the population lives in poverty. This creates the opportunity for traffickers to coerce people into different forms of human trafficking. The lack of proper border on land, sea and air makes South Africa the perfect transit country, to transport victims from the rest of Africa, Asia and Eastern Europe to North America and Western Europe.

Victims of human trafficking from South Africa's poor neighbouring countries, such as Swaziland, Lesotho and Zimbabwe, are brought to South Africa, as a destination country, to work in the sex industry or as low cost labourers in other industries, such as agriculture and also domestic servitude.

## **Prevention**

The government is continuously attempting to prevent human trafficking. All government anti-trafficking efforts are co-ordinated by the Trafficking in Persons Inter-Sectoral Task Team. Before the World Cup in 2010, prevention campaigns were launched by the government as well as NGO's. In October 2010 the fifth annual Human Trafficking Awareness Week was held, which made a huge contribution towards the awareness amongst the public in South Africa.

The Tsireledzani project, which introduced an action plan to combat human trafficking, is still being led by the National Prosecuting Authority (NPA). The NPA also created awareness tools such as a radio drama as well as peer education worksheets, targeting the general public. Different provinces conducted their own public awareness activities taking on different forms. Other activities of the NPA includes inter alia, investigations into *ukuthwala* (forced marriages between young girls to adult men), where the perpetrators are then charged with statutory rape and kidnapping. Road shows were also held where communities were educated about children's rights being violated by the use of *ukuthwala*. The practice of *ukuthwala* is quite prevalent amongst certain communities, especially in the Eastern Cape.

## **Prosecution**

South Africa ratified the Palermo Protocol and as such is obliged to introduce trafficking-specific legislation. In 2010, the South African government introduced "The Prevention and Combating of Trafficking in Persons Bill". Presently the country has not yet promulgated the necessary trafficking legislation. Traffickers have to be charged with various other crimes related to human trafficking.

The South African government has increased law enforcement efforts in an attempt to combat trafficking. There are presently several pending trial cases and also several cases postponed for sentence where offenders were successfully convicted. A cause for concern however is the low number of convictions and the subsequent inadequate prison sentences or fines. A number of additional trafficking cases were investigated and prosecuted of which all but one involved sex trafficking.

Section 71(1) and (2) of The Criminal Law (Sexual Offences and Related Matters) Amendment Act 32 of 2007 prohibits sex trafficking of children and adults. This offence is listed in Part 1 of Schedule 2 to Act 105 of 1997. Upon conviction for this offence a Regional Court or a High Court shall sentence the offender to life imprisonment unless there are substantial and compelling circumstances that justify the imposition of a lesser sentence. If such circumstances exist the court can impose a term of imprisonment for a period not exceeding 30 years.

Chapter 6 of the Basic Conditions of Employment Act no 75 of 1997 prohibits the employment of children and forced labour. Section 48 of Act 75 of 1997 prescribes a sentence of a fine or imprisonment for a period not exceeding three years which means that the court can impose a maximum fine of r60000 or three years imprisonment. The Prevention of Organised Crime Act 121 of 1998 introduced measures to combat organized crime, money laundering and criminal gang activities. It prohibits certain activities associated with gangs.

## **Protection**

South Africa, most importantly persevered in its efforts to ensure that all trafficking victims have access to protective services. The National Prosecuting Authority has developed training manuals for law enforcement and immigration officials, prosecutors, social workers, health care providers and NGO representatives to identify and address trafficking cases. The Department of Social Development (DSD) is the only department involved in the referral of crime victims to private shelters, faith-based organisations and community charities. The DSD and the SAPS are in communication on trafficking cases. The purpose is to compile evidence and to give the victims proper access to protection as soon as possible. The DSD also established a rehabilitation programme for the well being of the victims.

## **RECOMMENDATIONS AND CONCLUSION**



The Palermo Protocol is the most important international instrument dealing with trafficking in persons. By ratifying the Protocol, Australia, Japan and South Africa are morally and legally obligated to prevent and combat human trafficking, and to protect and assist the victims of trafficking. Compared to the other two countries, South Africa needs to address a few more issues to fulfill the requirements in eradicating human trafficking.

The government should attempt to address the labour trafficking abuses occurring in the country. Training the officials dealing with the labour trafficking cases is essential. More specific funding must be dedicated to combat human trafficking. The government needs to implement a specific long-term victim support plan for trafficking victims who assists with investigations. This plan should include social and legal services as well as financial assistance. Trafficking victims from other countries should have the option to stay in the country as opposed to being deported without any other recourse. Considering the position in Australia, the government could implement a visa system whereby a victim would be able to stay in the country, provided that the victim meets the requirements of a visa. South Africa may also benefit from investigating the Polaris Project in Japan, for best practices. Finally the biggest stumbling-block to combat anti-trafficking is the lack of comprehensive legislation pertaining to trafficking including a definition that fully defines trafficking.

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# EFFICIENCY ASSESSMENT TOOLS FOR CREDIT GRANTING PROCESS

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## ABSTRACT

*In recent years many countries have experienced stagnation or even decline in the amount of mortgage credits granted to households. The credit-granting process has become significantly complicated, less transparent and excessively time consuming. This study seeks to define the improvement opportunities for credit granting through creation of a simple, transparent and accountable framework of decision-making process. To achieve this purpose the author used qualitative method – structured interview and graphical tools – decision tree. The developed framework makes it possible to identify areas of the credit granting that might have potential for considerable improvements. The empirical results of the study indicate that decision-making process in credit granting has considerable potential for improvements. The developed framework is supposed to help commercial banks to improve the quality and efficiency of the decision-making process in the credit granting and reduce cost of credit granting process. This is possible to achieve by cutting down the duration time of alternative solutions with negative outcome – credit denial. This research introduces a valuable framework of transparent and accountable model of decision-making process in the credit granting. The author has found that the introduced framework is suitable not only for commercial banks but also for a wide range of organizations having similar complicated and multiple staged decision-making processes.*

## INTRODUCTION

In recent years many countries, including the USA (Federal Deposit Insurance Corporation, 2012), the United Kingdom (Bank of England, 2012), Germany (Deutsche Bundesbank, 2012) as well as Latvia, experienced stagnation or even decline in the amount of mortgage credits granted to households. Statistic data processed by the Financial and Capital Market Commission (FCMC, 2012) indicates that commercial banks of Latvia experience a decrease of households mortgage credit portfolio by 4.96% in 2009, 5.7% in 2010 and by 7.4% in the first half of 2011. Partly his negative dynamic could be described by stiffened in last years standards and regulation on credit granting. Households as well as bank officials admit that a credit-granting process has become more complicated, excessively time-consuming, and non-transparent compared to previous years. Bank officials explain it by significant changes that took place in commercial banks practices since the beginning of the crisis. Previously the power of credit granting decision-making was delegated to the middle managers of commercial banks, but currently a decision-making mandate is significantly reduced and only belongs to the credit committees.

This paper seeks to define an opportunity for improvements of the credit granting process in commercial banks through the creation of a simple and transparent framework of the decision-making process. The developed framework is supposed to help commercial banks to improve the quality of the decision-making process in the credit granting and reduce cost of credit granting process. The author defines the following objectives to reach the purpose of the study: (1) transformation of complicated household mortgage credit granting process into a transparent and accountable framework by using a decision tree; (2) identification of problem areas of decision-making process in credit granting; (3) development of practical recommendations for commercial banks for improvement of the decision-making process in credit granting; (3) assessment of potential of the developed framework. To achieve the objectives of the study the author defined four tasks: (1) conduct structured interviews with loan officers from Latvian commercial banks; (2) transform results of

interviews to the credit granting decision-making tree and fix the time and probability of the each alternative solution; (3) carry-out the verification of the developed credit granting decision-making tree; (4) remark the results of the credit granting process decision-making tree.

## BACKGROUND OF THE RESEARCH

The credit granting process, according to the structure suggested by the author, consists of two interrelated components: credit granting policy (procedures) and decision-making. The credit granting policy (procedure) represents credit granting methodology to assess credit risk by establishing a wide range of requirements and standards for credit granting. Decision-making, in turns, represents a set of consistent and sequential actions that should be carried out by the loan officers in order to meet all standards and requirements established in the credit granting procedures. The main task of the decision-making process in credit granting is to obtain approval or denial of credit granting from relevant authority of commercial banks (in most cases - the credit committees). The author's intention is to research decision-making issues of the credit granting process, because this component usually is neglected by commercial banks. And to the mind of the author it is a mistake, because this component might have considerable potential for improvements of the credit granting process and therefore should be properly reflected and resolved. Credit granting is a trade-off between the perceived default risk of a credit applicant and potential returns from granting credit (Keasey, Veronesi, 2008). "Trade-off" is a subjective and capacious criterion that is represented by credit risk management. Credit granting procedures of commercial banks include a wide range of requirements and standards aimed to establish boundaries on level of acceptable credit risk. Most of the requirements and standards of commercial banks are similar and include standards on market segment, quality and liquidity of property, its value, collaterals, loan limits, creditworthiness and credit reputation of a credit applicant.

Reverting to the decision-making process of the credit granting the author has observed lack of proper analysis and documentation of it in the procedures of commercial banks. At best commercial banks have made an attempt to reflect the credit granting process either in descriptive or visual way. However used for this purpose techniques such as flow-charts and Entity-relationship model are not sophisticated enough to provide comprehensive precept of complicated, multiple staged and diversified process of decision-making in credit granting process. Lack of proper reflection and documentation of decision-making process in credit granting implies that commercial banks have not paid detailed attention to that and might have little control over this process. As a result, the author finds that commercial banks might have opportunities for considerable improvement in decision-making process, which, in turns, would result in better efficiency of the whole credit granting process. Efficiency of the credit granting process could be measured by the time and labour costs spent on proceeding of a credit application. Knowledge and clear understanding of the decision-making process in credit granting could enlarge range of tools used by commercial banks to increase customer's satisfaction by achieving better efficiency and quality of the credit granting process.

By highlighting the lack of proper analysis of decision-making in credit granting the author set a task to develop a framework of decision-making process in credit granting using a decision tree concept that would bring required simplicity, transparency and accountability. A decision tree framework according to Magee (1964) is suitable and valuable tool for evaluation of decisions under uncertainty. A decision tree framework allows managers to take a rational decision with the greatest expected value. Magee considers a decision tree framework as a unique tool that combines analytical techniques with clear visual representation of the impact of future decision alternatives and events. Olivas (2007) in his work as well as Magee recognizes a decision tree framework as a helpful and one of the most suitable and valuable tools, which exist in decision-making theory, for evaluation and analyze of wide range of decisions. He not only provide examples of application of a decision tree framework in particular situations, but also specifies advantages of this framework. Jaunzems and Reizinsh (2008), in turns, go far forward in terms of decision tree application area as well as in interpretation of the obtained results. The author emphasizes that quantitative approach in decision-making requires comprehensive informative analysis. Informative analyses of the developed decision tree introduced by Jaunzems and Reizinsh assumes necessity of evaluation of each decision sub-branch with binary test: validity of mathematical expectation and validity of standard variation. This binary test of all decision tree sub-branches establish Pareto ( $\mu$ ,  $\sigma$ ) rule and decrease amount of alternative solutions worth for further analysis from dozens to several (Jaunzems, Reizinsh, 2008), which make decision-making process for managers much easier and more efficient.

A decision tree framework has received wide recognition and is used in different kind of business industries with complex and multiple staged decision-making process, for example, Moore M. and Carpenter J.M. (2010) in their research use decision tree framework to identify consumer decision-making choices preferences and its further analysis, Chan S.L., Koh H.-C. and Low C.-K (1992) have used the Bayesian decision-tree approach in making auditing decisions, Mosquera N., Reneses J. and Sanchez-Ubeda E.F. (2008) showed that a decision tree framework is applicable also in electrical generation industry, Dowie R., Gregory R.P.F., Rowsell K.V., Annos S., Harrison C.J. and Dick A.D. (1998), in turns, used a decision tree to evaluate and commission ambulance cardiac services. After brief searching of current literature on credit granting process the author has identified a lot of researches devoted to the credit risk management (Orgler, 1970; Liebman, 1972; Myer and Forgy, 1953; Thomas, 2000; Kim, 2004; Goldberg and White, 2004; Liberti, 2005). At the same time there is a lack of researches devoted to the analysis of the decision-making process in credit granting. Therefore in this paper the author introduces one of first empirical study on analysis of the decision-making process in credit granting and provides a valuable insight into acknowledgment of interdependencies, critical issues and areas for improvements in decision-making process of the credit granting. The finding of the study gives rise to a series of new researches.

The empirical study of this paper is limited to the development of the framework of credit granting process that relates to only mortgage credit granted to households. The aim of this paper is not to introduce any new standards and requirements in credit risk management. The aim of this paper is to examine the decision-making process as a set of consistent and sequential actions that is carried out to reach decision on approval or denial of granting a credit and state recommendations for its improvements opportunities.

## THE EXPERIMENT

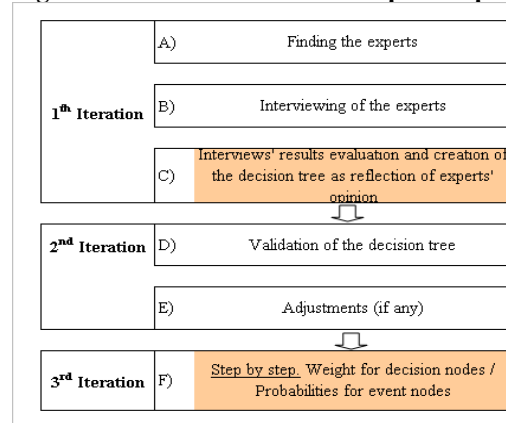
Used by commercial banks techniques for reflection of the decision-making process such as flow-charts or Entity-relationship model are useful for training of new employees to introduce them with a general percept of the credit granting process. However, those techniques do not ensure feedback to commercial banks regarding time and resources spent to handle a credit application. But the weakest side of the used techniques is enclosed in their inability to describe whether the credit granting process is organized properly and in efficient way? And the author finds that a graphical tool, particularly a decision tree, as the proper concept that allows overcoming of drawbacks of above mentioned techniques. It enables transformation of the decision-making process of the credit granting into a simple, transparent and accountable framework. A ground of the author's certainty in graphical tool's relevance for solution of the defined problem is knowledge that a decision tree is an instrument that explicitly interprets any process and can be stated as a strategy where actions of decision makers can be determined, in the same time the stochastic state of nature can be kept as given. The main purpose of creating a decision tree is that afterwards the decision makers can easily decide how to act in each decision node and follow their decision further in depth. In that case, the pace of the process execution depends mainly on the state of nature. A decision tree provides the opportunity for decision makers to analyze and compare different paths of a decision tree. To achieve the task of the research, the author has carried out the experiment based on the methodology provided by T.Reizinsh and D.Rutitis (Reizinsh, Rutitis, 2006), who introduced formalization of experts' opinion method consisted of three iterations and reflected in Figure 1.

The main goal of the experiment is to provide a theoretical background and develop a practically trustful and accountable framework of decision-making process in credit granting. Taking into account that adopted methodology include qualitative methods – structured interview with the experts. A structured interview is a valuable technique to gather as much information as possible, meanwhile sticking to the agenda of this research. So, the author has interviewed the experts with more than 10 years of experience in credit granting field. Experts' extensive experience in banking sector allowed the author to gather valuable information and understanding of the decision-making process in credit granting and decrease subjectivity error typical for qualitative methods.

During the *1<sup>st</sup> iteration* the expert performed a structured interview. During the interviews the selected experts provided the author with the decisions that are involved in credit granting process. Results obtained from the interviews made it possible to draw an initial decision tree. The conducted interviews during the first iteration of experts' opinion formalization has provided the author with the exact sequence of decisions that take

place in the credit granting process of commercial banks. It appeared that the credit granting process consists of 6 phases – 1<sup>st</sup> appointment, 1<sup>st</sup> analysis of gathered data performed by a loan officer, intermediate, 2<sup>nd</sup> appointment, 2<sup>nd</sup> analysis of gathered data performed by loan officer, and, finally, credit committee which has mandate on credit approval or denial.

**Figure 1: Formalization of the experts' opinion**



Source: Reizinsh, Rutitis (2006).

There are numerous decisions in defined 6 phases of the decision-making process, which an applicant and a loan officer must carry out during each phase, before to reach approval and denial on credit granting. That makes a total of 40 statements to which an answer is required before decision-making process can be moved to the credit committee. At the end of the first iteration the author has drawn an initial decision tree. The 2<sup>nd</sup> iteration starts with the validation of the decision tree drawn during the first iteration. During this formalization stage the author's task is to define whether the developed initial decision-making tree corresponds to the decision-making process that takes place in credit granting. If not, proper adjustments had to been made. Validation of the drawn initial decision-making tree indicated certain difficulties with incorporation of dome of the experts' answers into a decision tree and highlighted the necessity of adjustment regarding to the legislation issues. To overcome appeared drawbacks the author was focused to trace adjustments and modifications that the experts had required under legislative framework. In addition, the experts were asked to paraphrase their statements that had been changed by the author due to legislative framework during the first iteration. This stage of the formalization process proved to be most time-consuming, because before to come out with the validation results the author has spent considerable amount of time on the explanation of the concept of a decision tree to the experts in order they can understand the task of validation. After the experts had been given the approval of the provided sequence of decisions in the credit granting process, the structure of the decision tree became stable and the third stage of the formalization can be performed. The 3<sup>rd</sup> iteration is the essence of the carried experiment. During this stage the expert provided the author with the empirical distribution of probabilities of each alternative branch of the developed decision tree. It was carried out through incremental evaluation and analysis of each of all 40 statements of the decision tree that belongs to a particular phase of the credit granting process. Afterwards a combined probability was formulated as a product of all probabilities enclosed in a particular decision tree branch. In the same way the experts shared their experience regarding the time required to perform tasks enclosed in each statement. In the end of the third iteration the author calculated the cumulative time that describes particular decision tree branch.

The formalization process was finalized by the development of the decision tree, which bring desired and expected transparency and accountability of a decision-making process in credit granting.

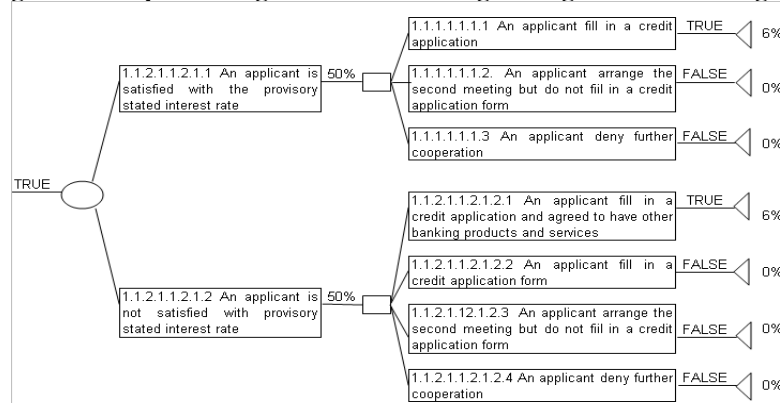
## RESULTS OF THE CREDIT GRANTING DECISION TREE

The carried out experiment brought clarity and complete understanding of the decision-making process, that take place in credit granting. Obtained knowledge allowed to develop a decision-making tree, which brought transparency and accountability to the decision-making process of the credit granting, as well as to define

execution time of each particular outcome. The most important outcome gained from the transformation of the decision-making process into decision tree is development of a flexible framework, which encloses opportunity to analyze and evaluate decision-making process in credit granting from different sides.

The developed credit granting decision-making tree happens to be excessively voluminous, which make its displaying in full rather complicated. Giving this limitation the author presents only a tiny fragment of the developed credit granting decision-making tree, corresponding to 1<sup>st</sup> appointment, in Figure 2. The developed decision-making tree of the credit granting process was subject of statistical and mathematical data processing.

**Figure 2: Graphical fragment of the credit granting decision-making tree**



Compiled by the author.

The decision-making tree of the credit granting process consists of the decision nodes and sections of the decision nodes. Every decision of the credit granting decision-making process is described in terms of time it takes to make (reach) it and fixed probability of occurrence.

The author's analysis of the developed credit granting decision-making tree is based on exploration of the core alternative solutions of the decision-making process. Decision tree branches were measured by the probability of the node of each event. Values of the decision tree branches have been determined by the common time capacity. Values of the event nodes have been disclosed as time instants of the credit granting process. The characteristics of the credit-granting decision tree shown in Table 1 illustrate that 35.02% of alternative solutions are solutions that theoretically might take place in the credit granting process, but according to the experts' experience have never took place and their realization probability is close to zero. The author called this group of alternative solutions as "empty sets" and has excluded them from further analyses due to lack of practical implementation. The largest share of alternative solutions in the developed decision-making tree belongs to the alternatives solutions that have been rejected and represent 35.82% form total number of alternative solutions. These alternatives solutions are characterized as alternative solutions that never take place in the credit granting process. The alternatives solutions characterized as realized represent 29.17% from the total number of the alternative solutions and are described as alternative solutions that are regular decisions in credit granting.

**Table 1: Characteristics of alternative solutions in credit-granting process**

Indicator	Results
Alternative solutions of the process (decision tree sets) do materialize	29.17%
Alternative solution of the process (decision tree sets) do not materialize	35.82%
"Empty sets"	35.02%

Compiled by the author.

From the results of statistical analysis of the developed credit granting decision tree presented in Table 2 the author founds that a positive outcome, when credit granting is approved, take place in only 14.60% of cases. This statistically obtained result required additional verification due to suspiciously small rate of positive outcome. To verify the obtained result the author refers to the credit granting statistic data provided by the experts. The experts' data on the credit granting identifies that 100 experts' meetings with the credit applicants

per month turn into only 15 signed loan agreements. The conducted verification confirmed that the developed framework of the credit granting decision-making process is proper and truthful. This allowed concluding that the derived results can be used as credible data for further analysis. A negative outcome, when credit granting is denied, takes place in 85,40% of cases. The improvement of this process can be achieved by decrease of time spent on coming up with a negative decision. The relived time can be redirected to serve larger number of the credit applicants.

**Table 2: Groups of the credit-granting process alternative solutions**

<i>Indicator</i>	<i>Results</i>
Positive decisions (credit is granted)	14.60%
Negative decisions (granting of credit is rejected)	85.40%

Compiled by the author.

Implementation of the developed credit granting decision-making tree would help commercial banks to identify irrational and time-consuming alternatives solutions (branches) in the decision making process of the credit granting. Identification of such alternative solutions, in turns, encloses considerable opportunity to improve the credit granting process. In order to set a time standard for optimal duration of the alternatives solutions, the author has calculated several variables, including the maximum, the minimum, the average decision duration, the median, the mode and the weighted average of the time consumed to come out with a decision. The results of calculation are shown in Table 3. The calculated variables help to compare the decision-making duration of each alternative solution to other alternatives solutions in the same group or with alternative solutions form other group. Alternative solutions which decision-making duration exceeds the average duration have to become a subject for further analysis, because they are a source for improvements of whole decision-making performance in credit granting. The maximum time necessary to come out with a decision is 4064 minutes (8.47 working days), while the minimum time - 3 minutes. The average time of decision-making duration of alternatives solutions is 2512 minutes (5 working days). The maximum duration of alternative solutions to come out with a positive decision takes 4064 minutes (8.47 working days), the minimum duration - 564 minutes (1.18 days) and the average duration - 2412 minutes (5.23 working days). As it can be seen the dispersion between the maximum time and minimum time spent to come out with a positive decisions is considerable. The mode of the positive decision is 1591 minutes (3.31 working days) and the median - 2441 minutes or slightly more than 5 working days.

**Table 3: Decision-making duration of alternative solutions in the credit granting**

Groups of alternative solutions	<i>Variable</i>	<i>Value</i>	
		<i>minutes</i>	<i>working days</i>
Overall in the credit granting process	<i>Maximum duration</i>	4064	8.47
	<i>Minimum duration</i>	3	0.01
	<i>Average duration</i>	2512	5.23
Positive decisions	<i>Maximum duration</i>	4064	8.47
	<i>Minimum duration</i>	564	1.18
	<i>Average duration</i>	2412	5.03
	<i>Mathematical expectation</i>	782	1.63
	<i>Median</i>	2441	5.09
	<i>Mode</i>	1591	3.31
Negative decisions	<i>Maximum duration</i>	3764	7.84
	<i>Minimum duration</i>	3	0.01
	<i>Average duration</i>	2130	4.44
	<i>Mathematical expectation</i>	107.28	0.22
	<i>Media</i>	2081	4.33
	<i>Mode</i>	2431	5.07

Compiled by the author.

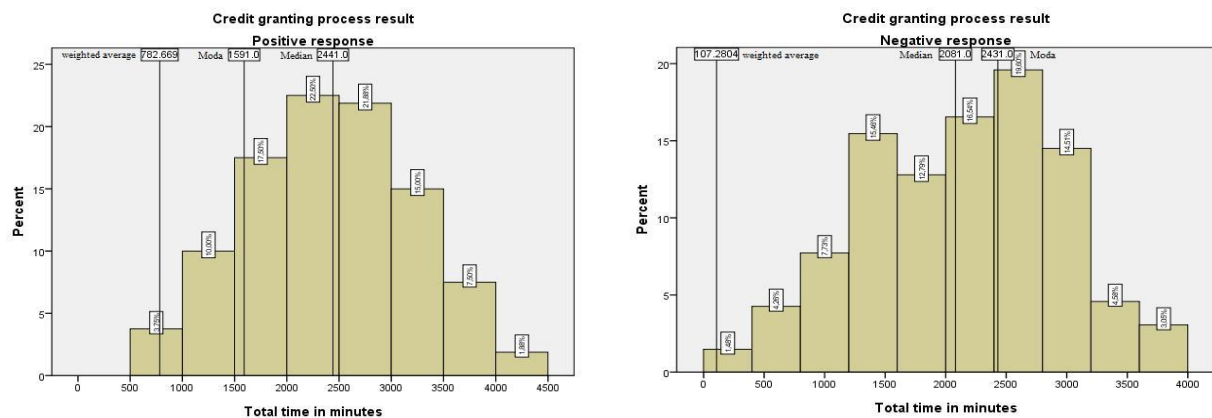
The maximum duration of the alternative solution to come out with a negative decision takes 3764 min. (7.84 working days), but the minimum duration constitutes to 3 minutes and the average duration - 2130 min. (4.44 working days). The dispersion between the maximum and the minimum time consumed to come out with a negative decision is even bigger that in case with a positive decision. The mode of the negative decision of the



alternatives solutions is 2431 min. (5.07 working days) and the median - 2081 min. (more than 4 working days). The results demonstrate that the negative decision of alternative solutions can be reached faster than the positive decision of the alternative solutions (2412 minutes to 2130 minutes). The most frequently repeated duration time of the alternative solutions, presented by the mode, is considerably shorter for the alternatives solutions with a positive outcome than for the alternative solutions with a negative outcome (1591 minutes to 2431 minutes).

As it was mentioned earlier so considerable dispersion between the maximum and the minimum duration time of the alternatives solutions is appropriate for both - positive and negative decision branches. Therefore in order to set standards for optimal duration time of the alternative solutions, new variable should be introduced. The author has calculated variable that is supposed to identify the highest probability and represent the most common duration time of the alternative solutions to reach the final decision – credit granting approval or denial. The author entitled this variable as the “mathematical expectation”. According to the data provided in Table 3 the mathematical expectation for the alternative solutions with a positive decision corresponds to 782 minutes or 1.63 working days, but in case of a negative decision corresponds to 107 minutes. These ranges should be considered as a standard for optimal duration of the alternatives solutions to come out with a decision. The alternative solutions that exceed the value of the mathematical expectation are subject to further analysis and improvements of the decision-making in credit granting process. The main agenda of the analysis is determination of reasons that cause an increase of decision-making duration and develop recommendation for overcoming those challenges.

**Figure 3: Positive decisions in credit granting process**      **Figure 4: Negative decisions in credit granting process**



The value of mathematical expectation of positive decisions and negative decisions of the alternative solutions indicates that a negative decision can be achieved faster than a positive decision. This should be considered as reasonable approach, because each minute spent to come out with a decision generates expenses and can be defined as a waste of time for both participants of the credit granting process - commercial banks and credit applicants. A negative decision of the alternative solutions does not generate income for commercial banks and is waste of time for credit applicants. Therefore duration time of the alternatives solutions with a negative decision should take as less time as possible to ensure efficiency of the credit granting process.

## CONCLUSIONS

The experiment that was carried out demonstrates that the provided methodology of transformation of the complicated credit granting process into a decision tree is appropriate and relevant. The conducted verification of the developed decision-making tree proves that this way of reflection is credible and valuable for practical implementation by commercial banks. The reflection of the credit granting process as a decision tree ensures its transformation into easily understandable graphical diagram. The applied method made it possible to calculate the decision-making duration of each node, the cumulative time of each alternatives solution, as well as the probability of occurrence for each alternative solution's outcome. When a drawn decision tree becomes excessively voluminous and its graphical visualization is rather complicated, it can be revert to numerical matrix and its further analysis can be performed mathematically. The applied approach of the credit granting process's reflection made it possible to express a decision-making duration of each alternative solution in time units. This

opportunity ensures accountability of the whole credit granting process and let to compare and evaluate a decision-making duration of alternative solutions in different profiles. The author suggests comparing of decision-making duration of alternative solutions to a value of the mathematical expectation. Alternative solutions which cumulative time exceeds a value of the mathematical expectation for particular group of the alternative solutions (positive or negative outcome) most likely contains opportunities for improvements. Therefore, the improvement of the credit granting process can be achieved by finding, understanding and negotiating the reason of a decision-making duration of alternative solution that exceed the mathematical expectation.

Main benefit of the elaborated framework is achieved transparency and accountability of the credit granting decision-making process and opportunities for its improvement. Time component of the credit granting process introduced by the author is a key indicator in assessment of the costs caused by the process to commercial banks. Costs of the credit granting process can be expressed also in labour cost per hour. Adding the labour cost component to the credit granting decision-making tree makes it possible to calculate and set boundaries for costs that alternative solutions can generate within the credit granting process.

This study presents one of a few researches of decision-making process analysis in the credit granting and provides material for further researches. The presented framework of the credit granting process is helpful tool to overcome part of challenges existing in the credit granting process. The author recommends using the this approach not only for the transformation of the credit granting decision-making process in banks, but also in other organizations having complex decision-making process (in insurance, auditing companies and universities).

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# DESIGNING INDUSTRIAL POLICY

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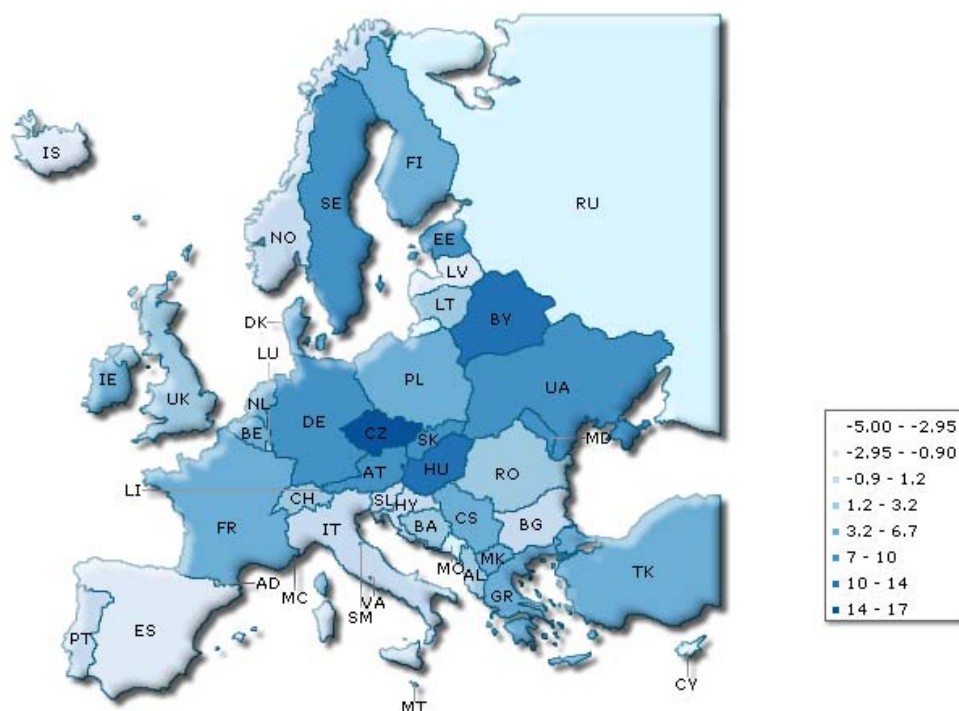
## ABSTRACT

*The debate on industrial policy (IP) is a tricky issue in economics. Despite this, governments engage in industrial policy all the time and since economic downturn in 2008 we can see revival of industrial policies. New forms of IP (soft industrial policies) and new tools of IP are implemented. Aim of this paper is to evaluate current trends in industrial policies and outline appropriate institutional design for IP. Key design attribute that IP must possess is embeddedness of technology and innovation policy into IP. Properly designed industrial policy is useful tool for increasing productivity and international competitiveness.*

## ROLE OF INDUSTRY IN GLOBAL ECONOMY

According to the latest data from 2011, the industrial sector produces 31 percent of the world's GDP. This means that one-third of the world's wealth has its origin in industrial production. Regarding the middle-income countries, almost 40 percent of their GDP originates in industry. And China, the current economic tiger, generates 40 percent of its GDP in industry, too. For the USA, this ratio is 22 percent with the EU industry-to-GDP ratio being 25 percent (CIA, 2012). Figure 1 shows the EU industrial production growth rates for 2011.

Figure 1: Industrial production growth rates in 2011 (percent)



Source: Index Mundi (2012), CIA (2012)

The key role of industry in the EU economy can also be seen in Figure 2 showing the development of Purchasing Managers Index (PMI) in the production sector. Many economists see the PMI as a significant prediction tool of the future economic growth. Being strongly correlated with Euro zone's GDP, this index suggests a strong dependence of the EU economies on the industrial output. Figure 2 also clearly demonstrates the PMI plummeting in early 2008 in response to the steep decline of economy.

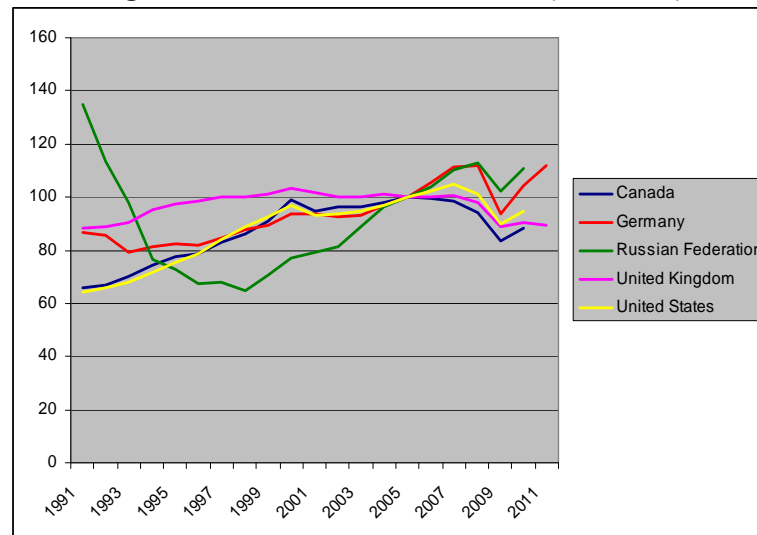
Figure 2: PMI (left axis), output index, sa, 50 = no change, percent, GDP, q/q (right axis)



Source: Makit, Eurostat, Patria (2012)

This drop of the PMI is also clearly reflected in the industrial output as measured, for instance, by the industrial production index shown by Figure 3. However, the industrial production slump caused by economic recession is not specific to EU only afflicting all (not only) industry-based economies as demonstrated by Figure 3.

Figure 3: Industrial Production Index, (2005 = 100)



Source: [UNECE](#) (2012)

Industries form key parts of the world economies with the industrial production stimulating economic growth, which in turn improves the living standard. If, moreover, the industrial sector is capable of integrating technological innovations, an acceleration effect is created on the growth. This positive correlation between technological innovations and the economic growth was corroborated, among others, in a study by Romer

(1990). An efficient industrial base helps accelerate the technological advancements of a country through the implementation of successful innovations paving the way to international competitiveness. Firms in the industrial sector achieve higher productivity growth rate (Foster, 2006) and the production sector itself is the most important source of economic growth (Szirmay, 2009). For this reason, even in the third millennium, industry will have a key role in generating the *wealth of nations*. The journal Economist held a debate introduced by the motto: "*Without a big manufacturing base, an economy cannot succeed*" (Economist, 2011), thus providing a succinct characterisation of the prominent role occupied by industry in the national economy. Especially today in the era of an economic slowdown, industry and industrial policy may act as a stimulus to an economic recovery.

## Industrial policy and mechanism design

Industry occupies an important role in creating wealth and IP, if properly balanced, stimulates the industrial sector and thus the whole national economy. Basic for its successful implementation is the setting or design of industrial policy. IP is often demonized as non-functioning and non-feasible because such obstacles as asymmetric information and rent seeking. Rodrik (2004, 2007) says, however, that such obstacles are at work with all types of government policies and should not, therefore, be the reason for dismissing an industrial policy. For a more detailed explanation of the theoretical background of industrial policy, see Putna (2011). According to Economist (2010), "Governments engage in industrial policy all the time even when they do not call it such." This is exactly the reason why a majority of countries do implement some form of industrial policy and the only question that is really relevant is how it should be designed to achieve the intended goals.

The design of an industrial policy is a key factor deciding about its success or failure. Before analysing a particular IP design, however, it may be good to provide a succinct definition of industrial policy. Pack and Saggi (2006: 2) define industrial policy as follows: "Any type of selective government intervention or policy that attempts to alter the structure of production in favour of sectors that are expected to offer better prospects for economic growth that would not occur in the absence of such intervention." According to another definition, the goal of an industrial policy is to: "stimulate specific economic activities and promote structural change," Rodrik (2008: 3).

For an industrial policy to be successful, that is, to fulfil the intended goals, it must include suitable incentives to motivate each agent to act "correctly". Suitable and efficient configuration of industrial policy is a variation of *mechanism design* analyzed by Leonid Hurwitz earning him a 2007 Nobel prize together with Eric Maskin and Roger Myerson. Mechanism design (sometimes referred to as reverse game theory or incentive-compatible mechanism) is a way of reasoning while rules are designed which, while leading to the intended goal, will be accepted by all the agents as serving their interests. Maskin (2008: 1) says that "the theorist wants to explain or forecast the economic or social outcomes that these institutions generate. But in mechanism design theory the direction of inquiry is reversed. We begin by identifying our desired outcome or social goal. We then ask whether or not an appropriate institution (mechanism) could be designed to attain that goal." The basic concept of mechanism design and thus also of designing industrial policy is *incentive compatibility*, which is a term describing a balance of all the agents for which choosing the same strategy will pay off under the *ceteris paribus* assumption. If this concept is to be applied to industrial policy, the IP rule must be set for the agents to be personally interested in achieving a specific IP goal. Therefore, an industrial policy must include clearly defined incentives in the first place, which are essential for the way people behave as pointed out already by Mises (1949). Thus the objective of the mechanism or intelligent design is: „how to minimise the economic cost of asymmetric information“ (Economist, 2007: 1) and, as asymmetric information is thought of as the main theoretical obstacle to implementing industrial policy, mechanism design seems to a suitable platform for setting the rules of industrial policy. How should such rules be shaped to meet this incentive-compatible condition?

## Designing (New) Industrial Policy

Today, the traditional forms of industry stimulation such as i) support for domestic exporters, ii) attracting foreign investment, iii) subsidies on innovations, and other IP forms as mentioned by (Harrison and Rodríguez-Clare, 2010), are replaced by modern procedures based on the changing technological, business, and political circumstances, which use the mechanism design theory in setting the industrial policy rules.

The following is a list of the basic principles underlying the industrial policy design respecting the intelligent design principles. According to Rodrik, Hausmann and Sabel (2008) these include:

- Industrial policy should focus on building capabilities rather than supporting sectors
- Government should engage private sector and experts to identify market failures and required public inputs
- Activities identified for support should have clear potential for spillovers or increased productivity
- There should be clear benchmark for success and failure - this helps with early identification of failures and decisions to continue or terminate government assistance
- Monitoring, transparency, accountability and legitimacy of industrial policy
- Government incentives should have built-in sunset clauses or safeguards to prevent wastage of and over-reliance on public resources by failing industries

The above principles/recommendations for designing industrial policy give additional quality to what is called

a new industrial policy as compared with its previous vertical form of industry support. This new industrial policy or innovations and industrial policy (IIP) sometimes referred to as soft industrial policy (Harrison, 2010) makes a point of incorporating the mechanism design principles in the IP design. The foremost objective of the new industrial policy is to support innovations and their increasing application in economy. Therefore, design is an important tool of national competitiveness. This is because, while the strong (innovative) economy sectors reciprocally enhance the competitiveness of a given field, they also contribute to the growth and competitiveness of the national economy. Hollanders and Arundel (2005), for example, say that "innovations are thought of as one of the sources of economic growth" (Hollanders and Arundel, 2005: 19). Moreover, superior competitiveness of an economy is among the key factors determining the long-term growth of a country's (potential) product. As pointed out by Krammer (2009) "in today's dematerialized world and global economy, the ability of a country to develop, adapt, and use its innovation potential is a key condition of long-term economic development and competitiveness" (Krammer, 2009: 2).

Apart from a suitable industrial policy setting, also the political environment is of immense importance in which a particular industrial policy is to be implemented. According to Acemoglu and Robinson (2012), the main problem of IP is that it is "*subservient to politics*". As a major challenge he then sees that „the problem is to identify the political situations in which industrial policy can be used...“ (Acemoglu, 2012). In his research of successful and unsuccessful government attempts at regulating economy in the process of industrialization, Evans (1995) explored the political dimension of industrial policy defining the notion of embedded autonomy. "Embedded autonomy is a delicately balanced combination of (1) capable, coherent bureaucracies characterized by meritocratic recruitment, long-term career rewards, and high esprit de corps, with (2) dense ties to industrializing elites, which provides access to information, agents for implementation, and catalyses a more coherent, forward looking entrepreneurial class." (Evans, 1995: 63). Thus, industrial policy needs not only rules suitably set in the sense of mechanism design, but also a political situation which is in favour of a successful fulfilment the industrial policy objectives.

## CONCLUSION

The industrial sector produces thirty-one percent of the world's GDP. In a global economy, industry occupies a central role as evidenced in the Euro-zone by the purchasing managers index in the production sector, which is strongly correlated with the Euro-zone's GDP. The importance of industry could also be seen during the recent economic recession with the GDP decreasing as the industrial output plummeted. An industrial policy trying to achieve competitiveness of the industrial sector can only be successful if governed by suitably set rules. The mechanism design concept and the logic of incentives compatibility provide a suitable framework to analyse and fine-tune such rules. The paper has listed some principles, which, if respected, give the industrial policy a chance of being successful. In addition to a suitable industrial policy design, it is also the political environment in which the changes are to take place that is important. Only in combination with a favourable political context, a suitable



IP setting can lead to success in its implementation. Thus, a (new) industrial policy can serve as a suitable platform to stimulate economic growth

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# PORTFOLIO CREATION USING SHAREHOLDER VALUE CREATION IN INDIAN MARKETS

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## ABSTRACT

*The empirical research uses CNXIT, an index of IT companies, as benchmark index and a sample of 256 IT companies listed, on National Stock Exchange of India. Companies are ranked in the order of shareholder value created (SVC) as measured by Pablo Fernandez Model (PFM). A portfolio is created replicating the CNXIT in terms of number of companies and their weights in the portfolio, based on their rank in SVC and portfolio risk-return are measured. The research finds that portfolio thus, created has an ability to be a good mediator to enhance portfolio return while reducing the portfolio risk.*

## INTRODUCTION

The portfolio managers across the globe strive very hard in their endeavours to create a portfolio that challenges the basic financial tenet of “*high risk and high return*” and create a portfolio that enhances return minimising the risk assumed on such investments using various mediating practices such as passive portfolio, active portfolio, indexed based portfolio, fundamental analysis or technical analysis based portfolios, etc. There are growth stocks and value stocks, along with several cross-combinations that fill out the equity style box. Yet none of these popular style conventions says anything about the fundamental ability (or inability) of a company to create wealth (Abate, Grant & Stewart III, 2004). The research paper tries to address this very issue by trying to create portfolio using Shareholder value creation as measured by a model proposed by a famous Latin American Economist Pablo Fernandez and try and ascertain whether this portfolio creation style is a good mediating factor to achieve the ultimate objective of every single portfolio manager across the countries.

## LITERATURE REVIEW

The portfolio managers have been excessively dependent on the historical accounting measures such as price-to-earnings ratio or price-to-book ratios for making the investment decisions. P/E multiple, and EPS have been long standing pillars of investment decisions across the world and continue to be so even today. There have also been varied thoughts about portfolio creations i.e. whether to have a diversified portfolio or to focus on “a” particular sector. There have, however, been common set of parameters thereafter to make a choice of stocks. The importance of diversification in building a solid portfolio was clearly articulated in Harry Markowitz's modern portfolio theory (MPT). In his breakthrough paper published in 1952, he stated that the three key inputs in determining an optimal allocation among assets are the assets' forecasted returns, projected risks, and expected interrelationships (Miccolis & Goodman, 2012).

These traditional measures had a major flaw in terms of they being arrived at based on historical figures and also that they did not allow across company and industry comparisons. But the major area of concern is that traditional measures such as P/E multiples, EPS, etc completely neglect the cost of capital especially the cost of equity, who are the real risk bearers of the company. “They can be used for past analysis but not for future decision making” said Rappaport in 1995. The traditional methods are criticised because they only consider cost on Debt Capital while calculating returns but do not consider cost of Share Capital - Equity & Preference- as they are a part of appropriation and are not debited to P&L Account. With corporate form of business organisation growing in number, Cost of Equity cannot be ignored (Tully, 1994). Consequently, a lot of new

measures that the international business community were using started to gain acceptance like shareholder value creation as measured by Economic Value Added (EVA) and Pablo Fernandez Model (PFM). Measure such as EVA was used by researchers such as Abate, Grant & Stewart III (2004), Zaima (2008), Grant (1996, 1997, 2003), and Biddle, Bowen, and Wallace (1997) to either create portfolios or to study the correlation between EVA and Stock returns. Yook and McCabe (2001) were first to create portfolios using Market Value Added (MVAs). They found that low MVA (stock return) per share led to higher average portfolio returns. This study differs from the Yook and McCabe study by investigating portfolios formed with EVAs. An examination of portfolios ranked by EVA provides added information given that Grant (1997) found a significant difference in EVA and MVA between wealth creators and wealth destroyers.

The inadequacy of equity style is surprising, as it is well known in finance that investors are ultimately concerned with 'economic realities' (economic earnings) as opposed to 'accounting constructs' (accounting earnings). In this context, the price of any company's stock is equal to the discounted value of its expected cash flows, *not* its accounting flows. Hence, the inherently flawed traditional fundamentals—such as price-to-earnings and price-to-book ratios—that are often used to define value versus growth investing have little direct relationship to wealth creation. Economic Value Added (EVA<sup>TM</sup>) has been used as a tool to create portfolios. The EVA style of investing emphasizes the fundamentals of wealth creation in the profiling of a company and its stock. It thus provides securities analysts and portfolio managers with a robust framework for identifying good companies that have good stocks. EVA also provides insight into the critical role of risk adjustment in stock selection and portfolio risk control (Abate, Grant & Stewart III, 2004).

## **EVA<sup>TM</sup> - Economic Value Added**

The conventional measures also concentrated on the short term objective of Profit Maximisation. This hindered the growth of the company as the decisions were all aimed at the short term goal. Stern and Stewart modified the concept of Residual Profit as professed by Alfred Marshall and propagated a new measure of corporate efficiency namely Economic Value Added (EVA). They annually publish EVA of 1000 US based companies. EVA is defined as an excess of Operating Profit after Tax over Cost of Capital. EVA<sup>TM</sup> or Economic Value Added is excess of Net Operating Profit after Taxes over the Cost of Capital.

## **Arguments for EVA**

Tham and Pareza (2004) supported the use of EVA by questioning that while choosing a project, if the managers concentrated on the Cash Flows as discounted by the cost of capital, then why the same managers ignored the cost of capital while measuring corporate performance.

Chong et al (2008) found that EVA could be used to manage portfolios, as the EVA-based stock portfolios were found to be similar to the S&P 500 Index, yet produced positive alphas across subsamples, an indication that EVA contained information beneficial to increasing shareholder wealth, even in bear markets. On closer examination of the EVA-based stock portfolios, it was suggested that in times of market upswings, one should construct a portfolio based on lower EVA-ranked stocks, while switching to higher EVA-ranked stocks during market downturns.

Many studies such as Tsuji (2006), Stern and Stewart (1994), Biddle, Bowen, and Wallace (1997), Farslo, Degler, Degner (2000) have investigated EVA's correlation with excess returns, back-testing it against the underlying companies' actual wealth creation, as evidenced by subsequent stock price increases, or comparing it to market value added (MVA).

## **Arguments against EVA**

One major critic of the EVA is its methodology. Horngren, et al (1997) caution that more than 160 adjustments were expected to calculate EVA, which made the process cumbersome and tedious. The researchers such as Kramer and Pushner (1997) concluded that market value added was not predicted in a significant way by EVA. Latin American scientist Pablo Fernandez (2002), criticised EVA on the basis that it is a method based on the historical accounting and thus, cannot be used as a measure of value creation and corporate performance.

Shareholder Value Creation measures like EVA are useful for the companies to pay honorarium to its Managers (who take strategic decisions like MD, CEO, CFO, etc). This is a usual practice in the west where companies like Coca-Cola, AT&T, etc use EVA to pay managerial compensation. But is not a useful tool while making strategic decisions like Mergers & Acquisitions, Portfolio Creation and Management, etc. The paper, therefore, uses PFM for portfolio creation and management.

## PFM

Pablo Fernandez formulated a model, namely the Pablo Fernandez Model (PFM) where he calculates the Shareholder Value as excess of Shareholder Return (based on the market returns) over the cost of Equity. His model is as follows:

$$SVC = (r_{sh} - k_e) \times MV_t \quad (1)$$

### Where

#### 2. Shareholder Return

$$r_{sh} = SVA \div MV_{t-1} \quad (2)$$

#### o Shareholder Value Added

$$SVA = \Delta MV + \sum_{t=1}^t DIV + \sum_{t=1}^t P - \sum_{t=1}^t OC - \sum_{t=1}^t Conv \quad (3)$$

Where,

$$6. \Delta MV = MV_t - MV_{t-1} \quad (4)$$

▪ Where  $MV_t$  = Current Market Value &;

▪  $MV_{t-1}$  = Market Value 1 year back;

7. DIV = Dividends paid during the year. Also stock dividend;

8. P = Other payments to shareholders during the year like discount on par values, share buybacks

9. OC = Outlays for capital increases like issue of new shares, GDRs, etc.

10. Conv = Conversion of convertible debentures, creditors, etc to share capital

#### 4. $K_e$ = Cost of Equity as calculated by CAPM model:

$$K_e = r_f + \beta(r_m - r_f) \quad (5)$$

Where,

5.  $K_e$  = Cost of Equity;

6.  $r_f$  = Risk Free Rate of Return (using Interest Rate on 90 days T-Bills);

7.  $\beta$  = Beta Coefficient;

8.  $r_m$  = Market Return (Using NIFTY as benchmark index)

5.  $MV_t$  = Current Equity Market Value as explained in eq. (4) above.

## RESEARCH QUESTION

Shareholder Value Creation, as measured by PFM (Pablo Fernandez 2001), in comparison to a measure such as EVA has proved to have significant relationship with Market Value Added (stock return) in developed countries like US and Europe. An efficient market is a market in which price fully reflect all information. (Sudhahar and Selvam, 2009). It has been proved by Vaidyanathan and Kumargali (2005) and Khan and Ikram (2004) that Indian Markets are different from the US and European markets in terms of Market Efficiency. Indian Markets namely NSE and BSE are good examples of Weak form of Efficiency with a little hint of Semi-Strong Efficiency. But in either case, the Indian Markets do not reflect all the publicly available information (Khan and Ikram, 2004). Hence, this research focuses on the PFM as a successful mitigating variable for a portfolio manager to create portfolio that maximises the returns and minimises the risk.

We shall, therefore, test the following null hypotheses:

**H0** = Shareholder Value Creation as measured by PFM is not a successful mitigating variable to create portfolio in Indian Markets.

The null hypothesis is further sub divided in to:

- H0<sub>1</sub>** = Portfolio as created using SVC as measured by PFM does not give increased return compared the benchmark; and  
**H0<sub>2</sub>** = Portfolio as created using SVC as measured by PFM does not reduce the risk as measured by Beta ( $\beta$ ) compared the benchmark;

## RESEARCH METHODOLOGY

### Sample

This study considers 256 IT companies listed on National Stock Exchange of India as on 31<sup>st</sup> March, 2012 for a period of 4 years from 1<sup>st</sup> April, 2008 to 31<sup>st</sup> March, 2012.

### Data Source

The data is collected from NSE website, Reserve bank of India website, and Capitaline database. PFM values are computed using the above mentioned formulae in eq. 1-5.

### Methodology

There are 768 IT companies which were chosen from the Capitaline database. Then those companies that were not listed NSE were removed. We, thus, got a sample of 256 companies. The PFM values of these 256 companies are calculated as per the equations given above from 2007-08 to 2010-11. These companies are then ranked in order of highest value creators to lowest value creators for the next four years. 20 companies with highest SVC as measured by PFM as on 31<sup>st</sup> March are invested on the first day of April. ***The market is not timed.*** It is a purchase done in the opening trade of the market. A portfolio comprising of 20 stocks is decided as the benchmark CNXIT comprises of 20 companies. The CNX IT Index represents about 10.27 % of the free float market capitalization of the stocks listed on NSE and 93.04 % of the free float market capitalization of the stocks forming part of the IT universe as on March 30, 2012. The portfolio created also has identical weights as per the CNXIT. The portfolio is churned on 31<sup>st</sup> March every year to include new companies or adjust the weight of companies based on their new ranks as per the shareholder value created using process described above. A portfolio and index return and portfolio risk, as measured by portfolio beta ( $\beta$ ), is calculated for a period of 4 years 1<sup>st</sup> April, 2008 to 31<sup>st</sup> March, 2012. Index beta ( $\beta$ ) is assumed to be 1. Portfolio return is calculated as follows:

$$r_p = (P_t - P_{t-1}) \div P_{t-1} \quad (6)$$

Where,

$r_p$  = Portfolio Return;

$P_t$  = Current Value of Portfolio;

$P_{t-1}$  = Portfolio Value 1 year back

Index Return is calculated as follows:

$$r_i = (I_t - I_{t-1}) \div I_{t-1} \quad (7)$$

Where,

$r_i$  = Index Return;

$I_t$  = Current Value of Index;

$I_{t-1}$  = Index Value 1 year back

### Data Analysis

***"t-Test: Paired Two Sample for Means"*** is used as a statistical tool to analyse if the change in Portfolio Return and Portfolio  $\beta$  show a significant change from the Index Return and an Index  $\beta$ .

**Table 1: List of companies in CNXIT with weight**

Sr. No.	Name of the company	Weight in the index
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1	Infosys	54.10
2	Tata	23.21
3	Wipro	8.80
4	HCL	4.69
5	Oracle	1.69
6	Mphasis	1.16
7	Tech	1.05
8	Hexaware	0.97
9	CORE	0.67
10	CMC	0.58
11	Financial	0.57
12	Patni	0.48
13	MindTree	0.46
14	Educomp	0.37
15	Rolta	0.34
16	Polaris	0.32
17	HCL	0.19
18	Tulip	0.16
19	OnMobile	0.14
20	GTL	0.07

Source: nseindia.com

## FINDINGS AND ANALYSIS

The returns on the index and portfolio as created using PFM in INR & % for the period under review is given below in Table 2.

**Table 2: Index & Portfolio Return for the period under review**

Sr. No	Year	r <sub>i</sub>		r <sub>p</sub>	
		(Rs.)	%	(Rs.)	%
1	2008-09	-1356.15	-36.90	218.72	5.95
2	2009-10	3537.25	152.55	6673.66	171.40
3	2010-11	1292.15	22.07	5663.90	53.60
4	2011-12	-632.10	-8.84	347.14	2.14

**Figure1: Graphs showing Index & Portfolio returns**

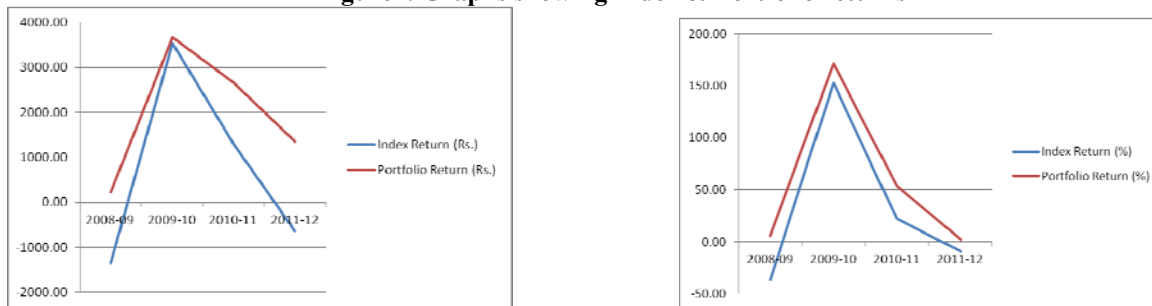


Table no 2 and figure no 1 above show that the return on the benchmark index is lower as compared to the return generated by the portfolio created using SVC as measured by the PFM. The index has given negative return in the financial year 2008-09 and 2011-12 but the portfolio return has always been positive, though the increase may have fallen. One major responsibilities and objective of the portfolio manager is to earn higher returns as compared to the benchmark.

One question that still needs to be answered is whether this higher return is statistically significant as compared to the benchmark index return. Table 3 and table 4 below show the “t-test” results conducted on the index and the portfolio returns.

**Table 3: t-Test: Paired Two Sample for Means of Returns (Rs.)**

Particular	Index Return (Rs.)	Portfolio Return (Rs.)
Mean	710.29	3225.86
Variance	4800816.36	11720427.90
Observations	4.00	4.00
Pearson Correlation	0.94	
Hypothesized Mean Difference	1.00	
df	3.00	
t Stat	-3.28	
P(T<=t) one-tail	0.02	
t Critical one-tail	2.35	
<b><i>P(T&lt;=t) two-tail</i></b>	<b>0.04</b>	
t Critical two-tail	3.18	

**Table 4: t-Test: Paired Two Sample for Means Returns (%)**

Particular	Index Return (%)	Portfolio Return (%)
Mean	32.22	58.27
Variance	7015.80	6236.20
Observations	4.00	4.00
Pearson Correlation	0.99	
Hypothesized Mean Difference	1.00	
df	3.00	
t Stat	-3.85	
P(T<=t) one-tail	0.02	
t Critical one-tail	2.35	
<b><i>P(T&lt;=t) two-tail</i></b>	<b>0.03</b>	
t Critical two-tail	3.18	

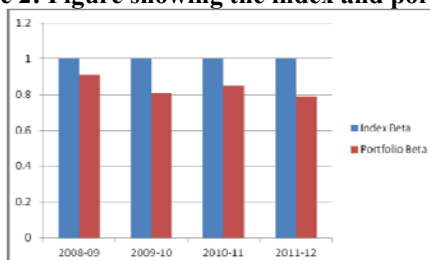
Further scrutiny of the “t-test” results in tables 3 and 4 point out that, not only has there been increase in returns compared to the benchmark but also this increase has been significant with “P – Values” in both the tables being lower than .05. We, therefore, **reject  $H_0$**  which stated that “***Portfolio as created using SVC as measured by PFM does not give increased return compared the benchmark***”

Table 5 and figure 2 below show the risk as measured by Beta ( $\beta$ ) for the benchmark Index and the portfolio.

**Table 5: Table showing the Index and the portfolio  $\beta$**

Year	Index Beta	Portfolio Beta
2008-09	1	0.91
2009-10	1	0.81
2010-11	1	0.85
2011-12	1	0.79

**Figure 2: Figure showing the index and portfolio  $\beta$**



It can be seen from above that the portfolio  $\beta$  has come down in comparison to the Index  $\beta$ , which is considered to be 1. The “t-test” given below in Table 6 shows whether, the reduction in  $\beta$  value of the portfolio, in comparison to the index, is significant or not.

**Table 6: t-Test: Paired Two Sample for Means of  $\beta$  value of the Index and the portfolio**

Particular	Index Return (%)	Portfolio Return (%)
Mean	1.00	0.84
Variance	0.00	0.00
Observations	4.00	4.00
Pearson Correlation	0.00	
Hypothesized Mean Difference	1.00	
df	3.00	
t Stat	-31.75	
P(T<=t) one-tail	0.00	
t Critical one-tail	2.35	
<b>P(T&lt;=t) two-tail</b>	<b>0.00</b>	
t Critical two-tail	3.18	

Further scrutiny of the “t-test” results in table 6 point out that, not only has there been decrease in risk as measured by  $\beta$  compared to the benchmark but also this decrease is significant with “P – Values” in the table way lower than .05. We, therefore, reject  $H_{02}$  which stated that “Portfolio as created using SVC as measured by PFM does not reduce the risk as measured by Beta ( $\beta$ ) compared the benchmark”

Thus, portfolio created using SVC as measured by PFM is a good mitigating factor to create portfolio in the Indian Markets. We, therefore, reject the main null hypothesis  $H_0$ , which states that, “Shareholder Value Creation as measured by PFM is not a successful mitigating variable to create portfolio in Indian Markets”

## CONCLUSION

It is thus, seen that portfolio created by using SVC as measured by PFM achieves the desired mitigating impact while creating a portfolio, where the main objective is to maximise returns, minimising risks.

## MANAGERIAL IMPLICATIONS

This paper, thus, makes a case for the use of PFM, which considers a Shareholder Value Added; a market based return, and only considers Cost of Equity, hence, it is more suitable for Portfolio Managers or Strategic decisions such as Mergers and Acquisitions, Sharebuybacks, Share splits, etc.

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# MENTORING AS AN ANTIDOTE TO CAREER SUCCESS OF PROTÉGÉS: INSIGHTS FROM PUBLIC HOSPITALS, SOUTH AFRICA

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## ABSTRACT

*Since 1995, efforts have been made to overcome the skewed human resource patterns at high skills levels in South Africa through the repeal of old legislation and the introduction of various new legislature. Beyond the legislative regiment the success of human resource transformation is highly dependent on the implementation of effective mentoring programmes. While such programmes usually have noble intentions their effectiveness and success are however greatly dependent on the support from the historic pool of skilled mentors. To understand the efficiency or lack of mentoring programmes, this research was therefore conducted at 6 public hospitals from Limpopo, Mpumalanga and Gauteng province. Within these hospitals, 20 mentors were purposively drawn to take part in the study. Among other things, the main views of the mentors suggest that mentorship programmes play a pivotal role in fulfilling their developmental needs. Furthermore, suggestions are that the success of mentoring programmes depends not only on mentoring capabilities, but also on the commitment of both mentors and the institutional management to the process of transformation. In the end when mentoring is properly implemented, it is likely that the protégés would be able to adapt to their new roles quickly and tokenism may not prevail.*

## INTRODUCTION

South Africa had an unbalanced and discriminatory history in its employment patterns on the basis of racial discrimination that largely affects disadvantaged blacks (Bendix, 2001:66; Finnemore, 1999). This type of practice channelled blacks into the unskilled and semi-skilled labour force and this, in essence, created a greater opportunity for white workers to pursue careers in elite posts (Munetsi, 1999). What seems excessive is that this legislation prohibited advancement by blacks to both skilled and managerial level portfolios and from performing skilled jobs in a white suburban environment (de Beer, 1998; Greef & Nel, 2003).

In the area of employment, the most visible legislative measures designed to afford racial privileges were incorporated into the policy of job reservation Acts, such as the *Industrial Conciliation Act*, 1924 (Act No.11 of 1924), were affirmative action (AA) instruments to ensure the prioritisation of jobs for whites, and organised white labour made it legal to reserve jobs for whites in exclusion of cheaper black labour (Greef & Nel, 2003). Training opportunities for blacks were, as such, limited to the homeland universities, although later to technikon institutions, which were less-resourced compared to their white counterparts. The result of the discriminatory legislation was a concentration of blacks in lower-level jobs in the workplace for the following reason: “*Black people were regarded as servants and considered lacking direction for life or as people to whom orders should be given, not from whom orders should be taken*” (Kahlenberg, 1996:6).

In addressing these previous injustices, training interventions are imperative in particular mentorship for people appointed on the basis of affirmative action. According to Hamlin (2011) mentoring has been recognised as a powerful human resource development intervention that is aimed to inexperienced employees in career

advancement and this serves as form of on-the-job training. Bozeman (2009) argues that the value of mentors who contribute to the development of potential talents is important and that was not evaluated in the public sector institutions and hence the researcher opted to conduct the study. Drawing from what other scholars argue, particularly Hamlin (2011) who argues that for effective mentoring relations to be established, mentors need to adopt both pulling and pushing style. Essentially, this suggests that a favourable environment for mentoring should be created so that protégés feel free to share their agenda.

According to Arifeen (2010) mentors may or may not be employed in the same organisation as the protégé and the two options have its own implications. First, in the case where they are in same organisation, the mentor may be physically available; may be in a good position to provide direct mentoring and this in essence could enable the mentor to give more assignments to the protégé. Second, if employed elsewhere than the protégé, it is likely that the mentor may have inter - organisational resources and may even have long range career involvement.

In this paper the prescripts pertaining to mentoring will be identified and discussed. Possible impediments to mentoring will be identified and these could include among others; lack of mentors, unwillingness of mentors to train protégés and mismatch of mentor – protégé. The rest of the paper will focus on theoretical perspective on mentoring, research design and methodology, findings and conclusions.

## **Theoretical Perspective on Mentoring**

There has been a groundswell of research conducted on mentoring over the past years and findings had been on the association between the presence of mentor and career success of protégés (Singh and Ragins, 2009). Mentoring is said to be a relationship between a more senior, experienced person and a less experienced protégé with the intention of helping and developing protégé career. Hamlin (2011) argues that mentoring is twofold, *inter alia* with, first is about career development and Psychosocial support. As regards to career development, is to provide support to protégé with sponsorship, exposure and challenging assignments aimed at assisting them to progress well in their respective careers. Contrary to this notion, psychosocial support's major role is to provide support services such as counselling; role modelling personal development and acceptance with the aim of enhancing protégé self-confidence.

The need to rectify all these imbalances and ensure representivity in occupational categories is well articulated in the *White Paper on Transforming of Public Service* (SA: 1995) subsequent legislation and corresponding affirmative action programmes. The intention of such government legislation was that mentoring programmes should allow special measures to be taken to ensure that people from disadvantaged groups, specifically blacks and women, in and outside the public service, would be identified and appointed to prevent a high concentration of blacks in lower level skills, as articulated by Kahlenberg above. Since successful implementation of mentoring measures should be coupled with successful execution of duties, it is therefore imperative to ensure that mentoring becomes a mechanism to enhance career success of the protégé.

In terms of such special measures, this paper will focus on the mentoring process as experienced by mentors in the quest to assist protégés in their career development. In the context of this research; mentor is defined as higher-ranking individual with advanced experience and knowledge who played a positive role in the development of one's career (Singh and Ragins, 2009). De Beer (1998); Meyer & Fourie (2004) describe "mentoring" as a dynamic and reciprocal relationship in a work environment whereby a more advanced and experienced incumbent helps a less experienced person who has a developmental potential to develop in some specified capacity. The mentor's role is to give work-related information and act as a role model for the person being mentored. Some of the fears associated with mentoring relationships in South Africa are perceived fears that the persons being mentored could in future take their mentors' jobs. Wingrove (1993) attests that this could mean that mentors are less willing to assist protégés, since the increasing skills development of black people could have the resulting effect of white people being retrenched and having fewer opportunities. Mkhwanazi (1993), too, supported by Rankhumise (2000), argue that employees who are against the mentoring programme do not give support and training to protégés.

In terms of section 2 of the Skills Development Act, 1998 (Act No. 97 of 1998), government departments should ensure that the advancement of inexperienced people is reinforced through training and mentorship measures to provide protégés with an opportunity to acquire new skills. Any barriers, including resistance to change, employment equity, skills development plans and training interventions, have to be overcome in accordance with the internal policy of the hospitals (Esterhuyse, 2003).

Mentoring has been shown in Europe to contribute positively to retention, succession planning and knowledge management (Clutterbuck, 2003). Locally, it is acknowledged that mentoring interventions can lead to high standards of performance (Meyer & Fourie, 2004). Only through effective mentoring programmes protégés could perform in line with set standards and would, thus, be able claim promotion based on merit (Thomas & Robertshaw, 1999). However, mentoring programmes work best if protégés are allowed to select their own mentors based on relationships already established. The success of mentoring, therefore, always involves commitment on the part of the three parties, namely the mentor, mentee and the management (Thomas & Robertshaw, 1999). Beyond the commitment of the three involved parties, the successful implementation of mentoring is wholly dependent on the following factors, according to Meyer & Mabaso (2001): Firstly, commitment based on sound principles should be obtained, thereby identifying the reason for the mentoring programme; for example, a need to speed up the development of future leaders. Secondly, mentors should be properly identified and screened for their roles, as well as evaluated. Willing and able mentors easily ensure a successful process. Thirdly, the appropriate matching of mentors and trainees would ensure that mentors have relevant experience in the speciality of the persons being mentored.

Mentoring interventions require varying degrees of effort and resources dependent on the needs to be met to achieve specific outcomes. Positive interventional outcomes are also dependent on skills, knowledge and value, or attitudes (Celliers, 1995). Tsukudu (1996) sees the successful implementation of mentoring as dependent on the training of mentors in fostering competence requirements and an understanding of the mentoring process. Mentorship training should prepare mentors for cross-gender sensitisation to overcome stereotypes that influence judgement with regard to the person being mentored.

Against the given background and challenges associated with mentorship, this specific research was intended, firstly, to assess how the mentors view mentoring programme. Secondly, to determine the effectiveness of the current mentoring practices and finally provides insight on how best to implement it as a developmental intervention.

## **METHODOLOGY**

### **Design**

The design that was adopted for this research was exploratory in nature. It was expected that the exploratory approach in this case, would provide the opportunity to unravel the nature of the mentorship programme implemented by public hospitals. The essence of exploratory research in this case, is to obtain a richer understanding of the experiences relating to the hurdles experienced by the mentors in the pursuance of the intervention and which could essentially hinder the mentoring as an intervention. To implement this, an essentially inductive approach was applied. This approach is said to rely on the use of qualitative data collection methods in order to gain a deep understanding of the factors and nature of the main issues or research problem. A contextual approach has been described as one where-in the phenomenon under investigation is studied in accordance with its intrinsic and immediate contextual significance (Babbie and Mouton, 2009). With this type of approach, the researcher was able to emphasize the dynamic, holistic and individual aspects of the human experience and additionally attempted to capture those aspects in their entirety, within the context of those who are experiencing them.

Taking into account the approaches stipulated above, during the interview participants were given the opportunity to articulate their experiences and challenges in terms of factors they perceive to be influencing mentorship in the public hospitals.

### **Population and sampling**

The study was conducted in three provinces, namely Limpopo, Mpumalanga and Gauteng. The study's population consisted of mentors in the selected hospitals. The researchers purposively selected the mentors to take part in the study on the basis that this is what the researcher considered comprised *a typical unit*. The latter sampling approach was deemed to be appropriate because it is normally applied in cases where participants are selected based on their possession of knowledge of the phenomenon under study, namely the experiences and challenges facing mentors in the process of mentorship.

## **Ethical considerations**

In conducting the study, the proto-typical ethical considerations as provided by De Vos (1998) were followed. First, the researcher requested permission from the respective hospitals to conduct the research, Second, informed consent was obtained from the participants through information leaflet outlining the purpose of the study and the process to be followed for data collection were explained to the participants. Third, participants were further informed of their rights in regards to participation in the study. Fourth, participants were informed that their anonymity will be maintained particularly as no personal identifiers were being used in the study.

## **Data collection procedure**

Prior to formal data collection, a pre-test of the study was conducted among five mentors in one hospital. The rationale was to establish any possible flaws within the measuring instrument. In collecting data, the researchers used one central question as a point of departure, namely: *"What experiences and challenges do you encounter which influence mentoring as an intervention to develop protégés"*. Based on this primary question, other questions emerged as the interviews progressed. The researcher was then asked *follow-up* questions in order to explore particular aspects in greater depth. Interviews were conducted until such time as a saturation point was reached and in this instance, saturation was reached at 20<sup>th</sup> participant.

In order to ascertain the depth of the mentoring challenges qualitative interviewing was entered into with the 20 mentors from different sampled public hospitals. The concept of data saturation, which is defined by Strauss & Corbin (1990) as an end result of sampling until no new data emerge was used to determine the number of interviewees. In addition to the field notes, the interview conversations were recorded by means of tape and transcribed data were analysed using Tesch's data reduction methods (Creswell, 2009). Outcomes of the findings from the qualitative study are reflected in verbatim.

## **Trustworthiness**

To ensure that trustworthiness was achieved, the framework of Lincoln and Guba, (1985) was followed. This included credibility, transferability, dependability and confirmability. Trustworthiness was achieved by prolonged engagement and take account of distortion that might otherwise creep the data and this done to build trust (Lincoln and Guba, 1985), triangulation, peer debriefing, and the authority of the researcher and by using an independent coder (Creswell, 2009).

## **Data analysis**

The audio taped interviews were transcribed verbatim by the researcher. In analyzing the data, the researcher and co-coder analysed the data independently using Tesch's data reduction method (Creswell, 2009) of open-coding. Audiotapes were listened to once and then listened to a second time. The field notes were then read to understand the data properly and to get a sense of the whole. Topics were abbreviated as codes and these were then written next to the appropriate clusters of the text. The related topics were grouped to reduce sub-themes to a manageable yet viable number. A final decision regarding the wording for *topics* was then undertaken to turn these into categories (Creswell, 2009). After the data analysis was completed, the researchers and co-coders met to discuss the analysis and agreed on the specific significant emerging themes. In the case where variations were noted, a negotiation has to be forged until attestation is reached.

## FINDINGS

### Sample realisation

In the survey, a total of 20 [N=20] mentors were interviewed. The gender distribution among the surveyed mentors was 60% (12) per cent male and 40% (8). Notably most of the respondents were drawn from Mpumalanga public hospitals with 50%.

The discussion on which this paper is presented based on main themes that emerged during the analyses, *inter alia* with **success of mentoring, barriers towards mentoring, mentoring period, commitment by management on mentorship, policy on mentoring, training needs analysis,**

Notably, the participants articulated quite interesting experiences that have both positive and negative influence on the success of the protégés in their respective careers. In the next section, a discussion of the empirical evidence is attested based on the verbatim responses.

### Success of mentoring

It emerged from the analysis that a number of factors could lead to failure of mentoring initiatives as posited by participants, namely lack of enough mentors and mentor expertise. It is imperative that when selecting mentors, consideration should be made on the expertise that the mentors possess and taking cognizance of their respective skills. This would enable a good match between mentor and protégés. Lack of expertise could lead to mentors failing to provide focus and guidance to the protégés. This is in line with what Celliers (1995) & Tsukudu (1996) found that the effectiveness of mentorship dependent on knowledge, attitude and competence. Interviews with mentors revealed the same sentiments, as follows: *“...mentors should have thorough knowledge, skills and experience on how employment equity is implemented so that with our experiences we could guide and coach our subordinates properly”*.

The other crucial factor that emerged is lack of mentors. For mentoring to succeed, it is imperative to have a pool of mentors to ensure effective implementation of the intervention. This is evident with what participants said *“...We do not have enough mentors to assist in mentoring. We have other duties to fulfill and if we have adequate mentors, I think the situation might be better...”*

### Mentoring period

It emerged from the analysis that participants indicated that the period for exposing protégés is not sufficient. Essentially, protégés are exposed for shorter periods which do not allow them to learn all what they should learn. *“...I have realised that most the protégés are given three – five months for mentoring. This in fact does not allow them to learn as much as they should...”* *“The time provided for protégés is inadequate; enough time should be allocated to ensure that a wide scope of activities is covered so that they could work independently”*. These findings are contrary to what Samier (2000) found that time is critical aspect of development and for effective mentoring to take place two –five years is a reasonable period. Based on this articulation, one can argue that protégés should be allowed to stay long with mentoring process so that they learn all the aspects of the work.

### Commitment by management on mentorship

Commitment by management plays a pivotal role in every intervention in the institution. The mentors surveyed attested that it is important for management to be committal in the mentorship. In answer to this, mentors revealed: *“...though I agree; I essentially believe that commitment is twofold, that management and employees must both be committed to the process. Management should provide support and financial means and employees must then be committed to the actual process”*. Samier (2000) concurs with this findings and posit that a number of supportive activities have to take place to ensure viability of the programme. In this case, it means that senior management should create conducive organisational climate for mentoring to take place. These findings suggest that if hospital management is not committed to the process, mentoring may not succeed.

## Policy on mentoring

For mentoring to be effective, policies and procedures have to be developed which could allow commitment from both mentor and protégés. From the survey participants indicated that policies and guidelines were being developed, and that those that already existence might not be well communicated: *“There are plans for general training, not specifically for mentoring. Mentoring is taking place, but there are no statistics or evidence to say these are employees who were mentored. One can therefore say that guiding policies in the implementation of mentoring are not communicated to the workforce”*. The absent or lack of policies and procedures could result in a situation where the programme is not explained to mentor or protégé and evaluation process could be unclear and so forth.

## The role of protégés

Although we perceive professionalism of mentors by ensuring that mentoring is delivered as effective as learning experience, the role of protégé is imminent (Bamford, 2011). The findings revealed that mentors posited that for successful mentoring to take place, the role of protégé should be explicit. Importantly, for the experience to work, both mentor and protégé need to take equal responsibility since the intervention is not individualistic. The protégés in the context of the intervention are encouraged to plan, record and give feedback to their mentors. In this case, mentors would advice accordingly in terms of whether mentoring experience has developed in terms of leadership skills and self confidence.

## Training needs analysis

Mentors, on the other hand, thought that preparatory exercises, such as a needs analysis for training plans for protégés remain imperative. This is evidence with what participants articulated that: *“I believe that one should start with a needs assessment to identify the gaps and it will also help in the development of the methodology to address the problem”*; *“I also feel that there is a need to have dedicated people in the HRD to help with the training needs assessment”*. For mentoring to be effective, a proper needs assessment should be made to ensure that mentorship is based on identified areas where protégés require intensive intervention.

# CONCLUSION AND RECOMMENDATIONS

From empirical evidence, it can be concluded that for mentoring to succeed, the following three factors should be considered, at all times:

Firstly, there should be sound principles on whose basis mentorship programmes should be established at each hospital, rationalising and identifying the reasons and need for establishing mentorship. While the expression of commitment by the hospital management can be viewed through the literal implementation and funding, enough efforts had, however, not been made to lay down the principles of successful implementation and of course if there is not commitment from management, the intervention is likely to fail. Secondly, there should be a strong commitment on the part of the three parties involved in the implementation of mentorship programmes; that is, the hospital management, the mentors and the protégés. In the case of this research, although some commitment was expressed by both mentors and protégés, such commitment had not been formalised, nor did it form part of the “rules of engagement”. Thirdly, there should be a clear policy on mentoring with the view of guiding the process. Furthermore, a provision should be made in the policy making it compulsory for mentors to be evaluated on the success of their mentoring success. Fourthly, mentors should be properly identified, screened, skilled, with a positive attitude about the programme, and well paired with their protégés.

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# INTERNAL RATE OF RETURN TO INVESTMENT PROJECTS WITH FUZZY CASH FLOWS

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## ABSTRACT

*The techniques of discounted cash flow more important, as the net present value and internal rate of return can be extended to investment projects with fuzzy cash flows. This paper extends the concept of net present value for trapezoidal fuzzy numbers applied to independent or mutually exclusive projects with different selection criteria. Also, it defines the trapezoidal and triangular rates of return and other variants applied at intervals as the average and intermediate rates of return and criteria applied in each case. All these techniques can be applied relatively easy in a spreadsheet or using specialized software.*

## INTRODUCTION

In the evaluation of investment projects, it is generally difficult to determine exactly the future cash flow, because the investment variables, cost, revenue, number of periods or interest rate, are uncertain. The usual approach to solve this problem is to encode the uncertainty using probability distributions, either on the basis of historical data or constructed through sampling. However, many scenarios have no background, and in other cases, the situation is unique or does not allow trials. If you do not have enough probabilistic information, then it may be useful to use probability distributions based on the subjective opinion of experts (Chiu and Park, 1994).

On the other hand, in many cases, uncertainty in the estimates is generated by the lack of information by the random nature of the variables to be estimated. For this reason, in an uncertain economic environment, the expert opinion is usually presented by ranges of possible values of some variables. This information can be properly interpreted by trapezoidal or triangular fuzzy numbers that can represent the possible values gradually, as an extension of the concept of interval (Choobineh and Behrens, 1992; Chalco, 2009).

In this sense, the techniques of discounted cash flow more important, as the net present value and internal rate of return can be extended to investment projects with fuzzy cash flows (Chiu and Park, 1994), but without some of the properties of these models to real flows, mainly because the algebraic structure of fuzzy numbers is not the distributive property or multiplicative inverses (Dubois, 1979; Buckley, 1987; Ríos, 1999). The applications of these techniques to the investment decisions are numerous in Capital Budgeting (Kahraman et al., 2002) and Portfolio Selection (Huang, 2007).

This paper extends the concept of net present value for trapezoidal fuzzy numbers applied to independent or mutually exclusive projects with different selection criteria. It also defines the trapezoidal, triangular, intermediate and average rates of return and their properties. There are examples with graphics in appendix that help interpret the concepts of fuzzy rate of return and its various versions.

## TRAPEZOIDAL RATE OF RETURN

A trapezoidal fuzzy cash flow  $F_j = [F_{j1}, F_{j2}, F_{j3}, F_{j4}]$  is conventional if it satisfies the following conditions:  $F_{j1} < 0$ ,  $F_{ji} > 0$ ,  $\sum_{j=0..n} F_{ji} > \text{abs}(F_{j1})$   $i = 1, 2, 3, 4$  and  $j = 1, 2, \dots, n$ . Under these conditions exists for each  $i$  a single real internal rate  $R_i > 0$  such that  $\sum_{j=0..n} F_{ji} \cdot (1+R_i)^j = 0$ . Moreover, since by hypothesis  $F_{j1} \leq F_{j2} \leq F_{j3} \leq F_{j4}$  also have to  $R_1 \leq R_2 \leq R_3 \leq R_4$

The trapezoidal fuzzy number  $FIRR = [R_1, R_2, R_3, R_4]$  is called the trapezoidal rate of return of fuzzy cash flow  $F_j$ . If cash flow is not conventional, then the FIRR may not exist or take multiple values. Moreover, unlike the actual cash flows, the net present value diffuse NPVD =  $\sum_{j=0..n} PV(F_j)$  is not equal to zero when discounted rate FIRR following the definition of inverse trapezoidal. Overall, the net present value discounted at the  $FIRR = [R_1, R_2, R_3, R_4]$  is the trapezoidal fuzzy number

$$(1) \quad [\sum_{j=0..n} F_{j1} \cdot (1+R_4)^j, \sum_{j=0..n} F_{j2} \cdot (1+R_3)^j, \sum_{j=0..n} F_{j3} \cdot (1+R_2)^j, \sum_{j=0..n} F_{j4} \cdot (1+R_1)^j]$$

with  $\sum_{j=0..n} F_{j2} \cdot (1+R_3)^j \leq 0 \leq \sum_{j=0..n} F_{j3} \cdot (1+R_2)^j$  since  $(1+R_3) \geq (1+R_2)$ .

## Application Criteria

Let  $F_j = [F_{j1}, F_{j2}, F_{j3}, F_{j4}]$  a conventional fuzzy cash flow and let  $K = [K_1, K_2, K_3, K_4]$  the discount rate. If  $FIRR > K$  then  $NPVD > 0$  and if  $FIRR < K$  then  $NPVD < 0$ .

If  $FIRR > K$  then  $R_1 > K_4$ . Furthermore,  $NPVD = [\sum_{j=0..n} VP_1(F_j), \sum_{j=0..n} VP_2(F_j), \sum_{j=0..n} VP_3(F_j), \sum_{j=0..n} VP_4(F_j)]$  where  $\sum_{j=0..n} VP_1(F_j) = \sum_{j=0..n} \min \{ F_{j1}(1+K_1)^j, F_{j1}(1+K_4)^j \}$ . Since  $F_j$  is a conventional fuzzy cash flow and  $K_4 > K_1$  then  $\sum_{j=0..n} VP_1(F_j) = \sum_{j=0..n} F_{j1} (1+K_4)^j$ . Furthermore, by defining FIRR,  $\sum_{j=0..n} F_{j1} \cdot (1+R_1)^j = 0$ . As  $R_1 > K_4$  then  $\sum_{j=0..n} VP_1(F_j) = \sum_{j=0..n} F_{j1} (1+K_4)^j > 0$ . Therefore,  $NPVD > 0$ .

Similarly, if  $FIRR < K$ , then  $R_4 < K_1$ . In addition,  $\sum_{j=0..n} VP_4(F_j) = \sum_{j=0..n} \max \{ F_{j4} (1+K_1)^j, F_{j4} (1+K_4)^j \}$ . Since  $F_j$  is a conventional fuzzy cash flow and  $K_1 < K_4$  then  $\sum_{j=0..n} VP_4(F_j) = \sum_{j=0..n} F_{j4} (1+K_1)^j$ . Furthermore, by defining FIRR,  $\sum_{j=0..n} F_{j4} \cdot (1+R_4)^j = 0$ . As  $K_1 > R_4$  then  $\sum_{j=0..n} VP_4(F_j) = \sum_{j=0..n} F_{j4} (1+K_1)^j < 0$ . Hence,  $NPVD < 0$ .

As a corollary of the above result is a criterion for selecting the FIRR for conventional fuzzy cash flows consistent with the criterion of NPVD: If  $FIRR > K$  then  $NPVD > 0$  and therefore, the project is accepted. If  $FIRR < K$  then  $NPVD < 0$  and therefore the project is rejected.

## TRIANGULAR RATE OF RETURN

Given the  $FIRR = [R_1, R_2, R_3, R_4]$ , it is possible to construct a triangular rate of return  $TRR = [R_m, R_p, R_M]$ , defining  $R_p$  for cut  $\alpha=1$  as the geometric mean of  $R_2$  and  $R_3$ ,  $(1+R_p)^2 = (1+R_2)(1+R_3)$ , analogously  $(1+R_m)^2 = (1+R_1)(1+R_2)$  and  $(1+R_M)^2 = (1+R_3)(1+R_4)$ . The TRR has the following property:

## Application Criteria

The  $NPVD = \sum_{j=0..n} VP(F_j)$  discounted at the  $TRR = [R_m, R_p, R_M]$  is a triangular fuzzy number contains a zero for some  $\alpha$ -cut. For construction,  $R_1 \leq R_m \leq R_2 \leq R_p \leq R_3 \leq R_M \leq R_4$  and this implies, by definition that  $\sum_{j=0..n} F_{j1} \cdot (1+R_M)^j \leq 0 \leq \sum_{j=0..n} F_{j4} \cdot (1+R_m)^j$  y  $\sum_{j=0..n} F_{j2} \cdot (1+R_p)^j \leq \sum_{j=0..n} F_{j3} \cdot (1+R_p)^j$ . Thus, the NPVD contains at zero for some  $\alpha$ -cut.

Similarly, given the minimum rate of return  $K = [K_1, K_2, K_3, K_4]$  you can define a triangular minimum rate  $K\# = [K_m, K_p, K_M]$ . For a fuzzy cash flow  $F_j$ , the fuzzy net present value discounted at the rate  $K\#$  is denoted by  $NPVD\#$

## Property

Let  $F_j = [F_{j1}, F_{j2}, F_{j3}, F_{j4}]$  be a conventional fuzzy cash flow,  $K$  the minimum fuzzy rate of return and  $K^\#$  the minimum rate triangular. If  $FIRR > K^\#$  then  $NPVD^\# > 0$  and if  $FIRR < K^\#$  then  $VPND^\# < 0$ .

If  $FIRR = [R1, R2, R3, R4]$ ,  $K = [K1, K2, K3, K4]$  and  $K^\# = [K_m, K_p, K_M]$  then  $(1+K_p)^2 = (1+K_2)(1+K_3)$ ,  $(1+K_m)^2 = (1+K_1)(1+K_2)$  y  $(1+K_M)^2 = (1+K_3)(1+K_4)$

If  $FIRR > K^\#$  then  $R1 > K_M$ . Since  $F_j$  is a conventional fuzzy cash flow then  $\sum_{j=0..n} F_{j1} \cdot (1+R1)^j = 0$  and  $NPVD^\# = [\sum_{j=0..n} VP1^\#(F_j), \sum_{j=0..n} VP2^\#(F_j), \sum_{j=0..n} VP3^\#(F_j), \sum_{j=0..n} VP4^\#(F_j)]$  with  $\sum_{j=0..n} VP1^\#(F_j) = \sum_{j=0..n} \min \{ F_{j1}(1+K_m)^j, F_{j1}(1+K_M)^j \}$  then  $\sum_{j=0..n} VP1^\#(F_j) = \sum_{j=0..n} F_{j1} \cdot (1+K_M)^j > 0$ . Therefore,  $NPVD^\# > 0$ .

On the other hand, if  $FIRR < K^\#$  then  $R4 < K_m$ . Since  $F_j$  is a conventional fuzzy cash flow then  $\sum_{j=0..n} F_{j4} \cdot (1+R4)^j = 0$  and  $NPVD^\# = [\sum_{j=0..n} VP1^\#(F_j), \sum_{j=0..n} VP2^\#(F_j), \sum_{j=0..n} VP3^\#(F_j), \sum_{j=0..n} VP4^\#(F_j)]$  with  $\sum_{j=0..n} VP4^\#(F_j) = \sum_{j=0..n} \min \{ F_{j4}(1+K_m)^j, F_{j4}(1+K_M)^j \}$  then  $\sum_{j=0..n} VP4^\#(F_j) = \sum_{j=0..n} F_{j4} \cdot (1+K_m)^j < 0$ . Therefore,  $NPVD^\# < 0$ .

As a corollary of the previous result we obtain the following criteria: If  $FIRR > K^\#$  then  $NPVD^\# > 0$ . If  $FIRR < K^\#$  then  $VPND^\# < 0$ . In other cases, the criterion is not applicable

## Application Criteria

Let  $F_j$   $j = 1 \dots n$ , a conventional fuzzy cash flow,  $K$  the fuzzy minimum rate and  $E(NPVD) = [E^-(NPVD), E^+(NPVD)]$  the mean value of fuzzy net present value (González, 1990). If  $InRR > K$  then  $E(NPVD) > 0$  and if  $InRR < K$  then  $E(VPND) < 0$

If  $InRR > K$  then  $R^- > K_4 > K_3$ , therefore  $\sum_{j=0..n} F_{j1} (1+K_4)^j + F_{j2}(1+K_3)^j > \sum_{j=0..n} (F_{j1} + F_{j2})(1+R^-)^j = 0$  with  $E^-(NPVD) = 0.5(\sum_{j=0..n} VP1(F_j) + \sum_{j=0..n} VP2(F_j)) > 0$  and  $E(NPVD) > 0$

If  $InRR < K$  then  $R^+ < K_1 < K_2$ , therefore  $\sum_{j=0..n} F_{j4} (1+K_1)^j + F_{j3}(1+K_2)^j < \sum_{j=0..n} (F_{j4} + F_{j3})(1+R^+)^j = 0$  with  $E^-(D) = 0.5(\sum_{j=0..n} VP3(F_j) + \sum_{j=0..n} VP4(F_j)) < 0$  and  $E(VPND) < 0$

As a corollary, the selection criteria using the  $InRR$  and the  $E(NPVD)$  is: If  $InRR > K$  then  $E(NPVD) > 0$ . If  $InRR < K$  then  $E(NPVD) < 0$ . In other cases, the criterion is not applicable.

## AVERAGE RATE OF RETURN

Given a conventional cash flow  $F_j = [F_{j1}, F_{j2}, F_{j3}, F_{j4}]$ , we can determine a real number  $R_\lambda$ ,  $0 \leq \lambda \leq 1$ , with the property

$$(1-\lambda) \sum_{j=0..n} (F_{j1}+F_{j2})(1+R_\lambda)^j + \lambda \sum_{j=0..n} (F_{j3}+F_{j4})(1+R_\lambda)^j = 0 \quad (2)$$

$$\sum_{j=0..n} [(1-\lambda)(F_{j1}+F_{j2}) + \lambda(F_{j3}+F_{j4})](1+R_\lambda)^j = 0 \quad (3)$$

The average rate  $R_\lambda$  exists because the sum of conventional cash flow is conventional (Liou and Wang, 1992). The definition it follows that  $R_0 \leq R_\lambda \leq R_1$ .

Let  $F_j, j=1...n$ , be a fuzzy cash flow,  $K$  the fuzzy minimum rate and  $V_\lambda(NPVD)$  the average value of the fuzzy net present value for a fixed value of  $\lambda$ . If  $R_\lambda \square > K_4$  then  $V_\lambda(NPVD) > 0$  and if  $R_\lambda \square < K_1$  then  $V_\lambda(NPVD) < 0$ .

Let  $K = [K_1, K_2, K_3, K_4]$  and  $R_\lambda \square > K_4 > K_3 \square > K_2 > K_1$  then  $\sum_{j=0..n} F_j 1(1+K_4)^{-j} + F_j 2(1+K_3)^{-j} > \sum_{j=0..n} (F_j 1 + F_j 2)(1+R_\lambda)^{-j}$  and  $\sum_{j=0..n} F_j 4(1+R_1)^{-j} + F_j 3(1+R_2)^{-j} > \sum_{j=0..n} (F_j 4 + F_j 3)(1+R_\lambda)^{-j}$

Since  $V_\lambda(NPVD) = (1-\lambda)E-(NPVD) + \lambda E+(NPVD)$  and  $E-(NPVD) = 0.5 \sum_{j=0..n} F_j 1(1+K_4)^{-j} + F_j 2(1+K_3)^{-j} - E+(NPVD) = 0.5 \sum_{j=0..n} F_j 4(1+R_1)^{-j} + F_j 3(1+R_2)^{-j}$  then

$$V_\lambda(NPVD) > 0.5[(1-\lambda)\sum_{j=0..n} (F_j 1 + F_j 2)(1+R_\lambda)^{-j} + \lambda \sum_{j=0..n} (F_j 3 + F_j 4)(1+R_\lambda)^{-j}] = 0 \quad (4)$$

Analogously, if  $R_\lambda \square < K_1 < K_2 \square < K_3 < K_4$  then

$$\sum_{j=0..n} F_j 1(1+K_4)^{-j} + F_j 2(1+K_3)^{-j} < \sum_{j=0..n} (F_j 1 + F_j 2)(1+R_\lambda)^{-j} \quad (5)$$

$$\sum_{j=0..n} F_j 4(1+R_1)^{-j} + F_j 3(1+R_2)^{-j} < \sum_{j=0..n} (F_j 4 + F_j 3)(1+R_\lambda)^{-j} \quad (6)$$

$$V_\lambda(NPVD) < 0.5[(1-\lambda)\sum_{j=0..n} (F_j 1 + F_j 2)(1+R_\lambda)^{-j} + \lambda \sum_{j=0..n} (F_j 3 + F_j 4)(1+R_\lambda)^{-j}] = 0 \quad (7)$$

This result implies the following selection criteria: If  $R_\lambda \square > K_4$  then  $V_\lambda(NPVD) > 0$ . If  $R_\lambda \square < K_1$  then  $V_\lambda(NPVD) < 0$ . There are examples with graphics in appendix that help interpret the concepts of fuzzy rate of return and its various versions.

## CONCLUSIONS

When uncertainty reflects the lack of information, not the randomness of the variables, it is usually possible to establish a range of values that can be represented by trapezoidal fuzzy numbers, and can be interpreted as families of intervals with different possibility levels. In addition, the operations with fuzzy number can be moved naturally to a spreadsheet, so that the apparent complexity of the calculations is eliminated.

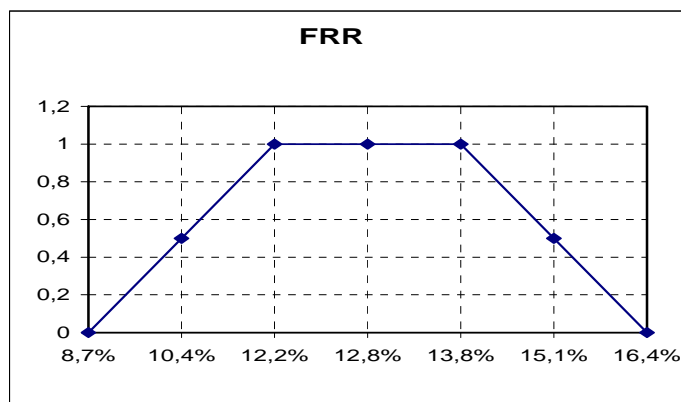
On the other hand, the construction of the cash flow of an investment project involves estimating future revenues and expenditures, which depend on other parameters such as interest rates, inflation or exchange rate. These variables are generally uncertain, and if are not reliable probabilistic information, you can define fuzzy cash flows that represent reasonably available information.

In this research, it defines the trapezoidal and triangular rates of return and other variants applied at intervals as the average and intermediate rates of return and criteria applied in each case. All these techniques can be applied relatively easily in a spreadsheet or using specialized software.

## APPENDIX

### Fuzzy Rate of Return

VPF <sub>j1</sub>	VPF <sub>j2</sub>	VPF <sub>j3</sub>	VPF <sub>j4</sub>
-1009	-1008	-994	-976
169	217	219	224
123	152	175	208
118	148	167	185
158	161	172	208
-23	15	22	46
90	112	124	137
104	134	140	170
32	47	53	63
60	72	77	91
116	134	135	136
71	80	88	97
76	97	102	117
-2	15	17	17
89	98	99	109
-8	10	12	24
-9	2	3	4
22	34	36	39
0	10	13	23
32	40	40	47
-4	0	5	6
1211	1576	1698	1953
1,200	1,563	1,708	2,001
8,7%	12,2%	13,8%	16,4%

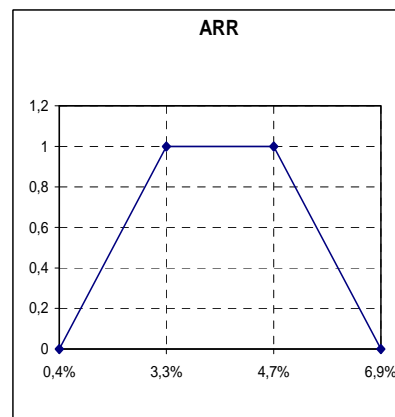


FRR	alfa
8,7%	0
10,4%	0,5
12,2%	1
12,8%	1
13,8%	1
15,1%	0,5
16,4%	0

Mean Value (Dubois/Prade)	
10,4%	15,1%
Average Value( $\lambda = 0.5$ )	
12,8%	

## Average Rate of Return

FRR	R1	R2	R3	R4	$\lambda$		S1	S2	S3	S4
	8,1%	9,1%	9,3%	11,1%	0,83		3,7%	4,9%	5,9%	7,2%
j	Fj1	Fj2	Fj3	Fj4	$V_{\lambda}(F_j)$	sgn				
0	-1013	-1002	-997	-983	-2009	0	-1013	-1002	-997	-983
1	98	138	153	164	250	1	229	417	568	811
2	-139	-87	-74	-42	-207	0	-119	-73	-62	-34
3	84	133	140	167	232	1	181	366	462	718
4	-13	44	57	72	47	1	-54	114	179	288
5	-40	-17	6	54	-37	0	-27	-11	4	36
6	-79	-34	-9	5	-94	0	-49	-20	-5	3
7	-21	37	47	50	30	1	-69	84	123	161
8	162	182	211	250	364	1	292	394	524	759
9	-51	-49	-35	-24	-93	0	-25	-23	-16	-9
10	3	48	71	88	69	1	5	94	158	232
11	-73	-24	-18	-1	-84	0	-31	-9	-7	0
12	170	172	200	247	360	1	264	307	396	568
13	-70	-70	-55	-12	-127	0	-25	-22	-17	-3
14	121	136	139	193	270	1	175	221	246	386
15	-104	-49	-41	16	-132	0	-32	-13	-11	5
16	24	31	45	45	61	1	33	46	72	79
17	131	159	184	215	308	1	169	223	273	350
18	142	153	158	200	305	1	177	204	223	303
19	51	79	103	156	152	1	61	101	136	221
20	-38	-17	-4	36	-40	0	-8	-3	-1	8
FFV							1461	2571	3362	4877
FPV							-1329	-1177	-1111	-977
ARR							0,4%	3,3%	4,7%	6,9%



ARR	alfa
0,4%	0
3,3%	1
4,7%	1
6,9%	0

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# **CRAFTING AS A DYING TRADE? – ARGUMENTS FOR ITS VALUE-ADD**

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## **ABSTRACT**

*Most luxury fashion brands have lost their intrinsic promise of craftsmanship. To several high net-worth consumers, luxury has been cheapened and simply no longer evokes the magic it once did. Now customers want to know about stories behind products. This paper explores the critical dimensions necessary to promote indigenous and contemporary craft for the success of luxury fashion brands. The study adopted a qualitative approach by reviewing case studies in international luxury fashion brands, and semi-structured interviews were conducted with luxury fashion brand managers, experts in academia, industry and craftspeople to explore their knowledge and experiences. It was supported by secondary research such as internal documents, media reports and academic data. It was found that craftsmanship is a core cooperative culture in creating brands in the luxury fashion industry. Craftsmanship which is usually built over time to give a long-term relationship, develops a deep emotional experience. The true value of craftsmanship is therefore its human element. The management of the luxury fashion brand is complex, and requires a consistent and coherent approach. It is therefore recommended that the creators of luxury fashion brands strategically develop and employ a unique and interesting story that reflects the brand personality of their products such as the “handmade-ness” as a way of interpreting, articulating and promoting the unique identity and value of a brand.*

## **INTRODUCTION**

The luxury fashion brand industry, above all others, should be a bastion for integration to secure these precious skills and resources. Preserving these precious skills would result in brand value and brand awareness as craftsmanship answers the emotional needs of customers. The true value of craftsmanship is its human element (Klein, 2000). Utilizing accrued ancient techniques and skills perfected over decades has resulted in the manufacturing process creating brand value, because it is a conscious effort to bring the past into the present (Kim, Kim, Kim, Kim & Kang, 2008). Sennett (2008) noted that the “handmade-ness” of the craft object, is the process where the hand and mind engage material together, offering a meaningful alternative to machine production. It encourages particular attention to how a product is made so that individuals come to regard what a product is, by how it came to be. The making process becomes an essential part of the object’s identity. In doing this the craft objects can assist in challenging the belief that outward appearance and reality are the same, thus the inherent promise which distinguishes successful luxury fashion brands from their counterparts (Wind, 2009). The development of a culture of craftsmanship (quality control) demands a proactive approach by promoting the old and newly challenging crafts as a brand management strategy. The ethos is on the luxury brand fashion industry to package craftsmanship as a means of creating brand value and brand awareness. A possible way of promoting crafts in the luxury fashion industry is by utilizing the brand awareness strategy with storytelling, establishing a flagship store and creating a museum experience (Roberts, 2004).

This paper identifies the need to rescue the dying crafts and to transfer in-depth knowledge from the hands and minds of master craftsmen to the younger generation. It categorically distinguishes the value of



craftsmanship - “handmade-ness” against machine production. The research further explores the extent to which craft is and could be embedded in the design management strategies of luxury fashion brands in creating brand awareness. Brand awareness strategies such as storytelling, a flagship store and a museum experience are recommended.

## **LITERATURE REVIEW**

### **Today’s Luxury Concept**

A mass class of wealthy people has emerged worldwide. A vast amount of wealth has been amassed by individuals due to several economic, social and technological breakthroughs. Secondly, a sea of luxury brands has emerged and this has affected the high-entry barrier that the industry guarded for centuries. It has also given luxury consumers more choice than ever before. Thirdly, the rapid growth of digital information and communication technology has given consumers more variety in luxury product offerings, easier access to view the choices, and lower switching costs, especially on the Internet. This has empowered the consumers to become more individualistic, experimental, and bold enough to mix luxury and high-street fashion ((Dubois, Laurent & Czellar, 2003; Olins, 2007). The result of this change is the phenomenon of trading-up and trading-down (BCG, 2004). The new wealthy class enjoying their ability to trade up to acquire luxury products, practise trading-up. Trading-down is the practice of mixing the use of luxury items with fashion brands. This practice is also popularly called the democratization of luxury. Therefore it is no longer a surprise to find a wealthy celebrity wearing jeans from H&M, earrings from Chanel, shoes from Coach, a shirt from Zara and a bag from Louis Vuitton (Lury, 2004). Fashion brands are showing that they have understood the language of differentiation and individualism, and are able to offer the luxury consumer alternatives to their luxury products or complementary goods at better price-value. They have determined that it is no longer a problem for a young wealthy duchess to combine a £50 pair of jeans from Zara with a £3,000 bag from Vuitton and a £5,000 J12 watch from Chanel (Powel, 2007). The difference between luxury brands and fashion brands is not only in the aspects of product quality and pricing, but also applies to availability and the exclusivity of the products. Fashion brands are for the mass market, whether they are of high quality or not. Luxury brands are for a distinct narrow market and are defined by high quality, differentiation and precision in product design and craftsmanship. A brand is either a luxury brand, or it is not. If a brand does not set out to target the high-end market, then it is difficult to become a luxury brand (Jain & Bagdare, 2009).

### **Brand Identity**

Compelling brand identity represents any organization, any size, anywhere with an immediately recognizable, distinctive, professional image that positions it for success. An identity helps manage the perception of an organization and differentiates it from its competitors. A smart system conveys respect for the better customer and makes it easy to understand features and benefits. An effective identity encompasses elements such as a name that is easy to remember, or a package design that wants to be owned (Wheeler, 2003). Strategic brand identity works across diverse audiences and cultures to build an awareness and understanding of an organization and its strengths. By making intelligence visible, effective identity seeks to clearly communicate an organization’s unique value proposition. The coherence of communication across various media – from an advertising campaign to a business card to a sales presentation – sends a strong signal to the customer about the laserlike focus of an organization as noted by Aaker (2002). Subsequently, Wheeler (2003) writes that a brand or an organization’s reputation is considered to be one of the most valuable organizational assets. A brand’s future success is dependent on building public awareness, preserving their reputation, and upholding their value. A strong brand identity will help build brand equity through increased recognition, awareness and customer loyalty, which in turn helps make a organization more successful (Dubois, Czellar & Laurent, 2005).

### **Brand Strategy**

A brands strategy is built on a vision, is aligned with business strategy, emerges from an organization’s history and culture, and reflects an in-depth understanding of the customer’s needs and perceptions. The brand strategy

defines positioning, differentiation, the competitive advantage and a unique value proposition. A brand strategy is the road map that guides marketing, makes it easier for the salesforce to sell more, and provides clarity, context and inspiration to employees (Wheeler, 2003). Great brands never change, however they change constantly. The core of what appeals to a customer – a brand's meaning and values, its promise and the satisfaction it gives – should be constant, providing customers with something to believe in and remain loyal to, over the long-term. The manifestation of a brand, external factors such as package design, advertising, and web experience, and internal factors such as product design, processes and flavours – not only can, but must change constantly. Their evolution needs to reflect customers' changing perceptions and expectations, as well as market developments by competitive brands. Paradoxically, it is only by changing that a brand can maintain its constant position in the customer's mind and offer an experience consistent with a customer's own changing self. A strong brand can withstand even radical change in what it sells, for example, Lego used to sell wooden toys, not plastic bricks (Riezebos, 2003).

## **A Perspective On Craft**

### **Design, workmanship and craftsmanship**

Craftsmanship differs from both design and workmanship. Craftsmanship has taken on a broader, less precise meaning or, simply being equated with workmanship. This division of effect has also affected an individual's conception and understanding of craftsmanship as a process of conceiving and making. Using Aristotle's ideas of *theoria*, *praxis* and *poiesis*, it can be argued that designing or "design man-ship" and workmanship should not be considered opposites. Design should be seen as relating to the realm of *theoria* since it involves abstract, theoretical knowledge; designs, are abstractions, formal inventions for things that exist in theory, not in reality, (Best, 2006). Workmanship is relating to the realm of *praxis* since it involves practical manual skill. Workers who follow designs must possess knowledge of abstractions, since they are required to distract designs to bring them to reality as made things. But despite this, their activities, which are essentially at the level of practical, manual skill, must be predictable. So, design is a process of inventing form, and workmanship is the process of filling that form with material (El-Amir & Burt, 2010). Craftsmanship can be said to fuse *theoria* and *praxis* because it has both an abstract and a practical, material aspect. It involves risk at the level of workmanship through technical manual skill, as Pye claims, but it also involves an element of abstract conceptualization in design. In other words, craftsmanship is not limited solely to the execution of sophisticated technical manual skill through the hand; craftsmanship should be seen as existing within the realm of *poiesis* because technical skill and creative imagination come together in craftsmanship to bring the "thing" into being as a physical-conception entity (Tynan & McKechnie, 2009). Craftsmanship should be understood as a creative act in which actual physical form is brought together with an idea/ concept. This is the creative act at the basis of every original craft object. It is a process of formalizing material and materializing form that results in the creation of an original craft object (Olins, 2007). Howard (2007) explains that identifying this type of activity explicitly with the term craftsmanship, serves to distinguish it from design and workmanship. The craftsman conceives and executes. The traditional craftsman conceiving/ executing, imagining / making, link together mind and body and creative imagination.

## **OBJECTIVES**

- To evaluate the value of craftsmanship to the Luxury Fashion Industry.
- To utilize craftsmanship as a brand awareness strategy.
- To recommend strategies to promote crafts in the Luxury Fashion Industry.

## **RESEARCH METHODOLOGY**

### **Methods of research**

A quantitative and qualitative research approach was followed. Both a primary and secondary research approach was followed. Secondary research was in the form of case studies, whilst primary research was in the form of personal interviews, observation and focus groups.

## **FINDINGS**

### **The Hand**

The passion for pursuing the old ways of making bags solely with the hand created the platform to be in a “blue ocean” for the brand. It has not been about competitive advantage, he has created a niche in capturing loyal customers, thus how unique customers perceive his product. Pride in one’s work lies in the heart of handmade-ness as the reward for skill and commitment. Integrity and reputation reflect the pride of the master craftsmen (Howard, 2007). The ability to practise a particular skill continuously in order to mature is a culture that is losing its roots in today’s society. Hence, hand-making crafts is shipwrecked by the younger generation in pursuit of fast ways of making things with machines. This very handmade-ness is the human element that makes the skill one’s own. Using old-age techniques and skills perfected over decades as brand manufacturing processes creates brand value because of its uniqueness and its conscious effort to bring the past into the present. Society appraises such activities, but the challenge lies in making these practices appealing to the younger generation (Lury, 2004). Millinery, for instance, is hardly the speciality of choice for promising young design school graduates. Finding skilled labour is nigh impossible, and training an apprentice willing to take up a craft, is a long-term commitment. Bontoni, for example, is a brand of shoes which is a cult object due to the handmade-ness by master craftsmen. Bontoni loyal customers affirm, “the shoe fits so well that it feels as if the shoe was custom made for the individual customer”. The ability of craft objects to relate perfectly to the human body is the element devoid from machine production. Luxury consumers are awakening to the appeal of products that connect meaningfully, and not merely possession (Lindstrom, 2005).

### **Education**

Helene Le Blanc of Luxury Society noted that fine craftsmanship is to some extent an acquired taste. Even discerning customers sometimes have to be educated about the intricacies that make these products so special. This in turn requires well-trained salesstaff, an all too often overlooked aspect of luxury retailing. Finding the right retail partners who are attuned to the nature of the product and willing to go the extra mile to support them, is therefore an important part of the equation for these brands (BCG, 2004). Owing to that, there is the need for luxury fashion brands to build confidence and raise aspirations in their craftsmanship. It is paramount that enthusiasm for craft is created by promoting a culture that enables, celebrates and rewards craftsmen and their craftsmanship. This will foster confidence in essence of crafts to the customer, and subsequently promote brand awareness and economic gain. This can simply be done through education (Kemp, 1998).

### **Knowledge transfer**

Partnership programs would enable organizations to obtain knowledge and skills from master craftsmen and experts such as storytellers from the further education sector, or from research organizations such as the Craft Council in the UK. Educating staff and retailers on how to creatively share the brand’s philosophy with regard to brands, cherished the practice of craftsmanship to customers and society as a whole, and will go a long way in making craft business an attractive venture. Furthermore, support from independent agents such as Crafted, Palmer Hamilton Partnership Ltd and the Craft Council in the UK (just to mention a few) whose task it to make connections between and across brands and craftsmen, is vital (Chadha & Husband, 2006). These intermediate agencies could aid in promoting artisans for the luxury fashion brand industry. Also, academic bodies such as universities can stir up craft for economic growth as well. Craft courses should be vigorously promoted at higher education institutions. This would offer an applied research that will answer the needs of the industry, especially the Luxury Fashion Industry and society as a whole (Donation, 2008).

### **The Internet**

The Internet connects organizations and brands that have identified unmet needs with all manner of product solutions. This process opens up a global resource for finding new opportunities. An efficient international online networking system for linking craftsmanship skills and connecting brands, suppliers and craftsmen could be beneficial in promoting craft (El-Amir & Burt, 2010). Knowledge transfer is not only about transferring old techniques, but also concerns new or non-traditional ones. This could imply, for instance, that a British leather-worker, originally trained to make hard-edged cases using bridle leather, could learn to make light, soft bags from a Florentine leather craftsman (Best, 2006).

## **Securing the supply chain of craft**

Chanel only accounts for 60 percent of Paraffection's turnover, however, the workshops operate entirely independently, also supplying high-end ready-to-wear items to private clients and competing houses. They are actively encouraged to train new craftsmen and inaugurate younger collections, such as the fresh-faced, technologically-advanced approach that artistic director Eric Charles-Donatien (33) has brought to Maison Lemarié, developing, for example, unusual combinations with silk flowers and feathers. While an element of financial self-interest is definitely at play, haute couture could not continue at the same rarefied level without these skills. Chanel is one of the few big maisons for which it is both an image-builder and a source of income – the organization insisting that its primary motive goes beyond turning a profit. Nathalie Vibert, a senior press officer for the Maisons d'Arts, asserts that these acquisitions “amount to a genuine wager on creativity, which, beyond preserving unique archives and know-how, allows such craftsmanship to grow and bloom in full independence. The aim is clear: it is not for Chanel to grab exclusive suppliers, but to nourish a craft which is the quintessence of Paris couture. Nor is it to save the last remnants of a disappearing tradition. On the contrary, all highly profitable at the time of their purchase, can now look at the future with hope and serenity” (Mozota, 2003). This trend towards the conservation of crafting extends across the luxury world. Bulgari began to acquire key suppliers for and competitors of its watch-making arm in 2000, namely Gerald Genta, Daniel Roth and Manufacture de Haute Horlogerie. In 2005, it purchased controlling shares of Cadrans Design and Prestige d'Or, and two years later, the intellectual properties and machineries related to watch components from Leschot. In 2008, Bulgari further expanded its purview to encompass the Swiss company, Finger, specializing in the production of high-end watch cases for multiple brands (Salter, 2009).

## **RECOMMENDATIONS FOR A BRAND AWARENESS STRATEGY**

### **Storytelling**

Storytelling is an old communicating tool that cuts across every culture. It is a technique very effective at breaking down some of the relationship barriers and encouraging more open communication practices. The simplest and most playful way of conveying information is by good storytelling. Good stories catch the attention of its audience and are worth remembering and retelling. Storytelling is the nucleus of communication activities which results in increased awareness when managed properly. Well-managed storytelling works across diverse audiences and cultures to build an awareness and understanding of a brand, its vision, philosophies and its core values to its customers. Storytelling engages the senses of its customers. A well-managed story instinctively captures the core values of brands as characters in the story-telling process. The audience, thus customers, associate themselves with the characters of these stories. It gives customers etched memories of the characters. This emotional attachment brings meaning of the brand to the customers and they aspire to be those characters. Storytelling, appealing to every customer, conveys respect for the customer and signifies an in-depth understanding of the customer's needs and perceptions. This recognition and awareness of the brand through a strategic storytelling mechanism would create customer loyalty, which in turn provides economic gain to brands.

It is paramount that luxury fashion brands strategically employ a unique and interesting story that reflects brand personality of their own such as the “handmade-ness” as a way of interpreting, articulating and promoting a brand's unique identity and value. A strong, memorable brand is often linked to a story. A brand story basically tells the customer who and what the brand is. It endorses the validity of corporate beliefs,

philosophy, vision and brand spirit to customers (Vincent, 2002). Therefore, storytelling seeks to align brand expression with its perception. Storytelling strategy should utilise an integrated approach such as websites and online promotions; brochures, leaflets, newsletters, postcards, brand giveaways, promotional items, exhibitions, trade shows, point of purchase, community events, posters, signage and stickers, press and media coverage. In order to yield profitable results, staff should be educated on how to interestingly share a unique story about the crafts of their brands through seminars and in-house branding catalogues. This will support staff more effectively in delivering internal messages and improve and coordinate the planning and delivery of communications from all departments to customers.

## **Flagship stores**

Flagship stores in major cities are a medium of expressing the brand's essence. Through observation, flagship store strategy provides the opportunity for brands to reveal their cherished vision and philosophies to customers, not in a two-dimensional form, but rather a three-dimensional form where the customer embraces brand philosophy – provided through well-managed stories that are practised in real life situations. This transparency evokes an awareness, value and ultimately loyalty to the customer. Furthermore, it promotes an intimate relationship between the customer and the craftmakers. As a result, the customer understands the craftsman's role in producing exquisite artifacts, consequently promoting brand loyalty. It aids in the aesthetic values of the brand, where artisans are placed on a cultural pedestal to capitalize the awareness in communicating how raw materials are processed and manipulated to attain a finished product. Again, the involvement of master craftsmen exposed to customers, such as the presence of Alexander McQueen doing what he does best in a store, would be a big boost. It reinforces brand attributes and value. A crafting process creates the aura that supports the brand message. A visit to Bentley Motors, flagship store at Crewe brings a deep emotional attachment to the brand. It affirms the brand's value by becoming aware of what goes into a Bentley car. Its master craftspeople, raw materials and quality control mechanisms can only do one thing - that is to increase an awareness and value for such a brand.

This three-dimensional experience considerably adds to the rather limited expression of the brand. The flagship store experience evokes a customer's senses with respect to the making process. The smell of tanned leather, sight of pleasant customised natural dye, feel of sort after the soft North European leather, painstaking sewing to the finished artifact, without doubt creates positive experiences for customers. As customers critically observe, interact, question and are educated by craftspeople on their noble expertise, customers will begin to share a similar relationship with the raw material and finished product; more importantly, the shared understanding of preserving and promoting an ancient, noble practice devoid from the upsurge machine-ability will be established. Such an approach increases profitability, indirectly through effective brand awareness and differentiation, or directly through the understanding of the role of the craftsman and the designer. Most automobile brands such as Bentley Motors Ltd. and Rolls Royce have chosen the path of flagship stores to boost their brand awareness. Flagship stores associate the brand with an inspirational lifestyle that supports sub stores and motivates customers from all walks of life to visit the flagship stores to enjoy the full experience. Furthermore, it adds a touch of sociability and closeness to nature to a brand's persona, projecting a friendly image which is a core component of craft practice. More importantly, the flagship store experience endorses and substantiates some logical value tied to the brand through its power of strategic storytelling. Finally, master craftsmen overseeing important processes and educating new staff acts as a strategy for promoting the culture of quality control which breeds brand loyalty, resulting in an increase in brand equity.

## **Museum**

A museum is a permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purpose of education, study, and recreation as defined by the International Council of Museums in the UK (Museum/statutes, 2009). Museums collect and care for objects of scientific, artistic or historical importance and make them available for public viewing through exhibits that may be permanent or temporary. Liaising with museums in major cities as a brand awareness strategy would certainly have a great impact on customers and provide excellent learning opportunities. Comprehensive collections of brands' antique to their latest artifacts will create an awareness programme in making the customer comprehend how brand

heritage is uncompromised, and its evolution to brand iconic style in response to time. Establishing education programs and activities for a range of audiences, including elite customers and potential buyers, as well as specific professions and academic bodies should be encouraged. Programs for the public may consist of lectures or tutorials by the museum faculty or field experts, films, shows, performances and technology demonstrations. Other modern trends in interactive exhibitions are the use of PowerPoint presentations, or through the web as a virtual exhibit. Playing recorded sounds will also be effective when it is done as practicable as possible. This strategy will promote the platform by which customer and audience could interact with the artefact where appropriate. Furthermore, it will go a long way in wiping the erroneous idea of craftsmen being out of value and practising an outmoded career. Hence, this will encourage the younger generation to willingly take up the expertise of the ageing master craftsmen. As noted, museums assist customers to identify how the brand has moved with time and how long the brand has been affiliated with craft practice. It is a very sure means of creating brand awareness as customers are more relaxed to interact with brand history. The understanding of brand history to its present stage provides immense knowledge for customers on the set of both tangible and intangible associations that make the brand a cult object. They provide the platform where customers can know why brands choose to employ specific tangible and intangible associations as a brand spirit and sidestep others.

## CONCLUSION

Challenges facing the luxury fashion industry, such as the rising cost of raw materials, growing competition and the search for personnel, may be seen as an opportunity. Horatio, a Roman poet, wrote, “Adversity has the effect of eliciting talents, which in prosperous time would have lain dormant.” Faced with the threat of dying skills, it is understandably tempting to batten the hatches and promote an alternative way of making progress. That will, however, be a big blow to the Luxury Fashion Industry and the economy in general. Brands that promote craft will grow stronger and equip themselves to strive in such a competitive market. Promoting craft through storytelling, a flagship store and a museum experience will help build brand equity through increased recognition, awareness and customer loyalty, which in turn helps make an organization more successful.

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# THE MEDIATING EFFECTS OF CUSTOMER RELATIONSHIP MANAGEMENT ON CUSTOMER RETENTION

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## ABSTRACT

*The primary objective of this study was to investigate the influence of service quality, customer satisfaction, customer loyalty and customer value on customer retention via Customer Relationship Management (CRM) performance as the mediating variable at selected motor dealerships in the Buffalo City Municipality (BCM) of the Eastern Cape Province in South Africa. Primary data was gathered using a self-administered questionnaire, with items referring to service quality, customer satisfaction, customer loyalty, customer value, CRM and customer retention. The sample consisted of 252 customers of Toyota, Nissan and Volkswagen dealerships in East London and King William's Town (hereafter referred to as the Buffalo City Municipality (BCM)). Data was analyzed using Structured Equation Modelling (SEM). The application of CRM is fundamental to obtaining the desired results of retaining more customers, in addition to obtaining more profitable customers and using the existing customers as advocates for acquiring new customers and spreading the positive word of the motor dealership outlet. The managers of motor dealerships must understand that managing customer retention in isolation will not generate maximum revenues, margins and profits. Therefore, the profitability of motor dealerships depends particularly on their ability to get existing customers to increase their product purchases or service usage and purchase additional products and/or services (cross-buying). The management of motor dealerships in the BCM must consider the provision of tailor-made products with individual modifications, such as highly individualized auxiliary services, which is important to reduce customer defection. Thus, relationship quality also implies that the management of motor dealerships in the BCM must recognize the individuality of its customers. The efforts of these managers might be rewarded through a careful identification of which customers are prone to stay with a provider and likely to respond to satisfaction improvement efforts.*

## INTRODUCTION

The motor industry is crucial to South Africa in terms of Gross Domestic Product (GDP) and employment. Overall, the automotive industry, including manufacturing, distributing and servicing of vehicles and components - is the third largest sector in the South African economy, after mining and financial services, contributing approximately seven percent to GDP. However, in such a competitive environment consumers today are complicated and have more choices for their financial needs than ever before. This is due to technology, globalization, increased competition and increased consumer mobility which have dramatically changed the manner in which people seek information and purchase services and products. For example, in 2011, South African consumers could choose between approximately 1 390 variants of cars from 50 different brand names (South Africa Info, 2012). Hence, the focus of businesses are now increasingly on appropriate, well-researched and even aggressive marketing to ensure the survival of the business in the face of such fierce competition. Consequently, motor dealerships in South Africa must be able to follow suit and emphasize the significance of customer-centered philosophies and quality management approaches to enhance their competitive advantage. Furthermore, in today's era of intense competition for acquiring and retaining customers, customer retention can become a major issue and a key objective in the motor industry. This is mainly due to the large growing number of motor dealerships which are targeting almost the same cohort of customers, and are above all



equipped with similar levels of technological competencies. Therefore, in the modern marketing era which is highly customer-centric, prioritising customer metrics such as service quality, customer satisfaction, customer loyalty and customer value is a strategic weapon in attracting and particularly retaining existing customers (Trasorras, Weinstein & Abratt, 2009). This paper provides an explanation of the research problem that was investigated and the research objectives, hypotheses and methodology that were followed. Thereafter, the empirical results are discussed followed by management implications and recommendations.

## **LITERATURE REVIEW**

### **Service Quality**

Service quality refers to the degree and direction between customers' expectations and perceptions (Lenka, Suar & Mohapatra, 2009). The nature of service quality is that it originates from the customer's perspective on specific dimensions of service quality. The dimensions that will influence service quality include reliability, responsiveness, assurance, empathy and tangibles. Hence, service quality refers to the perceptions that customers have regarding the quality of services of a specific business with reference to these dimensions (Kuo, Wu & Deng, 2009).

### **Customer Value**

The concept of customer value is critical to CRM. Customer value is described as the economic value of the customer relationship to the business, expressed on the basis of contribution margin or net profit (Reinartz & Kumar, 2006). Businesses must move away from extracting their profits from single transactions to maximizing revenue over a series of transactions. The concept of customer value can be evaluated through a Customer Lifetime Value (CLV) metric (Berndt, du Plessis, Klopper, Lubbe & Roberts-Lombard, 2009). The lifetime value of a customer relationship can be calculated as the net present value of the net profits that can be expected from the customer over the years. This entails the revenues gained from the customers of an business over the lifetime of transactions, after the deduction of the total cost of attracting, selling and servicing customers (Grönroos, 2007).

### **The Mediating Role of CRM Performance**

Wahab and Ali (2009) stated that CRM performance is the success of creating value for customers through businesses with the goal of increasing customer retention, repurchase and word-of-mouth. The consequences of CRM performance have been viewed from two perspectives, namely the behavior of the customer and that of the business. From the customer perspective, CRM performance can increase service quality, customer loyalty, customer satisfaction, customer value and customer retention (Hu, Kandampully & Juwaheer, 2009). From a business perspective, the objectives of customer satisfaction, customer loyalty and commitment or retention as well as cross selling, are also pursued in order to increase long-term yields and relationships (Mithas, Krishnan & Fornell, 2005). CRM initiatives in many businesses have resulted in increased competitiveness through high revenues and low operational costs and such applications also help businesses to assess customer profitability on measures such as repeat purchases, dollar spent and longevity. Moreover, the management of customer relationships can effectively boost customer satisfaction, customer value, customer loyalty and customer retention (Rootman, 2006).

### **Customer Retention**

Customer retention is generally concerned with maintaining the business relationship established between a service provider and a customer (Ndubisi, 2007). Such a relationship can be performed firstly by the customer making subsequent purchases or by extending the customer's contract with the service provider over a specified period of time. Secondly, it is done by the intention of the customer to make future purchases from the same provider, or to refrain from quitting the contract (Jain & Bagdare, 2009). Customer retention has also been expressed in terms of post-purchase intention which is the tendency that customers will purchase the goods and

services at the same shop and deliver their use experiences to relatives and friends through word-of-mouth (Wang, Lo, Chi & Yang, 2008; Wang, Lo, Chi & Yang, 2004),.

## **RESEARCH PROBLEM**

The existing literature has reported that acquiring a new customer can cost five times more than retaining existing customers and a two percent increase in customer retention has the same effect on profits as cutting costs by 10 percent (Ramakrishnan, 2006). In addition, Tsai, Tsai & Chang (2010) commended that in comparison to attracting new customers, a business can spend less on marketing by retaining old customers. Therefore, due to the intensive competitive nature of the South African motor industry, motor vehicle brands usually invest large amounts of money to understand and influence customers in order to retain them and encourage them to spend more and make repeat purchases. However, the relationship between a business and a customer seldom ends when a transaction is made; rather increasingly, the relationship intensifies after the sale. Hence, it is important to note that how this relationship is managed, is critical to its continuation and the absence of sound management leads to the deterioration of the relationship (Trasorras, Weinstein & Abratt, 2009). It is against this background, that the paper proposes that CRM performance must be prioritised towards achieving higher levels of customer retention for motor dealerships in the BCM. Figure 1 illustrates the interrelationships among the variables to be investigated.

## **RESEARCH HYPOTHESES**

- H1 CRM performance strongly mediates the effect of service quality on customer retention for motor dealerships in the BCM;
- H2 CRM performance strongly mediates the effect of customer value on customer retention for motor dealerships in the BCM;
- H3 CRM performance positively influences customer retention for motor vehicle dealerships in the BCM;

## **RESEARCH METHODOLOGY**

The study was conducted in East London and King William's Town, the two largest towns of the BCM. The unit of analysis under study was motor vehicle dealerships in the BCM, focusing on Toyota, Nissan and Volkswagen dealership brands that have dealerships in East London and/or King William's Town. All the dealerships of the selected dealership brands in the BCM were approached irrespective of sales turnover, number of staff employed, and number of stock at hand. The only criterion was that the dealership needed to be part of the selected dealership brand, that is, Toyota, Nissan and Volkswagen. Therefore, the population elements included customers of Toyota, Nissan, and Volkswagen dealership brands in the BCM. Since the elements of this study are customers, the researcher made use of the motor dealerships' customer database. The customers should have used any of the motor dealerships' services under study and understand the concept being measured. The sampling techniques used in this study included stratified random sampling and simple random sampling. A probability sampling approach was followed, mainly because the procedure is objective in that the probability of selection will be known in advance for each population unit (Parasuraman, Grewal & Krishnan, 2007). Thus, the researcher played no role in determining which specific population units should form part of the sample. As a result, the stratified random sampling technique was used to select the respondents. In this study the two main strata were grouped and divided in terms of location, that is, East London and King William's Town customers. Secondly, substrata were formulated according to the dealership brand name, that is, Toyota, Nissan and Volkswagen. After segmenting the population elements into exclusive groups, elements were then selected from each stratum through a simple random sampling approach. A total of 252 questionnaires were completed.

A quantitative research design was used for this research study. Self-administered questionnaires were used to collect the data. The questionnaire used for the study comprised of Likert scale statements. The questions were weighed on a 7-point scale where the respondent was given a continuum of labeled categories that represents the range of responses varying from 1 = strongly disagree to 7 = strongly agree. Questionnaires were personally distributed to respondents visiting the motor dealership's site. Before the main fieldwork, the

questionnaire was pretested amongst 15 respondents. These respondents were from the target population located in both East London and King William's Town, since it is advised to use similar respondents to those who will be included in the survey (Malhotra, 2009). Structural equation modelling (SEM) was used to measure the relationships between the independent variables and dependent variables simultaneously in order to test the theoretical model of this study (see Figure 1). SEM was the most appropriate analysis method as it produces comprehensive overall goodness-of-fit. In other words, through a confirmatory approach, the theoretical model of this study was tested using SEM to determine if the pattern of variances and co-variances in the data was consistent with the structural or path model specified in the study. In addition, SEM enabled the accommodation of measurement errors and incorporated abstract and unobservable constructs. Finally, SEM helped accommodate and test multiple interrelated dependence relationships in a single model which could not be done by other multivariable techniques (Hair, Anderson, Tatham & Black, 2006). The SEM in this study was performed using Analysis of Moment Structures (AMOS) version 17. AMOS was also used to calculate the Cronbach alpha coefficient values, conduct a Confirmatory Factor Analysis (CFA) and a One-Way Analysis of Variances (ANOVA).

## FINDINGS

### Reliability Testing

**Table 1: Construct reliability**

Construct	Cronbach Alpha value	Average variance extracted*
Service quality*	0.94	0.85
CRM performance*	0.91	0.87
Customer loyalty	0.91	0.86
Customer satisfaction	0.92	0.84
Customer value	0.87	0.80
Customer retention	0.87	0.83

*\*Summated scales*

The structural model of the mediating effects showed evidence of acceptable model fit based on the assessment of the overall fit statistics illustrated in Table 2, which shows that the model significantly fits to the data. This has been assessed through the Cmin/df value of 2.73 which is below 3, GFI of 0.82 (close to 0.9), AGFI of 0.80, as well as the RMSEA estimate of 0.088 which satisfies the threshold of 0.08 (Hair et al., 2006). Moreover, all the model comparison indices (TLI, CFI and TLI) satisfy the threshold estimate of 0.90, which indicates a good model fit. Having satisfied both the stages of structural equation modeling (that is, testing the fit and validity of both the measurement and structural models) it was then necessary to proceed with testing the hypothesized relationships. This is illustrated by Figure 3.

**Table 2: Goodness-of-fit results for the structural model**

Goodness-of-fit measure	Result	Goodness-of-fit measure	Result
<b>Model fit</b>		<b>Model comparison</b>	
$\chi^2$	603.307	Tucker-Lewis Index (TLI)	0.912
Degrees of freedom	221	Normed Fit Index (NFI)	0.885
p-value	.000	Comparative Fit Index (CFI)	0.923
Cmin/df	2.730		
Goodness-of-fit Index (GFI)	0.816		
Adjusted GFI (AGFI)	0.770		
RMSEA	0.088		

For the purposes of this study, construct validity was first examined for the measurement model and the same procedure was then done for the integrated structural model.

**Table 3: Hypothesis testing based on the structural model of mediating effects**

Hypothesis	Correlation between variables	Estimate	S.E.	C.R.	P-value
H <sub>1</sub>	Customer retention ← CRM Perf ← Service Quality	.541	.111	4.868	.000***
H <sub>2</sub>	Customer retention ← CRM Perf ← Customer Value	.386	.086	4.508	0.000***
H <sub>3</sub>	Customer retention ← CRM Performance	.884	.070	12.657	0.000***
	Customer loyalty ← Customer Satisfaction	.700	.050	13.970	0.000***

\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.001$

*SE: standard error, CR: critical ratio, Estimate: standard regression weight, CRM performance: Customer Relationship Management performance.*

*Note: Highlighted section indicates a post hoc analysis that was important to explain the insignificant result of H<sub>2</sub>.*

**Hypothesis 1:** CRM performance strongly mediates the effect of service quality on customer retention for motor dealerships in the BCM

The structural equation modeling results in Table 3 indicate that the standardized regression weight estimate of the mediating effect of CRM performance on the structural path between service quality and customer retention was positive at 0.541 and strongly significant ( $SE = 0.111$ ,  $p = 0.000$ ). In other words, one unit increase in CRM performance will result in a 54.1 percent increase on the influence of service quality on customer retention. This indicates that hypothesis 1 is supported by the data and it can be concluded that H<sub>1</sub> is accepted and the null hypothesis (H<sub>10</sub>) that “CRM performance insignificantly mediates the effect of service quality on customer retention for motor dealerships in the BCM.” is rejected.

**Hypothesis 2:** CRM performance strongly mediates the effect of customer value on customer retention at selected motor dealerships in the BCM.

The SEM results in Table 3 indicate that the standardized regression weight of the mediating effect of CRM performance on the relationship between customer value and customer retention was positive at 0.386 and strongly significant ( $SE = 0.086$ ,  $p = 0.000$ ). In other words, a unit increase in CRM performance enhances the influence of customer value on customer retention positively by almost 39 percentage points. This indicates that hypothesis 4 is supported by the data and it can be concluded that H<sub>4</sub> is accepted, but the null hypothesis (H<sub>40</sub>) which states that “CRM performance insignificantly mediates the effect of customer value on customer retention for motor dealerships in the BCM” is rejected.

**Hypothesis 3:** CRM performance positively influences customer retention at selected motor dealerships in the BCM.

The mediating effects of CRM performance reported on H<sub>1</sub> and H<sub>2</sub>, above are known as partial mediation. However, the final hypothesis of this study examined the composite or total mediating effects of CRM performance between all independent variables (service quality, customer satisfaction, customer loyalty and customer value) and the dependent variable – customer retention, known as full mediation. As illustrated in Table 3, the results of SEM show a highly positive standardized regression weight of 0.886 and a strongly significant relationship ( $SE = 0.07$ ,  $p = 0.0000$ ), indicating that hypothesis 4 is fully supported by data. That is,

one unit increase in CRM performance results in approximately 90 percent increase in customer retention for motor vehicle dealerships in the BCM. Hence, it can be stipulated that hypothesis 4 is supported by the data and it can be concluded that  $H_4$  is accepted. Therefore, the null hypothesis ( $H_{4_0}$ ) stating that “CRM performance has an insignificant influence on customer retention for motor vehicle dealerships in the BCM” is rejected.

## MANAGERIAL IMPLICATIONS

For motor dealerships in the South African motor industry, customer relationship managers benefit from a thorough understanding of the various factors that drive retention. The customer satisfaction and relationship marketing literature only suggests three predictors of retention, namely overall customer satisfaction, affective commitment, and calculative commitment (Aurier & N’Goala, 2009). From the analysis in this study, it is evident that service quality, customer loyalty, customer value and customer satisfaction are important drivers of customer retention. It is also important for motor dealership managers to know that the usage of Relationship Marketing strategies, particularly CRM, is fundamental to obtaining the desired results of retaining more customers, and not only the recruiting of more profitable customers and using the existing customers as advocates for acquiring new customers and spreading the positive word of the business.

This research also seeks to advise motor dealership managers, especially brand managers, on how consumer beliefs and brand attitudes or services influence customers’ subsequent purchasing behavior. Thus, an in-depth investigation into the attitude of customers will also help motor dealership managers to identify why and for what reasons customers purchase their products/services as well as competitors’, and also help them determine the strengths and weaknesses of their products or services. By doing so, managers will be equipped with best practices that yield more positive attitude from customers, which ultimately enhances repeat purchase behavior. In this case, there might be a need to investigate what competitors are doing or offering, and if practical competitive counter-offers such as great service or car sale deals, mark-down prices or targeted discounts, can be provided. Another important implication evident from this study to managers is the need to control misalignments in the satisfaction– retention relationship. Marketers must realize that customers are not similar, and cannot be satisfied at the same levels; some are just satisfied, while some can be completely satisfied (delighted) (Wahab & Ali, 2009; Weinstein, 2002). This enables relationship managers to understand the effects of customer satisfaction on retention beyond inherent differences in customers’ propensities to churn. Similarly, not only are some customers predisposed to stay or to churn, but they are also sensitive to changes in customer satisfaction (Clancy, 2010; Gustafsson, Johnson & Roos, 2005). The efforts of managers might be rewarded through a careful identification of which customers are prone to stay with a provider and likely to respond to satisfaction improvement efforts. In other words, there is need to understand that satisfaction alone has low impact on customer retention, therefore focus should also be extended to other exogenous factors (such as customer value) which affect both attitudinal and behavioral components.

Another strategy available for motor dealership managers is the provision of tailor-made products with individual modifications, such as highly individualized auxiliary services, which are also important to reduce customer defection. Thus, relationship quality also impedes motor dealership management to recognize the individuality of its customers. Managers’ efforts might be rewarded through a careful identification of which customers are prone to stay with a provider and likely to respond to satisfaction improvement efforts. In addition, the service management in motor dealerships should be aware that competition increases customers’ propensity to seek a variety of services or product offerings. Hence, in their customer retention efforts they should pay more attention to the ways of lessening the variety-seeking syndrome, and this can be achieved by increasing their one-on-one interactions with customers. Finally, managers of motor dealerships must understand that managing customer retention in isolation will not generate maximum revenues, margins and profits. In other words, the profitability of motor service dealerships depends particularly on their ability to get existing customers to increase their service usage and purchase additional products and/or services (cross-buying). In order to accomplish this, relationship managers must strive to convert transactional interactions into long-term collaborative partnerships through CRM activities. Thus, trust, commitment and relationship satisfaction are important value drivers for customer retention for motor dealerships in the South African motor industry. Motor dealerships should therefore be aware that by reinforcing the continuity of relationships as revealed by trust, commitment and relationship satisfaction (performance measures of CRM), service quality, customer

satisfaction, customer loyalty and customer value can have a significant impact on repurchase intentions and profit maximization in the long run.

## CONCLUSION

The major aim of this study was to empirically investigate the influence of independent variables, namely customer satisfaction, customer loyalty and customer value on customer retention as the dependent variable via CRM performance as the mediating variable focusing on motor vehicle dealerships in the South African motor industry. Based on the empirical findings, the normative model of mediating effects was found significant (except for the customer satisfaction – customer retention link), and the relative influence of CRM performance as a mediator variable on customer retention was found to be strongly significant. This analysis concluded and proposed a model that postulated that customer evaluation metrics have the greatest influence on customer retention, indirectly through CRM performance, for motor dealerships in the BCM. In essence, motor dealerships should be aware that reinforcing the continuity of relationships as revealed by trust, commitment and relationship satisfaction (performance measures of CRM), service quality, customer satisfaction, customer loyalty and customer value can have a significant impact on repurchase intentions and profit maximization in the long run.

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# TECHNICAL AND COMPETITIVE INTELLIGENCE ROLE IN BUSINESS MODEL

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## ABSTRACT

*Competitive Intelligence and Technology play a decisive influential role on the design of business and strategy formulation. This work seeks to characterize the role of Competitive Intelligence (CI) and Technology (TCI) to build the business model of one of the most important and internationalized wine-producer in Brazil, with branches in Argentina, Chile, Portugal and Italy. The main results indicate the CI and TCI play distinct roles in building the business model that essentially considers the company's technological expertise as an argument to the business model, leading TCI to play a more prominent and fundamental role to the company than CI role.*

## INTRODUCTION

Intelligence in the modern era has been institutionalized as a military discipline, more formally by countries involved with the world wars. The intelligence services strengthened between the U.S.A and Russia during the the Cold War until the late 1980. Intelligence then, was gradually transferred to businesses, but became widespread as competitive intelligence, only in the mid-1990s. Since then, it follows a path of consolidation of its role and functions within the business world. In its early years i business, intelligence bared a technical function to provide and accumulate information to support corporate decision making. More recently, it became an institutional mechanism to prepare and develop human skills to help business compete more effectively. In this new scenario, the Competitive Intelligence, now supported by IT structures, gradually takes the place of the information systems, driving the formulation of corporate and competitive strategies.

Since the 1980s the debates around issues that should concern to CI have grown due to the increasing critical importance of CI in supporting decision making process in companies. A more consistent body of knowledge on CI, however, came to be noticed only in the beginning of the 1990's. Specialized literature built through the work of renowned authors on CI, such as Fuld (1995), Tyson (2002), Kahaner (1996), Herring (1999), Prescott & Miller (2002) contribute to accumulate knowledge on Competitive Intelligence from empirical work, originated mainly through consultancy work.

Technical or Technological Competitive Intelligence (TCI) demonstrate value and greater usefulness as Chesbrough's (2003); (2007), Santos, Doz, Wiliansom's (2004) concepts – and other contributors – on open innovation reached world attention. Chesbrough argues that companies can no longer rely exclusively on research and development carried out within walls, because of the high costs of development and the shortening of the life cycles of technologies, products and markets. Santos, Doz, Williansom (2004) point out the needs to see the world as a large innovation farm. Executives must then have open mind to innovation and be acquainted that global knowledge pockets are scattered all over the world. They must find them to access innovation to consolidate competitive advantages and profit on technical novelties.

In the selected case study, Valduga House is a winery, established in 1875, by the first immigration lots of Italian coming to South of Brazil. Originally focused on farming grapes with high yield per farmed area and, therefore, concentrated almost exclusively on grape juice production, the Valduga House has been distinguished itself for the quality of wines – red, white, and sparkling wine - produced in the last 20 years. Today, Valduga is international in scope recognized by the excellence in quality of its wine portfolio. Much innovation has



happened at Valduga House lately, where quality and excellence of both, grape juices and wines, became the main focus of the House. Business innovation promoted lately, launched Valduga House in the national and international markets. One may notice that from the point of view of innovation as the business foundation, a competitive strategy considers technological dominion as its basis. Without technology dominion, it is impossible to establish a corporate strategy aligning internal resources and capabilities to sustain business success. Thus, the two systems (CI and TCI) become supporters of the today business success. Competitive Intelligence focuses on the business as a whole, that is, a search and appropriation system of internal and external information, bolstering the decision making and the competitive strategies formulation process. Technical Competitive Intelligence, on the other hand, focuses technology dominion to support internal operations (production and administrative), the advancement of technical knowledge and changes coming from radical and incremental advances.

If we accept that innovation is critical to sustainability and expansion of business, then we might accept the premise that information on corporate resources and capabilities, combined with external information, on the competitive sector environment are also essential to guide technological dominion strategy and the formulation of effective competitive strategies. In a company where tacit knowledge and technological dominion are essential for business success, the intelligence systems become indispensable.

The research question that could be inserted here is what is the role of the competitive and the technical intelligence to cast the business model? To do this we study the characteristics of the intelligence in the Valduga House and its alignment with business strategy in order to determine the role of competitive and technical intelligence and its implications for the business model of the firm. Therefore, in this work, we intend to identify the characteristics, structural positioning and role of competitive and technical intelligence to identify the implications for the business model adopted in the company studied. To study the role of intelligence in its two basic formats in the firm is relevant scientific and technical level because of the nature and importance of the relationship between intelligence strategy in the enterprise and business strategies. From the scientific point of view, this work can contribute to advancements of the knowledge on the CI and CIT systems that support market penetration of the company, based on experiential and osmotic learning of the most advanced technologies of wine production. Another possible contribution of this work involves the scientific description of the competitive and technical Intelligence as managerial mechanisms of knowledge-based processes that induce to the possible results/theory that contain a challenge to the established theory, such as that decision-making and strategy formulation are essentially contingent to merely rational processes. From the technical point of view, this work can contribute significantly to the development of models and technical intelligence systems that most closely fit to the technology dominion base of the company. This CI and CIT function would allow the company to decide more appropriately on resources allocation and capabilities development that matter most directly to the goals of the business.

## **THEORETICAL PRECEDENTS**

### **Competitive Intelligence**

By worldwide historical reports, CI came up to light in business around the end of the Cold War (GOMES, Braga, 2006). The pioneers of the CI, coming from various governmental intelligence organizations, found in the business arena a field where they could benefit from professional skills and help, through the knowledge of intelligence process practice, collect and process information to business interest, in an ethical and legal way. Companies that use the concepts of intelligence to gather and use information could now find a way to gain considerable competitive advantage in their operating environment (GOMES, Braga, 2006, PRESCOTT, MILLER, 2002).

Due to the military heritage, CI activities were stigmatized in the field of administration. Public opinion continues to relate the term 'intelligence' to secrecy, confidential, secret agents and espionage (PRESCOTT, Miller, 2002). Thus, in the early years of transition of the CI to the business world, articles and reports on information and competitive advantages derived from CI, approached CI functions closed to the leakage of information, bribery, coercion and industrial espionage concepts, among others (Miller, 2002). Although a good deal of people now hold a better understanding on the role of CI in decision making process and strategy

formulation, it's still important to clarify that CI, in companies, is not rooted in acts of espionage or theft of information. The object of the CI is private or public cognitive bases of information, publicly accessible, that can be used in legal and ethical ways (Fuld, 1995). The Strategic Competitive Intelligence Professionals - SCIP defines CI as a systematic, ongoing, legal and ethical program for gathering, analyzing and managing environmental information that might affect plans, decisions and operations of a company (SCIP, 2010). Aligned with this concept, Comai (2004) and Cole et al. (2006) add that CI should be practiced under ethical and legal norms and integrated into the decision-making process to achieve the strategic goals of an organization.

The Brazilian Association of Competitive Intelligence Analysts - ABRAIC understands CI as an informational process that drives managers to make better decisions, whether strategic or operational (ABRAIC, 2010). Combs (1992) introduces new elements in the concept when he defines CI as an analytical process that reflects the position, performance, capabilities and intentions of competitors and transforms information into relevant intelligence to the strategic knowledge.

The specialists in CI subjects agree that the object of the CI is the information relevant to business competition. However, the rule is not to steal the secrets owned by competitors, but rather to collect information in a legal and systematic way, building a large information base that could provide a broader understanding of the structure, culture, behavior, strengths and weaknesses of competitors (Combs, 1992; Weiss, 2002; Tyson, 2002). In sum, CI is a system to process information targeted to the interests of decision makers, that will enable the company to be abreast and ahead of competitors (Coelho et al., 2006). As the importance of CI increases in organizations, there is also a significant increase in the practice of CI in the last decade (Coelho et al., 2006) due mainly to the multiplication of public sources of scientific, technical and economic information. Miller (2002) and Fuld (1995) call the attention to the fact that CI is not unique to large multinational companies. Rather, the CI is of equal usefulness to small and medium sized companies since, as organizations, they need to build competitive advantage.

The CI in organizations assumes distinct role as it works under specific functions (Rodrigues, 2012) in organizations. In general, two purposes distinguish the two distinct roles. One purpose serves the administrative structure of the organization and the intelligence functions are embraced by the term Competitive Intelligence. The subjects are information on competitors, environmental scenarios, industrial sector behavior, market and market segment behavior, social and technological trends and the likes. The other purpose serves the technical or Technology Development structure of the organization, mainly New Product Development, R&D, Production and similar.

In fact, the operating structure that supports these two purposes is basically the same. Obviously, the subjects and the cognitive sources of information are distinct, in terms of its contents. In the process of CI, the nature, objective and users of the demands (step (I) in Figure 2) are different. Also the cognitive sources and contents in step (III) Figure 2 are technical, rather than administrative. And in steps (V) e (VI) the product is technical in nature, and is delivered basically to the expert and technical structure, rather than to the administrative structure.

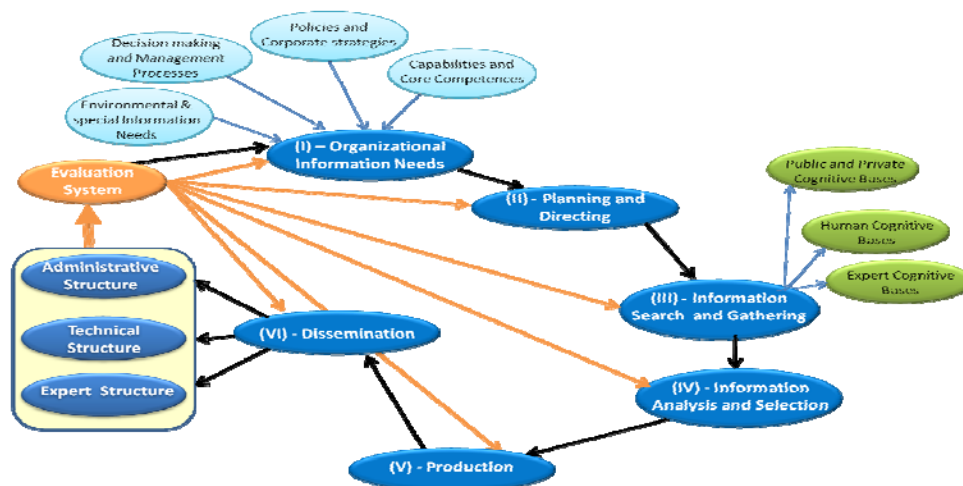
## **Competitive Intelligence System and Process**

To develop a competitive intelligence system - CIS in an organization it is necessary to build a structure to support the management and the coordination of such a system (Sammon et al., 1994). The creation of a CIS will bolster the information to be disseminated quickly and safely through all hierarchical levels within the organization, thereby reducing uncertainty and risks of failure in the decisions made (Balestrin, 2001).

For Kotler, Armstrong (1993), an intelligence system must first identify the critical types of competitive information and the best sources. Next, the system must continuously gather information from the environment and from public data bases. Then, it needs to evaluate the validity and reliability of the information, interpret it, organize it properly, and send the best information to the various organizational levels in order to support decision making process. According to Fuld (1995), the CIS is not just a set of data collection techniques that aims at answering one specific question but rather a set of systematic processes that organizes all types of information collected. Within this concept, requirements for the construction of a CIS refer to the provision of

financial resources, human, and information technology (BATTAGLIA 1999). As decision-makers need to be well informed about key issues involving the company's business, it is necessary a systematization of the intelligence process. Herring (1999) proposed a process cycle of four stages. This process, later on, has been taken up and extended by Miller (2002), turning it into a five stages process: (1) **Planning and directing**: defines the concentration of the collection and its implementation. Identifies key people interested in the subject who could be decision makers disperse across the entire enterprise; (2) **Collection**: consists of the collection and categorization of data of facts related to the external environment of a company, thus becoming information; (3) **Analysis**: regards the analysis and synthesis of information to create intelligence; (4) **Dissemination**: refers to disseminating information among decision makers; and (5) **Monitoring**: refers to controlling or maintaining continuous attention to the cognitive external and internal sources in order to identify trends and to correct diversions. Figure 1 shows Herring's (1999) CI cycle, expanded by Miller (2002), in organizations.

For Correia (2006), the process cycle of the CI is developed from the identification of business information needs across the organization or specific sectors. Complementing Correia (2006), Rodrigues & Riccardi (2007) advanced the process model, under the classical premises of CI. However, Rodrigues (2012) model shows the latest advancement in this model and is used here to support the studied case (Figure 2).



**Figure 2: Competitive Intelligence Process**

**Source:** Inputs from CORREIA, C.C. (2006). Getting Competitive. *Library Journal*, v.131, n.7, p.53.

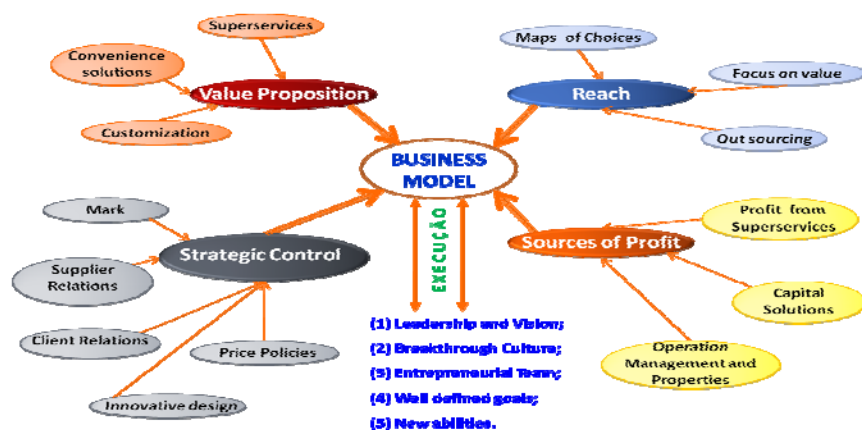
According to Rodrigues (2012) model, after the organizational needs identification (I), the prospection work must be planned to assure effective directing (II). To meet applicants' needs CI people should seek the information by prospecting it in public, private, human and expert cognitive sources (III). Once data are collected, it needs to be analyzed and selected (IV) to the needs of the organization's demand. The process of analysis and selection leads to the generation of an intelligence product (V) and should be spread out (VI) to specific applicants of the organization. Applicants should then provide feedback to the CI system to adjust processes or redirect information prospection to deliver more appropriate information to the needs of users. It is rather evident that if decision makers and strategists, feed by a formal and efficient CI system like the one shown in Figure 2, may do a better job in their function. It is also understandable that organizational information needs, thus feed, can be of great influence in the development of the organization's business model, corporate policies and guidelines, administrative processes, technology dominion and incorporation of innovation, which cast the profile of the business and its performance.

## Business Model

There is a great deal of discussions on the issue of the precedence of business model or competitive strategy to business performance. Hamel (2000) argues that business model should precede the business strategy. Porter (1996) assumes that business is in place and a strategy should be developed to increase efficiency and

competitiveness. Applegate (2000) says that business model refers to the structure of the flow of products, services, information and role of constituents that characterizes the specific value chain in an organization.

On the other hand, Bovet & Martha (2000), rationalizing on the value of networks, propose a more comprehensive business model, that we use here as a theoretical fundament for the objectives of this work. Bovet & Martha business model is based on four dimensions and one way of execution as shown in Figure 3.



**Figure 3: Business Model**

Source: Bovet, D. Martha, J. (2000) *Value Nets*. New York: John Willey & Sons.

Applegate's (2000) business model, in spite of not being as comprehensive as Bovet & Martha (2000), shows the importance of the information in the operation of the business. However, it is intuitive the needs for external and internal information to build and support the dimensions (value proposition; reach; profit zone; and strategic control) of Bovet & Martha (2000) business model. For example, value proposition requires at least information on the market segment values, culture, behavior and competitors strategies to decide what and how would be the value proposition. To establish the reach, one will need, basically what are the market needs or opportunities to be considered, to decide on map of choices and values to be focused. Strategic control requires internal information, self and competitors' strengths and weaknesses and market perceptions on mark and the company image. It is understandable the implications of a Competitive Intelligence System in building own business model.

## METHODOLOGY

To achieve the objectives of this research we sought to analyze the role of Competitive and Technical Intelligence in the Valduga House management system, through the case study method. Research situations leading to the pursuit of "how" and "why", according to Yin (2005) are suitable for the case study method use. This is exactly the situation in perspective for this research. In essence we seek to identify how CI and TCI influence the profile and the rationale of the business model at Valduga House.

The extrapolation of theoretical contents from a case study according to Pozzebon; Freitas (1998) and Eisenhardt (1989) understandings, may be performed, depending on the technique used to collect information in the collection phase, in the analysis phase and in the data interpretation phase. To this end, we used the protocol of case study process, adapted from Gordon (2001) synthetized into four steps: Description (data collection); Diagnose (problem or success causes identification); interpretation (analysis of cause and effect under theories); and Prescription (lessons learned and ways to change).

Data collection was accomplished through personal interview with Valduga's chief executive, Mr. Juarez Valduga, besides production director, logistics, development and marketing. The interviews were recorded and transcribed for later analysis. Analysis and interpretation of data collected were performed by the technique of content analysis.

## DATA ANALYSIS AND RESULTS

Since middle of the last century Valduga House leads wine makers community members to increase quality and adopt new technology in wine producing. In Valduga's community most families descends from Italian immigrants, which in its origin in Italy were poor and holding low educational degrees. They came to Brazil with the sole purpose of surviving. They lived from land products and exchanged goods and products through bartering. The innovative spirit of Valduga House first appeared when the father of the current generation of Valduga's owners sold grape to a regional large juices producer, back in the 1950. At Valduga's House then, to grow and to sell grapes became a business. To study the case, addressing the factors that support business profile at Valduga House, we interviewed at different opportunities, three people considered strategic in the company: the General Director, Mr. Juares Valduga; the director of marketing, Mr. Fabiano Olbriech; and the director of Valduga's subsidiary, Domno Brazil, Mr. Jones Valduga. The House family history and the innovative spirit incorporated in the business has been the approach focused by Mr. Juares. Market positioning and market strategies of the business, was the main focus of Mr. Olbriech, and the structure, the role of quality and the strategic controls used in the business were a major care of Mr. Jones.

## **A Summarized history of the House**

Valduga family came to Brazil in 1875, fleeing from a pre-French Revolution, in times where misery and famine raged in Europe, especially in Italy. Italian immigrants in Brazil did not found better infrastructure solutions than they had in their homeland but, at least, there were large pieces of land they could cultivate. In the early years they did only subsistence agriculture, growing corn and vegetables (potatoes, zucchini, etc.) And beef cattle (pig, cattle, chickens). With land and favorable climate, however, the seedlings of grapes, brought by senior Valduga in his pocket, sprouted and became the way of life of the many families of the community.

The species of grapes grown in those early years were not suited for quality wine production (Isabel grape is suited for table consumption and for juice production). The grape was then domestically consumed and not sold or exchanged in any way. It was not until around the 1950s that the grape was transformed into economic value by product family. The increase in production and quality of the grape allowed the Valdugas to sell it to a local grape juice producer. So, the family business began. In spite of working with one type of grape not much suitable for wine production, the Valdugas initiated a home wine production, for self-consumption and for eventual bartering. Producing and selling wine was not yet the main focus of the Valduga's economy.

The Valduga's changed the business model in order to produce sparkling wine and high quality white and red wines and enter the international market. The first step was to change the business orientation was to change the traditional way of growing grapes to a vertical vineyards, so grapes would be expose to higher and longer periods of sun light, increasing sugar content, and allowing to generate higher quality wines. The second step was the diversification of crop varieties, introducing grapes such as Merlot, Cabernet-Sauvignon, Chardonnay, Sauvignon, and others. And the third step was to expand the plantation area by acquiring new lands suitable for special grape growth.

Today the family business is managed by a Holding (Valduga's Holding), which controls four distinct business: (a) Valduga's House, which is the core business of the family, producing fine table wines and sparkling wines, since 1973, (b) the House of Wood, integrated in 1990, produces fine jellies, using grape variety such as Cabernet-Sauvignon, Malbec and Merlot. It also produces grape juice and holds attached a gourmet restaurant to try recipes of foods to harmonize with the distinct wines produced by Valduga's House; (c) Valduga's Village, established in 2005. It is a hostel house and cares for tourist-related events, such as harvest festival, tour and tasting the food of Valduga's House restaurant; and (d) Domno Brazil, established in 2008, commercializes imported wines, mainly from South America, in the Brazilian market. The Domno also makes sparkling wines, using the Charmat method for sparkling wines. Domno purchases grapes from small local producers and vinifies it in the Valduga's House production equipments.

In the last decade, a new family's generation occupied functions in the business. Domno Brazil, for example is managed by Jones Valduga, the son of John Valduga, one of the three starting brothers. Valduga's House started up the first steps in the international market lead by Edward, son of Juares, who lead the production of wines from "terroirs" of countries in South America (Argentina and Chile), and in Europe (Portugal and Italy), by renting the crops of local houses. The wines thus produced are marketed under the brand

MUNDVS of Valduga's House allowing it now to export wines for 13 countries in the world, including North America, Europe, Eastern Europe and Asia.

## Roles of Competitive and Technical Intelligence

The information system of the House is critical to support the dynamics of the business as a whole. Most attention is paid by Valduga's executives to internal communication. They believe that clarity of purpose is effective only if objectives and goals are properly communicated. Valduga's senior executive is very strict on this principle, which is facilitated by the organic structure of the company. The perception of what intelligence is, and what are its functions in the business, is best expressed in the words of Mr. Jones, Director of Domno Brazil:

*We still do not have a competitive intelligence in the strict sense of intelligence. We want to communicate well to all our employees and we are very aware of two things: what the experts say here in our company, in terms of technology, and what we "hear" from the market, in fairs, and from the people who visit us ...*

It seems clear the higher sense of Valduga's adaptation to market expectations. The answers also seem to be approached from the technology side, not the transaction processes. The attention to external technology-based information observed all across the company reflects the concept of intelligence, that is, Technical Competitive Intelligence. The search and selection of information is focused on the identification of technological innovations best suited to solutions to market demands that could refine Valduga's wine production processes and ensure quality improvements.

*"We are always looking for new products, equipment, technologies that push us to the edge in this industry. The Valduga's mark is recognized for being a pioneer in technology ... "* adds Mr. Olbrich, Valduga's Director of Marketing. It seems quite apparent that the technical competitive intelligence occupies a more prominent role in conducting the wine business at Valduga's. The needs for external information to model the business decrease in importance compared to the needs of technical information to support product and process quality. At Valduga's, the format of the business transaction is defined, that means, wines and sparkling wines are to be sold only in wine and sparkling wine specialized stores, and directly in restaurants. Thus, the role of competitive intelligence is restricted to wines sales and pricing policies information of competitors, and more specifically, marketing information such as: standards of acceptance of wines and sparkling wines by consumers; regions of greater consumption; types and tastes of wines sold by market segments; seasons of greater sales; etc.

As stated by Mr. Jones, both the competitive and technical intelligence, although the latter have a greater role in the present day to day business at Valduga's, are informal. More systematized information, related to the sector's competitive environment and Valduga's market segment are collected, analyzed and selected by the Marketing area that disseminates it to top management. Information related to innovations and technologies available can be collected by any individual within the House, but are necessarily transmitted to the senior management, who concentrates the decision-making power.

## Implications for Business Model

To characterize the implications of competitive intelligence on Valduga's business model, it is necessary to frame the basic elements under our business model option (Bovet & Martha, 2001):

(a) **Value Proposition** –At Valduga's House there is a perfect consciousness that quality is essential to Valduga's products acceptance and tag consolidation. Quality of wines and sparkling wines is the most valuable product attribute offered to market. The value of protecting and maintaining quality in order to associate or transfer to the company's mark drives all corporate strategies, including innovations hidden to consumers, such as grape growth processes, maceration, winemaking, filtering etc., up to market management policies, such as, exclusive distribution through wine specialized stores or straight through renowned restaurant, as well as premium price policies. This business vision is transparent in Mr. Juarez words about what he thinks is the value behind the business: *"quality to us is everything. We do nothing that could jeopardize the quality of our wines; no new investment, no change in the company...This is not good for Valduga's House, for our trade mark..."*

(b) **Reach** – Wine business market is diverse and large, showing clear trend to increase consumption worldwide. Consumer's segments are equally highly segregated and generally much more attentive to price

policies as a quality indicator. Not to dissociate Valduga's name from product quality, the company decided to establish a premium price policy for its products. At Valduga's House the map of choices does not hold leeway, because the superservices value depend on the wine quality. To increase the choice map, however, Valduga's established another company (Domno Brasil) to take care of the imported wines segment. This distinction is well pointed by Mr. Jones, when he reminds that: "our business (at Domno) and Valduga's business are distinct. At Valduga we need to have a strong control on what we do, that means, we would not (and want not) make quality mistakes. Here, on the other hand, we can experiment alternatives. If we fail, Valduga's business would not feel the consequences..."

(c) **Profit zone** – Valduga's profit zone comes straight from its value proposition (superservices), combined with market segment where the company operates. Since Valduga's produces high quality wines, well above the average of the South American imported wines, Valduga's applies a premium price policy to its products. The policy become a discriminant of A and B class target segment, easily absorbed by this market. This price policy warrants enough profit to keep Valduga's loyal to value proposition: the quality of product.

(d) **Strategic Control** – Valduga's executives believe that the name Valduga is the most valuable asset they consider as critical for strategic control. However, this mark is supported by a set of elements that makes the basis of Valduga's technological domain. Three areas are the most critical. First one is the land with favorable climate for grape varieties adaptation added of growth technology (sun light, reconversion of vineyard). Second one is absolute dominion of winemaking processes, from grape harvesting, to maceration, fermentation, filtering, maturing and bottling. Third one is the use of equipment and inputs of high performance in production processes. At Valduga's these elements are transparent in the manipulation of pure strain of high performance fermentation, or at use of isobarometric filter press to guarantee the quality of filtered wines.

(e) **Execution** – In the conception of Bovet & Martha(2001) of a business model, the ideal execution requires, at least five institutional implementing elements: leadership and vision, breakthrough culture, entrepreneurial team, simple goals and new abilities development. All these requirements seem to be covered at Valduga's House, but the key element seems to be the visionary leadership of Mr. Juares. Mr. Olbriech, Director of Marketing, asserts on this subject matter: "...we need to constantly push him (Mr. Juares) down to hearth. He is always pushing the business with his ideas, new acquisitions, and instinct to show trends...but some times, we need to be more conservative to stay loyal to the core of our business...". The attendance of directors and higher employees of Valduga's House at the two restaurants (Valduga's House and Wood House restaurants), for instance, targets at collect feedback of these people on tastes of dishes, quality of food, and services etc. On the other side, all employees are constantly challenged to contribute with new ideas, which are carefully evaluated by Valduga's top management. Thus, considering the business objectives goals are defined in a clear way so everybody can understand. Under the same parameters or by the same process, top management decides on investments to develop new abilities. For instance, the production of the red wine MUNDVS, by tenancy of entire harvest of "terroirs" of other countries came from this process of collecting new ideas and stimulating the entrepreneurial spirit of the House teams.

The construction of the five elements of the business model at Valduga's House is essentially based on wealth of information from the competitive environment, as well as of resources, capacities and internal competences. Thus, not only the construction of the model, but its operation in an efficient way requires the use of

competitive intelligence.

On the other hand, the insistence of Valduga's management to link to all actions the fundamentals of quality, puts the technical competitive intelligence as the central mechanism for prospection of technical information. Any prospected innovation is carefully and exhaustively evaluated by top management of the company and are adopted if they improve the quality of products and /or processes, augment the productivity or improve the production processes, without quality standard prejudice.

## FINAL REMARKS

The objective of this work was to determine the role of CI and TCI in a case study, illustrated by Valduga's House of Wines. The focus was to characterize the implications of the intelligence on the business model. To do this, we tried to describe the characteristics, the structural positioning and the role of competitive and technical intelligences in the company, looking at the main influences on the dimensions of Bovet & Martha (2001) on the company's business model.

From field observation and data from research, we conclude, considering the business model currently practiced at Valduga's House, that in this company:

- (a) The Competitive Intelligence is a mechanism to access strategic information concerning Valduga's business, still informal and incipient;
- (b) At Valduga's business people considers less the company's competitive environment, as leading source for the business model profile, but its resources, processes, capabilities and technologies in use;
- (c) Information of the competitive environment, when used, serve basically to feed marketing actions;
- (d) In this way, corporate strategies, that refers to the alignment of the company's value chain and internal processes in order to maintain and guarantee products quality, are the strategies with the most value for the model construction;
- (e) These characteristics induce the technical competitive intelligence to take a more prominent role and to become a critical mechanism for maintenance and improvements of total quality at the company.

We assume, therefore, that in spite of the theoretical importance of the competitive intelligence for executives in general, at Valduga's House the business model is most influenced by the technical competitive intelligence. Under the point of view of the hierarchical localization, the competitive intelligence is directly linked to the Marketing area. Yet, with respect to the technical competitive intelligence, there is no determined localization nor direct subordination to a department. The information are caught and distributed internally by criteria of importance and interest that they hold to guarantee the quality of products and processes.

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# **DOING BUSINESS IN AFRICA: RECOMMENDATIONS TOWARDS REFORMING THE CURRENT TECHNICAL REGULATORY POLICY REGIME TO PROMOTE INTERNATIONAL TRADE**

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## **ABSTRACT**

*In the aftermath of the recent global recession and the continuing economic turmoil in Europe, African countries experience slow economic recuperation, which results in significant political and socio-economic vulnerability in the region. This poses some concern as far as stability, food security and sustainable development are concerned. Whilst African countries have been repositioning their economies for sustainable growth over the last two decades, the current international trade dispensation between Africa and the rest of the world remains challenging. Generally speaking, the current policy regime on trade is guided by inflexible Taylor-made one-size-fits-all policies and ridged technical regulatory directives. Therefore, although some economic development is prevalent on the continent, sub-Saharan Africa remains marginalized as demonstrated by the fact that its share of global trade has steadily declined. Appropriate economic development interventions coupled to sustainability is imperative to ensure socio-political stability, food security as well as ensuring human dignity for the African peoples. On-going research has indicated that particular policy approaches to technical regulatory reform may assist in improving trade and associated sustainable economic activity for the Continent. An analysis of the international technical regulatory policies of the World Trade Organisation, the regional policies of the Asian Pacific Economic Community and the Organisation for Economic Co-operation and Development, and at African level, the technical regulatory policies of the Southern African development Community, yields some markers that may be of benefit in this regard. This paper includes findings conducted during research conducted for a PhD study. Recommendations are made pertaining to the development of an African technical regulatory reform policy; the establishment of appropriate institutional arrangements for an African technical regulatory framework; the establishment and strengthening of coordination of quality activities in the sub-region; the strengthening of national institutional capacity in the area of standards, conformity assessment and metrology; and the provision of specific companies with technical assistance.*

## **INTRODUCTION**

African countries have actively been repositioning their economies for sustainable growth over the last two decades. As a result of these interventions economic growth increased steadily, albeit from a low base of 2.1% from 1985 to 1994, to an average of 3.7% from 1995 to 2002, and 4.1% in 2003 to 5.8% in 2007 (ECA, 2007). Unfortunately the global economic crisis of the recent part has curtailed the high-level growth achievements of 2007. Yet, Africa as a continent, arguably remains the most underdeveloped region of the world with 33 of the world's least-developed countries as classified by the United Nations.

Yet, Africa remains marginalized on the international trade front, which results in a widening social gap among many African countries. The widening of the social gap also correlates with limited state institutional capacity. A 2003 International Monetary Fund Report on the World Economic Outlook: Growth and Institutions, that provided seminal observations on these issues, illustrates that country-specific income differences, e.g. gross domestic product per capita, appear to be closely correlated with indicators of state

institutional quality (IMF, 2003:95-127). Thus, countries with low economic growth and low *per capita* income often have limited state institutional capacity. The report also confirms that economic growth will need to be supported by organizational reform which aims to strengthen and institutional capacity in a systematic and orderly manner.

Lately, research also indicates that conventional growth factors e.g. labor, physical and human capital, do not fully explain the slow growth experience of Africa. Recent research considered how the lack of state institutional capacity impacts on economic growth. It was found that state institutional capacity affects growth because it impacts directly on the cost of transformation and the cost of transactions. Weaker state institutional capacity often means higher transaction cost, which translates into higher transformation cost, making a country uncompetitive and a society less productive (Aron, 2000: 99-135).

## **POLICY REFORM ON AFRICA**

Continuous demands have been made on African states for policy reform to re-assess the service delivery responsibilities of their governments through regulatory reform, privatization, outsourcing and the competitive provision of services. Such policy reforms are often conditional in terms of World Bank (WB) and International Monetary Fund (IMF) support (Cavanagh and Mander, 2004:60-63).

International organizations such as the International Monetary Fund and the World Bank have played a substantive role in the diffusion of policy reform ideas inspired by the neo-liberal ideology (Nef, 2003:523-535). Nef (2003) notes that developing states are often on the receiving end of this externally induced transplantation of policy reform ideas from other regions. Olsen (2006) highlights the problem of the transplantation of ideas that are not informed by a thorough understanding of the political, social, economic and cultural characteristics of a region or the individual countries in the region.

## **INSTITUTIONAL AND INFRASTRUCTURE REFORM**

A business climate survey on regional integration commissioned by the Association of Southern African Development Community (SADC) Chamber of Commerce and Industry in 2004 indicates that the private sector supported the simplification and improvement of African countries' regulatory framework, as well as improvement in institutional and infrastructure capacity. Thomas Friedman (2005:398-404) confirms the importance of especially infrastructure because reform it connects countries with the global trade system in a world that is becoming more global by nature. In addition Friedman (2005) also highlights the need for a regulatory environment that makes it easy for the private sector to do business and to remain competitive if market circumstances change.

A number of countries in Africa are making policy decisions with regard to regulatory reforms aimed at establishing infrastructure capacity to support economic development and remove bureaucratic red tape, which impacts negatively on enterprise development. As a result, the legislative and regulatory environment in Africa is steadily becoming more supportive and conducive to business. The gains are twofold for business. Firstly, businesses spend less time and money dealing with regulations and secondly, they have more time and money available for producing and marketing their products and services (Luiz, 2006:27).

Although the cost of doing business in Africa remains relatively high because of the abovementioned higher administration costs and delays in terms of bureaucratic procedures, there are considerable profits to be made in terms of various business opportunities on the continent. The average rate of return on investments in Africa is twice higher than in Asia and four times higher than in the G7 countries (Grobbelaar, 2006:35).

## **RECOMMENDATIONS FOR POLICY AND INSTITUTIONAL INFRASTRUCTURAL REFORM**

Following, a number of policy recommendations are made for the development of an African policy framework that may respond to the needs of the region. The recommendations are **firstly**, informed by the analysis of the international technical regulatory policies of the World Trade Organisation, the regional policies of the Asian Pacific Economic Community and the Organisation for Economic Co-operation and Development, and at African level, the technical regulatory policies of the Southern African development Community. **Secondly**, the recommendations are informed by the international and Southern African Development Community policy trends in the areas of standardisation, metrology and accreditation.

The recommendations consider policy proposals for a common approach to technical regulatory reform based on the abovementioned best practice, which is applicable and valuable for Africa; for the establishment of an African co-operation and co-ordination on technical regulations, standards, metrology and accreditation; for the development of complementary sub-regional capacity to meet the needs of the sub-regions and to provide building blocks for African co-operation; and **lastly**, for technical support to enterprises to manufacture and sell quality goods and services, which they can export competitively to other African countries in other regions.

The key elements of Africa's regional development policy for technical regulations, standards, metrology and accreditation should focus on the following:

- The development of a comprehensive and integrated African technical regulatory reform policy under the auspices of the African Union;
- The establishment of an African institutional arrangement for the implementation and governance of an African technical regulatory framework;
- The co-ordination of technical regulatory activities and the development of technical infrastructure institutional capacity in the sub-regions of Africa;
- The strengthening of national institutional capacity for standards, conformity assessment and metrology; and
- The provision of technical assistance to specific African business entities and companies.

In particular, five policy recommendations should be considered, which foresee a situation where an importer can accept proof of compliance with technical requirements in terms of product or service quality either for technical regulations or in the voluntary domain, even if the products were tested, certified or inspected in an African exporting country. In order for conformity assessment procedures to be recognized as equivalent to that prevailing in the importing country, the African technical regulatory frameworks have to be harmonized and the technical competence of the conformity assessment institutions has to be demonstrated.

An African approach to co-ordination should emphasise regional integration of common functions so that these are supplied more cost-effectively to all member states from a regional or sub-regional resource. The approach should aim at establishing cost-effective institutional capacity at regional and sub-regional level. It would also make sense to use the lessons learnt in the sub-regions in setting up an effective African technical infrastructure. The above mentioned learning could be used in the launching of an African initiative aimed at planning the implementation of these best practice models in the rest of the continent. The advantage of such a coordinated approach may be that the resulting technical infrastructure is mutually compatible and does not have to be harmonised in any major way when the African Union evolves economically into an African free-trade area.

The recommended policy interventions should be based on a thorough needs assessment for all parts of the African economy with the understanding that there is no ready-made model for technical regulatory reform. African policy-makers should provide ongoing political and financial commitment to the policy decisions. After consideration of the assessed need, policy implementation should be based on panning and appropriate sequencing of interventions in order to ensure that the technical infrastructure in Africa is coordinated and developed in a sustainable manner. This includes a clear articulation of the resources and finance that will be required to sustain the necessary technical regulator infrastructure taking into consideration regional and sub-regional service delivery options, which may achieve better economies of scale.

## **Recommendation 1: Develop an African technical regulatory reform policy**

Two regions, namely the Asian Pacific Economic Community and the Organisation for Economic Co-operation and Development, have policies in place that focus on technical regulatory reform. These policies set out the principles that govern the reforms and provide information to stakeholders on what may be expected from the reforms. The main aims of the technical regulatory reform policies are to eliminate unnecessary barriers to trade between countries in the regions and thus to create an environment that may facilitate trade liberalization and be attractive to investors. Benefits of the reforms may be lower cost to the sectors that are regulated, lower prices to consumers, product innovation and technology development as well as effective use of government resources.

There is also the potential for gains in terms of job creation, capital productivity and economic-wide increases in the gross domestic product and real wages in countries. It is however important to keep in mind that technical regulatory reform is complex and multifaceted. In addition countries in Africa have different technical regulatory responses because of different interest and values that arise from specific economic, social and political environments.

Particular core trends in the Asian Pacific Economic Community and the Organisation for Economic Co-operation and Development regulatory reform efforts appear to be useful for an African approach to technical regulator reform. The before mentioned common trends include the building onto the World Trade Organisation Technical Barriers to Trade Agreement in an effort to find innovative solutions for technical regulatory harmonization, mutual recognition and coordination. Other trends include the use of performance-based regulations and international standards, the identification of conformity assessment requirements that have to be complied with, transparency, predictability and provision for participation, consultation, publications and comment periods. The use of impact and risk assessment analysis to inform policy-makers and regulators in order for them to choose appropriate technical regulatory responses is another common trend.

The current African technical regulatory system is in need of an extensive reform process because the current African approach is fragmented, inefficient and ineffective. A well-structured technical regulatory framework is of crucial importance to the development and competitiveness of the regional economy. The following principles may be used to develop a flexible African regional technical regulatory reform policy approach:

Transparency is one of the most important building blocks of a good technical regulatory system in Africa. A transparent system should make provision for effective access to existing technical regulations for all market participants and stakeholders, domestic and foreign. The system should also provide systematic information of technical regulations in the making. Predictability and clarity of the technical regulatory-making process also provide for participation by stakeholders at appropriate times in the process.

African countries should rely on technical regulatory impact analysis to avoid unnecessary trade-restrictiveness. Systematic assessment of the impacts of proposed technical regulations includes cost/benefit analysis, investigation of possible feasible alternatives to the proposed technical regulation and analysis of the impact of such a regulation on trade and investment and small businesses.

The approach to use internationally harmonised standards and technical regulations as a basis for domestic regulations wherever they are feasible and appropriate should be promoted. In this regard, support active participation in the development of international standards and ongoing national commitment of resources or participation in international standards setting will be a good indicator of the will to use international harmonised standards as a basis for domestic regulations.

In terms of choosing between prescriptive technical regulations or performance-based technical regulations, performance-based technical regulations should be preferred in the African approach to regulatory reform because they represent a more flexible approach and allow those that are regulated to devise the most efficient and effective method of compliance. Performance-based technical regulations provide flexibility while ensuring that the objective is achieved.

In addition to the above, the use of internationally harmonized requirements also covers the streamlining of the conformity assessment processes in the region with a view to facilitate mutual recognition, mutual acceptance and acceptance of supplier's declarations of conformity. Although, best-practice patterns are

difficult to identify because a variety of approaches to streamline conformity assessment processes is in use, the development and use of sub-regional accreditation bodies in Africa as a vehicle to confirm competence and to recognize conformity assessment results appear to offer a sustainable solution.

Finally, the following recommendations are made to establish a technical regulatory framework for Africa with a view to provide for an effective and efficient technical regulatory system that would expedite investment in and economic recovery of the continent:

- A technical regulatory reform strategy should be developed for the reform of primary and secondary technical regulatory legislation by an African Technical Regulatory Framework Committee;
- The African technical regulatory framework should be built on the following principles: transparency, proportionality, necessity, targeted principle, non-discriminatory principle and the use of appropriate internationally harmonized measures principles;
- The African technical regulatory framework should consider inclusion of the abovementioned core trends in terms of transparency, avoiding unnecessary trade-restrictiveness, use of international harmonized measures including accreditation to develop flexible regional approaches;
- The African technical regulatory framework should provide for the development of a technical regulatory checklist, guidelines for technical regulatory impact and risk assessment and code of practices for consultation, the technical regulatory process, and enforcement and for the publication and notification of technical regulations; and
- The strategy should explore the institutional capacity that will be required to roll out the strategy.

## **Recommendation 2: Establish institutional arrangements for an African technical regulatory framework**

The Asian Pacific Economic Community and the Organisation for Economic Cooperation and development regions recognized the need to establish an institutional arrangement to assure effective implementation of the technical regulatory reform policies. An institutional arrangement is necessary for coordination of different aspects of the reform policies and it creates a framework for accountability.

The Asian Pacific Economic Community and the Organisation for Economic Cooperation and Development officials also recognized the benefits from technical regulatory co-operation between governments. Through co-operation the abovementioned regions developed guides to steer implementation of a common approach to technical regulations and standards.

The need for co-ordination of the technical regulatory reform and the development of technical infrastructure capacity at African level is recognized. Currently the Inter-Africa Metrology System and the African Organisation for Standardisation are operational with various levels of progress. Co-ordination is, however, becoming increasingly important for accreditation and technical regulations. Additionally, co-ordination is required between the four elements of the technical infrastructure in order for the technical infrastructure to be able to respond to the needs of Africa's industrialisation efforts.

The policy objectives of the co-ordination are the promotion of co-operation and collaboration between the sub-regions of Africa in the area of technical regulations and technical infrastructure, the provision of a suitable environment for the production of quality goods and services, thus contributing to the industrial development in Africa and the progressive elimination of technical barriers to trade amongst the African sub-regions.

The existing and new structures that need to be coordinated are:

- The Inter-Africa Metrology System (established). The Inter-Africa Metrology System, which has been established to promote international, particularly inter-African and regional co-operation in metrology to facilitate the implementation of a global measurement system in the whole of Africa, in which all users can have confidence and work towards the establishment of a robust regional measuring system.

- The African Organisation for Standardisation (established). The African Organisation for Standardisation has been established to facilitate intra-African and global trade by promoting quality through co-ordination and harmonization of standards and conformity assessment in Africa.
- Inter-African Co-operation for Accreditation (to be established). The Inter-African Co-operation for Accreditation will facilitate co-ordination and co-operation between the sub-regional accreditation systems and establishment of the mutual recognition of the competence between accreditation bodies that operate in Africa.
- The African Technical Regulation Co-operation Committee (to be established). The African Technical Regulation Co-operation Committee will promote and facilitate implementation of the common approach to technical regulation for health, safety and the environment.

The work at African level should build on and support work on technical infrastructure development at sub-regional level with a view to ensure alignment and co-operation in areas of common interest on standards, accreditation, metrology and technical regulations and to minimize duplication of efforts.

The approach to co-ordination should emphasise regional integration of common functions so that these are supplied cost-effectively to all member states from a sub-regional or regional resource. The approach should aim at establishing sustainable institution capacity at sub-regional or regional level. The co-ordination approach should also advance the implementation of sub-regional best practice models in the rest of the continent. The advantage of such a coordinated approach would be that the resulting technical infrastructure would be mutually compatible and would not have to be harmonized in any major way when the African Union evolves economically into an African free-trade area.

### **Recommendation 3: Establish and strengthen co-ordination of technical regulatory activities in the sub-region**

The need for coordination of national and sub-regional technical regulatory reform and the development of technical infrastructure institutional capacity in the area of technical regulations, metrology, accreditation and conformity assessment is increasingly important so support economic growth, industrial development and regional integration. There are evidence that African exports to product characteristics, safety and health requirements.

One of the challenges facing African enterprises includes that they find it difficult to international requirements of developed countries. African participation in the formulation of international standards and technical regulations is ineffective because of low political support and inadequate participation. African enterprises are therefore standards-takers and are always reacting to changing standards and technical regulations formulated by developed countries that do not accommodate unique African constraints. Technical infrastructure institutions such as the standards and metrology bodies often lack human, financial and infrastructure to assist enterprises. Local testing bodies, certification facilities and inspection bodies are not internationally recognised.

In terms of technical regulations the challenge facing African entrepreneurs involves the absence of effective technical regulatory authorities that is putting pressure on local producers to substitute quality for price. There is a lack of understanding of technical regulations in policy-making. There is a proliferation of technical regulatory responsibilities and roles across national regulatory institutions. Often local technical regulations are out of date and enforcement mechanisms are ineffective.

Some sub-regions in Africa already have sub-regional technical regulatory reform co-ordination structures in place others, however, have informal structures. The sub-regional technical regulatory reform activities in Africa include the following: the Southern African Development Community, the Common Market for East and Southern African Community, the East African Community, the West African Community and the Economic Community of West African States and the Maghreb Community. The reform activities in Africa are still in the early stage and therefore low in terms of development.

The aim of this policy recommendation is to improve co-ordination of Africa's sub-regional technical regulatory reform efforts. The sub-regional co-ordination will be the building blocks for African co-operation. Specific actions should therefore be required to develop co-operation frameworks for those sub-regions that have

not formalized a sub-regional arrangement for co-operation in the area of standards, metrology, accreditation and technical regulations.

The sub-regional co-operation activities may focus on the exchange of professional and technical information and transfer of expertise in the sub-region. Co-operation may also include co-operation amongst the sub-regional countries to implement sub-regional programs related to technical regulation, metrology, standards and accreditation and to identify technical problems which might form the subject of joint projects. Other activities may include coordination, endorsement and harmonization of sub-regional training, establishment of communication channels and dissemination of information on sub-regional technical infrastructure activities. The co-operation should aim to effectively utilize technical and financial resources and services of the countries in the sub-regional and of the deployment of these towards identified regional development needs.

In terms of technical regulations the focus may be on the development and roll out of guidelines and other tools for the national implementation of a sub-regional technical regulatory framework. The co-operation efforts on technical regulations could aim to identify common technical regulations to be implemented in the sub-region and the development of mechanisms to facilitate the incorporation of international standards in technical regulations.

In terms of accreditation the co-operation efforts may focus on the creation of an internationally recognized sub-regional accreditation system that could be used to establish a pool of internationally acceptable accredited inspection bodies, laboratories and certification bodies in the sub-region and provide countries in the sub-region with accreditation as a tool for the removal of technical barriers to trade in both the voluntary and regulatory areas. The accreditation co-operation could facilitate the implementation of a sub-regional system that complies with international practice while taking into account the specific circumstances, opportunities and needs of the sub-region. Co-operation includes coordinating inputs to and liaising with regional organisations such as the Inter-African Co-operation for Accreditation an international organisations concerned with accreditation, such as the International Laboratory Accreditation Co-operation (ILAC) and the International Accreditation Forum (IAF). The aim is to create an environment for the conclusion of mutual recognition agreements between qualifying accreditation institutions within the framework of and consistent with global mutual recognition agreements.

The co-operation in metrology may focus on coordination of metrology activities and services in the sub-region, in order to provide sub-regional calibration and testing services with traceability to the System International (SI) units of measurements. The co-ordination could promote closer collaboration countries to improve existing national measurement standards and facilities and co-operate with regard to major investments in national metrology facilities in the sub-region.

Co-operation includes the responsibility for liaison with the Inter-Africa Metrology System, the International Bureau of Weights and Measures and other regional and international organisations concerned with measurement traceability. Other activities may include the organisations of both intra- and inter-regional laboratory test inter-regional laboratory test inter-comparisons and the creation of an environment for the conclusion of mutual recognition agreements.

The co-operation in standardization may promote the coordination of standardization activities and services in the sub-region with the aim of achieving harmonization of standardization. The co-operation could promote regional co-operation in the development of harmonized standards and technical regulations facilitate the exchange of information on existing standards, draft standards and technical regulations, facilitate the adoption of sub-regional standards. The co-operation includes the co-ordination of inputs to and liaison with the African Organisation for Standardisation and other regional and international standardization organisations. Other activities may include providing technical assistance and training in standards development and providing standards information services.

The current lack of technical infrastructure in Africa undermines the region's efforts to upgrade its production and trade capacities, increases the cost of doing business and impacts negatively on regional integration. The inability of African countries to meet technical standards set by trading partners is a barrier to taking advantage of the benefits of market access for processed and manufactured goods. In this regard, the



policy recommendation relates to the establishment of one accreditation body per sub-region to ensure the competency of testing, certification, calibration and inspection services provided to industry; the development and training of a pool of accreditation assessors which will provide assessor capacity to the sub-regional accreditation body; and obtaining international recognition for the sub-regional accreditation bodies from the International Laboratory Accreditation Co-operation and the International Accreditation Forum.

## **Recommendation 4: Strengthening national institutional capacity for standards, conformity assessment and metrology**

African countries face challenges in terms of improving domestic capacity to assist domestic manufacturers to meet the quality standards, safety and environmental technical regulations, which are required in global markets. Institutional reform and investment in human capital as well as infrastructure improvements in testing laboratories and certification facilities are becoming increasingly important

Governments of African countries thus need to accept the responsibility for the establishment of national metrology institutes because it provides the foundation for standardization, accreditation and conformity assessment. It is essential because it facilitates the acceptance of measurements related to products that manufactures may want to export, law enforcement related to measurements and it supports scientific results. The level of metrology available to the country needs to be informed by the needs of the industry and the government. This area requires substantial investment and, thus, careful planning and a sound knowledge of what is actually needed are important.

Standards form an important element of economic policy and African countries need to accept the responsibility that national standards organization needs to be appropriately guided based on national needs. Governments are required to provide the bulk of the funding for these public institutions.

National or sub-regional accreditation bodies, which provide accreditation services for laboratories, certification bodies and inspection bodies need to be recognized as competent internationally and nationally by the government. Governments in Africa need fund the international recognition activities because of the importance of providing assurance to trading partners that suppliers of tests and certificates are competent and to overcome technical barriers to trade.

Given the complexity of organisations, linkages and national, regional and international relationships as well as limited resources policy-makers in African will have to make important strategic policy choices.

The policy recommendations thus focuses on national support for technical regulator reform initiative and the establishment of national technical infrastructure capacity that may contribute to the maintenance and enhanced competitiveness of the local manufactures. Investments should be made in those institutions that are vital for economic development. The organizational structures should be suitable to provide the necessary output required at a national level. Funding mechanisms should be strengthen to enable sustainability and should include mobilizing donor funding to supplement national funding.

## **Recommendation 5: Provide specific companies with technical assistance**

One of the implications of global trade is that many of today's products are built with components sourced from around the world. These components must fit together, perform as expected and comply with international standards and technical regulations. High compliance costs to international standards and technical regulations impacts negatively on the international competitiveness of African entrepreneurs.

Africa entrepreneurs often need to incur high quality assurance compliance costs because they have to source these services from other regions. The conformity assessment services may include testing by competent laboratories, product and quality system certification from certification organisations acceptable to the regulator or homologation (a specific conformity assurance system used for example in the automotive industry) through

governmental mechanisms or regulators. It is important that African exporters make sure that the requirements of the import country are met in order to prevent costly mistakes and wasting of time.

Success in most of the priority sectors at the global export level lies in the access that these sectors have to world-class technical infrastructure. To achieve success in these sectors in Africa, a prerequisite before a company can even begin to contemplate export is quality assurance. In view thereof, a lot of effort is needed in the following areas: certification, inspection, control and testing of products.

This policy recommendation thus focuses on support for specific African companies that need financial and technical assistance to meet standards and technical regulations for export. Specific actions include identifying a number of companies per priority, which have the potential to export. The activities include analyzing the quality needs of each company's through a diagnostic process and developing as well as financing of a restructuring plan. Assistance may include providing technical support, as well as coaching for the implementation of the upgrading activities in the beneficiary companies.

## CONCLUSION

To conclude, the above-mentioned policy recommendations are made with a view to reform the African technical infrastructure and to secure international recognition, which may support Africa's efforts to participate in the global economy. The aim is to provide companies with technical assistance in implementing projects to meet international standards and technical regulatory requirements to improve their competitiveness and to better respond to the new challenges of liberalised market. A further aim is to co-ordinate and align the technical regulatory reform activities in the region (standards, metrology institutions, accreditation and conformity assessment services) in order to provide a suitable environment for the production of quality goods and services, thus contributing to the industrial development in Africa and the progressive elimination of technical barriers to trade among the African sub-regions. The co-ordination in Africa will target strengthening of technical regulatory reform and the development of activities in the sub-region (standards, metrology institutions, accreditation and conformity assessment services) in order to provide a suitable sub-regional environment for the production of quality goods and services, thus contributing to the industrial development in Africa and the progressive elimination of technical barriers to trade amongst the African sub-regions. Policy recommendations are made for technical assistance (in the form of institutional support and equipment) in establishing metrology, standardization and accreditation capacity as well as conformity assessment services for testing, certification, calibration and inspection that will meet the needs of the region. Lastly, the recommendations also aim to enhance the competitiveness of the region's priority industrial sectors and support the diversification of the regional economy and local processing of raw material by identifying and developing appropriate sector-specific standards, traceability and accreditation.

Given the complexity of organisations, linkages and national, regional and international relationships, policy-makers in Africa will have to make important strategic policy choices. Because of limited resources, the following issues need to be taken into account with a view to implementing the technical regulatory reform initiative and establishing a technical infrastructure that contributes to the maintenance and enhanced competitiveness of the continent: How are these various components and organisations arranged internationally? Is it vital to have all of these organisations in a developing country? Are some organisations more important than others? Which ones should be established first? Which ones should be established at regional level? Which type of organizational structure is best suitable to provide the various outputs? Should the organisations be in the public domain? Or could private organisations be used? Who should fund such organisations, the state or industry or both? How can the region mobilise donor funding to supplement regional funding? Ongoing research in this regard is currently underway.

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# METHODOLOGICAL APPROACH TO ASSESS ECONOMIC PERFORMANCE OF NETWORK FRANCHISE COMPANIES

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## ABSTRACT

*Today franchising is studied as one of the urgent matters in Russian economy. A lot of modern business people dedicate themselves to researching and analyzing the way franchising functions, as well as creating the best conditions for successful development of the franchising system.*

*The franchising system should find a broad application in Russia, especially in hospitality organization and management since it does not require changing forms of ownership. To assess economic effectiveness of a chain hotel franchising, there have been analyzed a number of methods which are used to assess the effectiveness of the distributive policy of an organization and their modifications, suggested by contemporary researchers and broadly covered in literature. Further on, we would like to look deeper into the problem of performance of a chain franchising organization, into its ability to meet the needs for service of customers in the area where the franchisor and franchisee are located. For this, as a measure of performance, we suggest using a possibility that the customer's needs for service are not going to be satisfied. Denial to serve leads to lost profits for the chain franchising organization as a player in the regional market of a certain type of products or services. Shrinkage of lost profits is naturally interpreted as an economic effect from expansion of the chain franchising organization and ratio of the economic effect to costs for its functioning – as an economic effect.*

## INTRODUCTION

Today franchising is studied as one of the urgent matters in Russian economy. A lot of modern business people dedicate themselves to researching and analyzing the way franchising functions, as well as creating the best conditions for successful development of the franchising system. These days nobody in Russia gets surprised at products or services labeled with well-known trademarks, such as Coca-Cola®, Adidas®, Xerox®, Shell®, MacDonalds® and many others. These trademarks are clearly associated with a certain producer, who is of high reputation, and imply high quality products or services. One of the efficient distribution channels to spread these products in different countries and all over the world is franchising.

Franchising dates back to the early 1800s, when British ale brewers granted rights to particular taverns to market their beer. In 1860, a system, very close to franchising was used by the factory of Singer, which specialized in sewing machine production. In 1898, in order to make a breakthrough in the market, General Motors started to actively use the franchising system, which today accounts for about 11 thousand members.

The formula which Coca-Cola developed in 1886 and sold in 1900 resulted in a powerful impact on franchising development. The system started spreading very quickly under the trademark of Coca-Cola, which is well-known to everybody today.

Today franchising has been developed in more than 70 industries. Franchising is recognized as a most progressive form of business and is wide-spread in foreign practices. Franchising agreement is an independent object of legal regulation in more than 80 countries all over the world.

Franchising is a system of relationship when one side (as a rule, a company with a well-represented image and high reputation in the commodity and service market) gives, on a fee paid basis, the other side (a company or a sole proprietor) its means of individualization for making goods, doing work or providing services (trademark, service mark, corporate identity), its business technology and other commercial information which, when used by the other side, will result in growth and stable position of the latter in the commodity and service market. Moreover, the granting side is committed to assisting in business development, providing technical and consulting help.

Franchising has the following features and specific characteristics:

- franchising implies existence of two parties in the agreement – a franchisor and a franchisee;
- the franchisor is the owner of exclusive rights: trademark, corporate identity, patent, idea, copyright and similar rights;
- the franchisor, as a rights holder, grants the franchisee its rights on certain conditions. The franchisee operates under the franchisor's trademark, uses its reputation in the commodity, work or service market and is identified with the franchisor through the corporate identity;
- the franchisor is singular, whereas there can be several franchisees operating by agreement with the rights holder, i.e. it is a kind of chain which uses the same methodology. Franchising implies high business ethics, which excludes attempts of converting into pyramid forms, i.e. expansion and sales of distribution networks. The backbone of franchising is to conduct its own business, whereas the backbone of networks is to sell parts of a network and attract as many members as possible;
- for successful business, the franchisor provides the franchisee with different forms of support and uses its right to regulate the franchisee's operations in order to keep the reputation in the market, but does not violate the franchisee's legal or economic independence;
- the franchisee makes certain payments for the use of franchisor's rights and support being given by the franchisor;
- franchise agreement is of individual character and depends on activities and politics which the franchisor leads and cannot be copied into other systems.

Depending on the business line, there are four types of franchising:

- product franchising,
- industrial franchising,
- service franchising,
- business format franchising.

Product franchising is the sale of products made by the franchisor or labeled with its trademark in some way. The franchisee, as a rule, is involved in their after-sale service.

Industrial franchising is the most efficient organization of production for a certain type of products. A company which possesses a secret of primary production and a patented technology to manufacture finished products provides the end-producer with raw materials and grants it with the right to use this technology. Industrial franchising is operable practically in all industries, provided there are rights for objects of intellectual property which are confirmed by protection documents, including by the one on the trademark.

Service franchising is something in between the two above-mentioned types of franchising. Its sphere of application is services. The franchisee is given the right to be involved in business activities under the franchisor's trademark. The franchisor has a number of patented rights which are granted to the franchisee by virtue of an agreement.

Service franchising has become wide-spread and is a promising business technology. The main trend of service franchising is a high level of customer service. Thanks to the politics, carried out jointly by the franchisor and franchisee, customers soon become aware of the quantity and quality of services they can get within a definite period of time by the companies of a definite trademark. Awareness saves the time customers spend on the search and satisfaction of their needs while the expected quality of services ensures, among other things, positive emotional impact, which increases the probability of repeat business for the franchisee. The customer

identifies the trademark rights holder and user, which gives additional stimuli for the franchising system development.

Service, in contrast to a product, is always personified, i.e. it is always provided to a definite person. Moreover, the service, in reality, can be assessed only after it has been provided and for every person the value of the same service is different. These are the points which give a good opportunity for additional profits in service business.

If we compare costs of products and services in Russia with their counterparts in the USA, we can see that the prices for goods are approximately the same, whereas the prices for services in the USA are considerably higher than in Russia. It is known that in the economy the service sector steadily squeezes out the production sector. In simple terms, people have had enough bread and now want circuses. The better the economy grows, the more actively the service sector grows.

Franchising in service sector is needed so that the entrepreneur can get a ready-made brand, technology to communicate with clients and technology to provide services.

The franchising system should find a broad application in Russia, especially in hospitality organization and management since it does not require changing forms of ownership.

Thus, some accommodation means are managed directly by the owners of the property, other hotels remain in ownership, but use a specialized management company, while the third ones change over the general trademark of the management company (they keep their individual names) with the use of franchising principles.

## **BUSINESS MODEL OF FRANCHISING HOSPITALITY**

There are several models of hospitality organization in the world. The Ritz model was named after a Swiss entrepreneur, Caesar Ritz, in honor of whom a lot of luxurious world hotels have been given their names. The emphasis is upon European traditions of exquisiteness and aristocratism (one of the examples is the Palace Hotel in Moscow), but today this model is experiencing a crisis.

The model, named after Clemons Wilson, is oriented on a bigger flexibility combined with fairly high service standards (The hotel chain Holiday Inn). Important requirements to a hotel chain organized according to this model include: uniform style (architecture, interior), symbols and external information; quick checking-in and checking out; availability of rooms for regular customers; buffet style breakfast; conference-hall presence; flexible system of rates; unitary management, marketing and communication service.

More than 50% of hotel rooms in the world are under the control of hotel chains built by this model. Such chains are run by one owner – head holding.

Independently from the country where they are located, hotels which comply with certain service ranges and standards unify into voluntary hotel chains (such as Best Western, Romantic Hotels) under the same trademark. The hotels make payments into the uniform fund and use this money for advertising and marketing purposes to promote their product. At the same time, each hotel is fully independent from the financial and management standpoint.

With practice the integration and combination of models have been formed. Thus appeared hotel consortiums, bringing together hotels and small hotel groups of different classes: *Best Western Hotels*, *Romantic Hotels & Restaurants*, the Russian company *Best Eastern Hotels*. Consortiums, without imposing their own service standards, make it possible to promote hotels into the world market and represent their interests in the booking systems. The hotels which are members of a consortium have to pay a fixed percentage of profits or fixed annual fees. Among Russian hotels, there are such members of international consortiums as the Art Hotels (Best Western Hotels) and the Aerostar (Supranational Hotels).

Families or associations (The Leading Hotels of the World, Preferred Hotels & Resorts Worldwide, Small Luxury Hotels of the World, etc.) include hotels, complying with relevant requirements. A hotel obtains a

marketing sales system, as well as well-known brand and attractive image. Associations rigidly control compliance with their standards, but do not interfere in the hotel management, although they reserve the right to eliminate it from their members in case corporate standards are seriously violated. Services of such associations are covered by payment of fixed annual membership fee, which does not depend on the current profits of the hotel, and commission for booking services. The association called the Leading Hotels of the World includes four Russian hotels: the National, the Balschug Kempinski, the Austoria and the Grand Hotel Europe Kempinski.

Hotel consortiums can be formed on the franchising principle. A franchising chain and a hotel can cooperate in dozens of ways, which vary in mutual obligations.

So, according to the afore-mentioned organization models, there are the following types of hotels which can be differentiated by the nature of relationship existing between the owner (entrepreneur, proprietor) of the hotel (a hotel group) and its management:

1. independent hotels, which are owned, controlled and used by the proprietor:
  - run by their owner;
  - run by hired managers or a specialized management company, employed by contract, including the one with its own trade or service mark; herewith the latter does not entail any change of the hotel status as independent towards other subjects of market relations;
2. hotels which are members of hotel chains (consortiums) and differ depending on the membership conditions:
  - full member hotels of the chains, unified by the common property of the owners, doing collective business, and hotels, run by the chain management – representatives of the owners. The management (administrative personnel) of the chain bears full responsibility for the results of business and hotel management, and, correspondingly is absolutely entitled to profit earning;
  - hotels which are associated (joined) members of the chain and do business on the basis of franchise agreement;
3. hotels, members of hotel consortiums on the conditions of their contract management (their property) by a professional hotel company (hotel operator), which receives operating fees from the owner for these operations. Such operator (or contract) chains have three basic subtypes, depending on the relationship between the owner (proprietor) and operator, which is stipulated in the management contract:
  - the owner transfers to the operator complete right to run the property and does not interfere in the management, just gaining net profit from hotel business; the operator is responsible for financial and operational risks related with its business activities;
  - the owner retains the right to interfere in the management process by control over business activity, but at the same time pays all operating expenses related with management and covers all operational and financial risks, resulting from his right of ownership; the operator is liable for its operations to the extent, stipulated in the contract.
  - the owner closely controls the operations of the management company (operator), but fully exempts it from any liability related with the outcome of the hotel business, apart from willful misconduct or gross negligence;
4. hotels, members of consortiums on combined conditions;
5. hotels, members of independent hotel associations.

Hotels, members of associations, maintain full independence in all aspects, including commercial operations and marketing policy, often have a uniform trademark and pay fees for membership in the association (entrance fee for the trademark, monthly fee for advertising and booking/information system).

There are several options for cooperation between a franchising chain and a hotel, which differ in mutual obligations.

A franchise hotel can be managed independently, without direct control on the part of the chain's management. In the franchise agreement, the management of the chain (franchisor) grants the franchise hotel (franchisee) the right to use a symbol (trademark), know-how and system structures of the chain (in organization of business activities, management, staff training, purchase etc.), whereas the franchise hotel has to pay an initial sum of money for these rights (a franchise fee) and make recurring payments (franchise services fees).

The franchise agreement selling a license for a trademark and rights to participate in the sales and marketing systems of the chain is considered to be the most successful in the worldwide practice (The Marriott Grand, the Marriott Royal, the Marriott Tverskaya (Marriott), the National (Le Royal Meridien), the

Vinogradove (Holiday Inn), etc.). In such a system the operator does not manage the hotels and the owner does not change. So, the Marriott hotels in Moscow are run by the American company Interstate, whereas the National remains to be a municipal business.

Franchising can be based on a management contract which includes several agreements, such as trademark use, provision of staff and know-how, membership in booking systems, technical maintenance and so on. The Sheraton Nevskij Palace can serve as an example. The chain enters into commitment to introduce an effective management model in the hotel and its fees directly depend on the level of the hotel's revenues.

The most common option is an agreement by which services of a individual operator are paid as a front-end membership fee (it is 100-150 thousand dollars for upscale hotels), royalty (4-8% of gross operating margin), marketing charges and commission for the use of distribution channels.

In Russia joint venture has become a common practice (the Radisson SAS Slavyanskaya, the Baltchug Kempinsky, the Marco Polo Presnya, the Novotel Sheremetievo, the Sharaton Palace, etc.). In this case a chain becomes on of the project investors and invests its capital and technology under terms of participation in a hotel's profits.

A hotel operator can be a hotel's owner, but this variant requires a lot of funding, which prevents the network from expanding. For such models, hotel ownership is believed to be insurance of stable business.

In Europe just 16% of hotels are members of groups or consortiums, whereas in North America franchising chains include more than 70% of the total number of hotels. Business practice reveals that chain member hotels' income is, on average, 60% higher with occupancy rate being 8% bigger than those of independent hotels.

When building relationship of a franchisor and franchisee, two basic options are possible:

1. direct franchising, when a franchisor sells franchise directly to a local entrepreneur (franchisee). With an international franchising chain, if the geographical distance between the franchisor and franchisee is big, there is a problem of sufficient support at the local level and local distinctions which are to be taken into account;
2. indirect franchising (subfranchising), when an international franchisor sells exclusive rights for the whole system development in a foreign country to one franchisee, which later on comes into sub-franchise agreements with other franchisee. So the franchisee becomes the franchisor in this country by selling and offering franchises to other entrepreneurs and collecting a service fee (royalty) from them.

Choosing a franchising option, the financial factor has to be considered, as expansion of activities on the international scale requires considerable money investment on the side of a franchisor, which is needed for negotiations to be conducted about franchise agreements or setting its own representative office, and adaptation to local conditions.

It is necessary to handle the problem of hiring local managers, who know the local legal requirements, traditions and tastes of end-users, are specifically trained and further used as consultants.

If a country has opportunities for potential development of entrepreneurs who have practical experience, financial and labor resources, and ability to perform as a master franchisee, it is always an advantage for the central company (franchisor), since it can help the franchisor avoid investing a lot into the international chain and expansion of its business in the country is facilitated.

A franchisor is usually inclined to direct franchise agreements in the country with a common frontier. If the countries are geographically separated, cooperation becomes more difficult and entails considerable transaction costs, in which case the franchisor will be more in favor of the second type of franchising (indirect). At this point, the level of country distinctions (different languages, laws, religions, traditions, customer preferences, business environment) together with other factors influence the choice the franchisor makes about a franchising variant.

Many large hotel companies actively use franchising as a strategy for growth and expansion to new markets. At this, as in case of any business expansion, an important problem is to assess effectiveness of this particular type of relationship, because franchising entails risks, connected with such factors as: limited facilities



for extensive expansion of business activities; weakened control over new hotels' business; low business activity in some new markets, franchising business consolidation. Let us consider these factors in more detail.

There were opportunities for extensive growth at the start of franchising, when this idea emerged and hotel chains were constructed vastly. When the franchising market is saturated and becomes mature, franchising chains are getting more oriented on resources relocation so as to increase the scales within the franchisee-franchisor relation system which already exists. This has become more important as a result of the economic crisis in 2006-2008, which decreased the demand for hotel services. Relocation, in its turn, is possible on the basis of franchising effectiveness assessment.

In consequence of franchising chains' quick development, when new members join them, issues related with control over the quality of service provided and performance are getting more and more vital since failures in this field considerably beat economic indicators of the system as a whole.

As the competitiveness between franchising chains grows and there is a change in focus on improving the activity of already existing members, franchising relations spread over new markets with lower return on invested capital and lower demand level. At the same time, the services in hotel business are getting more and more complex character (i.e. together with traditional accommodation, related services are offered, such as guided tours, transport service, etc.). So, decrease in potential profit margin makes assessment of the current activity effectiveness more important.

Finally, consolidation of franchising business (when one company becomes a franchisor for several franchising chains), results in competition within the same franchising system and need for evaluation if such forms of relations are worthwhile.

## **Methodical approaches to assess economic performance of network franchise companies**

To assess economic effectiveness of a chain hotel franchising, there have been analyzed a number of methods which are used to assess the effectiveness of the distributive policy of an organization and their modifications, suggested by contemporary researchers and broadly covered in literature. Taking into consideration the methodological approaches which are suggested in the literature on this issue, one should outline, that the economic effectiveness of a chain franchising organization is realized as effectiveness of:

- investments on a franchising project, assessed through profitability of franchisor's investments ( $R_1$ );
- process of sales policy implementation which has been assessed through the franchisee's profitability ( $R_2$ );
- the chain's performance as a whole, which is assessed through chain's sales profitability ( $R_3$ ).

These three factors, used to assess profitability of a project, process and performance, quite comprehensively, from the informative standpoint, describe the effectiveness of a chain franchising organization and correspond to the generally accepted conception of effectiveness as a proportion between performance and costs.

However, these concepts appeared in the industrial period of development which were characterized with domination of economic goals of functioning exceptionally, namely profit earning as a financial result. At the same time, in the post-industrial economy, with the development of information society, accounts of costs and performance only do not seem enough for a long-term business success. The new economy actualizes the problems of quality, customer loyalty, positioning in the market and business reputation maintenance. Influence of the aforementioned risk factors has to be considered for franchising hotel chains. What is more, it is important both in favorable economic conditions, and all the more so in unfavorable ones.

That is why, effectiveness of franchising chains should be interpreted in a broad concept, as a performance in its global meaning, i.e. ability to bring the necessary result. Performance can also be defined as a degree to which the planned targets have been reached, or absence or decrease in negative factors (for example,

claims, negative responses and so on, including factors related with quality of activities (goods or service quality), which for this interpretation corresponds to ISO 9000-2005 standards).

Shifting to such interpretation of effectiveness we methodologically extend the range of corporate performance management for franchising companies involved in hotel business since such interpretation allows implementing approach to fluctuation management not only in economic indicators, but also in indicators related with the level of management as a whole.

In this paper we use the term ‘chain franchising organization’ to refer to a corporate structure resulting from franchise agreements and including a center actor (franchisor) and peripheral actors (franchisees). The main characteristics of such a chain are: uniformity, open and flexible coalition, which is managed from a single center and concentrates major functions, like: development and direct alliance management, coordination, financial function, technological development, determination of strategic competences of the chain, development of relationship with consumers, management of information flows interconnecting the chain.

Combination of centralization and certain independence of peripheral elements of a chain franchising organization lets us view it as a mass service system. The system capacity is limited due to the limitation of its elements, that is why, formally, one should speak about n-channel system of mass service with denials. In the context of the present research, a channel is associated with a peripheral actor of a chain franchising organization.

Further on, we would like to look deeper into the problem of performance of a chain franchising organization, into its ability to meet the needs for service of customers in the area where the franchisor and franchisee are located. For this, as a measure of performance, we suggest using a possibility that the customer’s needs for service are not going to be satisfied. Denial to serve leads to lost profits for the chain franchising organization as a player in the regional market of a certain type of products or services. Shrinkage of lost profits is naturally interpreted as an economic effect from expansion of the chain franchising organization and ratio of the economic effect to costs for its functioning – as an economic effect.

In the mass service system the following conditions can be revealed, for the number of occupied channels or for the number of requests, related to the system:

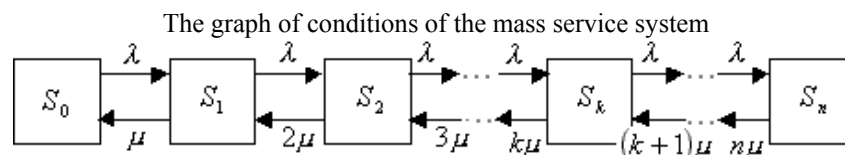
$S_0$  – all channels are free,

$S_1$  – only one channel is busy, others are free,

$S_k$  – only  $k$ -number of channels are busy, others are free,

$S_n$  – all  $n$  – number of channels are busy.

The graph of conditions of the mass service system is presented below. To place the graph, one should mark the intensity next to the arrows for corresponding events’ flows. On arrows from the left to the right, the system is shifted by the same flow – request flow with intensity of  $\lambda$ .



Source: Ivnitiskii V.L. Theory of queuing networks

If the system in  $S_k$  ( $k$  number of channels are busy) condition and a new request has arrived, the system shifts (jumps) to the  $S_{k+1}$  condition.

Let us define the intensity for the flows of events which shift the system by the arrows from the right to the left. Let us assume that the system is in  $S_1$  condition (one channel is busy). Then, as soon as the request which occupies this channel has been served, the system will shift to  $S_0$ , and it means that the flow of events which changes the system by the  $S_1 \rightarrow S_0$  arrow has  $\mu$  intensity. It is obvious, that if not one, but two channels which change the system by  $S_2 \rightarrow S_1$  arrow are busy in service, the service flow will be twice as intensive ( $2\mu$ );

if  $k$  – number of channels are busy, it will be  $k$  – times as intensive ( $k \mu$ ). Let us mark the corresponding intensity next to the arrows going from the right to the left.

Applying the general guidelines, we can create Erlang equations:

$$\left. \begin{aligned} \frac{dp_0}{dt} &= -\lambda p_0 + \mu p_1 \\ \frac{dp_1}{dt} &= -(\lambda + \mu) p_1 + \lambda p_0 + 2\mu p_2 \\ &\dots\dots\dots \\ \frac{dp_k}{dt} &= -(\lambda + k\mu) p_k + \lambda p_{k-1} + (k+1)\mu p_{k+1} \\ &\dots\dots\dots \\ \frac{dp_n}{dt} &= -n\mu p_n + \lambda p_{n-1} \end{aligned} \right\}$$

These are natural initial conditions for solving the equations:

$p_0(0)=1; p_1(0)=p_2(0)=\dots=p_n(0)=0$  (at the initial moment the system is free).

Integration of the equation system in analytical type is rather difficult, in practice such systems of differential equations are normally solved numerically. Such a solution gives us all probability values of conditions  $p_0(t), p_1(t), \dots, p_n(t)$  as a time function.

To solve the task, we should find probability bounds for conditions  $p_0, p_1, \dots, p_k, \dots, p_n$ , characterizing the set in mode of operation (as  $t \rightarrow \infty$ ). To calculate the probability bounds, let us use the ready solution to the task, obtained for the scheme of destruction and multiplication. The solution is presented below:

$$\left. \begin{aligned} p_k &= \frac{\lambda^k}{\mu * 2\mu \dots k\mu} p_0 = \frac{(\lambda/\mu)^k}{k!} p_0, \quad (k=1,2,\dots,n) \\ p_0 &= \frac{1}{1 + \frac{\lambda/\mu}{1!} + \frac{(\lambda/\mu)^2}{2!} + \dots + \frac{(\lambda/\mu)^n}{n!}} \end{aligned} \right\}$$

In formulae the intensity of the request flow  $\lambda$  and intensity of the service flow (for one channel)  $\mu$  do not exist independently, but as their ratio  $\lambda/\mu$ . Let us mark this ratio as  $\lambda/\mu=\rho$  and call the value  $\rho$  as ‘adduced intensity’ of the request flow. Its economic essence is the following: value  $\rho$  is an average number of requests, coming to the system within an average service time of one request. Considering this designation, the previous formulae will take the shape of those of Erlang:

$$\left. \begin{aligned} p_k &= \frac{\rho^k}{k!} p_0, \quad (k=1,2,\dots,n); \\ p_0 &= \frac{1}{1 + \frac{\rho}{1!} + \frac{\rho^2}{2!} + \dots + \frac{\rho^n}{n!}} = \left[ 1 + \frac{\rho}{1!} + \frac{\rho^2}{2!} + \dots + \frac{\rho^n}{n!} \right]^{-1} \end{aligned} \right\}$$

Erlang formulae represent probability bounds for all conditions of the system depending on parameters  $\lambda, \mu$  and  $n$  ( $\lambda$  - request flow intensity,  $\mu$  - service intensity,  $n$  – number of mass service system channels).

If all probabilities of conditions  $p_0, p_1, \dots, p_k, \dots, p_n$  are known, one can find characteristics of the system effectiveness: relative capacity  $q$ , absolute capacity  $A$  and probability of denial  $P_{rfsl}$ .

It is true, that an request is denied if it comes at the moment, when all  $n$  channels are busy. This probability is equal to

$$P_{omx} = p_n = \frac{\rho^n}{n!} p_0$$

The probability of an request being accepted for service (the very same relative capacity  $q$ ) completes  $P_{rfsl}$  to one:

$$q = 1 - p_n$$

Absolute capacity:

$$A = \lambda q = \lambda(1 - p_n)$$

One of the major features of the mass service system with denials is an average number of occupied channels (in this case it coincides with an average number of requests in the system). Let us mark this average number  $\bar{k}$ . The value  $\bar{k}$  can be calculated directly through probabilities  $p_0, p_1, \dots, p_n$  by formula:

$$\bar{k} = 0 * p_0 + 1 * p_1 + \dots + n * p_n$$

As mathematical expectation of a discrete random variable, which assumes values  $0, 1, \dots, n$  with probabilities  $p_0, p_1, \dots, p_n$ , however, it is much simpler to evaluate the average number of occupied channels through absolute capacity  $A$ , which we already know. In fact,  $A$  is nothing different than the average number of requests being served in unit time; one occupied channel serves, on average,  $\mu$  requests in unit time; the average number of occupied channels is calculated by division of  $A$  by  $\mu$ :

$$\bar{k} = \frac{A}{\mu} = \frac{\lambda(1 - p_n)}{\mu}$$

or

$$\bar{k} = \rho(1 - p_n)$$

Let us examine an example which allows judging if it is reasonable to use elements of the mass service theory to determine the effectiveness of a chain franchising organization development.

Let us assume that there is a chain franchising organization which includes a franchisor and two franchisees and is interpreted as a three-channel mass service system. All members of the chain serve the same area, that is why, the customers who have been denied in being served in one of the organizations can contact another one. The flow of requests in the area has intensity of  $\lambda=1$  task per hour. Average service time is  $t_{\text{ser}}=1,8$  hours.

It is known, that the market for this type of service is not saturated and there is a potential for development of a franchising organizations' chain. It is necessary to determine if its expansion is reasonable, i.e. how many franchise agreements can be concluded to increase the chain capacity until the market has been saturated.

We have to calculate the values of:

- probability of the number of organizations, fully loaded with requests;
- probability of denial in serving an request;
- relative capacity of the chain franchising organization;
- absolute capacity of the chain franchising organization;
- average number of organizations in the chain, fully loaded with requests.

Let us examine a particular case of doubling the capacity.

Let us define  $\mu$  parameter of the service flow:

$$\mu = \frac{1}{t_{\text{ser}}} = \frac{1}{1,8} = 0,555$$

The adduced intensity of the request flow:

$$\rho = \lambda / \mu = 1 / 0,555 = 1,8$$

Probability bounds are calculated by Erlang formulae:

$$A_1 = \frac{P_1}{1} \cdot A_0 = 1,8 \cdot A_0$$

$$A_2 = \frac{P_2}{2} \cdot A_0 = 1,82 \cdot A_0$$

$$A_3 = \frac{P_3}{3} \cdot A_0 = 0,97 \cdot A_0$$

$$A_0 = \frac{1}{\sum_{i=1}^3 \frac{P_i}{i}} = \frac{1}{1 + 1,8 + 1,82 + 0,97} = 0,186;$$

$$A_1 = 1,8 \cdot 0,186 = 0,334;$$

$$A_2 = 1,82 \cdot 0,186 = 0,301;$$

$$A_3 = 0,97 \cdot 0,186 = 0,180.$$

Probability of denial in service request:

$$P_{\text{отн}} = A_3 = 0,180$$

Relative capacity of the chain:

$$q = 1 - P_{\text{отн}} = 1 - 0,180 = 0,820$$

Absolute capacity of the chain:

$$A = 3 \cdot q = 1 \cdot 0,820 = 0,820$$

Average number of chain member organizations, fully busy in service:

$$\bar{K} = \mu \cdot (1 - P_{\text{отн}}) = 1,8 \cdot (1 - 0,180) = 1,476$$

Thus, at the established operation mode of the system, on average 1,5 organizations out of three will be busy, other one and a half will stand idle. The performance of the chain examined cannot be considered satisfactory, as it does not serve requests in 18% of cases on average ( $P_3 = 0,180$ ). It is obvious, that the chain capacity at data  $\lambda$  and  $\mu$  can be raised only by increasing the number of franchising organizations.

Let us identify, how many organization the chain should have in order to reduce the number of requests which are not served by 10 times, i.e. so that the probability of denial of service will not exceed 0,0180. For this, the formula of denial probability is used:

$$P_{\text{отн}} = \frac{P^n}{n!} \cdot A_0$$

Table 1 represents the results of calculated probabilities  $P_0$  and  $P_{\text{отн}}$ .

**Table 1 – Capacity to satisfy requests for service when expanding the chain**

$n$	1	2	3	4	5	6
$P_0$	0,357	0,226	0,186	0,172	0,167	0,166
$P_{\text{отн}}$	0,673	0,367	0,18	0,075	0,026	0,0078

Analyzing the data in the table, one should note that the increase in the number of organizations of the chain with given values of  $\lambda$  and  $\mu$  up to 6 franchising organizations can satisfy the requests for task implementation by 99,22%, since as  $n = 6$  probability in service denial ( $P_{\text{отн}}$ ) is 0,0078.

If we know:

- $Z_0, Z_1$  (roubles) – average costs of an request in the chain before and after it has been expended, respectively;
- $N_0, N_1$  (requests) - average capacity in one organization which is a member of the chain before and after it has been expended, respectively;
- $P_0, P_1$  - probability of service denial before and after the franchising organization chain has been expended;
- $n_0, n_1$  (organizations) – number of organizations which are members of the chain before and after it has been expended;

then the projected economic effectiveness resulting from the chain expansion and interpreted as decrease in lost earnings from customer service will be:

$$\Delta E = Z_0 * P_0 * N_0 * n_0 - Z_1 * P_1 * N_1 * n_1$$

The economic effectiveness of the franchising organization chain expansion can be calculated as follows:

$$\Delta R = \frac{\Delta E}{\sum_{i=1}^{n_0} S_{f0i} - \sum_{i=1}^{n_1} S_{f1i}}$$

where:

$S_{f0}$ ,  $S_{f1}$  - operational costs of the chain franchising organization before and after the chain has been expanded,

$$S_f = A + M + K + Fr + Z$$

where  $A$  - accrued depreciation;

$M$  - tangible costs for operation of the chain franchising organization;

$K$  - salaries of the staff, employed by the franchisees;

$Fr$  - costs of franchise package promotion;

$Z$  - other expenses connected with communication within the chain;

$M_f$  - prime costs of the service rendered by the chain franchising organization.

## CONCLUSION

Experience of the foreign countries shows that successful development of the economy is determined, to a large extent, by integration of big and small businesses, which are major elements in the foreign economic system. Large companies bring stability and manageability into this system, whereas small business, which forms competitive environment, ensures flexibility and individualization of the production. This type of activity is considered not only healthy, but also prestigious abroad. It is obvious, that increased cooperation of big and small business is essential for successful development of Russia, too.

The fact that franchising is not a common thing in Russia is not related with some specifics of the country, but can be explained by very limited amount of knowledge in this sphere not only among grass roots, but also among specialists, entrepreneurs, i.e. weak preparation of entrepreneurs who could organize franchising systems so as to be their franchisors and operate in these systems as franchisees. Development of franchising in Russia is not duly supported at the state level. The first thing that impedes franchising is the Russian law. While in foreign countries this type of business does not require any official registration, according to the Civil Code of the Russian Federation, commercial concession agreement has to be registered in Rospatent, which results in red tape. Apart from this, the relevant legal framework is absent. In the USA, only at the federal level, there are about a hundred laws, one way or another related to franchising, whereas in Russia there is not even a law on franchising.

Nevertheless, although there are some inhibiting factors, franchising has been developing quite successfully in Russia. More and more business people choose to use this effective business form. It is difficult to overestimate its significance for the Russian economy: for a franchisor this is one of the quickest and most efficient ways to create new independent companies, joined in a single system, for a franchisee it is one of the quickest and most efficient ways to develop its own business on the basis of the business model that has already proved to be effective, for the state it is an effective tool for small and individual business support, and, as a result, for the economy as whole. Franchising in Russia is bound to develop quickly, that is why one should not miss the chance to overrun one's competitors right now. For the past 10 years, the following western franchising systems have entered and have been successfully operating in the Russian market: Baskin Robbins, English First, Carlo Pazolini, Kodak, Sbarro, Subway, Xerox, etc. However, companies, interested in development of franchising relation in Russia, should take into account the fact that the business infrastructure has not been developed in here, that is why the need for funds is higher, which impedes franchising development. It is worthwhile using regional franchising and sub-franchising for Russian franchisees. The prospects for franchising development are most favorable. There has been a recent trend for quick development and expansion of the franchising method in business. That is why tools and methods to evaluate effectiveness of this type of business

are needed. However, it can be said that, unfortunately, franchising in Russia develops relatively slow in comparison to developed countries.

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# **LEADERSHIP IN CROSS CULTURAL SETTINGS: APILOT STUDY ON 3M EGYPT**

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## **ABSTRACT**

*Organizations operating in different countries need to develop a leadership approach that adapts to each particular culture (Grotenhuis, 2001). As a leading company in the leadership filed, 3M Company developed a unique approach to leadership. However, 3M Company has not published results regarding the relevance of its leadership competency framework for a specific culture (Corporate executive board, 2000). Further, little researches have been carried out on cross-cultural leadership characteristics and competencies in a specific cultural context (Javidan & et al., 2006). This is a case study research that presents how 3M Company's leadership practices fit into the Egyptian national culture.*

## **INTRODUCTION**

Leadership in cross-cultural context attracted many researchers over the last forty years (Shahin & Wright, 2004). Nevertheless, relatively little research has been carried out on cross culture leadership characteristics and strategies, in a specific cultural context (Abdalla & Al-Homoud, 2001; Javidan & et al., 2006). Further, most of researches focused on middle managers only (Suutari & et al., 2002; Jepson, 2009). Indeed such type of researches might be helpful for multinational companies, (MNC), who believe in developing and implementing their leadership models with global mindset. 3M Company is one of the leading MNCs in the leadership filed who believed in developing and maintaining a customized leadership model. However, 3M has not published results directly related to the implementation of its cross-cultural leadership competency framework, vitality and relevance to a specific culture (Corporate executive board, 2000).

This study is an effort to contribute to this important and growing body of knowledge. This is a case study research that was conducted on 3M's subsidiary in Egypt. Semi-structured interviews were employed to explore how 3M leadership practices fits into the Egyptian national cultural aspects in work place. This was discovered through presenting 3M approach to leadership, based on literature; exploring the main cultural factors that should be considered in the Egyptian subsidiaries, based on interviewees point of view; and highlighting the main leadership practices used to fit into the Egyptian culture, based on literature and interviews.

## **LEADERSHIP IN CROSS CULTURAL SETTINGS**

The study of leadership across cultures is a significant field of research. It helps to understand leadership behaviors expected in multicultural environments (Yan & Hunt, 2005). Cross-cultural leadership is defined as "the leadership interaction between managers and subordinates with different cultural backgrounds" (Suutari & et al., 2002). Researchers, such as Scandura and Dorfman, Van Oudenhoven, and Suutari presented different frameworks addressing leadership in cross cultural settings. For example, based on the GLOBE project, Terri Scandura and Peter Dorfman came up with the following dimensions; charismatic/value-based, team oriented, participatory, human oriented, autonomous, and self-protective (Scandura & Dorfman, 2004). On the other hand, Van Oudenhoven (2001) based his research on Hofstede's cultural model. He focused on the decision making process to measure power distance, the rules and regulations level of formalization to measure uncertainty avoidance, the level of career orientation versus relationship orientation to measure masculinity, and the level of separation between work and personal life to measure individualism. Further, Suutari (1996)



identified eight aspects of leadership that are significantly related to national culture, based on Hofstede's model. These leadership aspects are decision participation, autonomy-delegation, rewarding, production emphasis, role clarification, conflict management, individualized consideration and providing vision (Suutari, 1996; Suutari & et al., 2002).

Researchers suggested that leadership researches' outcomes and recommendations should be based on indigenous practices that are emerging from specific cultural context rather than practices that have been made for other cultures. This will help the large corporations as they need to develop cross-cultural leadership aptitude (Javidan & et al., 2006).

## 3M LEADERSHIP COMPETENCY MODEL

3M developed a customized leadership model that is composed of three groups of leadership competencies. The first are the fundamental competencies which are concerned with the character of employees possessed when they are hired that is refined throughout employees job experience in the different managerial levels in 3M. The fundamental leadership competencies consist of ethics and integrity, intellectual capacity, and maturity and judgment. The second are the essential leadership competencies which are significant for individuals managing 3M functions or departments. They consist of customer orientation, developing people, inspiring others, and business health and results. The third are the visionary leadership competencies which are concerned with the visionary capabilities of leaders, as they are expected to accept broader responsibilities. Such competencies are classified to global perspective, vision and strategy, nurturing innovation, building alliances, and organizational agility (Alldredge & Nilan, 2000).

Based on its leadership competency model, 3M endorses leadership practices that fall within the democratic leadership practices. Such practices are classified to participative, visioning, affiliative, and coaching. These democratic practices are highly correlated to success, as they create a strong organizational climate (Rentfrow, 2007).

Table 1: Summary for 3M leadership styles and practices based on 3M leadership competencies model

<b>Participative practices</b>	Participative leaders take subordinates' opinion to reach a common decision (De Bono & et al., 2008, p.34). Such practices are highlighted in <i>nurturing innovation</i> competency where leaders are expected to include others to reach better solutions (Alldredge & Nilan, 2000).
<b>Transformational leadership /Visionary</b>	Transformational leaders should know where is the organization heading, and align all recourses towards the organizational goals (Bass & Avolio, 1993; Goleman, 2000; Rivenbark, 2006). Such leadership style is highlighted in 3M <i>vision and strategy</i> competency which emphasizes that leader should know where the organization is heading and align all recourses towards the organizational goals. Further, such practices are highlighted in 3M <i>intellectual capacity</i> competency which focuses on leaders' ability to articulate and communicate the organizational vision, goals, and objectives.
<b>Affiliative /Relating</b>	Affiliative leaders are flexible and encourage innovation to increase subordinates' sense of belonging (Goleman, 2000; Rivenbark, 2006). Such practices are highlighted in 3M <i>nurturing innovation</i> competency which focuses on leaders initiatives to create a climate that supports new ideas.
<b>Coaching</b>	Leaders dedicate time, energy, thoughts, and actions to the development of human capital (Goleman, 2000; Rivenbark, 2006). Such practices are highlighted in 3M <i>developing people</i> and <i>inspiring others</i> competencies which focus on leaders' commitment towards developing subordinates and helping them identify their own strength and weakness.

In order to build its global framework of leadership, 3M Company involved executives, senior managers, and leadership talents from different countries in the world. 3M executives believed that the model is relevant to those who are using it (Alldredge & Nilan, 2000; Corporate executive board, 2000).

## GAP IN THE KNOWLEDGE

Although researchers agreed that culture affect leadership, they failed to show the big picture that illustrates how this happens. Scholars are still calling for leadership researches' outcomes and recommendations that are based on specific cultural context rather generalizing the studies that have been made for other cultures (Abdalla & Al-Homoud, 2001 Suutari & et al., 2002; Yan & Hunt, 2005). Moreover, most of cross-country research didn't consider the organizational hierarchy and focused only on the perceptions of middle managers (Suutari & et al., 2002; Jepson, 2009).

Further, 3M executives believe that this model was highly accepted by those who are using it. However, 3M has not published results directly related to the implementation of its leadership competency framework's vitality and relevance, for a specific culture (Corporate executive board, 2000).

## METHODOLOGY

### Paradigm

This study employed the case study research, conducted on 3M, to explore the cultural factors that should be considered in the Egyptian subsidiaries, and 3M approach to fit into such cultural factors. This was clarified through respondents' own words, and experience, to inductively build abstractions, and concepts from details (Creswell, 1994, p.145).

### Sampling

Considering the qualitative nature of the study, purposive sampling was employed to make sure that participants are from different categories (Silverman, 2000, p.104). This qualitative research focused on both Egyptian managers, and their Egyptian subordinates in different departments, and hierarchal levels in that MNC's subsidiary in Egypt.

The researcher conducted fifteen interviews; mainly five interviews were conducted in each hierarchical level. Interviews were conducted basically with Egyptian Country Business leaders, (CBLs) and functions' managers; senior Egyptian managers who are the subordinates of the country business leaders; and senior Egyptian managers' subordinates, as well as function managers' subordinates.

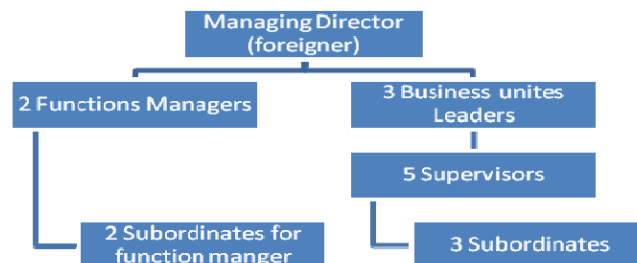


Figure 9 the study sample scope

### Data Gathering and Recording

Semi-structured interviews were the main data collection tool. Such interview style was useful in this qualitative study as the major interest is not only the researcher concerns but also the interviewees' point of view (Bryman & Bell, 2007, p.474). Face to face interviews were conducted in interviewees' offices or meeting rooms. Each interview took 60 minutes. First, the interviewer introduced the study and its main objectives to the employee. Second, the researcher asked the employee to read the participate form. Third, the researcher asked the employee whether s/he is interested to participate. Fourth, the researcher asked the employee to sign on the

participate form. Fifth, the interviewer, who is also the researcher, asked the interview questions. (Review the sample of interview questions)

Verbatim transcripts of the interviews testimony were created by the interviewer who's also the researcher. This helped the interviewer to pay attention to ask more clearly audible questions, as well as ensuring to receive clear answers during the interview (Kvale, 1996, p.169). Transcripts were amended based on interviewee feedback. Interviews' answers were categorized, based on literature.

## **Robustness of methodology**

The researcher strived to maintain the study credibility, transferability, dependability and conformability (Creswell, 1998, p.197). To establish *credibility*, the researcher requested the respondent's feedback about the credibility of the data collected, the findings, and the conclusion (Creswell, 1998, p.213; Yin, 1981). To maintain *transferability*, the researcher explicitly outlined the different steps of the research process (Silverman, 2000, p.188). To maintain dependability and *conformability* an auditor, who has no connection to the study, assessed the process and the findings, interpretations and conclusion accuracy (Creswell, 1998, p.198).

# **FINDINGS**

## **3M approach in its Subsidiary in Egypt**

3M Company believed that subsidiaries should be totally managed by the expert citizens of that country, to reach better results. 3M is keen to higher managing directors, (MDs), who's own culture is close to the Egyptian culture. This is because 3M found that the more close the managing directors' culture to the Egyptian culture, the more successful the subsidiary becomes. Thus, 3M Egypt country business leaders, (CBLs), and functions managers are Egyptians.

## **Egypt's Cultural aspects affecting workplace**

Employees in the Egyptian subsidiary believe that individuals' main concern and emphasis in Egypt differ from those of headquarters' countries. Based on the participants, employees tend to value socializing at work place, value human relationships, avoid conflict, value structured situations and clear rules, and focus more on short-term rather than long term issues.

In Egypt individuals tend to value socializing at work, as Egypt is a tightly integrated society that has high need for affiliation, this process help employees feel secured at work place. Further, employees-leader relationship tends to affect employees performance. In Egypt maintaining human relations and being caring are highly appreciated (Javidan & et al., 2006). Thus, subordinates expect leaders to consider their individual differences while coaching and directing their activities. Moreover, individuals tend to avoid conflict to maintain personal steadiness. Conflict among group members is considered as disruptive, as it creates uncertainty. Therefore, it tends to be avoided rather than confronted (Russell, 2004). Also, in Egypt, people tend to be more sensitive and emotional. They tend to take conflict on a personal level which may affect their motive and productivity at work. Furthermore, the culture in Egypt is traditionally risk-averse as it is characterized by high uncertainty avoidance (De Bono & et al., 2008, p. 203). Thus, individuals tend to value structured situations and clear rules to avoid uncertainty (Leat & El-Kot, 2007). Further, individuals tend to focus on short-term issues more than long term plans (Hofstede, 1994; De Bono & et al., 2008, p.71). This may be due to the inefficient education, the high instability and lack of transparency of laws and regulations, and the corruption of government agencies.

## **Shaping leadership practices to fit into the Egyptian national culture: Managerial implication**

Based on the identified cultural values, the process of fitting into the Egyptian culture, as identified through interviews, is found in five main leadership practices. The main leadership practices are formalizing rules and regulations, managing conflicts, tolerating the mix between work and personal life, creating and maintaining individualized consideration, and providing and reinforcing vision to followers (Suutari, 1996; Van Oudenhoven, 2001).

The first aspect is rules and regulations formalization, to deal with employees' tendency to value structured and clear regulations and avoid uncertainty. Leaders should clarify rules and provide detailed descriptions of the required tasks (Suutari, 1996). This includes providing guideline, and clearly stating and specifying responsibilities and obligations to fulfill the organizational requirements (Management Development Review, 1997). This also requires providing clear job description, and rewarding and punishment system as this process affects employees' motivation to fulfill expected results (Suutari, 1996; Suutari & et al., 2002). This process is highly important as employees tend to value structured work environment, to decrease uncertainty, and avoid overlaps and conflicts.

The second aspect is conflict management to deal with employees' attitude towards conflict. Leaders are expected to help subordinates to resolve internal conflicts with their team members, and manage conflicts with people in other departments (Suutari, 1996). Conflict may occur due to the gray areas, such as accountability overlap or confusion, deviating from rules and regulations, or conflict of interest between departments. Leaders should help employees deal with such conflict objectively, emphasize the overall organizational interest, clarify areas of responsibilities and relationships, and even highlight the good side of such conflicts. This process is important to deal with employees' sensitivity and emotional reactions to conflicts. This needs leaders' patience and interference to lobby for support and resolving conflicts (Management Development Review, 1997).

The third aspect is tolerating the mix between work and personal life to manage employees' tendency to socialize at work place. The degree to which employees involve their colleagues and managers in their personal life at workplace, should be managed (Low & Chapman, 2003). This process can be successfully nurtured and reshaped through socializing in lunch hours, and focusing on team building activities to develop mutual trust. Tolerating and effectively managing this mixing between work and personal life is important. Some employees tend to feel more secured and motivated when feeling that their work place is a tightly integrated environment that fulfills their social expectations. However, this should not lead to conflict of interest, intra organizational conflict, or violation of the company ethical code.

The fourth aspect is individualized consideration to deal with employees' tendency towards human relationship. Leaders should be supportive, and deals in an open way with subordinates (Suutari, 1996). This process helps in developing good relationships between leaders and subordinates. Leaders are expected to allocate time to discuss and help employees identify their strengths and weaknesses, and to create a development plan for each subordinate. This creates a chance for having open conversation between leaders and subordinates. Besides, it helps leaders to better support subordinates in the areas to be developed. Giving individualized consideration to employees make them feel welcomed and secured in the organization.

The fifth aspect is providing and reinforcing vision to followers to help them focus on short term issues while successfully implement long term plans. Leader should provide a vision of where the organization is heading in the future (Suutari, 1996). They are expected to communicate and clarify the company's vision, mission, and objectives to subordinates to help them understand and relate their tasks to the overall company's objectives. Unfortunately, without a clearly defined and communicated approach subordinates will fail in achieving their true potential (Strategic direction, 2004). This process helps employees focus on both long-term objectives, through focusing on realizing the bigger picture, and considering the day to day operations to fulfill this bigger picture.

In addition to the findings identified through participants' description for leaders' practices in 3M Egypt, many of 3M leadership competencies successfully address the identified cultural aspects affecting workplace. For example developing people competency addresses the individualized consideration, and intellectual capacity and vision and strategy competency address the development and reinforcement of vision to

followers. Employees in 3M believe that differences in national cultures are highly considered and tolerated, in a way that does not contradict with 3M business conduct.

## CONCLUSION

Through conducting a qualitative case study research, using semi-structured interviews with managers and subordinates, the research reached two main findings. First, individuals in Egypt tend to value socializing at work place, value human relationships, avoid conflict, value structured situations and clear rules, and focus more on short-term rather than long term issues. Second the process of fitting into the Egyptian culture is found in five main practices. The main practices are formalizing rules and regulations, managing conflicts, tolerating the mix between work and personal life, creating and maintaining individualized consideration, and providing and reinforcing vision (Suutari, 1996; Van Oudenhoven, 2001).

For MNCs to successfully operate in different cultures they need to develop a leadership approach that is applicable across the different regions where they operate, while maintaining and sharing common ethics and business practices (Alldredge & Nilan, 2000). Employees in the 3M Egyptian subsidiary believe that differences in national cultures are highly considered and tolerated, in a way that does not contradict with 3M business conduct.

## APPENDIX

### Interview(s) questions

1. Can an organization succeed even with an ineffective leadership? Under what condition
  - What does good/successful leadership look like? Would you please give an example?
2. Can an organization fail even with an effective leadership? Under what condition
  - What does poor/unsuccessful leadership look like? Would you please give an example?
3. Through your visit to the headquarters did you notice or feel that the leadership style (leaders activities, and practices) differs from the leadership style in the subsidiary in Egypt? If yes, would you please elaborate more?
4. Would you please describe the leadership practices in Egyptian subsidiary?
5. According to your opinion how does the national culture (individuals' main concern and emphasis) of the States differ from that of Egypt? Would you please give an example?
6. Do you think that the leadership style (activities and practice) in the Egyptian subsidiary is adjusted to fit into the Egyptian culture ( i.e., beliefs, expectations, ideas, values, attitudes and behavior)? How? Would you please give examples of successful attempts and ineffective attempts

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# CONSIDER THE IMPLICATIONS OF INTERNAL MARKETING ON ORGANISATIONAL PERFORMANCE: THE CASE OF SWEDISH IT FIRMS

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## ABSTRACT

*Internal marketing has evolved over time and different ideas and definitions of the concept have developed. Some argue that internal marketing aims to treat internal marketers as customers and jobs as internal products, while others argue that internal marketing is about motivating internal marketers towards customer orientation or that it is a strategy for implementation and management change. Internal marketing has been studied and investigated thoroughly as one of the key drivers of organisational performance. One conceptual theory explains that by motivating internal marketers through a variety of activities, organisational performance can be enhanced. This study explores how internal marketing programmes affects organisational performance of Information Technology (IT) companies in Sweden.*

## INTRODUCTION

Internal marketing has been developed during the last three decades and is today seen as a planned effort to motivate internal marketers through activities to improve organisational performance. The concept of internal marketing emerged from the idea that internal marketers within organisations should be considered as internal customers and jobs as products (Berry, 1981). There seems to be limited or no extant studies on how internal marketing is used to improve organisational performance within the Swedish IT industry. The current study aims to bridge this gap. The IT-sector is a sector with high demands where internal marketers, to a large extent, are considered the most important business assets. It is considered increasingly important to motivate internal marketers, and to retain them. Hence, this research contributes further knowledge to the area of internal marketing and how it impacts organisational performance. The focus on internal marketing, as a key driver of organisational performance, increased within the academic world when Sasser and Arbeit (1976) first referenced internal marketing in the context of management activities and organisational performance. The key to success for business according to Sasser and Arbeit (1976) is to regard jobs as the principle products and internal marketers as its most important customers.

Over time, different ideas and definitions of internal marketing have developed and the concept continues to evolve (Ahmed and Rafiq, 2002; Lings and Brooks, 1998; Ahmed and Rafiq, 2000; Varey and Lewis, 1997). The main arguments that have emerged suggest that internal marketing has some effect on internal marketers, external customer satisfaction and the development of cross functional units within the organisation (Aburoub et al., 2011). The various ideas and definitions of the concept mean that internal marketing continues to be a mooted concept (Ahmed and Rafiq, 1995; Ahmed and Rafiq, 1993).

Definitions of Internal Marketing have been developed during the last three decades. Leonard Berry is considered the pioneer of internal marketing due to the fact that he was the first person to use the term “internal marketers as customer”. He further explained this term when he suggested that internal marketing should be considered as viewing employees as internal customers and viewing their jobs as internal products (Berry, 1981) However, it was not until the publication of Berry’s seminar article in 1981 in which he defined internal



marketing as “viewing employees as internal customers, viewing jobs as internal products that satisfy the needs and wants of these internal customers while addressing the objectives of the organisation” that internal marketing entered the discourse of management (Berry, 1981, p. 25)

One definition considers internal marketer satisfaction. As stated above, Berry’s definition of internal marketing aims to treat internal marketers as customers and jobs as internal products. Parasuraman and Berry (1991, p. 151) clarified the statement further and stated that “internal marketing is the philosophy of treating employees as customers...and it is the strategy of shaping job products to fit human needs.” Furthermore, Grönroos (1985) set forth his view of the concept and stated that the job and work environment are the internal products which motivate the internal marketer to respond positively to management demands for customer orientation. Subsequently, Woodruffe (1995) promoted the idea that internal marketing treats the needs of internal customers and external customers with the same importance. Hence, he advocated that organisations can achieve their stated objectives by satisfying the needs of both internal and external customers through efficient planning and well-designed programmes. Furthermore, he argued that the aim of internal marketing is to make sure an organisation’s internal marketers are motivated and committed to the idea of delivering high quality customer service. According to Ahmed and Rafiq (2003) there is a relationship between satisfying the needs of the internal customers and meeting the expectations of external customer. Furthermore, Parasuraman et al. (1985) developed this idea in highlighting the fact that what the external customers pay for is the work of the internal customer approaching him or her. Furthermore, the definition of the internal marketer as a customer has been criticised due to the fact that it gave primacy to the internal marketers’ needs which, according to Ahmed and Rafiq (2000) was to challenge the objectives of marketing whereby external customers should be considered a priority. The criticism was supported by Harari (1993) who advocated that focusing on internal customers could drive the organisational focus away from external customers who he considers the main source of revenue and profitability.

Grönroos (1981) argued that contact internal marketers, who interact directly with the external customers, are involved in interactive marketing. The interaction between contact internal marketers and external customers is very important in terms of the marketing of the organisation. Furthermore, Grönroos (1981) stated the importance of taking advantage of all possible marketing opportunities and he suggested that contact personnel need to be customer orientated and sales minded. The aim of internal marketing is to motivate customer-conscious internal marketers within the whole organisation. In order to achieve this, integration throughout the organisation’s different functions is considered vital, as are the interactions between supporting functions and contact internal marketers. As a result of this discussion the definition of internal marketing was further developed to highlight internal marketing as a method of motivating internal marketers towards customer-consciousness. To do this, marketing activities were included: “...holding that an organisation’s internal market of internal marketers can be influenced most effectively and hence motivation to customer-consciousness, marketing orientation and sales mindedness by a marketing-like approach and by applying marketing-like activities internally” (Grönroos, 1985, p. 42). Implementing a marketing-type orientation at the internal level achieves the much desired satisfaction of front-line internal marketers. In addition, it attracts, develops, motivates and retains the best qualified internal marketers (Parasuraman and Berry, 1991).

The conceptual definition advanced by Grönroos (1985) is aligned with the views of Gummesson (1987) and George (1990). An integrated organisation provides the development of customer orientation and furthermore every internal marketer involved in the preparation and commercialisation of the product and service has an impact on organisational performance (Gummesson, 1987). George (1990, p. 64) emphasised that internal marketers “...are best motivated for service-mindedness and customer oriented behaviour by an active marketing-like approach, where marketing-like techniques are used internally”. The first and second definition of internal marketing emphasises the need to motivate internal marketers and the use of marketing-like techniques to do so. However, it is noted that the first definition advocates treating internal marketers as the most important customers for the organisation and put these in focus while the second definition advocates the importance of putting external customers in focus.

One of the first to advocate the role of internal marketing as a technique for managing internal marketers towards achieving organisational goals and objectives was Winter (1985, p. 69). He defined internal marketing as aligning, educating and motivating staff towards institutional objectives and as the process by which internal marketers understand and recognise, not only the value of the programme, but their place in it. For an

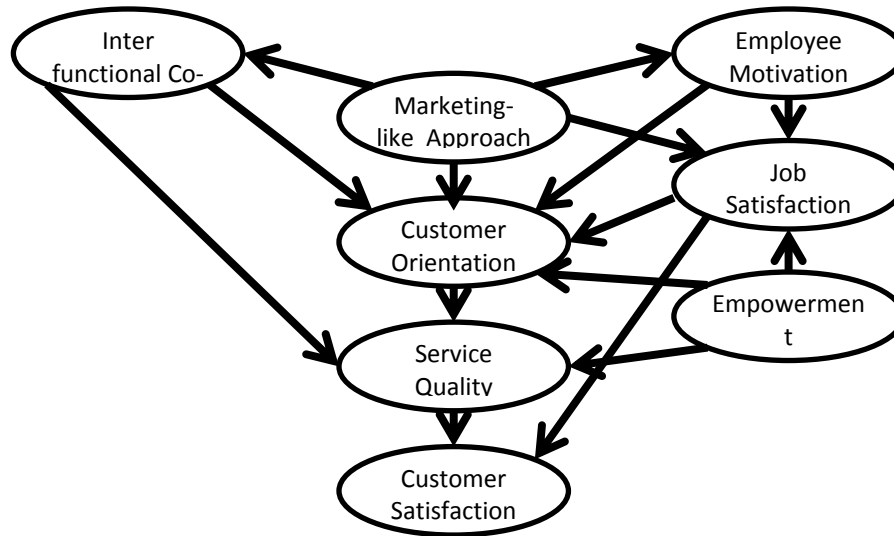
organisation it was said to be important that internal marketers see themselves as active participants in order to achieve the goals, objectives and long term success of the organisation. This assertion chimes with theory advanced by Compton et al. (1987) who stated that internal marketing aims to increase the understanding and importance of internal marketer interactions with external customers. Such an approach will provide the internal marketer with an understanding of their responsibilities in interactive marketing. This definition and view of internal marketing was supported and further expanded upon earlier ideas of internal marketing as a cross-functional mechanism for integration within the organisation. George (1990) supported the previous definition when he stated that internal marketing is to be seen as a holistic management process with the purpose to integrate multiple functions. George's view is supported by Stauss and Schulze (1990, p. 155) who suggested that: "the objectives of internal marketing are to get motivated and customer oriented employees". By creating acceptance of customer orientation among internal marketers and at the same time creating an environment which supports the attitudes and behaviour of customer orientation, internal marketing emphasises the idea of customer orientation (Stauss and Schultz, 1990). Another definition suggests that if an organisation needs to implement a new strategy this could be done more efficiently if the internal communication is sufficient and the inter-functional frictions are few. Furthermore, internal marketing has wider application than simply the motivation of internal marketers towards customer consciousness. Indeed, this definition highlights the possibilities to motivate internal marketers throughout the whole organisation towards delivering high quality services to external customers. Ahmed and Rafiq (1993, p. 222) defined internal marketing as "a planned effort to overcome organisational resistance to change and to align, motivate and integrate employees towards the effective implementation of corporate and functional strategies". It can therefore be concluded that internal marketing is about driving behaviour towards high quality services for the external customer as well as motivating the internal marketers towards achieving organisational goals and objectives.

## **CONCEPTUAL FRAMEWORK**

The relationship between internal marketing and customer orientation is derived directly from the internal marketing literature (Grönroos, 1981, Ahmed and Rafiq, 2002, Sasser and Arbeit, 1976, Woodruffe, 1995, Parasuraman et al., 1985). The model presented in Figure 1 shows how internal marketing is related to customer orientation. The focus in this model is the use of internal marketing in order to achieve customer orientation among internal marketers. The centre of this model is customer orientation, which is achieved through a marketing-like approach to the motivation of internal marketers and inter-functional coordination. The model puts customer orientation in the centre to show its importance and its central role in achieving customer satisfaction and hence organisational goals. In addition to this, the model also suggests that internal marketing includes marketing-like techniques and internal marketer empowerment. The empowerment variable is essential for the interactive marketing concept advanced by Grönroos, (1981) to occur. Empowerment in the model has an impact on job satisfaction, customer orientation and service quality (Ahmed and Rafiq, 2002). The model widens the scope of internal marketing as a tool for implementation that treats internal marketers as resources for the marketing function within the organisation. Further, Ahmed and Rafiq (2002) stated that internal marketing could be used as a general tool for implementations in order to overcome internal frictions and resistance to change. Furthermore, the central part of this model is customer orientation as it is one of the main aims of using internal marketing in order to achieve service quality and customer satisfaction.

Ahmed and Rafiq (2002, p. 20) showed four linkages presented in the model:

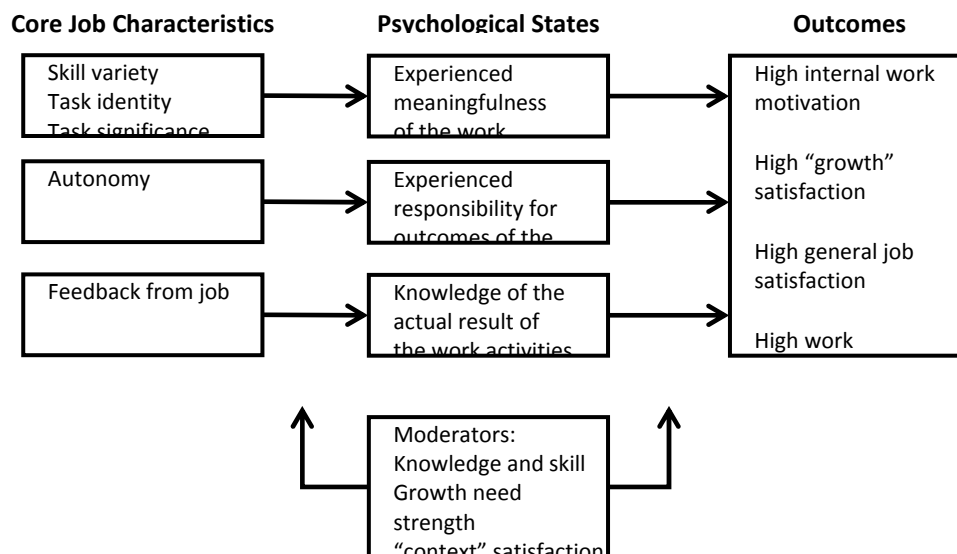
- i. Job satisfaction is linked to service quality indirectly through customer orientation
- ii. Internal marketers will be motivated and inter-functional coordination will be achieved by marketing-like approach
- iii. Job satisfaction and customer oriented internal marketers will be achieved by marketing-like activities internally
- iv. Customer orientation and job satisfaction will lead to customer satisfaction



**Figure 1. A Framework for internal marketing of services (Ahmed and Rafiq, 2002)**

It is possible to distinguish between two types of motivation that are universally applicable: intrinsic and extrinsic motivation. As discussed, Herzberg et al. (1959) differentiated between motivators and hygiene factors. Motivators generate job satisfaction in the same way as hygiene factors prevent dissatisfaction but do not generate satisfaction. The hygiene factors were described as extrinsic and related to the physical environment which the work was performed in. Furthermore, motivators were described as intrinsic. Pinder (2008) argued that in order for intrinsic motivation to be satisfying for the internal marketers they must not feel pressure. According to Harackiewicz and Larson (1986), feedback given by the supervisor which compares the competencies of internal marketers could affect intrinsic motivation positively or negatively depending on the outcome of the feedback being perceived as positive or negative by the internal marketer.

In comparison with what has been discussed above, The Job Characteristics Theory by Hackman and Oldham (1980) anticipates that satisfaction can be even greater if the work task includes variety and feedback.



**Figure 10. Adopted The Job Characteristics Theory by Hackman and Oldham (1980)**

The model suggests five core Job Characteristics that influence intrinsic work motivation. The five characteristics are; skill variety, task identity, task significance, autonomy and job feedback. If an internal marketer perceives the five core Job Characteristics as relatively high then job satisfaction is likely to follow (Hackman and Oldham, 1980).

- i. Skill variety – The degree to which the work requires variation of skills, talents and activities
- ii. Task identity – the degree to which the internal marketer perceives work as a whole and complete task with a beginning and an end and with a tangible outcome
- iii. Task significance – The degree to which the task contributes to something wider and affects others both within the organisation and in the external environment
- iv. Autonomy – the degree of independence and responsibility of the internal marketer in order to carry out his work
- v. Feedback – the degree to which the work tasks give the internal marketer direct and clear feedback about its performance

The above core Job Characteristics can influence the extent to which the internal marketer experiences the three critical psychological states identified as:

- i. Experienced meaningfulness of the work – The grade to which the internal marketer experiences the work as meaningful, valuable and not monotonous
- ii. Experienced responsibility for the work outcomes – the extent to which the internal marketer feels responsible for their work
- iii. Knowledge of results – the internal marketer's understanding of work and how well he or she performs

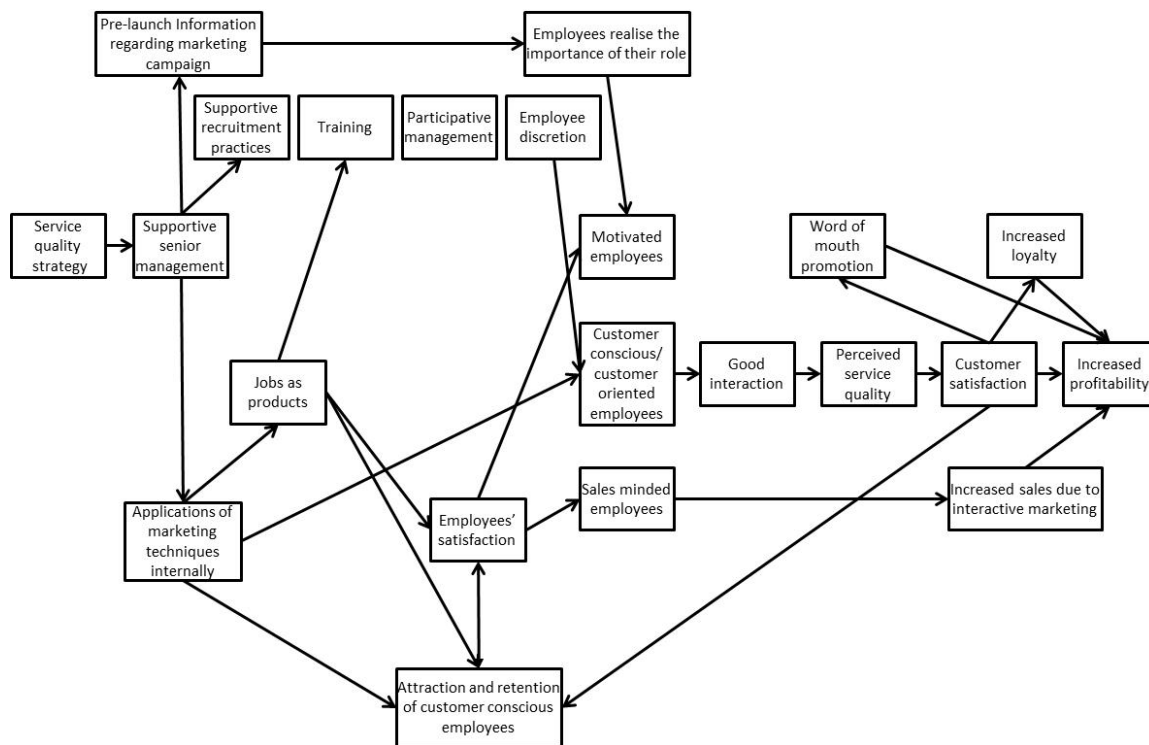
The first three core job characteristics according to Hackman and Oldham (1980) affect the perceived meaningfulness of work. In other words it can be said that a workplace which requires different types of skills in combination with offering possibilities to complete work as a 'whole product' as well as influencing others internally or externally will be perceived as meaningful and valuable work. Furthermore, the theory shows that if an internal marketer feels responsible for the work performed and able to work independently he or she will also feel responsible for the results presented. Feedback has important resonance with the internal marketer's knowledge about their work and how effectively he or she is performing the work. However, the internal marketer needs to have the knowledge and skills required to perform the work and also feel satisfied by the overall work context. If the internal marketer lacks the requisite knowledge or skills he will not be able to focus on job enrichment. These considerations are defined as moderators in the model and are further explained as follows:

"The worst possible circumstances for a job that is high in motivating potential would be when the job incumbent is only marginally competent to perform the work and has low needs for personal growth at work and is highly dissatisfied with one or more aspects of the work context. The job clearly would be too much for that individual and negative personal and work outcomes would be predicted. (Hackman and Oldham, 1980 p 88).

Internal marketers who report higher on one or more of the moderators should respond positively to the job. When an internal marketer finds work uninteresting, extrinsic motivation is required according to Gagné and Deci (2005). Offering extrinsic rewards (such as tangible rewards) is thought to influence the level of work that internal marketers will contribute in order to receive these rewards (Mahaney and Lederer, 2006). In comparison, Csikszentmihalyi and Rathunde (1993) argued that motivation theories should focus on how people feel when taking action. If the person "wants to do it" it is intrinsically motivated, on the other hand if the action is unrewarding the person will either stop performing, or continue, because he or she "has to do it", which is extrinsic motivation.

## **INTERNAL MARKETING AND ORGANISATIONAL PERFORMANCE**

Ahmed and Rafiq (2002) developed a model which combines the view of internal marketing by Berry (1981) and Grönroos (1985). Berry stated that internal marketing is about treating the internal marketer as customers and their work as any other product of the company. Grönroos stated that internal marketing is about getting internal marketers to be customer-conscious and sales minded in order to achieve better service quality. The model by Ahmed and Rafiq (2002) also includes a number of additional features that aim to refine the relationship between customer orientation and increased profits. Profits can also be seen to increase by word-of-mouth promotion from satisfied customers. Further, the model below suggests that internal marketer satisfaction is a result of training, participative management and internal marketer discretion. Jobs are also needed to meet the needs of the internal marketers (Ahmed and Rafiq, 2002).



**Figure 11. A meta model of internal marketing (Ahmed and Rafiq, 2002).**

The model has a number of advantages:

- i. The model highlights different aspects of internal marketing and emphasizes the fact that Grönroos and Berry are not competing views. Further the model uses differences between the two views in order to provide a more comprehensive conceptualization.
- ii. The model highlights a number of embedded assumptions and relations that need to be tested empirically.
- iii. The model provides a view of the mechanisms involved in the implementation of internal marketing.
- iv. The model provides a more comprehensive and complete view of internal marketing.

Furthermore the model provides an integrated framework for a number of issues in the marketing field, specifically: customer orientation, customer satisfaction, customer loyalty as well as the link between internal marketer satisfaction, customer satisfaction and customer loyalty. Moreover, the model implies that customer satisfaction leads to increased profitability and so does customer loyalty. According to Ahmed & Rafiq (2002) the effects of customer loyalty are, among others, reduced costs of attracting new customers as a result of word-of-mouth promotion, lower price-sensitivity, improved reputation of the organisation and reduced impact on competitor activities. This relationship has been criticized by Hallowell (1996) who found a weak relationship between customer satisfaction, customer loyalty and increased profits. Furthermore, he stated that it would have

been more comprehensive to look at the links between customer orientation and customer loyalty and between customer satisfaction and increased profitability.

## **IMPLICATIONS FOR MANAGEMENT**

IT companies in Sweden have developed rapidly over the last decades and are expected to do so going forward. In light of this it is interesting to further understand and investigate how they use internal marketing and to appreciate the way it influences their organisational performance. There has been limited research focusing on how motivation, as part of internal marketing, influences organisational performance. The field is continuously developing and this research hopes to contribute to the understanding of the subject and its foundational base. This means that this study will contribute to knowledge within this field and will inform future research within the field of IT firms in Sweden. It can also be used as a tool within the field of organisational innovation.

According to the key findings, internal marketers at Swedish IT companies are motivated by being able to continuously develop and contribute to the performance of the organisation. It is important for organisations to realise the full potential of internal marketers and focus on their continuous development. Developmental initiatives should satisfy individual needs amongst staff for personal and professional development. It is important to identify the potential of each individual internal marketer and provide each individual with a tailored development plan. In order to address the desire for development organisations should invest in their internal marketers and develop individual development plans in co-operation with internal marketers and their managers. The use of continuous reviews and evaluation programmes can help to identify and track each internal marketer's individual development. It is when the internal marketers realise that they have potential to develop and are able to achieve this on both a personal and professional level that they will feel motivated. Therefore, developmental initiatives have a strong impact on Swedish IT organisations' performance. The work to provide individual development programmes requires significant investment in terms of both time and resources, however the upside of reaching each individual's potential will ensure that IT companies in Sweden have motivated internal marketers.

It is important to address the desire for empowerment among internal marketers. Providing internal marketers with flexibility and increased control over tasks as well as a work life balance that suites their individual needs is key for improved performance and enhanced engagement. By providing individualistic cultures, internal marketers will feel greater responsibility and will feel valued. This should lead to greater motivation, which should stimulate organisational performance for companies within the IT industry in Sweden. The critical link between empowerment and performance should be addressed by managers as they play a critical role in contributing to a feeling of empowerment. It is important to make this a priority amongst managers, even though this can be a time consuming task. The long-term reward from an operational point of view for both internal marketers and managers is well worth it.

It is recommended to address the importance of teamwork and social interactions between departments and offices and consider promoting interactions between functions within each office, but also try to increase the interaction between various offices, not only in Sweden but also abroad. Social interaction and team initiatives will help Swedish IT organisations to achieve more motivated internal marketers and this in turn will lead to increased organisational performance. Furthermore, it is recommended to facilitate joint activities on a regular basis, as these play an important role in interactions between departments as well as in building an open and dynamic environment. The advantages of using joint activities are manifold and could be seen as part of continuous personal and professional development amongst internal marketers, through the exchange of experiences, knowledge and ideas. In order to address the link between motivation, transparency and stability, Swedish IT organisations should consider if the organisation could become more transparent as well as investigate the extent to which the structure is flat. It is recommended to further develop internal communication channels in order to overcome any issues regarding a lack of clear communication throughout the organisation, as well as to enable ideas to flow freely. It is recommended to ensure that internal marketers in support functions are motivated as these functions contribute to a feeling of stability and security in the overall organisation, which is important in turns of motivation.

## CONCLUSIONS AND FUTURE RESEARCH DIRECTIONS

This study lays the foundation for future research on the impact of internal marketing on organisational performance. For researchers it confirms that motivation and customer orientation are the key drivers of internal marketing with implications for organisational performance. It provides an insight into how a Swedish IT company should work with internal marketing programmes in order to enhance organisational performance. Future research could investigate how other companies in other sectors work with this and any differences between the needs of internal marketers in different organisations. Furthermore, a study could be conducted into the impact of organisational performance on profitability after implementing the recommendations. Another study might examine how monetary rewards could enhance motivation.

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# **INTERNATIONAL STANDARDIZATION AND ORGANIZATIONAL LEARNING IN COMPLEX ADAPTIVE SYSTEMS: THE CASE OF ISO 26000 SOCIAL RESPONSIBILITY STANDARD**

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## **ABSTRACT**

*ISO 26000's learning process will be treated in this work as a process that involves individual cognition and collective activities of multi-stakeholders that are bounded by common goals and commitment to organizational actions of the ISO/TMB/WG SR. In July 2010, the ISO/TMB/WG SR had 450 participating experts and 210 observers from 99 ISO member countries and 42 liaison organizations. This paper aims to present the results of an MSc dissertation concluded in 2011, concerning the analysis of the learning dynamics and the specific learning mechanisms experimented by the different groups during the development process of ISO 26000 standard, through the lens of the social complexity perspective of organizational learning (OL). In the context of ISO 26000's learning process, it was assumed that the social complexity perspective of organizational learning (OL) could be especially useful as it can improve the understanding of the role of learning in a double level of consensus – amongst stakeholders and across countries – in the light of the strategic challenges faced by ISO within the global governance arena.*

## **INTRODUCTION**

The need for ISO to work on a Social Responsibility (SR) global standard was first assessed in 2001 by ISO/COPOLCO. In 2003, the multi-stakeholder ISO Ad Hoc Group on SR which had been set up by ISO's Technical Management Board (TMB) completed an extensive overview of SR initiatives and issues worldwide. In 2004, ISO held an international, multi-stakeholder conference on whether or not it should launch a SR standard. The positive recommendation of this conference led to the establishment in late 2004 of the ISO Working Group on Social Responsibility (ISO/TMB/WG SR) to develop the future ISO 26000 standard.

The membership of the ISO/TMB/WG SR was the largest and the most broadly based in terms of stakeholder representation of any other single group formed to develop an ISO standard. Six main stakeholder groups were represented: industry; government; labour; consumers; nongovernmental organizations (NGO); 'service, support, research and others', as well as a geographical and gender-based balance of participants (ISO, 2012). Under the joint leadership of the ISO members for Brazil (ABNT) and Sweden (SIS), it was made up of experts from ISO members (national standards bodies – NSBs) and from liaison organizations - associations representing business, consumers or labour, or inter-governmental or nongovernmental organizations. In July 2010, the ISO/TMB/WG SR had 450 participating experts and 210 observers from 99 ISO member countries and 42 liaison organizations (ISO, 2010).

The ISO 26000 development process introduced innovative procedures and new flexible organizational structures, which can be summarized as follows: (i) adoption of a multi-stakeholder approach; (ii) implementation of twinning principle (twin leadership between a developed and a developing country) in the ISO Working Group on Social Responsibility (ISO/TMB/WG SR) to a greater extent than had yet been carried out in any ISO standards development group; (iii) configuration of a basic organizational framework including subgroups devoted to adopting new flexible procedures; looking for funding under-funded groups; and enhancing communication within and outside ISO/TMB/WG SR; and (iv) implementation of an inclusive decision-making process which encompassed national mirror committees from 99 countries, having in their composition experts from all stakeholder categories. This organizational mechanism was designed to provide national perspectives as input to the experts acting in the ISO/TMB/WG SR, in addition to those from 42 international and broadly based regional organizations (D-Liaison organizations).

Considering the characteristics above, the choice of the social complexity approach for analyzing the development process of ISO 26000 was mainly due to its strength in treating organizations as social evolving complex systems, reinforcing the role of learning as a source of sustainability. This conceptual approach will be adopted for build a comprehensive and transparent analytical tool to discuss the complex dynamics of knowing and learning during the ISO 26000 standardization process. One of the basic assumptions of this research is that both internal (endogenous) and external (exogenous) interactions are essential to organizational learning within an international and multi-stakeholders' organizational environment – such as ISO 26000 standard development. Different social actors (individuals, groups and organizations) were identified as learning entities that interacted and negotiated through various boundary objects.

The social complexity perspective is a conceptual approach that integrates cognitive and social perspective conceptions by drawing on two sets of principles of complexity, namely 'schemas-diversity' and 'interaction-interdependence'. Through the social complexity perspective lens, learning emerges as a space where different possibilities can be contained and it is also a process and product of the multiplicity of connections. This perspective can also reveal that organizational learning is the emergent product of multiple connections and it is particularly relevant for analyzing the ISO26000's process, where double level of consensus building was successfully achieved.

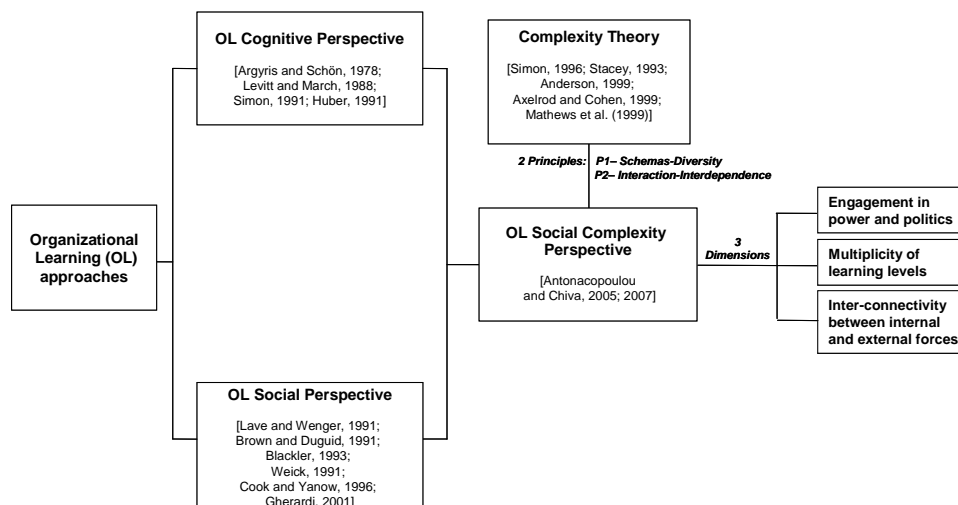
This paper aims to present the results of an MSc dissertation concluded in 2011, concerned with the analysis of the learning dynamics and the specific learning mechanisms experimented by the different groups during the development process of ISO 26000 standard, through the lens of the social complexity perspective of organizational learning (OL). In the context of ISO 26000's learning process, it was assumed that the social complexity perspective of organizational learning (OL) could be especially useful as it can improve the understanding of the role of learning in a double level of consensus – amongst stakeholders and across countries – in the light of the strategic challenges faced by ISO within the global governance arena.

By integrating the cognitive and social approaches, ISO26000's learning dynamics was treated as a process that involves individual cognition and collective activities of multi-stakeholders that are bounded by common goals and commitment to organizational actions of the ISO/TMB/WG SR. The main results can be summarized as follows: (i) an emerging model for learning dynamics analysis of international standardization processes; (ii) the ISO 26000 case study as a complex learning process; (iii) list of main facilitating factors for organizational learning in this case; and (iii) recommendations addressed to ISO regarding future international standardization processes in social complex environments.

This paper proceeds as follows. First, literature on the social complexity perspective of organizational learning (OL) is reviewed, as the basis for investigating learning dynamics of international standardization processes. Second, the methodology adopted during the MSc research, combining a case study strategy with a survey research, is described. Third, through the lens of the social complexity perspective, an emerging model depicting the interfaces between international standardization and organizational learning, as employed in the case study, is presented. Fourth, findings from the case study, supported by survey results, are discussed. Lastly, the paper is summarized and several conclusions are drawn.

## **THEORETICAL BACKGROUND**

Figure 1 schematically represents the theoretical background concerning the social complexity perspective of OL. In our previous works about ISO 26000 learning process, we have explored in more detail the main organizational learning approaches, namely OL cognitive and social perspectives (São Thiago and Almeida, 2011; São Thiago, 2011). Here, we are going to focus on the OL social perspective.



**Figure 1: Theoretical Background Schema concerning the Social Complexity Perspective of Organizational Learning**

The social complexity perspective of Organizational Learning (OL) is a conceptual approach proposed by Antonacopoulou and Chiva (2005; 2007) that integrates cognitive and social perspective conceptions by drawing on two sets of principles of Complexity Theory, namely ‘schemas-diversity’ and ‘interaction-interdependence’ (Simon, 1996; Stacey, 1993; Anderson, 1999; Axelrod and Cohen, 1999; Mathews et al. (1999)).

For the purpose of analyzing and re-conceptualizing OL as a dynamic, complex process, Antonacopoulou and Chiva choose these two sets of principles, both because they reflect the most significant dimensions that explain the nature of complex adaptive systems (CAS), and also because they correspond to the two main streams in OL research: (i) cognitive perspective (Argyris and Schön, 1978; Levitt and March, 1988; and Huber, 1991); and (ii) social perspective (Lave and Wenger, 1991; Brown and Duguid, 1991; Blackler, 1993; Weick, 1991; Cook and Yanow, 1996; and Gherardi, 2001). A key element of the cognitive perspective is schema theory (Gnyawali and Stewart, 2003), which considers learning as the process of transforming, creating, refining or validating schemas. On the other hand, the social perspective considers learning as the product of social interactions (Gherardi, 2001).

Based on ‘schemas-diversity’ and ‘interaction-interdependence’ principles, Antonacopoulou and Chiva (2005; 2007) proposed an integrated conceptual view of OL that explores the interactions between learning actors at different levels and the wider environment. From their conceptual view, one can also identify the conditions that underpin the interdependencies between them. For capturing the dynamics of learning and organizing, Antonacopoulou and Chiva (2007) identified three dimensions as key for explaining the social complexity of OL. They are: (i) engagement in power and politics; (ii) multiplicity of learning levels; and (iii) inter-connectivity between internal and external forces.

Engagement in power and politics by individual agents is a reflection of their ability to retain their power to maintain their unique qualities even when they operate in community. This point suggests that political behavior is not only a reflection of an attempt to fit in by subordinating one’s preferences in the interest of collective homogeneity. Quite the contrary, individual agents can fit in a community also when they exercise their practical judgment in assessing how to respond to situations. By both following the rules and breaking the rules as they learn, agents of a complex social system contribute through their actions to either the stability or

renewal of the organization. Engagement as an active process of collaboration between agents supports the co-ordination that underpins the complexity of changing conditions and allows greater responsiveness to internal and external forces. This means that the relationship between actors and the relationships between the organization and its environment shape the forces that influence the learning that takes place as a condition for their co-evolution.

Concerning the second dimension, ‘multiplicity of learning levels’, the several connections and interdependencies between actors and their social structures are subject to forces such as identity, language, power and politics as key conditions shaping how diversity is accommodated in relation to the emerging schemas. This point suggests that OL emerges out of the possible connections and inter-dependencies explored across multiple levels of analysis. Understanding which are the conditions that make connections across levels of analysis possible and how they form is a key priority.

From the perspective of social complexity, diversity and heterogeneity are achieved by the relationships between agents and by the internal agents’ or individuals’ relationships with the outside world. Agents achieve heterogeneous individual schemas, which cause the effective complexity of the system and the emerging self-organization. It is critical therefore, that OL reflects both the endogenous (internal) and exogenous (external) connections shaping learning as different sets of relationships create both the need and the context for learning. Equally fundamental are the dynamics resulting from the relationship between internal and external forces as they interact. This approach is more likely to provide scope for exploring the mutually adaptive relationship between the organization and the environment. The internal and external environment is dynamic and permeable not least because of the socio-political dynamics that constitute it.

According to Antonacopoulou and Chiva (2007), learning emerges as a space where different possibilities can be contained and also as a process of the multiplicity of connections. Besides, this perspective can also reveal that organizational learning is the emergent product of multiple connections and it is particularly relevant for analyzing the ISO 26000’s learning process, where double level of consensus building was successfully achieved. The choice of the OL social complexity approach for analyzing the ISO 26000 development process was mainly due to its strength in treating organizations as social evolving complex systems, reinforcing the role of learning as a source of sustainability.

This conceptual approach was the basis for designing an integrative conceptual model and for building a comprehensive and transparent analytical tool to discuss the complex dynamics of knowing and learning that occurred during the ISO 26000 standardization process. Both, the conceptual model and the survey tool will be presented in next sections. One of the basic assumptions of this research is that both internal (endogenous) and external (exogenous) interactions are essential to learning within an international and multi-stakeholders’organizational environment – such as ISO 26000 standard development. Different social actors (individuals, groups and organizations) were identified as learning entities that interacted and negotiated through various boundary objects towards consensus achievement.

## METHODOLOGY

To test the conceptual approach proposed by Antonacopoulou and Chiva (2005; 2007) in the organizational context of ISO 26000 process, we adopted a methodology which combined qualitative and quantitative methods, particularly, a case study strategy with a survey research.

The research methodology, as a whole, comprised: (i) literature and documental review on international standardization; social complex adaptive systems; organizational learning, with special attention to integrative approaches; (ii) review of the development process of ISO 26000 standard; (iii) design of a conceptual model that integrates the international standardization and organizational learning, through the lens of the social complexity perspective; (iv) development and application of a survey questionnaire to representatives of ISO/TMB/WG SR, including its Brazilian Mirror Committee; and (v) description of ISO 26000 learning dynamics through social complexity perspective, combining qualitative and quantitative methods.

For the purpose of review the development process of ISO 26000 standard and show its organizational complexity, a reference source of information provided by ISO was accessed via the online ISO Livelink area (ISO, 2012). This database comprises an extensive empirical material on its development process, including circa of 1,700 documents as a whole. By way of illustration, different drafts of ISO 26000, minutes of the working group meetings, working documents, resolutions, comments or results of ballots could be accessed and reviewed.

Concerning the case study's development, we adopted the research design proposed by Yin (2009), as follows: (i) definition of study's questions and propositions; (ii) definition of type of the case study; (iii) delimitation of units of analysis; (iii) understanding of the logic linking the data to the propositions; (iv) definition of the criteria for interpreting the findings; (v) analysis and discussion of results; (vi) case's conclusions (Yin, 2009, p. 20). Yet, the development of survey questionnaire we based upon the recommendations from DeVellis (1991). Finally, for integrating case study strategy with survey research, we used the referential works of Lee (1991) and Eisenhardt (1989).

It has been demonstrated how case studies, when integrated with a survey in a larger, more complex research design, can be useful: (i) as a source of rich detail to aid in the interpretation of quantitative findings from the survey (e.g. construct validation/internal validity and interpretation of observed associations); (ii) as a further means of triangulation, by testing the propositions or patterns with the case sample as well as with the quantitative survey data; (iii) to develop a close relationship with a few organizations who may serve as the sample for pilot testing the survey instruments and as a cross-check against questionnaire responses to aid in validating the survey instruments; (iv) as a test of the contextual relevance of variables of interest where an idiographic research strategy is pursued; and (v) as an aid in identifying alternative *ex-post* models (Gabbie, 1994).

Tables 1 and 2 summarize the analytical framework build for supporting the survey research. The complete instrument was arranged in four parts, totaling 78 questions.

**Table 1: Construction of Survey Questionnaire: Parts 1 to 3**

Dimension	Constructs	Number of questions
1. Engagement in power and politics	1.1 Stakeholders' representative-ness and legitimacy	7
	1.2. Solving of conflicts and tensions between the priorities and interests of different actors and stakeholder groups	5
	1.3. Different perspectives and motivations underlying the learning and knowledge creation	5
	1.4. Leadership of the process	6
2. Multiple levels of learning	2.1. Individual learning	3
	2.2. Collective learning	7
	2.3. Learning at different stages of the process	5
	2.4. Official language and existence of language groups as a support for transparency and learning at various levels	4
3. Interconnectivity between internal and external forces	3.1. Interactions among individuals within a group	4
	3.2. Interactions among the various groups	3
	3.3. Interactions between individuals and their external environments	5
	3.4. Self-organization	5

The first three parts refer directly to the three dimensions of the proposed OL conceptual model and include 58 questions. Yet, the other 20 questions are associated to factors facilitating learning in complex adaptive systems (as in the case of ISO 26000 learning process).

**Table 2: Construction of Survey Questionnaire: Part 4**

Factors facilitating OL	Number of questions*
Inclusive multi-stakeholder model	2
Interactions among individuals in different groups	2
Interactions among the various groups	2

Interactions between individuals and their external environments (external to the groups where they participated)	2
Flow of information and accessibility to information	2
Transparency and trust	2
Existence of language groups as support for transparency and learning at the various levels	2
Shared leadership between a developed country and a developing country	2
Work dynamics adopted by the different groups	2
Organizational structure for the standard's development	2

**Note:** The 2 questions were the same for all factors. They were: (i) importance of the factor for OL in international standardization processes; (ii) effective contribution of the factor for OL in the ISO 26000 process.

From the total of 450 experts who participated in the ISO/TMB/WGSR, we delimited a target population of 165 participants, applying three criteria: (i) to be a member of the 'Chairs' Advisory Group' or CAG; (ii) to be a member of Brazilian Mirror Committee of ISO/TMB/WGSR; and (iii) other experts of ISO / TMB/WG SR with active participation during the whole standardization process. It was assumed that the group of 165 experts gathered the characteristics of representatives of ISO/TMB/WGSR as a whole, as recommended by Levin (1987). Table 3 shows the target population for the survey research and the sample composition (respondents).

**Table 3: Target population for the survey research and the sample composition**

Item	Target population (Typical cases)	Sample composition	
		Number	%
Members of Chairs' Advisory Group (CAG)	31	16	51,61
ISO/TMB/WG SR leaders	4	4	100
Coordinators and co-coordinators of Task Groups (TGs)	12	5	41,67
Representatives of international organizations (OIT, UN Global Compact and Global Reporting Initiative – GRI)	3	3	100
Representatives of six stakeholders' categories	12	4	33,33
Members of the Brazilian Mirror Committee	14	13	92,86
Other experts of ISO/TMB/WG SR with effective participation during the whole standardization process	121	39	32,23
<b>Total</b>	<b>165</b>	<b>68</b>	<b>37,8</b>

## INTERNATIONAL STANDARD DEVELOPMENT AND ORGANIZATIONAL LEARNING: AN EMERGING MODEL

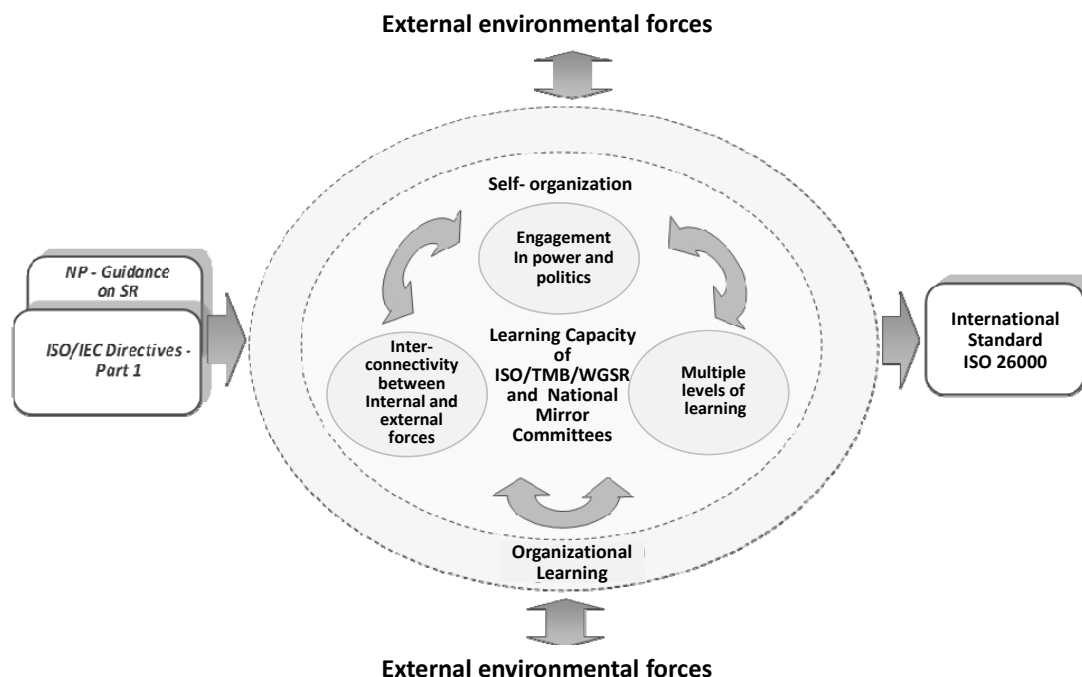
We present in this section an integrative conceptual model proposed for analyzing the ISO 26000 learning dynamics, assuming that international standardization processes can be considered complex and adaptive systems. Particularly, within the organizational context of ISO 26000 process, the proposed model could be empirically validated by 68 representatives of the respective units of analysis - ISO/TMB / WG SR and its Brazilian Mirror Committee (considering a target population of 165 people, as showed in Table 3).

The ISO/TMB/WGSR was composed by 450 experts from 99 countries and 42 D-liaison organizations. (ISO 2010). Experts representing "Industry" accounted for approx. 22% of the WG experts, followed by the categories "Government" (approx. 21%), "SSRO" (approx. 19%) and "NGO" (approx. 19%). The two smallest groups were "Consumers" (approx. 11%) and "Labour" (approx. 8%). As far as the implementation of an inclusive decision-making process was concerned, National Mirror Committees from 99 countries were established. These Committees had in their composition experts from all six stakeholder categories. The Mirror Committees were designed to provide national perspectives, considered as a fundamental input to the members of ISO/TMB/WG SR, in addition to the opinions from 42 international and broadly based regional organizations (D-Liaison organizations).

The model presented here relied on the work of Antonacopoulou and Chiva (2005, 2007) concerning organizational learning in complex social systems. However, to propose an integrative model for analyzing the dynamics of learning in ISO 26000 process, we assumed the following assumptions:

- the organizational structure established by ISO in 2005 for conducting the ISO 26000 process can be considered as a complex adaptive system;
- within the ISO/TMB/WG SR's task environment, OL has been cause, consequence and context of a self-organized and co-evolutionary process;
- the interconnections between individuals and groups within and outside of the ISO/TMB/WG SR (and also within the National Mirror Committees) have been molded by political forces, considered essential for effective OL in these contexts;
- the dynamics of negotiations based on a multi-stakeholder approach, which included discussions at international and national levels, allowed the stakeholders to contribute to the development of a learning capacity within the ISO/TMB/WG SR (and also in National Mirror Committees).

Figure 2 schematically shows the proposed conceptual model focused on the analysis of the dynamics of organizational learning experienced during the standardization process of ISO 26000. The development of this model started from the three original dimensions defined by Antonacopoulou and Chiva (2005, 2007), which were deployed in twelve constructs during the development of the MSc research project (See Table 1).



**Figure 2: Conceptual Model for Learning Dynamics Analysis of ISO 26000 Process through Social Complexity Perspective**

This model aims to provide the conceptual basis for supporting the survey research and the OL analysis developed through a case study strategy focusing on ISO26000 process. In specific terms, it aims to support:

- analysis of factors and mechanisms that influence the effective engagement of the participants of ISO/TMB/WG SR;
- identification of the most relevant aspects for the OL at the individual level, at the level of subgroups and also at the ISO / TMB / WG SR as a whole;
- analysis of the conditions that facilitate the interactions between individuals of the ISO/TMB/WG SR; between different groups of ISO/TMB/WGSR; and between individuals and groups and their multiple external environments;

- identification of facilitating factors for organizational learning in international standardization processes (in general) and evaluation of their contribution to learning in the process of drafting the International Standard ISO 26000.

## MAIN RESULTS

Table 4 shows a synthesis of the results related to the OL conceptual framework, as presented in Table 1 and represented in Figure 2.

**Table 4: General results related to OL conceptual framework**

Unity of analysis	Statistics	REPR	CONF	PERS	LEAD	INLE	COLE	PRLE	LANG	INTI	INTG	INTE	SELF
ISO/TMB/WGSR	Average	7,90	<b>8,45</b>	7,92	7,66	8,28	7,74	8,11	7,79	<b>7,65</b>	8,25	7,66	8,04
	Standard Deviation	1,85	1,60	2,00	2,10	1,83	2,02	1,86	2,18	1,84	1,55	1,93	1,80
Brazilian Mirror Committee	Average	7,86	8,89	8,26	8,82	9,15	8,85	8,98	8,65	8,33	8,36	8,35	8,85
	Standard Deviation	2,21	2,09	2,37	2,19	1,15	1,77	1,66	1,87	1,83	1,86	2,06	1,69

**Legend:** REPR- Stakeholders' representative-ness and legitimacy; CONF - Solving of conflicts and tensions between the priorities and interests of different actors and stakeholder groups; PERS - Different perspectives and motivations underlying the learning and knowledge creation; LEAD - Leadership of the process; INLE - Individual learning; COLE - Collective learning; PRLE - Learning at different stages of the process; . LANG - Official language and existence of language groups as a support for transparency and learning at various levels; INTI - Interactions among individuals within a group; INTG - Interactions among the various groups; INTE - Interactions between individuals and their external environments; SELF - Self-organization.

**Scale:** from 10 to 1, where: 10 =totally agree; and 1=totally disagree.

According to Table 4, the highest average (8.45) referred to the construct “Solving of conflicts and tensions between the priorities and interests of different actors and stakeholder groups”, which shows that the process was oriented to achieve double level of consensus building – among stakeholders and countries. In fact, this one of the ISO targets successfully reached. On the other hand, the lowest average obtained during the evaluation of learning dynamics of ISO 26000 process referred to ‘interactions among individuals within a group’ (average = 7.65). This result was due to perception that the existence of a subgroup devoted to promote communication within and outside the WG SR did not contributed effectively to build confidence among the experts of the WG SR. This topic had 6.13 as average. In the complete MSc dissertation (São Thiago, 2011), available in PUC-Rio website (Libraries), these results are deployed and discussed by each dimension of analysis, namely: (i) 'engagement in power and politics'; (ii) 'multiple levels of learning'; and (iii) 'interconnectivity between internal and external forces '. Due to limitations of space, we are going to focus on results regarding the factors facilitating organizational learning in international standardization processes, in general, and their contribution to ISO 26000's organizational learning, through the social complexity perspective, in particular. We present the indicators analyzed by organizational unit in this case study, as follows: (i) ISO/TMB/WG SR (number of respondents = 68) and (ii) Mirror Committee (Brazilian respondents = 13).

Table 5 presents the descriptive statistics concerning the importance of facilitating factors for enhancing organizational learning in international standardization processes (in general), according to the perceptions of: (i) respondents of ISO/TMB/WGSR; and (ii) respondents of the Brazilian Mirror Committee.

The survey revealed that, from the perspective of participants of the ISO/TMB/WG SR, all ten factors were considered important for standardization processes in general, since the averages are near ( $m = 9.25$  and  $m = 8.07$ ). However, the factors which gained prominence were 'transparency and trust' (average = 9.25); 'flow of information and accessibility to information' (average = 8.94), and 'inclusive multi-stakeholder model' (average = 8.76.).

**Table 5: Importance of facilitating factors for the processes of international standardization (in general)**



Unity of analysis	Statistics	MOD	IIG	IDG	IIA	FIN	TRC	LAN	SHA	DYN	STR
ISO/TMB/WGSR	Average	9,00	8,38	8,45	7,61	8,62	8,80	8,02	8,02	7,97	8,26
	Standard Deviation	1,25	1,80	1,67	1,88	1,32	1,30	1,68	1,85	1,86	1,87
Brazilian Mirror Committee	Average	9,46	8,77	9,08	8,38	8,62	9,08	8,54	8,54	8,62	9,00
	Standard Deviation	1,13	1,30	0,95	1,61	1,33	1,38	1,76	1,20	1,56	1,08

**Legend:** MOD - Inclusive multi-stakeholder model; IIG - Interactions among individuals in different groups; IDG - Interactions among the various groups; IIA - Interactions between individuals and their external environments (external to the groups where they participated; FIN - Flow of information and accessibility to information; TRC - Transparency and trust; LAN - Existence of language groups as support for transparency and learning at the various levels; SHA - Shared leadership between a developed country and a developing country; DYN - Work dynamics adopted by the different groups; STR - Organizational structure for the standard's development

**Scale:** from 10 to 1, where: 10 =totally agree; and 1=totally disagree.

In turn, Table 6 presents the descriptive statistics concerning the contribution of the same factors for enhancing OL in ISO 26000 process, according to the perceptions of: (i) respondents of ISO/TMB/WGSR; and (ii) respondents of the Brazilian Mirror Committee.

**Table 6: Effective Contribution of Facilitating Factors to organizational learning in ISO 26000 process**

Unity of analysis	Statistics	MOD	IIG	IDG	IIA	FIN	TRC	LAN	SHA	DYN	STR
ISO/TMB/WGSR	Average	9,00	8,38	8,45	7,61	8,62	8,80	8,02	8,02	7,97	8,26
	Standard Deviation	1,25	1,80	1,67	1,88	1,32	1,30	1,68	1,85	1,86	1,87
Brazilian Mirror Committee	Average	9,46	8,77	9,08	8,38	8,62	9,08	8,54	8,54	8,62	9,00
	Standard Deviation	1,13	1,30	0,95	1,61	1,33	1,38	1,76	1,20	1,56	1,08

**Legend:** MOD - Inclusive multi-stakeholder model; IIG - Interactions among individuals in different groups; IDG - Interactions among the various groups; IIA - Interactions between individuals and their external environments (external to the groups where they participated; FIN - Flow of information and accessibility to information; TRC - Transparency and trust; LAN - Existence of language groups as support for transparency and learning at the various levels; SHA - Shared leadership between a developed country and a developing country; DYN - Work dynamics adopted by the different groups; STR - Organizational structure for the standard's development

**Scale:** from 10 to 1, where: 10 =totally agree; and 1=totally disagree.

## CONCLUSIONS

The survey research combined with case study strategy allowed the analysis of each construct of the conceptual framework presented in this paper. They also allowed the identification of the most important facilitating factors for organizational learning in international standardization processes in general. Regarding the effective contribution to organizational learning in ISO 26000 process, the ISO/TMB/WG SR's members considered that the factor that more contributed to ISO26000 OL was 'inclusive multi-stakeholder model' (average = 9.00). The factor 'transparency and trust' was also highlighted in the opinion of this group (average= 8.80).

From the perspective of the Brazilian Mirror Committee, the factor 'inclusive multi-stakeholder model' received the highest average among the ten factors set out in the survey instrument. Both, for the organizational learning of standardization processes, in general, and also for the ISO26000 OL (average= 9.62; and average= 9.46, respectively).

As a final conclusion, it can be stated that the case study supported by a quantitative analysis enabled an empirical validation of the conceptual model proposed in this work and represented in Figure 2. This validation involved 68 representatives of the respective units of analysis – the ISO/TMB/WG SR and the Brazilian Mirror Committee, considering a target population of 165 potential respondents.

The main contribution of this research was to introduce a new theoretical lens for investigating international standards' development as a social, complex learning process. This approach will be useful as it can improve the understanding of the role of learning in a double level of consensus – amongst stakeholders and across countries – in relation to the strategic challenges faced by ISO within the global governance arena. From

the ISO26000 case study, it can be revealed the best mechanisms to facilitate the process of learning and also the main difficulties observed in such an international, multi-stakeholders' environment. For future international standards developments, the case study can also bring some recommendations that ISO could adopt in near future to meet needs and expectations of all stakeholders' categories, particularly different groups other than those which classically took part in ISO standardization processes.

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# COMPARISON OF BOOK INCOME AND TAXABLE INCOME IN TERMS OF VALUE RELEVANCE OF EARNINGS

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## ABSTRACT

*In the assessment of earnings, International Financial Reporting Standards (IFRS) and Tax Procedure Law (TPL) in Turkey applies different principles. As a result, difference between book income and taxable income arises because of different procedures each system applies. This study examines and compares IFRS income and TPL income and investigates which measure is more value relevant than the other in explaining earnings-return relation. The study further discusses book-tax conformity issue and questions whether book-tax conformity would result in loss of relevant information to financial statement users. We provide supportive evidence regarding value relevance of IFRS income while we cannot find significant evidence regarding value relevance of TPL income. Regarding the ongoing debate over the necessity of converging two income numbers, we conclude that if IFRS income converges to TPL income a considerable level of information will be lost.*

## INTRODUCTION

Financial statements are prepared for different interest groups that use financial information. The accounting principles that Capital Markets Board of Turkey employs is International Financial Reporting Standards (IFRS) (published in serial: XI, Number:29 “Notification Regarding Financial Reporting in Capital Markets”), while the accounting principles that tax authority of Turkey employs is Tax Procedure Law (TPL). In the profit calculation of corporations, IFRS and TPL takes different rules and requirements into account since the principles they use in their accounting applications are different. For instance, there are five basic measurement methods according to IFRS; historical cost, replacement cost, realizable value, fair value and value in use. On the contrary, measurement methods applied in TPL covers imputed cost (classified within the fair valuation concept), cost of purchase and nominal (face) value (Pamukcu, 2011). Consequently, taxable income is derived from the financial statements that are prepared according to TPL of Turkey, while accounting (book) income is derived from the financial statements that are prepared according to IFRS. In tax reporting, the purpose of the tax authority is to take precautions against taxpayers’ actions to show base value at minimum and to provide fair tax collection with appropriate rules and regulations. Meanwhile in financial reporting, the purpose of accounting standards is to accommodate transparent and fairly presented financial statements in order investors and creditors to make appropriate judgments.

The difference between book and taxable income arises mainly from two factors. First, some revenues and expenses are excluded in the period end profit of TPL income but are included in the period end profit of IFRS income. Second, some revenues and expense accounts are discounted at once in that period although the accounts enclose more than one period. However, according to matching principle in IFRS, all revenues and expenses are discounted at the related period. In literature, this difference between two accounting measures (IFRS and TPL) is called timing difference (Guclu, 2009). Regarding the divergence between book and taxable income measures, costs of book-tax conformity as well as costs of book-tax differences are debated in the prior literature. Some state that converging book and taxable income measures will cause loss of information in the financial markets and decline in value relevance of earnings (Ali and Hwang 2000, Hanlon 2005, Hanlon, Kelley and Shevlin 2005, Kelley and Shevlin 2005, Maydew and Shevlin 2006). Meanwhile some argue that the

divergence between book and taxable income bring considerable costs to the corporations such as deterioration in persistence of earnings, decrease in reputation of firms in the financial markets and increasing levels of tax sheltering (Hanlon 2005, Mills 1998, Zeng 2002 and Desai 2003). In U.S. it is observed that there is an increasing gap between book and taxable income numbers after early 1990s (Manzon and Plesko 2002, Mills, Newberry and Trautman 2002, Hanlon and Shevlin 2005).

If regulators decide on applying book-tax conformity, it is important to examine whether converging book income to taxable income or taxable income to book income would result in negligible loss of information. In this respect, we questioned whether book income or taxable income is more value relevant than the other. To our knowledge the study of Hanlon, Kelley and Shevlin is the only one that compares the value relevance of earnings and incremental information content of book income and taxable income. They measured value relevance of earnings by comparing changes in book and taxable income as independent variables for U.S. firms. Researchers found that book income is more value relevant than taxable income, however both of the measures show incremental explanatory power. Thus, they conclude that converging book income to taxable income will result in a 50% loss of information in explaining earnings.

The aim of this study is to examine value relevance of earnings in book income (hereafter IFRS income) and taxable income (hereafter TPL income) and question which measure provides more information content to financial statement users. We used net income numbers in calculating EPS of firms. Since “book income” and “taxable income” demonstrate pre-tax values, we preferred to call these two measures as IFRS income instead of book income and TPL income instead of taxable income. Our study extends Hanlon, Kelley and Shevlin’s (2005) empirical work by using three models determining earnings-return relation, developed by Easton and Harris (1991). Our sample comprises of 200 publicly held firms in ISE for the period 2004-2009. The final sample includes 949 firm year observations for IFRS income data and 896 firm year observations for TPL income data. We compare value relevance of two measures by conducting two univariate analyses in which the independent variables are earnings levels and earnings changes. We further conduct a multivariate analysis which tests the explanatory power of earnings using both earnings levels and earnings changes variables in a combined model. Although existing literature deals with U.S. firms and capital markets, our study also contributes to the prior works by examining capital markets of Turkey in the Istanbul Stock Exchange. Apart from Hanlon et al.’s findings, our results show that IFRS income is significantly value relevant and has information content in explaining stock returns while information content of TPL income is not sufficient in explaining earnings-returns relation. Hence our results suggest that converging IFRS income to TPL income would result in considerable loss of information to financial statement users.

## LITERATURE REVIEW

Several studies in the literature address the reporting issues related to divergence between book income and taxable income. Manzon and Plesko (2002) focus on the magnitude and sources of book-tax differences and examined publicly traded firms for the period 1988 – 1998 for each set of accounting rules. Manzon and Plesko demonstrate the objectives behind two measures, such that book income is based on Generally Accepted Accounting Principles (GAAP), in which relevance, reliability, comparability, consistency and materiality are five basic qualities outlined in the measurement of accounting numbers. Contrarily taxable income is based on Internal Revenue Code (IRC), in which efficient and equitable determination of tax liabilities and subsequent collection of revenues to fund governmental operations are the main objectives in assessing taxable income number. Since measurement rules diverge as a result of different objectives each system has, book and taxable income numbers diverge accordingly. The researchers mainly focus on three sources of difference. First source is the differences in timing of revenue and expense recognition. Second source is the recognition of certain revenues and expenses in one system but not in the other system. Finally, third source arises from consolidation processes. Taxable income is measured by current federal tax expense divided by statutory tax rate and book income is taken from the financial statements of publicly traded U.S. firms from the S&P’s annual file. For the period 1988-1998 the results indicate that the gap between income for financial reporting purposes and tax purposes diverge during 1990s’. Researchers also observed that only a small set of variables is sufficient to explain large portion of this growing gap between two measures. Those variables which increase the book-tax spread are pretax income, change in net sales, net operating loss and post retirement benefits.

Mills, Newberry and Trautman (2002) demonstrate three purposes for the growing gap between book and taxable income. According to the U.S. Treasury (1999) and Bankman (1999) the reason of the growing gap can be attributed to corporations' growing use of tax shelters. The increasing use of non-qualified stock option plans leading to tax deductions is another suggestion for the book-tax difference proposed by several researchers (Manzon and Plesko 2002, Hanlon and Shevlin 2002, Desai 2003). Another reason for the growing gap between the two income numbers could be attributed to consolidation process generated by multinational companies (Mills and Newberry 2000, Manzon and Plesko 2002). Mills et al. conduct panel regression analysis for the period 1990 – 1999 and their results also reveal that there is a growing gap between book and taxable income (to the advantage of book income) from 1990 to 1999.

Reconciliation of book and tax reporting income is also reviewed and debated by Mills and Plesko (2003). To them, book-tax differences arise from two issues. First issue is related to consolidation process, where the book income is determined according to the share of the consolidated reporting group. For instance if the parent company owns more than 50% of the shares, but does not own 100% of the subsidiary, the parent company should subtract the portion of the subsidiary's earnings from net income and allocate that amount in the minority shareholder interest. If the corporation has ownership of another corporation between 20% and 50%, the parent company should include its percentage interest in the net income of that firm as "net equity of unconsolidated subsidiaries". Finally if the parent company owns less than 20% of another company it should only include dividends of that company in book income. Consequently the difference between book and taxable income arises from the companies that have foreign or domestic subsidiaries with ownership less than 100%. Second reason of book-tax differences arises from income measurement divergence between two measures. Financial accounting rules restrain companies from overstating income, while tax rules restrain companies from understating income. The temporary divergence between two measures for income measurement purposes can be attributed to accruals, asset recovery rules and amortization of intangible assets while permanent divergences are attributed to expensing stock options, cost recovery of intangible assets and valuation issues in merger and acquisitions.

Hanlon and Shevlin (2005) discuss conformity of book income and taxable income and disclosure differences between these values. They mainly discuss three solutions to the book-tax differences proposed by the regulators, academics and the press. First solution is full disclosure of firms' entire tax return in order investors to compare book and taxable income and to provide them a more accurate firm performance measure. Second solution is partial disclosure of firms' tax return, such as the amount of taxable income and tax liability. Third solution is the conformation of two income numbers by eliminating book-tax differences. Hanlon and Shevlin propose applying the third solution and examine potential costs and benefits of conforming book-tax differences. In the discussion of book-tax conformity the question of which income number should be approximated as a new income measure is examined. There are three options in converging the two measures. The first option is approximating new measure to taxable income, second option is approximating new measure to book income and third option is approximating new measure to some hybrid number in between. According to Hanlon and Shevlin (2005) the new measure should be approximated to taxable income and the Congress should be responsible in the rulemaking process. To them leaving the approximation process to an independent board such as FASB will be problematic since an independent board would not take treasury's budgetary needs into account. Studies state that potential benefits of conforming book and taxable income are the reduction in manager manipulations and compliance cost, since the same measure is reported in IFRS/GAAP and Tax Procedure Law. Contrarily, potential costs of conforming two measures are the loss of information in the financial markets due to the elimination of accruals from the book income, and decline in value relevance of earnings due to influence of political, social and economic factors on tax laws.

However the researchers did not consider value relevance of two income measures in determining pros and cons of book-tax conformity. In this respect, there are several studies which conclude that book-tax conformity will result in lower value relevance of reported earnings while other studies conclude that increasing book-tax differences will lower information content of earnings.

Ali and Hwang (2000) observed a decline in the value relevance of earnings when financial accounting measures are significantly influenced by tax rules. Similarly, Hanlon, Kelley and Shevlin (2005) also examined the value relevance of book and taxable income and discuss how much information content will be lost as a result of converging book-taxable income for U.S. firms. According to the researchers taxable income should be

estimated from financial statement disclosure. They assert that if accounting earnings are approximated to taxable income relevant information to financial statement users will be lost. In this respect they believe that rather than approximating accounting earnings to taxable income, firms should be forced to close the gap between book and taxable income in order to approximate “true” income of the firm. Researchers conduct an event study and regression analysis to examine whether income measure is correlated with the information that is used for firm performance assessment. They also analyze which measure of performance (book versus taxable income) is more related to stock returns. For the period 1983-2001 the results show that both measures have incremental explanatory power on stock returns. Consequently conforming two measures would result in a loss of information available to investors.

In an experimental study, Hanlon, Maydew and Shevlin (2006) investigate book-tax conformity issue in terms of information content of earnings for U.S. firms. Researchers assert that if tax rules change without any change in the financial accounting rules, it will direct firms to minimize taxes, thereby increasing after tax cash flows for shareholders. Prior literature reveals that as the degree of book-tax conformity increases, deferral of taxable income will result in tax-induced lower book income. Ball, Kothari and Robin (2000) observe that in code law countries where book-tax conformity is higher than common law countries, reported earnings are less value relevant. In line with the prior literature findings, Hanlon et al. hypothesize that informativeness of earnings decreases for cash basis firms compared to accrual basis firms following Tax Reform Act of 1986 (TRA 86), which requires greater book-tax conformity. To test the effect of book-tax conformity to information content of earnings, they conduct a regression analysis for 56 firms for the period 1981 -1992. Outcomes reveal that greater book-tax conformity results in a loss of information content of financial reported earnings. They also show that cash basis firms which use different accounting methods in the measurement of book and taxable income possess greater information content of reported earnings than accrual basis firms that use similar accounting methods in the measurement of two income numbers.

As mentioned earlier, some studies that observe growing book-tax differences after 1990s found that, increasing gap between two measures resulted in deterioration of firms’ reported earnings, increased tax sheltering activities and loss of reputation in financial markets. As “persistence” is a value relevant characteristic of earnings, Hanlon (2005) examines the persistence of earnings, accruals and cash flows when large book-tax differences exists. For the period 1994 – 2000 the researcher observes that U.S. firms with large book-tax differences where book income is greater than taxable income show lower levels of persistence in terms of pre-tax book income, accrual component of earnings and cash flow stream than firms with small book-tax differences. In other words, large book-tax differences result in lower earnings persistence.

Similar to Hanlon’s study, Atwood, Drake and Myers (2010) also examined the issue of book-tax conformity in terms of earnings persistence and investigate the relation between earnings and future cash flows. In a cross country setting among U.S. firms, for the period 1992-2005, the analyses show that increase in book-tax conformity results in a decline of one-year-ahead persistence of current earnings. They further found that increase in book-tax conformity also deteriorates the association between current earnings and future cash flows. Contrary to Hanlon’s findings, Atwood et al. conclude that book-tax conformity result in lower earnings persistence.

Following the studies that showed a growing gap between book income and taxable income after early 1990s, Mills (1998) argue that the increasing divergence between two measures brings also a certain amount of cost to the management. Mills hypothesizes that increasing gap between book-tax differences in the advantage of book income will also lead to an increase in the audit adjustments proposed by Internal Revenue Service (IRS). The researcher states that firms should trade off between current tax savings, cost of tax examination and financial reporting benefits. The sample comprises of 1,500 manufacturing firms in the Coordinated Examination Program of the IRS for the period 1982 – 1992. In a regression setting Mills observes that increase in book-tax differences increases IRS audit adjustments. Consequently, the results indicate that firms cannot maximize financial reporting benefits by increasing book income and lowering taxable income without bearing any cost. In line with Mills’ findings Zeng (2002) conducts a game theoretical model and observes that taxpayers are more likely to be audited by tax authority if they report high book income or low taxable income than they report no book-tax differences.

Desai (2003) examine the growing trend in book and taxable income differences on US firms and increased sheltering activity after 1990s. To examine the increasing levels of sheltering, he develops a model and conducts a piece-wise regression analysis covering 1990-2000 period. The results imply that the cost of sheltering activity decreases during 1990s as a result of lowered probabilities of detection and perceived lower penalties which in turn increase the gap between book and taxable income measures. Desai further identifies the factors that contribute to the growing trend in book-tax differences as excess depreciation, reinvested earnings abroad and proceeds from stock option exercises in which the latter creates the largest disconnection between book and taxable income. The results suggest that increased level of tax sheltering is responsible for the book-taxable income break down.

Consequently, there is considerable information in the prior literature regarding the relation between book-tax differences and value relevance of reported earnings. Some studies show costs of book-tax differences that the growing gap between book and taxable income results in deterioration in persistence of earnings, reputation of firms in the financial market and increasing levels of tax sheltering (Hanlon 2005, Mills 1998, Zeng 2002 and Desai 2003). Meanwhile some studies attend on the costs of book-tax conformity and assert that conforming book and taxable income and lowering the book-tax differences results in loss of information content of earnings (Ali and Hwang 2000, Hanlon 2005, Hanlon, Kelley and Shevlin 2005, Kelley and Shevlin 2005, Maydew and Shevlin 2006). Although there is considerable debate of whether firms benefit from book-tax conformity, the study held by Hanlon, Kelley and Shevlin (2005) is the one that examined earnings measurement systems in terms of their value relevance in explaining stock returns for U.S. corporations. They used changes in book and taxable income as independent variable to explain the earnings-return relationship. In this respect, our study contributes to the existing literature by examining the value relevance of book versus taxable income and earnings-return relation using book value model, earnings value model and a combination of both models developed by Easton and Harris (1991).

## DATA AND METHODS

Our sample comprises of 200 publicly traded non-financial firms in Istanbul Stock Exchange (ISE) of Turkey. Book income is obtained from the financial statements prepared according to International Financial Reporting Standards (IFRS) and taxable income is obtained from the financial statements prepared according to Tax Procedure Law (TPL). Stock prices unavailable on the ISE covering the period 2004 – 2009 and firms that do not provide income statement based on TPL are eliminated from the sample. Final sample comprises of 949 firm year observations for the IFRS data and 896 firm year observations for the TPL data.

We used valuation models developed by Easton and Harris (1991) to examine the value relevance of two measures through earnings-return relationship. First the relation between IFRS income-TPL income and price is demonstrated using earnings levels in the following model:

$$(1) \quad \frac{\Delta P_{jt} + d_{jt}}{P_{jt-1}} = \rho \frac{A_{jt}}{P_{jt-1}} + u_{jt}$$

where  $P_{jt}$  is the stock price of the firm  $j$  at time  $t$ ,  $P_{jt-1}$  is the stock price at time  $t-1$ ,  $\Delta P_{jt}$  is the change in stock price over time period  $t-1$  to  $t$ ,  $A_{jt}$  is accounting earnings per share of firm  $j$  over the time period  $t-1$  to  $t$ ,  $d_{jt}$  is dividend paid per share of firm  $j$  over time period  $t-1$  to  $t$  and  $u_{jt}$  is the disturbance term.

For an alternative model in determining value relevance of two income measures through earnings-return relationship, changes in earnings are calculated both for IFRS and TPL income and included in the following equation:

$$(2) \quad \frac{\Delta P_{jt} + d_{jt}}{P_{jt-1}} = \rho \frac{\Delta A_{jt}}{P_{jt-1}} + v_{jt}$$

where  $\Delta A_{jt}$  is change in accounting earnings per share of firm  $j$  over the time period  $t-1$  to  $t$  and  $v_{jt}$  is the disturbance term. For simplicity dividend payments are assumed to be zero and coefficient  $\rho$  to be constant across firms and time periods.

Combining both valuation perspectives where price is a weighted function of earnings levels and earnings changes, we obtained the following model:

$$(3) \quad \frac{\Delta P_{jt} + d_{jt}}{P_{jt-1}} = k\rho \frac{\Delta A_{jt}}{P_{jt-1}} + (1-k) \frac{A_{jt}}{P_{jt-1}} w_{jt}$$

where  $k$  is a factor for weighting contribution of earnings levels and earnings changes in explaining stock return and  $w_{jt}$  is the disturbance term.



In line with the prior literature (Hanlon, Kelley and Shevlin 2005), in the measurement of accounting numbers, since IFRS income is based on relevance, reliability, comparability, consistency and materiality principles and TPL income is based on efficient and equitable determination of tax liabilities and subsequent collection of revenue to fund governmental operations, we hypothesize that IFRS income is more value relevant than TPL income in all of the models.

H<sub>0</sub>: IFRS income is more value relevant than TPL income in explaining earnings-return relation.

Moreover, following Easton and Harris (1991) we expect explanatory power of the combined model to be higher than the individual models alone. In other words variation in returns would be explained by both earnings levels and earnings changes more accurately than it would be explained by either variable considered alone. Descriptive statistics as well as correlation matrices of both IFRS income and TPL income data are generated which are available on request.

Descriptive statistics reveal that the ranges between minimum and maximum numbers of earnings level and earnings changes variables are at considerable levels for IFRS income. Contrarily for TPL income, since minimum and maximum numbers for earnings level and earnings changes variables are very high, the range of each variable diverges at inconsiderable levels. In addition, results show a significant correlation between return and earnings level variables while no significant correlation is observed between the return and earnings changes variables when IFRS income is used. Similarly, we observed no significant correlation between any of the variables and return when TPL income is used.

## RESULTS

Employing three models developed by Easton and Harris (1991), two univariate and one multivariate regression analyses are conducted for IFRS income and TPL income data separately. Univariate and multivariate regression results are available on request. The univariate regression models of returns, earnings levels and earnings changes variables are as follows:

$$(4) \quad R_{tpt1} = \alpha_0 + \alpha_1 Eps_{tpt1} + e_1$$

$$(5) \quad R_{tpt1} = \beta_0 + \beta_1 Chaps_{tpt1} + e_2$$

R<sup>2</sup> for the levels model is 1,8% in equation (4) and R<sup>2</sup> for the changes model is 0,03% in equation (5). For the TPL income data, R<sup>2</sup>'s for both levels and changes models are 0,00%. When IFRS income data is used, the estimated coefficient of earnings level variable  $\alpha_1$  is 0,311 and significant at 0,01 level. Meanwhile, earnings changes variable of the same income measure is not significant. It is also observed that any of the variables are significant when TPL income data is used. When the univariate analyses are compared for IFRS-TPL income data, the results indicate that current earnings level variable is correlated with stock returns for IFRS income data however no association exists between earnings and returns using TPL income data. Although explanatory power of earnings variables are very low for IFRS income data, we can conclude at least to some degree that IFRS earnings are value relevant in explaining stock returns.

The model explaining earnings-return relation by including both earnings levels and earnings changes variables are examined for each income measure separately by the below multivariate regression:

$$(6) \quad R_{tpt1} = \phi_0 + \phi_1 Eps_{tpt1} + \phi_2 Chaps_{tpt1} + e_3$$

R<sup>2</sup> for the IFRS income data in the combined model is 4% while R<sup>2</sup> for the TPL income data is 0,00%. In terms of IFRS income, comparison of the R<sup>2</sup>'s of multivariate and univariate regression analyses reveal that explanatory power of the combined model is higher than the individual models. Hence including both earnings variables yields considerable improvement in explaining earnings-return relation. However in terms of TPL income, neither the individual models nor the combined model provide evidence in determining earnings-return relation. In the combined model, when IFRS income data is used, the estimated coefficient of the earnings levels and earnings changes variables are significant at 0,01%. However in the combined model, when TPL income is employed, neither of the estimated coefficients is significant.

To check whether the results of IFRS income data are affected from multicollinearity, condition indexes are computed. According to Belsley, Kuh and Welsch (1980) the limit for moderate multicollinearity is limited

to condition index values between 5 and 10 while condition index above 30 exhibits severe multicollinearity. Since, the highest condition index we obtain is 1,815 collinearity does not seem to influence our results. We also checked for normality, heteroscedasticity by various scatter plots and autocorrelation by Durbin Watson statistics. The results show that neither non normality nor heteroscedasticity problem exists in the IFRS income data. However, since  $d < 2$  (1,545), positive serial correlation is likely. It indicates that error for one observation may increase the chances of a positive error for another observation. Meanwhile, since Durbin-Watson test is not less than 1, severe positive autocorrelation is not likely. Moreover, as positive autocorrelation does not affect the consistency of the estimated regression coefficients we conclude that there are no obvious problems in the univariate earnings levels and combined model of IFRS income data. However, for univariate earnings changes model, Durbin Watson statistics equals 1, indicating a serious level of positive serial autocorrelation.

## CONCLUSION

In this study we examine and compare value relevance of IFRS income where income is reported to corporate shareholders, and TPL income where income is reported to tax authorities. Our motivation is to inform financial statement users about the consequences of reducing the gap between book-tax differences. Before converging two measures regulators should be aware of the fact that some information will be lost if more value relevant measure converges to less value relevant measure. In this respect the aim of the paper is to evaluate which income number is more value relevant in explaining earnings-return relation. Extending the prior literature we employed three models developed by Easton and Harris (1991); two of them include earnings levels and earnings changes variables in separate models and one of them includes both variables in a combined model. We compared  $R^2$ 's of the models in order to determine explanatory power of each measure. Our results show that IFRS income is value relevant and has information content in explaining earnings-return relation. Contrarily we cannot find significant evidence for the value relevance of earnings when TPL income data is used. We conclude that information content of TPL income is not sufficient in explaining earnings-return relation.

As prior literature observed that there is an increasing trend in the book-tax differences in the U.S. market, we propose for future research to examine whether there is a growing gap between book-tax differences in Turkish capital markets for the period 2004-2009. Since both European countries and Turkey employ IFRS in their accounting system, we further suggest extending existing research by comparing book-tax differences between Europe and Turkey. If taxable income in European companies is value relevant, such an examination will provide valuable information to tax authorities of Turkey to make necessary adjustments in TPL.

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# STOCK PORTFOLIO SELECTION USING COMBINATORIAL FUSION

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## ABSTRACT

*It has been shown that a combined approach can enhance the performance of individual methods for stock portfolio selection. In this paper, we describe and demonstrate a combination method for improving the selection of stocks for a portfolio using multiple financial indicators. Multiple scoring systems are constructed by analyzing the trends of the following financial indicators for a set of real estate companies: net profit ratio, inventory turnover ratio, receivables turnover ratio, assets turnover ratio, self-owned capital ratio, and liabilities ratio. Results demonstrate improved portfolio performance for multiple scoring systems based on a combination of financial indicators.*

## INTRODUCTION

As a promising pillar industry in its early stages of development, the Chinese real estate industry has been prosperous in recent years. Real estate enterprises have been looking for ways to finance their development projects and, as a result, much focus has been placed on the stock market. There are a total of 155 listed real estate companies in China at the end of 2010; these listed companies have also become a popular unit for stock investors. With the advances in the financial markets, investors are paying more attention to the long-term development outlook of enterprises when managing their portfolios. Investors seek accurate forecasts of enterprises' potential to generate income. Stock portfolio analysis on Chinese listed real estate companies provides a decision-making foundation for various investment or speculation subjects in financial markets. Based on previous research and according to the financial reports of real estate companies in both Shanghai and Shenzhen Stock Exchanges, this paper analyzes key financial indicators and utilizes a method of information fusion as a financial forecasting model. The model provides insights into how stock portfolio selection can be improved using a combination of multiple scoring systems.

Financial forecasting relies on methods and models that improve the accuracy of the forecasting process. Making predictions based on financial data is particularly challenging since the data is often noisy and non-linear. Two main approaches to financial forecasting are: financial time series analysis; and methods utilizing data mining and machine learning techniques. Time series analysis is based on statistical methods for making forecasts using time series data. As a time series model, the ARCH (AutoRegressive Conditional Heteroskedastic) model was the first non-linear approach which gained wide acceptance in the financial community (Kyamakyia et al, 2010). The ARCH model was introduced by Engle (1982), and since then many researchers have used and improved it to make predictions in financial markets. The GARCH (Generalized AutoRegressive Conditional Heteroskedastic) model, introduced by Bollerslev (1986), generalizes the ARCH model and has been used to predict conditional variances. Brooks, Faff, McKenzie and Mitchell (2000) analyzed the applicability of the ARCH model to national stock market returns for ten countries, as well as a world index. Posedel (2006) used the Nonlinear GARCH (NGARCH) model for the pricing of foreign currency options.

As the amount of data being analyzed increases, it becomes necessary to explore alternative techniques such as machine learning and data mining (Martinez et al, 2008). Applications of data mining methods such as Artificial Neural Networks (ANN) and Support Vector Machines (SVM) are common in financial markets (Support Vector Machines: Financial Applications, 2012). The following are examples of work in this area: Tay and Cao (2001) deal with the application of SVM in financial time series forecasting and examine the feasibility of SVM in financial forecasting by comparing it with a multi-layer back-propagation neural network. Using back-propagation neural networks (BNN) and SVM, Huang (2004) obtained prediction accuracy around 80% for both BNN and SVM methods for the United States and Taiwan markets. Eman (2008) demonstrated the application of a neural network model for the prediction of the foreign exchange rates market. Tjung et al (2010) compared neural networks to a regression model using an ordinary least squares estimation method, and found that neural networks yielded more accurate predictions. Xu (2011) presented a neural network-based ensemble forecasting method for financial market prediction, which uses the grid search method to find the optimal network structure and parameters. Abirami and Vijaya (2011) applied online support vector regression for predicting stock prices using an incremental learning technique.

In spite of extensive machine learning and data mining applications in financial forecasting, there are opportunities for improvement. Forecasting accuracy can be improved by combining multiple forecasting experts (Armstrong, 2001). A combined forecasting approach can enhance the performance of existing individual forecasting methods, especially when the individual forecasting systems are diverse. Systems can be diverse in terms of data sources and methods used and/or according to a statistical or computational measure of diversity. Using a combined forecast can also be less risky than selecting an individual forecasting method (Hibon and Evgeniou, 2005). Two popular models for portfolio management are the Capital Asset Pricing Model (CAPM) and the Arbitrage Pricing Theory (APT); however, non-linear structures such as neural networks have been applied to forecast portfolio returns (Vinod and Reagle, 2005). Vinod, Hsu, and Tian (2010) developed a framework for selecting assets, which utilizes information fusion to combine multiple criterion systems for predicting asset returns and optimizing portfolio choice. Using US stock market data, they demonstrated that a combined system did improve performance. In this study, we use Combinatorial Fusion Analysis (CFA) to forecast the performance of real estate company stocks and demonstrate that combining multiple financial indicators can enable better decision making in portfolio management.

The following sections of this paper include: combinatorial fusion for stock portfolio selection, description of the data set and experimental methods, and stock portfolio performance evaluation.

## **COMBINATORIAL FUSION FOR STOCK PORTFOLIO SELECTION**

An information fusion method, known as Combinatorial Fusion Analysis (CFA), is a computational approach to combine data, features, and outcomes from multiple scoring systems (Hsu et al, 2006). Scoring systems consist of score and rank functions, which are represented as Rank-Score Characteristic (RSC) functions. CFA is based on the concept of multiple scoring systems and provides methods for measuring diversity and performing system combinations. CFA has been successfully utilized in a variety of application areas such as: information retrieval (Hsu and Taksa, 2010; Hsu and Taksa, 2005), online learning (Mesterharm and Hsu, 2008), portfolio management (Vinod et al, 2010), biomedical and health informatics (Lin et al, 2007; McMunn-Coffran et al, 2009; Schweikert et al, 2009), text categorization (Li et al, 2009), target tracking (Lyons and Hsu, 2009), virtual screening (Yang et al, 2005), among others. The goal of employing Combinatorial Fusion Analysis in this case is to combine financial indicators in order to achieve an improved prediction of company stock price performance.

In this case, we are using historical financial indicators to predict the performance of a company's stock; we are particularly interested in combining information that is based on these indicators to improve results. These financial indicators for a set of listed real estate companies serve as the foundation for scoring systems that are based on financial trends, as well as scoring systems based on combinations of these trends. Using these scoring systems, we then create stock portfolios consisting of the top 5 ranked companies according

to each feature and feature combination, and test the performance of each set of stocks in the market. For a set of 24 real estate companies, we obtained data for the following indicators: net profit ratio (N), inventory turnover ratio (I), receivables turnover ratio (R), assets turnover ratio (T), self-owned capital ratio (S), and liabilities assets ratio (L). Brief descriptions of the indicators are as follows:

(1) **Net profit ratio**: The net profit ratio is an important indicator to reflect the company's profitability; it refers to the profit margins after deducting all costs, expenses and corporate income tax.

(2) **Inventory turnover ratio**: The inventory turnover ratio is a comprehensive index which measures and evaluates the corporate management status of the stock, production, and sales. It is the ratio of cost of goods sold divided by average inventory.

(3) **Receivables turnover ratio**: Receivable turnover ratio is an indicator that measures the liquidity of corporate accounts receivable; it is the ratio of net credit sales to average accounts receivables.

(4) **Assets turnover ratio**: Asset turnover ratio is an important indicator of the operational efficiency of an enterprise, reflecting the transfer speed of assets from input to output; a measure of management quality and efficient utilization of enterprise assets.

(5) **Self-owned capital ratio**: Self-owned capital ratio is the proportion of a corporation's self-owned capital to the total capital. The higher the proportion of self-owned assets is, the more robust the corporate constitution.

(6) **Liabilities assets ratio**: Liabilities assets ratio is the percentage of corporate liabilities in the corporation's total assets. This indicator reflects the proportion of the assets provided by creditors in all the assets of the enterprise, and also reflects the ability of an enterprise to operate in debt.

These six indicators serve as the historical data for the real estate companies and were collected for each quarter over a period of four years, from 2006 to 2009, inclusive. Data was obtained from the Shanghai Stock Exchange (<http://www.sse.com.cn/sseportal/ps/zhs/>) and RESSET Database (<http://www.resset.cn/cn/>). For each company, at the feature level, we then have a value,  $v$ , for each of the six indicators (features) for each quarter  $q_i \in Q$ , where  $Q = \{q_1, q_2, \dots, q_n\}$ , and  $n=16$ . In order to evolve each one of these features into a scoring system, we develop a score function that will generate one score for each company that is related to its predicted performance. For each company,  $c_i \in C$ , where  $C = \{c_1, c_2, \dots, c_m\}$ , and  $m=24$ , a score function  $s_X(c_i)$  is computed, where  $X$  represents a scoring system based on one of the indicators: N, I, R, T, S, or L. These features provide a measure of the financial state of a company and, when choosing which companies to include in our stock portfolio, we want to analyze the trend of these indicators over time. To characterize the trends of the indicators, we compute the score function as the slope of the linear regression line for the indicator value over the 16 quarters, given by,

$$s_X(c_i) = \frac{\sum_{j=1}^n (q_j - \bar{q})(v_j - \bar{v})}{\sum_{j=1}^n (q_j - \bar{q})^2} \quad (1)$$

These scores are normalized to a scale from 0 to 1, according to:

$$s_X^*(c_i) = \frac{s_X(c_i) - s_{\min}}{s_{\max} - s_{\min}} \quad (2)$$

An exception is the scoring system L (liabilities assets ratio), where a downward trend is preferred, and the score is normalized with:

$$s_L^*(c_i) = 1 - \frac{s_L(c_i) - s_{\min}}{s_{\max} - s_{\min}} \quad (3)$$

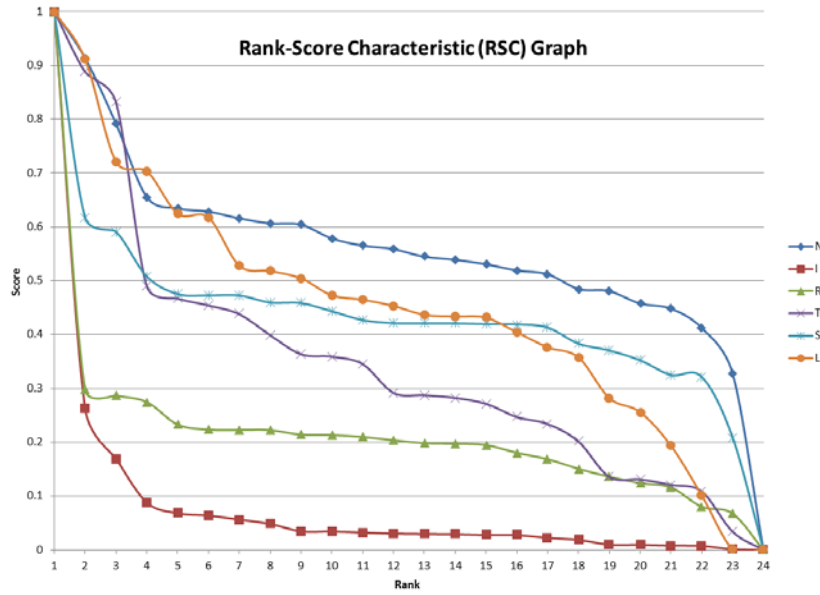
A rank function for each scoring system is then computed; the rank function,  $r_X(c_i)$ , from  $C$  to  $N = \{1, 2, 3, \dots, m\}$ , assigns a rank to each company after sorting the companies in descending order according to the scores generated by  $s_X(c_i)$ .

For each scoring system, we can represent its scoring behavior by computing its Rank-Score Characteristic (RSC) function. The RSC function  $f$  for system  $X$ ,  $f_X: N = [1, m] \rightarrow R$  is given by  $f_X(i) = (s_X \circ r_X^{-1})(i) = s_X(r_X^{-1}(i))$  (Hsu and Taksa, 2010; Hsu et al, 2006). The Rank-Score Characteristic graph of the RSC functions for the six individual scoring systems is shown in Figure 1. The objective of using information fusion is to create combined scoring systems that have the potential to have better performance than original indicators alone. Previous research has demonstrated that a combined system is preferred when the individual systems meet the following two criteria: the systems have relatively good performance and the systems are diverse (Hsu and

Taksa, 2010). One way to represent the diversity between two systems, X and Y, is to compute the RSC diversity, which is the distance between the RSC functions,  $f_X$  and  $f_Y$ , over m ranks, given by:

$$d(f_X, f_Y) = \sum_{i=1}^m |f_X(i) - f_Y(i)| \quad (4)$$

**Figure 1: Rank-Score Characteristic (RSC) Graph for Scoring Systems Based on Financial Indicators**



Since each scoring system captures a different aspect of a company's financial status, the rankings of companies can differ from system to system. The performance, in terms of ability to predict future stock price behavior, will also vary. In this analysis, we explore the combination of multiple scoring systems to test if a combined scoring system can outperform individual systems.

Given the six scoring systems, N, I, R, T, S, and L, we have  $\binom{6}{2}$ , or 15, pairwise combinations. These new, fused systems are created by performing score and rank combinations. The score combination of two systems, X and Y, is given by:

$$s_{SC}(C_i) = \frac{1}{2} (s_X^*(C_i) + s_Y^*(C_i)) \quad (5)$$

while the rank combination is computed with:

$$r_{RC}(C_i) = \frac{1}{2} (r_X(C_i) + r_Y(C_i)) \quad (6)$$

These score and rank combinations serve as score functions for the new combined systems. We also need a rank function for each of these new systems, which are produced as follows. The rank function,  $r_{SC}$ , of a score combination is obtained by sorting  $s_{SC}$  in descending order. Alternatively, the rank function,  $r_{RC}$ , of a rank combination is obtained by sorting  $s_{RC}$  in descending order (Hsu et al, 2006).

## PERFORMANCE EVALUATION

Based on the company rankings provided by each scoring system, we assemble a portfolio consisting of the top 5 companies identified by each. To evaluate the performance of each portfolio, we analyze an investment in these stocks for the first quarter of the year following our test data, Q1 of 2010. We simulate a purchase of 500, 400,

300, 200, and 100 shares in the companies ranked 1, 2, 3, 4, and 5, respectively. To compare the stock portfolios, we compute the percent gain or loss based on the value of the companies' stocks at the beginning and end of the quarter. Tables 1, 2, and 3 include the results of the stock portfolios generated by the scoring systems of the individual features, score combinations, and rank combinations. Figure 2 provides a visual comparison of the performance of these systems according to percent gain / loss.

**Table 1: Individual Scoring System Performance**

\*Note: All balances are in CNY (Chinese RMB)

Individual Features	Starting Balance	Ending Balance	% Gain / Loss
N - Net Profit Ratio	17980	16921	-5.89
I - Inventory Turnover Ratio	16075	16450	2.33
R - Receivables Turnover Ratio	24102	24518	1.73
T - Assets Turnover Ratio	17145	17217	0.42
S - Self-Owned Capital Ratio	14539	15109	3.92
L - Liabilities Assets Ratio	17783	18097	1.77

**Table 2: Score Combination Performance**

Score Combination	Starting Balance	Ending Balance	% Gain / Loss
NI	18677	17494	-6.33
NR	25225	23791	-5.68
NT	17428	16796	-3.63
NS	23529	22691	-3.56
NL	17812	17288	-2.94
IR	17063	18742	<b>9.84</b>
IT	16857	17330	<b>2.81</b>
IS	14630	14349	-1.92
IL	16618	16945	1.97
RT	16857	17330	<b>2.81</b>
RS	15165	15947	<b>5.16</b>
RL	16032	15601	-2.69
TS	14974	14897	-0.51
TL	17492	17361	-0.75
SL	14415	15368	<b>6.61</b>

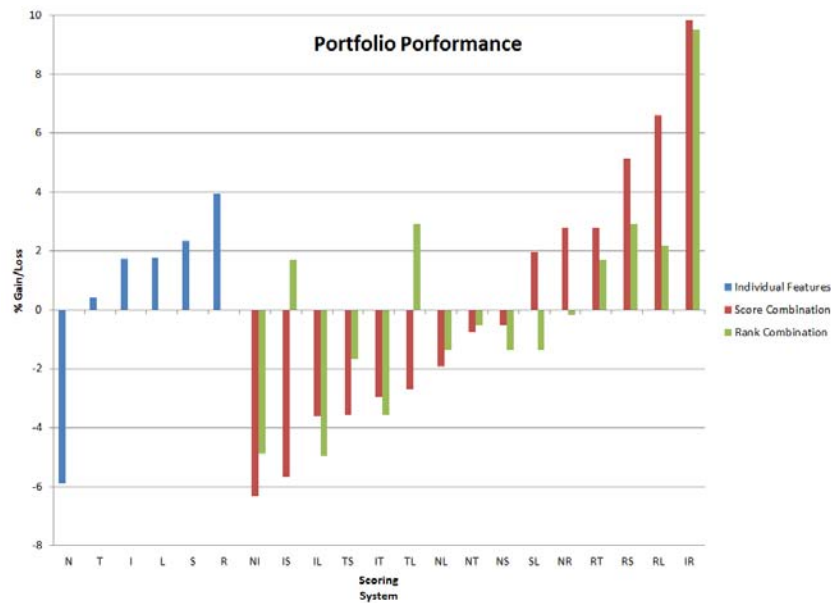
**Table 3: Rank Combination Performance**

Rank Combination	Starting Balance	Ending Balance	% Gain / Loss
NI	18517	17612	-4.89
NR	23518	23920	1.71
NT	17907	17019	-4.96
NS	23596	23201	-1.67
NL	23529	22691	-3.56
IR	16561	18139	<b>9.53</b>
IT	16363	16337	-0.16
IS	14914	14711	-1.36
IL	14914	14711	-1.36
RT	23518	23920	1.71
RS	22858	23524	2.91
RL	22858	23524	<b>2.91</b>
TS	14914	14711	-1.36
TL	14974	14897	-0.51



SL	18115	18512	2.19
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**Figure 2: Portfolio Performance of Scoring Systems According to % Gain/Loss**

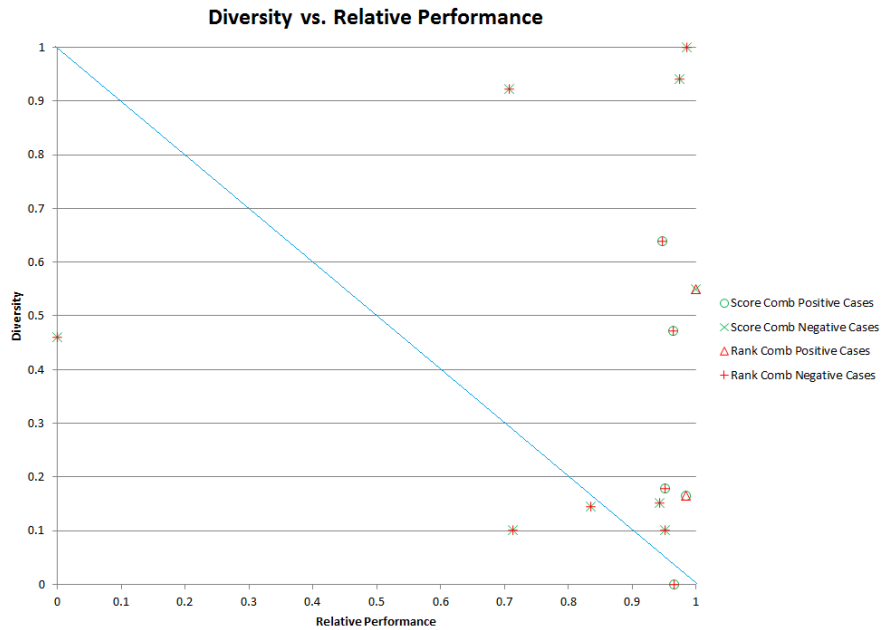


## CONCLUSION AND FUTURE WORK

Among the individual features, the self-owned capital (S) financial indicator showed the best performance with a gain of 3.92%. Among the combined systems, IR - the combination of inventory turnover ratio (I) and receivables turnover ratio (R) - had the best performance with a gain of 9.84% for score combination and 9.53% for rank combination, which is more than double the performance of the best individual feature. This demonstrates the benefits of information fusion and how a combination of two systems, neither of which is the best individually, can outperform the best single feature. When analyzing system combinations, we are interested in the combinations that yield a better result than both of its component systems, which are considered positive cases. In the score combinations, there are five positive cases: IR, IT, RT, RS, and SL; in the rank combinations, there are two positive cases: IR and RL.

To analyze the system combinations in terms of the diversity and relative performance of their component systems, we compute the RSC diversity and the performance ratio for each combined system. The relative performance is the ratio of the lower performance over the higher performance of the component systems. Figure 3 shows that the majority of the positive cases fall above the diagonal line, diversity + relative performance = 1 (Hsu and Taksa, 2010). Future work will involve testing this method on a larger data set of stocks to further explore the relationship between performance and diversity in financial applications.

**Figure 3: Scatter Graph of Positive and Negative Cases According to RSC Diversity and Relative Performance Measures**



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# THE IMPLEMENTATION OF THE TAXI RECAPITALIZATION PROGRAMME IN SOUTH AFRICA: EVALUATING THE FUTURE PROSPECTS OF TAXI OPERATORS AND POLICY CHOICES

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## ABSTRACT

*The administration of mini-bus taxi industry in South Africa previously failed to produce a mini-bus taxi business strategy that will manage and control the mini-bus taxi industry effectively as a business sector in the country. However a substantial number of taxi associations existed to help government in such management arena, but violence and anarchy characterized the mini-bus taxi business better. The management of such industry always yielded negative consequences of the industry in which people in the industry operated like a law unto themselves with taxi operators having their own armed forces perpetuating violence in the name of protecting their own mini-bus taxi route, and with the industry also failing to account to the country's taxman on their accrued profit from the business. The post 1994 government responded by enacting new transport legislations to correct the previous mismanagement neglect on mini-bus taxi industry. The enactment of the new transport legislations in the country aiming at regulating the mini-bus taxi industry also have the potential to threaten the existing economic household of those employed in the industry and those indirectly benefiting from the mini-bus taxi business. Of utmost significant the new legislations and its programme has the potential to open biased business opportunities to those economically strong taxi operators to take the business forward and close the business doors for those struggling mini-bus taxi operators. The paper does, however, predict that the benefit by the economically strong mini-bus taxi operators may be a short-term solution to them as they may not afford the cost of running their business as time goes by. This paper therefore evaluates the implementation of the South African Taxi Recapitalisation Programme (TRP) and its consequent impact on the struggling mini-bus taxi operators and other affected parties.*

## INTRODUCTION

The South African mini-bus taxi industry was always associated with negative connotations such as violence emanating from competition for lucrative roads, road accidents emanating from the use of unroadworthy vehicles and lack of proper government control and management on the industry. This therefore has left a great task to be performed by the new democratic South Africa in bringing about order and stability in the South African mini-bus taxi industry. This was, however, tackled together with other causes of violence and lawless in the country such as political violence. The introduction of the Taxi Recapitalisation Programme (TRP), like all other public policies seem to carry with its implementation processes some negatives that may result into job losses and taking other entrepreneurs out of the mini-bus taxi industry. The implementation of the programme is believed to be having some biased benefits that will only favour the economically strong mini-bus taxi operators and disadvantage the economically struggling mini-bus taxi operators. At the same time the nature of the structure of the mini-bus taxi industry still does not show the potential at which the Receiver of Revenue would have his hands on the finances from the business. This paper therefore addresses the following research questions:

- What is the nature and the extent of the implementation of the Taxi Recapitalisation Programme in South Africa?

- To what extent is the implementation of the Taxi Recapitalisation Programme beneficial to the South African mini-bus taxi operators?
- What are the possible policy options to the existing problem?

## **CONCEPTUALISING AND CONTEXTUALISING THE TAXI RECAPITALISATION PROGRAMME IN SOUTH AFRICA**

The White Paper on Transport policy (1996) and the Moving South Africa Strategy (1999) refer to the Taxi Recapitalisation Programme (TRP) as a public transport initiative taken by the government of South Africa in 1996 to bring about safe, effective, reliable, affordable and accessible taxi operations by introducing the New Taxi Vehicle (NTV) designed to undertake public transport functions in the industry. In the initial introduction of this programme taxi operators expected funding from government for the first time in the history of their business. However the minimum funding of R50 000 and its conditions from government became a problem later. In its implementation the TRP introduced three significant changes in the mini-bus taxi industry, namely replacement of the old mini-bus taxi's (14 and 16 seaters by 18 and 35 seaters), introducing valid operating licences to all taxi operators that qualifies as such and giving the scrapping allowance of R50 000 as incentive to get a new taxi conforming to the TRP requirements. A special Scrapping Agency was established in 2005 in all nine provinces (Ministry of Transport, 2005). It is managed by the Scrapping Administrator who facilitates both the scrapping of old mini-bus taxis and the acquisition of taxi vehicle required by the taxi operator. According to Dugard (2001) the TRP is a result of thirty six nationwide public hearings that started in 1996 by the National Taxi Task Team during the term of office of Minister Mac Maharaj. The TRP emphasises many aspects of improving transport activities in the country such as strict adherence to operating licences, use of roadworthy vehicles on South African public roads and the use of licenced drivers. The former are common problems which are believed to have made mini-bus taxi industry to be unsafe to passengers in the country. Although the TRP sounds very ambitious in transforming public transport in South Africa, the Local Government Budgets and Expenditure Review (2008) noted that the emphasis of the TRP on the scrapping of old taxi vehicles may not be the only problem of primary importance than focusing on effective regulation, integrated public transport system, effective law enforcement and safety of commuters.

The Ministry of Transport (2007) put in place safety and comfort requirements of the new taxi vehicles to be used in South African public roads. Particular mini-bus vehicles were therefore certified by the South African Bureau of Standards (SABS) as meeting such requirements. Those are Toyota Quantum, Nissan Interstar, Fiat Ducato, Mercedes Benz 380 CDI and Peugeot boxer HDI. Such vehicles are manufactured in a way that provide safety of passengers in terms of rollover protection, safety belts for all passengers, commercially rated tyres, type 2A braking systems, speed governors and anti tyre burst devices. The use of safe vehicles alone is not a guarantee of the safety of passengers on South African public roads, but adherence to traffic safety rules and effective dealing with corrupt traffic officers. Road accidents will continue as long as there is no respect for traffic laws.

## **LEGISLATIVE FRAMEWORKS**

With the exclusion of the transitional act of 2000 (National Land Transportation Transitional Act, 22 of 2000) applied before on the management of public transportation in South Africa, there are currently two applicable acts for such reasons. Namely, National Road Traffic Act, Act 93 of 1996 and the National Land Transport Act, Act 5 of 2009.

### **National Road Traffic Act, Act 93 of 1996**

The National Road Traffic Act, Act 93 of 1996 regulates the conversion of permits to operating licences and ensuring that drivers have driving permits. The act stipulates that no person shall drive a vehicle in which an operator is registered on a public road except in accordance with the conditions of a permit issued to him or her in accordance with the act, unless he or she keeps such permit with him or her in the vehicle. Van Vuuren (2004) indicated that a survey done by the Institute of Security Studies on corruption in the public service indicated that Traffic officials are first on the list followed by police officials. This is because traffic officers interact with

members of the public on the roads where corrupt activities are difficult to monitor. Therefore judging by the corrupt nature of the traffic system in the country the good articulated act may not achieve its anticipated objectives.

## **National Land Transport Act, Act 5 of 2009**

This act provides that the Minister of Transport must establish the office of the National Transport Regulator. Such person should have a specialized knowledge in at least public transport, transport economics, accounting, auditing or actuarial sciences, tourism transport and vehicle standards and specifications. The Transport Regulator shall oversee public transport in general and the activities of the Provincial Regulatory Entities in relation to land transport, and to receive and to decide on applications relating to operating licences. The Provincial Regulator shall perform function similar to the National Regulator except that his activities are provincially demarcated. From the perspective that South Africa is a new democracy, the implementation of acts and policies without problems is a pipe dream. Mafunisa (2010) indicated that the country is still struggling to implement the twin mandates of politics versus administrative efficiency. Thus far appointed public officials into senior positions have nothing to offer except political loyalty. Therefore the successful implementation of this act lies in the ability of the appointed official.

## **THE BENEFIT(S) AND DE-BENEFIT(S) OF THE TAXI RECAPITALISATION PROGRAMME**

Initially the implementation of the TRP in South Africa is mainly based on the following anticipated benefits aimed at government and both the passengers and the Taxi operators and drivers. The benefits include and may not be limited to collected tax revenue from the taxi business, safety of passengers, empowerment of both taxi operators and drivers. The achievement of such benefits have always been difficult to be attained in absolute terms and are said to be dominated by unanticipated consequences such as decreased employment opportunities, closed business opportunities in the industry for struggling taxi operators, and continued taxi accidents.

### **The benefit(s) of the Taxi Recapitalization Programme**

It is anticipated that the purpose of the TRP should be to build a strong economic base for the country while on the other hand ensuring safety of the commuters and meeting the socio-economic objectives of the South Africa and the business entrepreneurs. Local Government and Budgets Review (2008) indicated that the taxi industry in South Africa account for 63% of public transport users for work, school and other purposes. Mini-bus taxis are the most preferred mode of transport in South Africa than any transport type in the country. They are said to be fast and quick in facilitating commuter transport to the destination. The programme is intended to benefit the government and the society in various ways. In economic terms the TRP is viewed as a socio-economic policy that aim at regulating, empowering, and developing the taxi industry while integrating it within the 56 broader national revenue systems such as tax (Sekhonyane and Dugard, 2004:37). It can also be argued that in addition to the economic benefits, it was also hoped that the TRP will be beneficial in two ways; namely, firstly it was hoped that it will prevent the influx of more taxi operators into the business. Secondly, it was hoped that it will regulate anarchy and conflict over routes and function as a principal medium in ending taxi violence. The question as to whether the nature of the inconsistency of the business on daily basis can help the receiver of revenue to extract some moneys from such businesses remains a pipedream. However anarchy and violence among various taxi associations have been reduced.

### **The de-benefit(s) of the Taxi Recapitalization Programme**

While the government of South Africa anticipated good reward from the implementation of the TRP, Boudreax (2006) argued that the implementation of it is likely to be an advantage to other taxi operators and a disadvantage to others. The implementation is likely to harm the small mini-bus taxi entrepreneurs who can't afford the replacement costs of their mini-busses. Moving South Africa Action Agenda (1999:19) revealed that one of the critical problems of sustainability in the mini-bus taxi industry is the low profitability in the business which

makes re-investment in the business impossible. Therefore such imply that the enforcement by the legislation and the programme for the taxi operators to enter the business with new vehicles of specific manufacturing may not be beneficial to those small scale struggling taxi operators. Walters (2001:3) also indicated that more concerns drawn from the taxi associations are that the implementation of the TRP was to lead to the more job losses which shall affect all those individuals and institutions that directly or indirectly benefitted from the mini-bus taxi industry. It was believed that the right sizing of the taxi industry shall indeed result in fewer maintenance costs as the vehicles utilized will be new. That will be advantageous to the taxi operators to a particular extent, but with little advantage to garages that used to get jobs from those taxi operators. On the other side the service and work on the new vehicles are complicated as they involve advanced diesel technology which may only require original dealers to work and perform professional service on them. That might imply the dead end of small scale entrepreneurs performing mechanical job on mini-bus taxi vehicles. Khosa (1994) also added that the impact of the TRP is to be felt by many direct and indirect beneficiaries of the previous mini-bus taxi industry. If the impact goes to the extent of taking both taxi operators and taxi drivers out of business that will double the unemployment problem already experienced in the country.

While a major concern of the TRP rests on public safety, the South African mini-bus taxi's continued to be seen as unsafe and abusive towards the commuters (Nandipha, 2006). There is a continued practice of over speeding so as to cut travel time and secure more loads of commuters. The drivers have to make profit both in terms of trips and the commuters ferried. It is not known whether some requirements of the TRP like quality tires and spare parts of the genuine vehicles can be achieved in absolute terms. The likelihood of expensive parts of the vehicles used may be a threat to the safety of commuters thought of as significant element of the success of the programme. The question is whether the safety of commuters can best be addressed by the TRP. It can, however, be argued that the safety of the commuters can best be addressed through the roadworthiness of the vehicles and the positive attitudes of the mini-bus taxi drivers. As Grindle (1980:37) clearly articulated, although programmes are aimed at benefiting the intended beneficiaries, very few programmes can provide collective benefits, most instead provide categorical benefits. In the instance of the TRP, it is difficult to proclaim a collective benefit of all the stakeholders. Only particular category of the social class in the business is likely to be proclaimed as beneficiaries. It is however that from the perspective of the society any policy adopted by the state should provide uniform benefit to the members of the society. On the other hand policy experts and practitioners from the government will argue that there is no a policy that can achieve exclusively mutual ends for everyone in the society. That justifies the assertions that although policies aim to achieve good ends, but there are always some unintended consequences that will temper with such good intentions. Hence the needs for continuous policy analysis to make both incremental and re-adjustment to the existing policy programme.

## **THE SURVIVAL OF THE FITTEST, DO THE WEAK HAVE A CHANCE?**

From the start the introduction of the TRP aimed at commuter safety, the use of roadworthy vehicles and the end of mini-bus taxi violence. Other intentions include the manner by which mini-bus taxis should account to the receiver of revenue in terms of proceeds accumulated from their business. The intention of commuter safety and the use of roadworthy vehicles are the only reasons that threaten the livelihood of struggling mini-bus taxi operators. Cokayne (2006) indicated that the introduction of the TRP has been a threat to the employment of other mini-bus taxi drivers and has indeed driven other mini-bus taxi operators out of business. While indeed commuter safety is achieved through the use of high standardized new taxi vehicles only provided by specific motor vehicle dealers, such has an impact on the survival of the struggling mini-bus taxi operators and other indirect beneficiaries from taxi business such as hawkers, taxi drivers and local garages and spare shops. The scraping fee for an old taxi is settled at R50 000 per old mini-bus taxi vehicle scrapped and such is to be used as a deposit by the taxi operator for a new taxi mini-bus vehicle. The Government Gazette (2005) indicated that the government offers a subsidy of R50 000 per voluntary scrapped unroadworthy vehicle to help operators to purchase a new mini-bus vehicle or in order to leave the industry and pursue other business interest. It can, therefore, be argued that the Department of Public Transport in South Africa intends to keep the struggling mini-bus taxi operators out of business and to a certain extent to limit the second hand motor vehicle dealers who used to provide second hand or affordable mini-bus vehicles to those struggling operators at the expense of public safety. With the amount of R50 000 to support the new taxi vehicle business only the wealthy mini-bus taxi operators stand to gain and exist within the affordability of such a business environment. Human Sciences



Research Council (2006) however reported that the majority of regular mini-bus commuters in South Africa supported the replacement of the old fleet with new ones. Only 28% of the South Africans voted against the policy stating their reasons as fearing that the policy will lead to more job losses and keeping people out of business. It is therefore difficult to support both business of the mini-bus taxi operators in South Africa and on the other side promote road safety. The adoption of the other will therefore negate the existence of the other. The promotion of road safety through public transport implies the removal of unroadworthy vehicles which are owned by the struggling mini-bus taxi operators.

Fourie (2008) indicated that in most cases the deposit for new taxi vehicles start from R60 000, while the government only gives R50 000 scrapping allowance. With the R10 000 shortfall, only the wealthy mini-bus taxi operators can take the risk of adding more to the deposit. The struggling ones will have difficulty in securing more funds to add to that, hence they would be driven out of business. It can also be argued that even if they can secure such funds the monthly installments on new vehicles is very expensive considering the reduced number of commuters in mini-bus taxi ranks and the highest rate of empowered South Africans through Black Economic Empowerment deals who escaped the poverty trap to drive their own motor vehicles. Failure to pay monthly installments also will drive the struggling ones out of the mini-bus taxi business. A reasonable option is to conclude that the R50 000 subsidy as a scrapping fee is not sufficient for the mini-bus taxi operators. With the year 2010 being the target year to take all old mini-bus taxis out of public road, it can only mean the end of business for struggling mini-bus taxi operators. However, such taxis are still on the road because of corruptive practices in which roadworthiness certificates are still issued to such operators. While the struggling mini-bus taxi operators are earmarked to feel the pinch or to be retrenched from their business practice, the auto-mobile industry will feel the pinch to a certain extent with low customer rate from the mini-bus taxi industry. The successful implementation of the programme will mean a reduced turnover on their side. The terms and the specifications of the TRP stand to make their sales very slow and attractive to their customers. They cannot be able to make models that will address the specific needs and affordability of their clients in the mini-bus taxi industry.

## **KEEPING BUSINESS VERSUS SAFETY OF THE PEOPLE?**

Public policies are made to achieve a fair advantage to the majority of the country's citizens. It is therefore assumed that government programmes and their significance are evaluated against what fairly addresses the interest of the mass than of individuals. The implementation of the TRP in South Africa emanated from the need to protect commuters against both violence and road accidents (Ministry of Transport, 2005). However, because of the attitudes of mini-bus taxi drivers, reckless and corruptive tendencies of the traffic officers such objective might not be easily achievable by the TRP. Road Traffic Report (2009) has reported that unroadworthy vehicles are a major cause of accidents and loss of life in the mini-bus taxi industry. That also strengthens the assertion of this paper that the promotion of socio-economic conditions of the mini-bus taxi operators is not a significant aspect of concern by the TRP and the legislations that put it into operation. Hence the approval as indicated in the Government Gazette (2005) of the scraping subsidy of R50 000, which can't afford a good deposit of new recommended mini-bus taxi vehicles and the option of an operator to leave the mini-bus taxi industry if so wish. An inference that can be drawn from this act is that the Department of Public Transport is consciously or unconsciously reducing the number of mini-bus taxi operators in the business and only keeping those that can afford the cost of safe and roadworthy new taxi vehicles. That is likely to leave the government with a manageable number of entrepreneurs in that sector. When the sector is manageable the government can introduce a subsidy of mini-bus taxis like it is the case with the bus public transportation in the country.

Makai (2009:65) indicated that despite the TRP intention of safety of commuters through the use of designated new taxi vehicles, some operators continues to use old taxi models in South African public roads. This however means a threat to the achievement of the objectives of TRP on the introduction of safe and reliable mini-bus taxis on South African public roads. In the interest of public safety and prevention of loss of life on South African roads, the retention of struggling mini-bus taxi operators is not a fair option; neither is taking them out of business without a reasonable reward a good option. The economic retention of such businesses is not in the interest of the safety of the majority of the South African population that depends on mini-bus taxis for commuting. The governments incentive of R50 000 is not sufficient even to have those struggling mini-bus taxi operators to pursue other business interest, but instead an incentive to increase unemployment and save the life

to be lost on public roads. A reasonable policy option is therefore to choose the safety of life as against the retention of individual businesses. But such option also does not guarantee mutual benefit in the society with high rate of unemployment such as South Africa.

## **Good options, do we have ones?**

Public policies through their programmes never achieve absolute favour from the country's citizens. There will be those who will benefit and those who will not benefit from adopted policies. In the case of the TRP only the fittest in the business are likely to benefit, continue the business forward while those who struggled financially will exit the business opportunity. In dealing with this dilemma situation of increasing unemployment as against keeping unfit business people in the mini-bus taxi industry, the Department of Public Transport has few options if any. As Dye (1987:372-373) put it, in implementing public policy only a particular group may benefit and not all the categories of such population. Therefore even if options are available not all intended beneficiaries may benefit from the policy action taken. There are basically two options available to the Department of Public Transport in addressing this problem amicably. The other option will achieve a mutual solution of the beneficiaries of the mini-bus taxi industry but costly to the departmental budget, while the other one will not benefit the mini-bus taxi industry operators, but impact heavily on the departmental budget in the long run. Option one will be to increase the scrapping allowance by fifty percent (at least R 100 000) and an annual capital subsidy as it is applied to bus transportation in the country. Although the move will be costly to the departmental budget, but it will keep taxi drivers and taxi operators in their businesses and would have achieved a mutual balance for the policy makers and beneficiaries of the mini-bus taxi industry. Option two which looks like the one in place currently is to provide a R50 000 subsidy with the option of other taxi operators voluntarily getting money and opting out of mini-bus taxi business, with the intention that ultimately even those that remain will fail to afford the costs of staying in business and finally opt out by the time they fail to afford their monthly installments on their new mini-bus taxi vehicles. That will ultimately lead to the Department of Public Transport providing transportation to its citizens in the long run. It can be argued that if option two is not what the Department of Public Transport in South Africa has in mind when introducing the Taxi Recapitalization Programme, then the country risk to have a shortage of public transport provided by private organizations in future. With the new tough law enforcement action currently introduced to safeguard the implementation of the Taxi Recapitalization Programme by ensuring that all mini-bus taxi's on South African road comply in terms of the safety measures such as roll over protection, safety belts for all passengers, commercially rated tyres and the anti tyre burst system, the mini-bus taxi industry operated by the majority of South African black population without government subsidy will not see the next ten years of existence.

## **CONCLUSION**

This paper has argued that the implementation of the Taxi Recapitalization Programme in South Africa will only benefit the successful mini-bus taxi industry operators in South Africa. When such category of individual business people may succeed, that will be a temporary victory for them. The continued implementation of the Taxi Recapitalization Programme which may have diverse impact on various indirect beneficiaries such as automobile industry, other small businesses and major ones, at the ultimate end public transport will be difficult to be maintained by those private individuals and mini-bus taxi associations that can afford it currently, which in future conditions will dictate that public transport be provided by the Department of Public Transport. That will be the end of the mini-bus taxi industry and the beginning of the provision of a safe and roadworthy transportation of the South African public commuters. A good option is therefore to prepare the majority of such business owners to avoid future shocks and protest against public policies.

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# THE IMPACT OF ROAD INFRASTRUCTURE INVESTMENTS ON PUBLIC TRANSPORT EMPLOYMENT

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## ABSTRACT

*Improvement in road infrastructure provision is expected to have a major impact on economic development of the local communities through job creation opportunities. Literature on the causal relation between road infrastructure investment and its effects on employment has provided mixed and inconclusive evidence on the extent to which transport infrastructure can generate sustainable job opportunities for affected communities. On the other hand literature shows that employment effects vary considerably across different sectors of the economy. This paper aims to explore the empirical relationship between road infrastructure investment and local employment in the public transport environment. Econometric models will be presented to analyse road infrastructure investment and its employment impact. The paper intends to argue that improvement in road infrastructure investment encourage taxi and bus owners to buy new vehicles which lead to employment opportunities for local people, whilst simultaneously reducing the travel cost and time for commuters, and increasing productivity of the road dependent sector. The paper also asserts that the increase in road infrastructure investment will increase access to employment opportunities in rural areas.*

## INTRODUCTION

The role of new and or improvement in the existing highway road infrastructure on regional economic development, more especially on long-term job creation is well documented in a variety of literature. Jiwattanakupaisarn (2008) pointed out that the role of public infrastructure development on long – term job creation differs from one sector to another. The empirical findings of the studies from various literature reveals that improvement in the highway road network increase long – term job opportunities in the manufacturing sector as compared to other sectors (Yoshino, 2008). On other hand, Graham (2007a) argued that manufacturing firms which are participating in the international trade are likely to create more job opportunities as compared to non-participating firms. The reason being that improvement in the highway road network will reduce the cost of transporting goods and services needed to improve inputs and outputs of the private firms.

Keeler and Ying (1988), Garcia-Mila and McGuire (1992) and Grandra and Thompson (2000) studied the causal relation between the improvement in the highway and job creation using different private firms which are located in highway and competing regionally or nationally. The empirical findings of this studies reveals that the cost of commuting and purchasing of goods and services determines the probabilities that one firm can create more job opportunities in the near future or not. These studies argue that private firms with low purchasing cost and travelling cost are more likely to attract more customers as compared to the once with both high purchasing and commuting cost. The linkage between workers and commuters movement pattern and its impacts on public transport demand is not well documented in the literature.

This paper aims to explore the empirical relationship between investment in the road infrastructure and employment in the public transport industry. This article used the idea presented by Grandra and Thompson (2000) to develop the grounded theory which is used to significantly prove the causal relation between the improvement in the road infrastructure and job creation in the public transport industry. This article argued that the movement of customers and workers to different firms or companies is directly influencing the increase in the demand of public transport in the highway which results in the job creation in the industry. The purchasing

costs and commuting costs are all directly proportional to the direction and move of people. In other words, customers make rational decision to move towards firms with lower purchasing cost and where the travelling cost are only low, than in the direction where both the purchasing cost and commuting costs are high.

## **PUBLIC CAPITAL HYPOTHESIS**

In the literature on public infrastructure and economic development the majority of studies conducted studied the indirect effects of public infrastructure on private sector productivity using public capital hypothesis (Jiwattanakulpaisarn, 2008 and Deno, 1988). Public infrastructure which has indirect effects on private sector productivity is defined as infrastructure which does not enter into a firm's production process in the same way as private inputs which include for example labour and private infrastructure (Jiwattanakulpaisarn, 2008). A large body of literature documented such as Wheat (1969) and Venables (2007) argued that improvements in the road infrastructure development will contribute indirectly to the private sector productivity. While other studies conducted do not significantly confirm the indirect causal relationship between the public infrastructure and productivity in the private firms (Jiwattanakulpaisarn, 2008). On one hand some studies such as Nadiri and Mamuneas (1998) confirmed that there is no causal relation at all. Improvement in road infrastructure investment has been identified as important public infrastructure which significantly has indirect causal relation between private firm productivity, because of its role in terms of reduction of transportation cost of goods and services that improve inputs and outputs.

The question arises from the literature reviewed is to what extent does the public investment in infrastructure increase output and production of private companies indirectly, because lots of studies which confirm this causal relation lack theoretical base. Some of the studies conducted such as Keeler and Ying (1988) showed that public infrastructure will indirectly improve the production of private firms by means of reducing worker's commuting time and costs of moving inputs and outputs of the company. The causal relation between the reductions in the workers commuting time is questionable as it appears in the literature, because the time travelled by the workers has no direct link to the inputs of the private firm. The causal relation between the improvement in road infrastructure and private firm productivity is well document in the literature. The findings of the study conducted by Kosempel (2004) showed that in Rwanda, farmers receive only 20 percent of the price of their coffee as it is loaded onto ships in Mombasa; the other 80 percent disappears into the costs of poor roads between Rwanda and Kenya. Pierre-Richard (2010) argues that low income countries must increase their public investment in infrastructure in order to alleviate these constraints to growth and poverty reduction.

Poor infrastructure development especially road infrastructure in developing countries continues to be a key obstacle to economic growth and development (Pierre-Richard, 2010). This indicates that countries with good infrastructure development seemed to do well in terms of attraction of private firms, job creation and increasing GDP as compared to countries with poor infrastructure development. The empirical evidence from the literature lack theoretical base since there is no record of studies primarily aimed to compare the causal relation between infrastructure development in both rich and poor countries. Yoshino (2008) pointed out that transport costs are the highest in the world and act as a significant constraint on trade expansion. On other hand, Jiwattanakulpaisarn (2008) argued that good road infrastructure development will benefit private companies which participate in trading than the once which do not participate. The findings of this study showed that improvement in road infrastructure development will reduce the cost of transporting goods and services to increase both firm's inputs and outputs. Poor infrastructure development has a serious impact on the economic productivity, because private firms are motivated to locate their firm in areas with maximum benefits.

On other hand, the literature confirms the causal relationship between investment in transport infrastructure and highway dependence sector employment (Jiwattanakulpaisarn, 2008 and Grandra and Thompson, 2000). Most of the studies conducted in this area used national data and statistical method to establish this causal relation and the challenge is that these studies used statistical method without clear theoretical base (Jiwattanakulpaisarn, 2008). They also used national and international panel of data not provincial, district or municipal data to estimate this causal relation. There are little or no studies which studied the direct and indirect causal relation or role of highway dependence sector employment on improvement in public transport sector. Most of the workers who are working in the highway dependence sector rely more on public transport as a mode of transport to and from their work place.

The causal relation between improvement in the road infrastructure development and productivity of private firms is well documented in the literature with little concerned with its contribution on increasing mobility of people from their place of origin to their place of work. The improvements in the road infrastructure development which is connected to high concentration of firms (agglomeration) will increase mobility (Graham, 2007a), because a lot of people will be motivated to move searching for job opportunities or going to their work places. There is little if no research conducted which primarily look at the role of improvements in road infrastructure development and public transport employment. Most of the people who are working in the private firms or manufacturing more especially unskilled they cannot afford to buy their cars, they have to use public transport to and from their work places.

The researchers observed that improvements in the road infrastructure development encourage minibuses or taxi and bus owner to buy new vehicles. Buying of new vehicle will increase productivity in the car manufacturing industry and will result on high demand of workers who will use public transport to and from their work place and will motivate unemployed once to start searching for job opportunities. If most of the people are moving, the demand for public transport will be high and this will result on creation of job opportunities for many people in the public transport industry. This observation lacks theoretical base and this identifies the research opportunity that needs to be explored.

## **Differential effects of road infrastructure by sector**

Literature points out that researchers must take into account when examining whether and the extent to which infrastructure investment contribute to regional development, the distribution of the impacts of public infrastructure on various sectors of an economy (Jiwattanakulpaisarn, 2008 and Nadiri and Mamuneas, 1998). Jiwattanakulpaisarn (2008) argues that public investment in infrastructure will benefit from the private sector in both direct and indirect ways and in most cases the direct effects will likely be sector specific. The indirect benefit will also depend on extent from one sector to the other. The private firms which participate in the international trade will benefit more from the improvement of road infrastructure development than those which do not participate. Private firms which located or connected to the highway and compete on regional economic could benefit a lot from improvement in the road infrastructure. On one hand, the improvement in road infrastructure development will benefit highway dependent sectors which are connected to the improved highway and those which are not connected at all. Improvement in road infrastructure development will reduce the cost of transporting goods and services which improve both inputs and outputs of the private sectors. The level of public infrastructure development directed to areas of high economic development in either the nodal, corridors and spatial economic development determine the maximisation of benefits by private sectors. Venables (2007) and Graham (2007a) argued that studies which have studied the private firm location behaviour using the firm location theory confirmed that private firms locate in areas with maximum benefits. Improvement in the road infrastructure has both direct and indirect benefit. Indirect benefits refers to reduction in cost of transportation of goods and services, while direct benefits refers to increase in the mobility in the highway which results in boosting businesses located in the highway.

It is arguable that government must direct infrastructure development which will attract private firm investment, because basic service infrastructure cannot be used to unlock economic development or to support the economic development of the region. Basic service could only certify the basic learning standard for poor people. There is little literature conducted primarily aimed to establish the causal relationship between the basic service and economic development. Poor maintenance of the public infrastructure such as road infrastructure development increases commuting costs, transportation of goods and services which contribute to the private firm's productivity.

Literature shows that improvement in road infrastructure development will benefit big companies as compared to the small companies. The study by Grandra and Thompson (2000) argued that improvement in the road infrastructure development more especially in rural or municipal corridors and nodal areas kills the local market as people will start buying their goods in town and not local. On the other hand, movement of people from their place of origin to town and cities create more business to public transport industry, because the logic behind this thinking is that the more people are moving there the higher the demand of minibus or taxi and buses

on the road. High demand of minibus and buses on the road will create more job opportunities in the public transport industry.

Studies on the causal relationship between highway improvement and employment generation in the long-term such as Crane, Burke & Hanks (1991) find that an improvement in road infrastructure development generates long-term employment in the manufacturing and service sector, but provide only a temporary benefit in terms of construction employment. Chandra and Thompson (2000) also documents that the effects of improved road infrastructure development which connect two or more states which participate in trade increase job opportunities for poor in all sectors in a long-term. The empirical evidence from literature brings the concept of good location of firms and households in order to balance both the demand and supply of employment.

## **Transport infrastructure and firm and household location behaviour**

Jiwattanakulpaisarn (2008), Stephanades (1990) and Wheat (1969) studied the firm and household location behaviour using the labour market theory. Stephanades (1990) argue that private firms prefer to locate in the areas where there is good infrastructure development more especially transportation infrastructure such as road, railway and airport. Jiwattanakulpaisarn (2008) and Hotelling (1929) argued that investors decision to locate their firms are informed by the profit maximisation in terms of reduction in the cost of transporting goods and services needed to improve both inputs and outputs. The study by Jiwattanakulpaisarn (2008) showed that transport infrastructure more especially road infrastructure development which connect two or more state participating in international trade enhances the attractiveness of the regions and this will lead to areas for new establishment or the expansion of business in several different ways.

Wheat (1969) and Stephanades (1990) showed that high concentration of firms and manufacturing companies in each region will increase the demand for labours. The establishment of new firms and expansion of existing firms will directly impact on the increase in the mobility more especially in transport infrastructure development which is connected to the concentrations of firms. Increase in mobility support the highway dependence sector which in return creates more job opportunities for the poor people. Literature shows that highway dependence which is located in improved road infrastructure development is likely to benefit than those which is located in road which are not improved. Most of the studies conducted used aggregation theory to estimate the causal relationship between the improvement in road infrastructure and employment creation in the highway dependence sector lack theoretical base (Jiwattanakulpaisarn, 2008).

Jiwattanakulpaisarn (2008) used residential location theory to understand why workers prefer to reside in some areas rather than other areas. The study argued that workers prefer to stay in areas with access to good transport infrastructure development more especially road infrastructure, because it will be easy and reduce cost of mobility. There is little research conducted on the causal relationship between an increase in mobility and employment creation in the public transport. The road infrastructure which connects the areas under which the firms are located and areas under which the workers reside will seem to attract more investors in public transport industry. There will be a high demand for public transport as people will be moving every day to and from their place of work and others searching for job opportunities in those areas of high concentration of firms.

## **GROUNDED THEORY**

The role of infrastructure development on regional development or economic development is well documented in literature. Studies by Keeler and Ying (1988), Garcia-Mila and McGuire (1992) and Grandra and Thompson (2000) examined the investment in the road infrastructure based on private firm productivity. Keeler and Ying (1988) documented the positive effects of regional interaction of highway on productivity growth in the trucking industry. On the other hand, Garcia-Mila and McGuire (1992) in their study revealed that improvement in the investment on highway will increase the output of regional economy.

Thompson, Weller, & Terrie (1992) did not find the significant job growth in the Florida Countries on the highway investment. Most of the studies which used aggregate theory to estimate the causal relation between improvement on regional highway and improvement in the job creation lack a theoretical base. On one hand, studies which used quasi-experimental approach such as Rephann and Isserman (1994) find that new and

improvement of regional highway have a significant impact on job creation and earning in services, in transportation and public utilities in countries near urban areas. Despite the results of the studies reviewed from the literature such as Keeler and Ying (1988), Garcia-Mila and McGuire (1992), Rephann and Isserman (1994) and Grandra and Thompson (2000) the direction of the effects between improvement in the regional highway and economic development, this effect will depend on the extent to which a given industry's output is either traded regionally or nationally. Grandra and Thompson (2000) pointed out that the effects of highway investment of private firm productivity is not positive on nationally traded goods and service, because companies compete international for trading do not use the same highway and it is different to measure that effects.

The effects of the highway investment on regional economic development are well documented in the literature reviewed, but that effect differs from one sector to another. Grandra and Thompson (2000) and Rephann (1994) pointed out that investment in highway has a significant effect on the private firm productivity and long term employment and purchasing in the manufacturing sector. The idea behind the grounded theory presented in this article was taken from the study presented by Grandra and Thompson (2000) who studied the causal relation between the highway investment and regional economic development on regionally traded goods and services for companies located in the two highways.

Assume that a firm i, firm j, firm y, firm n and firm m which are all competing on the municipal traded goods and services are located along and/or connected to the two highways, firm i, firm y, and firm m headed north and south (Route 1) and the other once firm j and firm n headed east and west (Route 2) as pictured in table 1. The workers and customers reside along the two routes. Along Route 1 and Route 2, focus on firm i's interactions with one of its competitors for municipal traded goods or services, firm y, which is located to the north. The distance between firms i and y are defined as  $D_{iy}$ . The on-site cost of purchase from firm i is  $C_i$ , while the cost of purchase for firm y is  $C_y$ . The travel cost along Route 1 is  $T_2$  per trip and along Route 2 is  $T_1$ . The individual customers  $p^1, p^2$  and  $p^3$  reside between firms i and y, this customer purchase in two firms. There are three workers who are working in these two firms  $w^1, w^2$  and  $w^3$  residing between the two firms. Mathematically, customer  $p^1$  and  $p^2$  and  $w^1$  and  $w^2$  would be located at a distance  $D_{iy} + D_{ip1}$  from firm i and a distance  $D_{iy} + D_{iy}$  from firm j such must:

$$C_i + T_1(D_{iy} + D_{ip1}) = C_y + T_2(D_{iy} + D_{iy}) \quad (1)$$

**Where:**

$C_i$  = cost of purchase in firm i

$C_y$  = cost of purchase in firm y

$T_2$  = cost of travelling per mile in route 1

$T_1$  = cost of travelling per mile in route 2

$D_{iy}$  = distance between firm i and firm y

$D_{iy}$  = distance between firm y and firm i

$D_{ip1}$  = distance between firm i and residence where both customers  $p^1$  and workers  $w^1$  reside

The same equation can be applied on the firms that compete on the same Route. Along Route 1, focus on firm i's interactions with one of its competitors for regionally traded goods or services, firm j, which is located to the east. The distance between firms i and j are defined as  $D_{ij}$ . The on-site cost of purchase from firm i is  $C_i$ , while the cost of purchase for firm j is  $C_j$ . The travel cost along Route 1 is  $T_2$  per trip. The individual customer  $p^1$  reside between firms i and j, this customer purchase in two firms. There are two workers who are working in these two firms  $w^1$  and  $w^2$  residing between the two firms. Mathematically, customer  $p^1$  and  $w^1$  would be located at a distance  $D_{ij}$  from firm i and a distance  $D_{ij} - D_{ip1}$  from firm j such must:

$$C_i + T_2 D_{ip1} = C_j + T_2 (D_{ij} - D_{ip1}) \quad (2)$$

**Where:**

$C_i$  = cost of purchase in firm i

$C_j$  = cost of purchase in firm j

$T_2$  = cost of travelling per mile

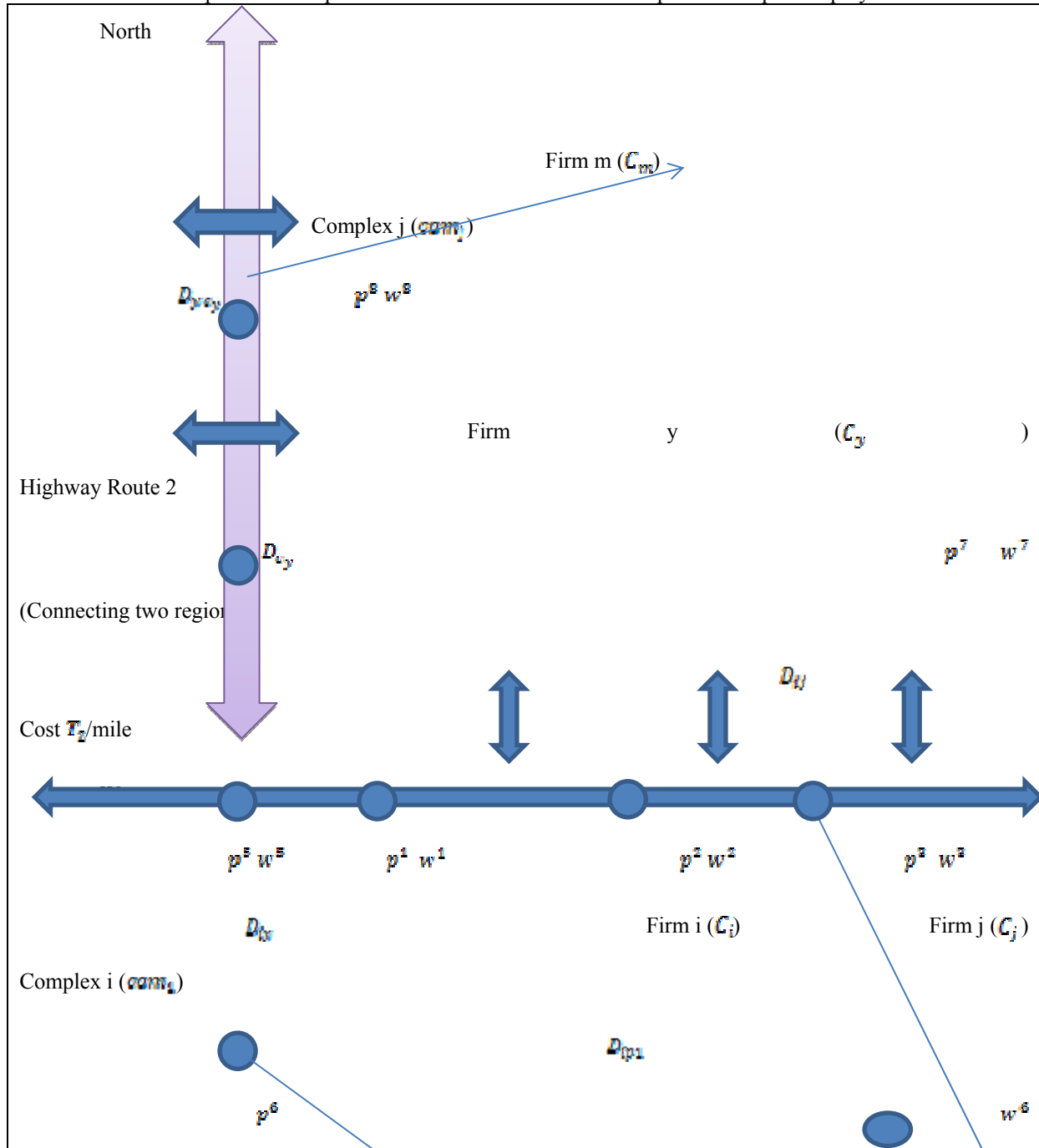
$D_{ij}$  = distance between firm i and firm j

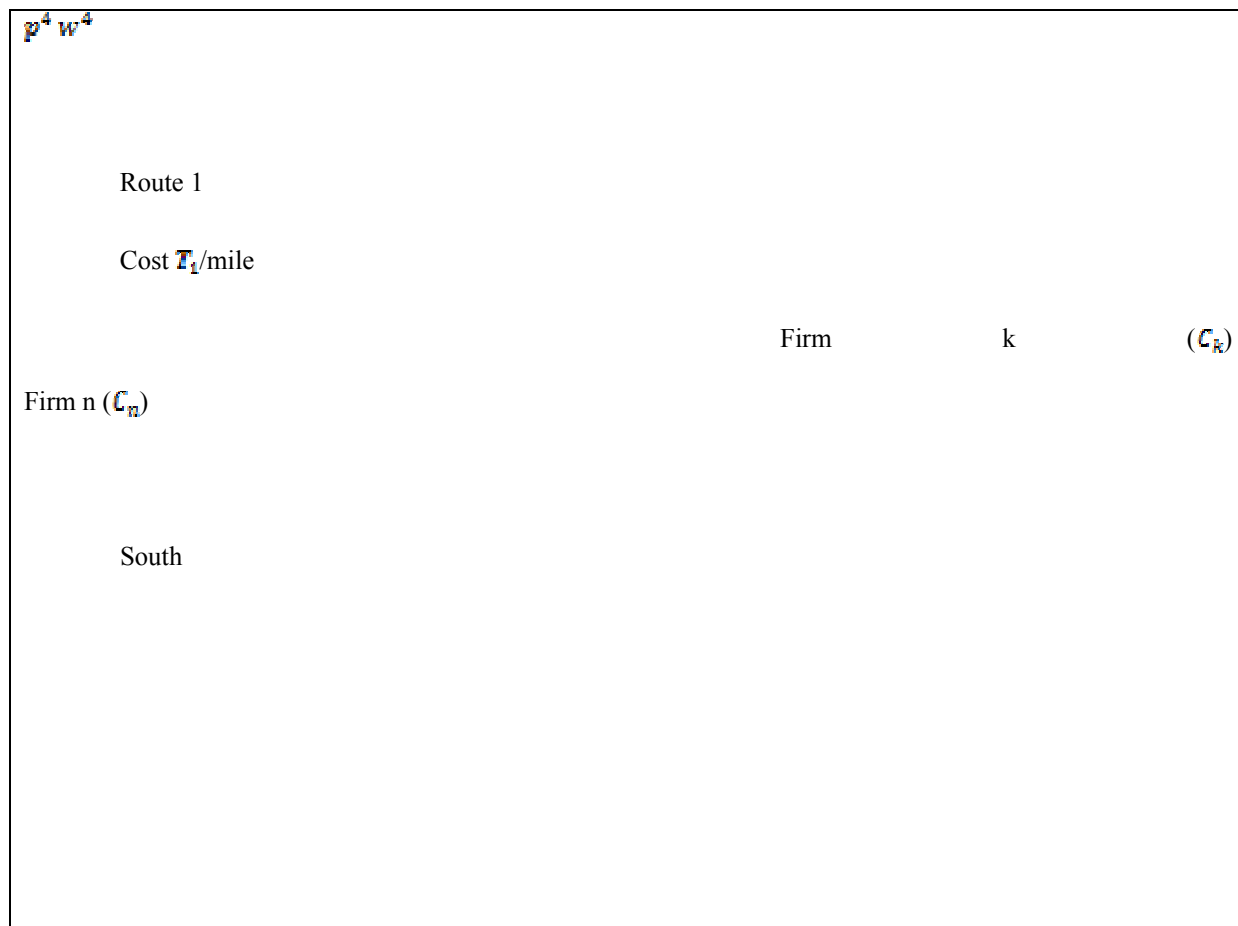
$D_{ip1}$  = distance between firm I and residence where both customers  $p^1$  and workers  $w^1$  reside



Given  $C_i$  and  $C_j$ , the total cost of travelling to firm i and purchasing the goods or service is the same as the total cost of travelling to firm j and purchasing the goods or services. Similarly the cost for commuting for both customer  $p_1$  and worker  $w^1$  from firm i and firm j is the same. The cost for commuting for both customers  $p^2$  and worker  $w^2$  is the cost of commuting for both customer  $p_1$  and worker  $w^1$  - the cost of commuting from customers  $p^2$  and worker  $w^2$ . From the above variables, both customer  $p_1$  and worker  $w^1$  in residential one are likely to travel more to firm i as compared to firm j. The distance from their residence and the cost of commuting are directly proportional to each other and/or both have lower distance and commuting cost for customer  $p_1$  and worker  $w^1$  to firm i.

**Table 1:** Relationship between improvement in road infrastructure and public transport employment





Source: Grandra and Thompson (2000)

The distance and commuting cost of both costumers  $p^1$  and  $w^1$  to firm i and firm j is the same, because the resident is located in the middle of the two firms with appropriately equal distance from firm i to resident and from resident to firm j. Both the customers  $p^1$  and  $w^1$  can purchase and work in both firms. Mathematically, both the distance and cost of commuting influence the move of the people in the highway which results on the high demand of public transport services along the highway. This equation is expressed as follows:

$$p^1 w^1 + T_2 (D_{ip1} - 2D_{ip1}) = p^2 w^2 + T_2 (D_{ij} - 2D_{ij}) \quad (3)$$

Firm i will accommodate both the  $p^1$  and  $w^1$  in cases where  $D_{ip1} < D_{ij}$ . Similarly firm j will accommodate both the  $p^1$  and  $w^1$  in cases where  $D_{ip1} = D_{ij}$ . This means both the  $p^1$  and  $w^1$  reside near the two firms rather than  $p^1$  and  $w^1$  which is located near firm i.

The location of the market boundary for both firms i and j is determined by the cost of purchase at both firms i and j and the cost of commuting between the place of origin and the firms. The travelling cost will be represented by  $T_2$ . To proof this equation mathematically using the  $p^1$  and  $w^1$  which is located in the middle of the two firms, rearrange the terms in equation (2), such that:

$$C_i - C_j = T_2 (D_{ij} - 2D_{ip1}) \quad (4)$$

If both the purchasing cost and the travelling cost are low in both firms, both firms i and j will capture a large proportion of  $p^1$  and  $w^1$ . But if the cost of purchasing in firm i is much lower than the purchase cost in firm j, firm i will receive a large proportion of both  $p^1$  and  $w^1$ . Large proportion of both  $p^1$  and  $w^1$  will travel on a highway heading east and more job opportunities in the public transport will be created along that highway as compared to the one heading to firm j.

In case of  $p^1 w^1$  the equation will look as follows:

$$C_i + C_j = T_2 (D_{ip1} + 2D_{ip1}) \quad (5)$$

If the purchasing cost of goods and services in firms i and j are equal, firm i will receive a large proportion of  $p^1$  and  $w^1$ , because the distance from their residence to firm j is long and more costly as compared to the one

in firm i. A large proportion of both  $p_i$  and  $w_i^1$  will travel to the highway road heading to firm i as compared to those heading to firm j.

## CONCLUSION

This article manages to establish the causal relation between new or improvement of the existing highway that connect firms that compete regionally and job creation in the public transport industry. The movement of customers and workers to different firms or companies is directly influencing the increase in the demand of public transport in the highway which results in the job creation in this industry. The purchasing cost and commuting cost are all directly proportional to the direct and move of people. In other words, customers make rational decision to move towards firms which lower purchasing cost and where the travelling cost are lower, than in the direction where every is more costly.

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# INTERNET BANKING ADOPTION IN SOUTH AFRICA: AN EXPLORATORY STUDY

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## ABSTRACT

*Internet banking (IB) is a typical banking innovation that potentially can transform the financial services landscape in developing nations such as South Africa. However, due to the associated low adoption rate, its full potential in deepening and extending banking services is yet to be realised, as a critical mass of consumers is yet to be accessed. Thus, a better understanding of why some banking customers adopt IB and others do not, alongside an identification of the factors influencing this decision is likely to be of considerable practical as well as academic value. For this reason, the purpose of this study was to investigate the factors influencing the adoption and usage patterns of IB among South African consumers. Using Rogers' IDT framework, data was collected using a self-completion questionnaire, in which some 249 banking customers participated. Results suggest perceptions of risk, lack of adequate support and training from banking institutions are some of the causes of non-usage. The implications of these findings are that banks could focus more attention on cross-selling IB together with other financial products, as IB is rarely used in isolation. Installing personal computers inside branches in conjunction with campaigns and demonstrations may also improve rates of adoption.*

## INTRODUCTION

The successful introduction of new electronic banking (eBanking) products such as automated teller machines (ATMs), cell phone banking (CB), and Internet banking (IB) into the marketplace significantly improves a financial institution's competitive position in a number of ways (Maenpaa, 2006). Firstly, the literature consistently illustrates that by successfully migrating their customers to eBanking channels, banking institutions will reduce expenses, and increase profitability (Berger, 2009; Berndt, Saunders and Petzer, 2010). Secondly, with banking innovations, financial institutions potentially can enhance the quality of service and banking experience in that their customers are liberated from banking within specific business hours at physical branches. In other words, customers can remotely access their accounts easily and conveniently from literally anywhere and anytime (Jayamaha, 2008). Thirdly, the banks' potential to reach a much wider pool of customers, over and above those accessible to the branch, including those in remote areas would be greatly improved; and thereby contributing significantly to the socio-economic development especially in developing countries such as South Africa. For these reasons, research into the acceptance and usage patterns of banking innovations has, over the years, proved to be not only an interesting subject but also an essential element in formulating financial institutions' marketing strategy.

However, as many bank marketing specialists including Black et al. (2001) have noted, the vast majority of products and (including banking) services which are launched annually fail at considerable cost to 'innovating' businesses. Particularly in the banking sector, the failure rate and low adoption rates of many innovations negatively impact on many financial services providers. Of note, IB is a typical innovation that potentially can transform the banking landscape in developing nations such as South Africa, but due to the associated low adoption rate, its full potential in deepening and extending banking services is yet to be realised. Although the popularity of the Internet, among South Africans continues to grow, uptake of IB, on the other hand, still remains comparatively low (Berndt et al., 2010; Shambare, 2011). Thus, a better understanding of why some customers adopt IB and others do not, alongside an identification of the factors that may influence this

decision is likely to be of considerable practical as well as academic value. It is for this reason that the purpose of this study is specifically to investigate the factors influencing the adoption and usage patterns of Internet banking. The rest of the paper is structured as follows: the following section discusses IB in South Africa. Next, the IB banking adoption framework is presented. The methodology and findings sections are presented followed by the discussion of results and concluding remarks.

## Research Question

Although the advantages of IB are well-documented in the literature – convenience, anytime-anywhere banking, privacy, and saving time (Brown, Cajee, Davies and Stroebe, 2003). In reality though these advantages for both consumers and service providers can only be realised when consumers adopt and use the service (Agarwal and Prasad, 1998), which at this point in time appears to be low. Consequently, the research questions for the study are formulated as follows:

*RQ: What are most important factors affecting Internet banking adoption?*

## LITERATURE REVIEW

### Internet Banking

Internet banking refers to a banking channel in which customers use the Internet to access their bank accounts and perform various functions including inter-account transfer, third-party payment, and checking balances. Customers use personal computers (or sometimes mobile devices - iPads or Smart phones) to connect to the Internet. For added security, IB websites are password protected – requiring intricate combinations of passwords and personal identification (PIN) codes. So, customers key-in their personal passwords in order to be allowed access to their accounts.

In South Africa, all of the ‘Big Four’ Banks – ABSA, FNB, Nedbank, and Standard – offer Internet banking services. Also, as expected in a maturing market, South African banks offer similar IB services including checking balances, third-party payments, inter-account transfers, and purchases. It is estimated that at least 40 per cent of South Africans use Internet banking services (South African Reserve Bank, 2008). However, because of the lack of scientific research in the area, the accuracy of these statistics are rather difficult to ascertain. Also as a result of the paucity of research, there is no clear sense of the state of IB in South Africa. Thus, bank marketers seem to grapple with formulating effective marketing strategies since all that is known about IB adoption is learnt from the West. For that reason, this study attempts to fill the gap in the literature by studying factors influencing the adoption of IB in South Africa.

### Conceptual dimensions of IB

The literature identifies numerous conceptual frames modelling consumer adoption of new technologies including Internet banking. The most cited ones are the Technology Acceptance Model (TAM) (Davis, 1989), the Innovation Diffusion Theory (IDT) (Rogers, 1995), the Theory of Reasoned Action (TRA) (Taylor and Todd, 1995), and the Theory of Planned Behaviour (TPB) (Ajzen, 1991). Of these, past studies have consistently demonstrated that consumer perceptions, in particular, Rogers’ (1995) IDT was the most reliable predictor of adoption of new innovations. This model has been tested and widely applied in numerous settings including education, psychology, and marketing (Agarwal and Prasad, 1998; Meuter, Bitner, A.L and Brown, 2005; Robertson, 1967; Rogers, 1983; Shivers-Blackwell and Charles, 2006; Taylor and Todd, 1995). The IDT model presupposes that adoption of new innovations is influenced by potential adopters’ perceptions towards the characteristics of the innovation. In total, five characteristics associated with new innovations are identified. These are relative advantage, compatibility, and complexity, observability, and trialability, which are identified as “the most important characteristics of innovations in explaining the rate of adoption” (Rogers, 1995:16). Thus, innovations that are perceived by individuals as having greater relative advantage, compatibility, trialability, and less complexity will be adopted more rapidly than other innovations. The innovation characteristics are defined next.

*Relative advantage:*

Is the additional benefit that an innovation has relative to another method is positively related to its rate of adoption. It is therefore possible to suggest that the advantages that Internet banking offers over other banking methods would affect its rate of adoption. Among these advantages are anytime and anywhere banking that is convenient, since banking customers can access their accounts using their cell phones. The following hypothesis was, as a result, formulated:

**H<sub>1</sub>:** *the greater the perceived relative advantage of using IB, the more likely that it will be adopted.*

*Perceived compatibility:* - refers to how well a technology fits with an individual's work, lifestyle, values, and needs (Rogers, 1995). In the context of IB, compatibility is the extent to which the product is in line with how the customers live their lives. For example, customers who use the Internet more frequently and for numerous functions in their work and lives, they have a higher degree of compatibility with the Internet. Likewise, they are likely to have a greater chance of adopting Internet banking.

**H<sub>2</sub>:** *the greater the perceived compatibility of using IB, the more likely that it will be adopted.*

*Perceived complexity:* - or the level of difficulty of using an innovation is inversely related to its adoption (Meuter et al., 2005; Taylor and Todd, 1995). This means that the greater the perceived complexity of conducting banking via the Internet, the less likely its adoption will be, and accordingly:

**H<sub>3</sub>:** *the greater the perceived complexity of using IB, the less likely that it will be adopted.*

*Trialability:* - Potential adopters who are allowed to try out and experiment with an innovation prior to purchase are likely to get a first-hand feel of the product. Also, they have a greater chance of feeling comfortable with the technology, and thus are more likely to adopt it (Agarwal and Prasad, 1998). Thus, the adoption of Internet banking is more likely if the technology together with its benefit is demonstrated to users.

**H<sub>4</sub>:** *the greater the trialability of using IB, the more likely that it will be adopted.*

*Perceived risk:* One of the major influencing factors around the establishment and use of new technologies for financial transactions is that of security and trust (Ho and Ng, 1994). The need for security of personal details and financial information is therefore critical to the success of IB. Some of the risks associated with IB and banking, in general, are the possibility of losing money to fraud or loss of privacy. As a result, the lower the perception of risk involved in using cell phone banking, the more likely that it will be adopted.

**H<sub>5</sub>:** *the greater the perceived risk of using IB, the less likely that it will be adopted.*

*Self-efficacy:* refers to the confidence potential adopters have in their ability to use a specific technology (Bandura, 1982). Thus, it is reasonable to expect that the higher the Internet experience and skill possessed by individuals, the more likely they will be adopt IB.

**H<sub>6</sub>:** *the greater the self-efficacy of using IB, the more that it will be adopted.*

*Facilitating conditions (technology support):* This construct may be interpreted to include support from both the Internet service providers as well as from the banks (Brown et al., 2003). Thus, IB will more likely be adopted if the technological backbone as well as its support is reliable.

Although Rogers (1995) identifies five key predictors of adoption, recent studies confirm that three of these: relative advantage, compatibility, and complexity have consistently proved to be stable predictors across multiple disciplines (Rugimbana, 1998).

**H<sub>7</sub>:** *the greater the perceived complexity of using CB, the less likely that it will be adopted.*

Adoption related studies show that consumers show high levels of resistance to trying new innovations. However, once this barrier of getting customers to try out a new product, adoption will most likely take place. For that reason, in this study, adoption was operationalised by whether respondents had indeed tried using IB or not. Accordingly, trial was measured using a single-item question assessing whether or not respondents had tried using IB.

## RESEARCH METHODOLOGY

A cross-section survey method was used (Calder, Phillips and Tybout, 1981). Data were collected using self-completion questionnaires. Using convenience sampling, three research assistants distributed questionnaires at city centre shopping mall in Pretoria (Blumberg, Cooper and Schindler, 2011). The completed questionnaires were checked for completeness; those with more than four missing values were discarded. SPSS v.19 was used for data analysis (Field, 2009).

## Sample

Since the study was concerned with banking customers, all individuals with a bank account potentially constituted the sampling frame. However, the study concentrated on young consumers, particularly under 35 years old. But, given the unknown bounds of such a sampling frame – under 35 years old and having a bank account – probabilistic sampling techniques were considered impractical to execute, hence the use of convenience sampling.

Some 500 questionnaire were distributed; 373 were returned. Of these only 249 were fully completed and usable for data analysis, representing a response rate of about 67 per cent. More females (56 per cent) participated, and the vast majority of respondents were student (87 per cent). Table 1 provides further details pertaining to the participants' demographic characteristics.

**Table 1: Demographic Profile**

<b>Demographic Characteristics</b>		<b>Percentage</b>
<b><i>Gender</i></b>	Male	44
	Female	56
<b><i>Age Group</i></b>	< 20 years	41
	21 – 24 years	48
	25 – 29 years	6
	30 years +	5
<b><i>Employment Status</i></b>	Full-time employed	8
	Part-time employed	5
	Students	87
<b><i>Education</i></b>	Diploma	86
	Undergraduate	4
	Postgraduate	10
<b><i>Monthly Income</i></b>	< R3, 000	84
	R3, 000 – R5, 000	9
	R5, 001 – R10, 000	3
	R10, 001 +	4

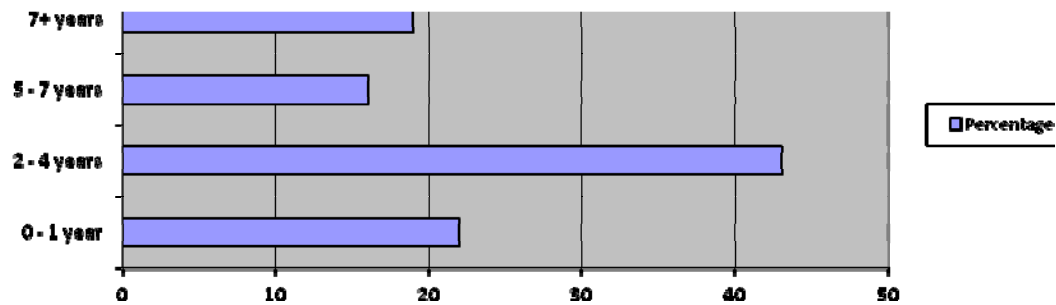
## RESULTS AND DISCUSSION

### User Experience of the Internet

In terms of Internet familiarity, approximately 65 per cent of the respondents indicated that they have used the Internet for up to four years, and almost 35 per cent reported having used the Internet for four years or more (Figure 1). Closer inspection revealed that only six respondents had never used the Internet at all, thus suggesting that Internet experience within the sample was moderate to high. The latter confirms findings of past research; in particular Black et al. (2001), who argued that Internet usage is growing rapidly.



**Figure 1: User experience of Internet banking**



## Internet Banking

It was also insightful to ascertain the factors influencing the adoption of Internet banking. The 20-item scale was used to determine which factors influenced Internet banking adoption. According to the conceptual frame, the seven factors or sub-scales determined consumers' acceptance of IB and ideally should load independently as distinct factors. To test these factors, Principal Component Analysis (PCA) was conducted on the 20 items (Malholtra, 2010).

The factorability statistics were satisfactory (KMO = 0.724; Bartlett's Test of Sphericity  $X^2 = 1161.709$ ;  $df = 190$ ;  $p < 0.000$ ). A six-factor solution, accounting for 67 per cent of variance, was extracted (Table 2). With the exception for complexity and technology support, the remaining four factors had Cronbach's alphas of greater than the common minimum of .7 (Field, 2009). However, since these were greater than .5, which is considered as absolute minimum for exploratory research, these were considered acceptable.

**Table 2: Six-item solution of the IB factors**

Factor	Sub-scale(s)	Eigenvalues	Cronbach's alpha ( $\alpha$ )
1	Self-efficacy & Trialability	4.258	.787
2	Risk	2.561	.775
3	Complexity	1.745	.594
4	Compatibility	1.589	.709
5	Relative advantage	1.358	.703
6	Technology Support	1.190	.620

## CONCLUSIONS

The findings of this study suggest that the Internet is a very popular technology, and is largely widely accepted by young South African consumers, as Internet adoption ranges from moderate to high experience. Overall, the data found support for all the tested hypotheses, indicating that the seven factors (self-efficacy, trialability, risk, complexity, compatibility, relative advantage, and technology support) are important determinants of IB adoption. The fact that self-efficacy and trialability loaded onto a single factor indicates the general influence of consumers' perceptions of their ability to use IB services. This ties in very closely with the arguments by Meuter et al (2005) that getting customers to feel comfortable about a technological innovation is achieved by having them try the innovation first. Thus, this paper reinforces previous findings, which suggest perceived attributes of innovations are important in predicting its acceptance and usage.

Future researchers could consider studying consumer choice behaviour of numerous other banking technologies including ATMs, credit cards, or telephone banking. The use of a different consumer segment, for instance the elderly or women might also provide unique insights into the phenomenon.

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# **TOWARDS ACCESS TO AFFORDABLE ESSENTIAL HIV AND AIDS MEDICINE IN SOUTH AFRICA : *UBUNTU* AND ESSENTIAL FACILITY ACCESS DOCTRINE CLAIMS**

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## **ABSTRACT**

*Africa's HIV and AIDS prevalence has reached a boiling point and there is clearly the need to consider intervention measures of different propositions. This paper makes an argument for a change in strategy and to look to the jurisprudence of ubuntu and essential facility doctrine (EFD) for help. The paper by way of examples demonstrates instances whereat ubuntu has been crucial in ensuring that the rights in the South African Bill of Rights are actualised by the courts in South Africa. The paper further argues that EFD can be used to gain access to patented essential medicine by developing countries with little or no manufacturing facilities.*

## **INTRODUCTION**

In this paper I argue for the change in strategy and approach in the implementation of measures to enhance access to essential medicine and treatment for Human Immunodeficiency Virus and Acquired Immune Deficiency Syndrome (HIV and AIDS). In particular I argue for recourse to *ubuntu* and essential facility doctrine (EFD). *uBuntu* is an African worldview which has assumed a central role in the constitutional jurisprudence of South Africa. The paper by way of examples demonstrates instances whereat *ubuntu* has been crucial essential facility doctrine ensuring that the rights in the South African Bill of Rights are actualised. I also argue that EFD can be used to gain access to patented essential medicine by developing countries with little or no manufacturing facilities. In order to place the discussions in a proper context, the paper outlines both the patents regime in South Africa and the World Trade Organisation (WTO) rules on the proportion of intellectual property rights. To this end, this paper without much discussion notes the implementation of the WTO flexibilities build into the Trade-Related Aspects of Intellectual Property (TRIPS) which strives to strike a balance between ownership of intellectual property rights and public utility of measures limiting such ownership for the purposes of public health benefits.

## **CONTEXTUALIZATION**

### **AIDS and HIV Rampant in Sub Saharan Africa**

The prevalence of HIV and AIDS in South Africa, and in the sub-saharan Africa (SSA) region is still one of the extreme national challenges. Sub-Saharan Africa (SSA) is a geographical term used to describe the area of the African continent which lies south of the Sahara, a desert land, or those African countries that are fully or partially located south of the Sahara. SSA countries are Angola; Benin; Botswana ; Burkina Faso; Burundi; Cameroon; Cape Verde; Central African Republic; Chad; Comoros; Congo (Brazzaville); Congo DRC (Zaire);Cote d'Ivoire; Djibouti; Equatorial Guinea; Eritrea; Ethiopia; Gabon; Gambia; Ghana; Guinea; Guinea-Bissau; Kenya; Lesotho; Liberia; Madagascar; Malawi; Mali; Mauritania; Mauritius; Mozambique; Namibia;

Niger; Nigeria; Reunion; Rwanda; Sao Tome and Principe; Senegal; Seychelles; Sierra Leone; Somalia; South Africa; Sudan; Swaziland; Tanzania; Togo; Zambia; Zimbabwe.

According to statistical reports the prevalence of Human Immunodeficiency Virus and Acquired Immune Deficiency Syndrome (HIV and AIDS) in Africa accries a great threat of obliterated a large number of the population in not so a distant future. In the words of International Partnership Against Aids in Africa, aids is ‘mortgaging the [African] continent’s future’ (2001:2). The South African Constitutional Court in *Minister of Health v TAC (No 2)* 2002 (5) SA 721 (CC) referred to HIV and AIDS pandemic in South Africa as “an incomprehensible calamity” (at para 1). The prevalence of HIV and AIDS in Africa is such common place that the continent has been described by the United Nations as experiencing the state of emergency that need “urgent and exceptional national, regional and international action.” (2005:8). As correctly observed by some commentators one of the major aggravating factors is the lack of/inadequate access to proper treatment of opportunistic infections and an availability of anti-retroviral drugs (AVRs), and the skewedness in the manufacture, pricing and distribution of patented pharmaceutical products (Ngwenya 2002; Bluestone 2001).

UNAIDS/WHO statistics shows, for example, that of the 42 million of people living with HIV/AIDS (PLWHA) between 68 and 70% are estimated to be in SSA (See HIV/AIDS 2004; Serralvo, 2011; Sibanda, 2009). In South Africa alone, the number of PLWHA is staggering. Over years the number of PLWHA in South Africa increased when compared to the estimate number of about 6.6 million in 2002. (See Soul City Institute for Health and Development Communication 2002). In some SSA countries AIDS has wiped out entire communities and families. Schoofs (1999) gives example of on teenager, Arthur Chinaka, who in 1990 was 19 years old and in high school. Arthur’s father died of AIDS and other opportunistic diseases. In 1992, his uncle Edward died of AIDS. In 1994, his uncle Richard died of AIDS. Another uncle, Alex, died of AIDS in 1996. In the same year his aunt Eunice and a fourth uncle, also died of AIDS. A study by UNESCO’s International Institute for Educational Planning (2002) reports an alarming number of children orphaned by HIV and AIDS in SSA, who unfortunately have been forced into early adulthood to work to fend for their remaining family members as young as seven years of age.

## **States Obligations to Provide Access to Health Facilities**

It is an obligation to all governments to take all appropriate measures to realize every person’s right to healthy environment and access to health facilities. This obligation derives from international law and conventions, and may also derive from continental treaties and national laws. Article 12 of the International Covenant of Economic, Social, and Cultural Rights (ICESCR), contains one of the most comprehensive public health obligation to States. Article 12(2)(c) mandates State Parties to countries to take steps to achieve the full realization of rights by people to enjoy sustainable and mental health such as the prevention, treatment and control of epidemic, endemic, and other diseases (See Serralvo, 2012:112). Of course public health obligations also find recognition in other international instruments such as the International Convention on the Elimination of All Forms of Racial Discrimination of 1965, Article 5(e) (iv); the Convention on the Elimination of All Forms of Discrimination against Women of 1979, Articles 11.1 (f) and 12; and the Convention on the Rights of the Child of 1989, Article 24. In Africa, 6(2) of the African Charter on Human and Peoples' Rights (ACHPR) of 1981 requires State Parties to “take the necessary measures to protect the health of their people and to ensure that they receive medical attention when they are sick.” African governments are therefore pursuant to ICESCR and ACHPR obligated to take all possible measures to protect their citizens from health disasters – imminent or actual disasters, such as the HIV/AIDS poses a serious problem.

## **WTO : Striking a Balance between Intellectual Property rights and Access to Essential Medicine**

The WTO governs matters relating to the protection of intellectual property rights (IPRs), primarily through TRIPS. Part of the preventative rights afforded to patent holders by TRIPS is that the production, distribution and other forms of exploitation of their pharmaceutical products must be done within the context of the rules under TRIPS. Thus, TRIPS gives the producers of pharmaceutical products recourse to protect their profits by allowing them to register patents over their products for exclusive use. Unfortunately the monopoly over IPRs has resulted into the restriction in the access to and flow of patented medicines.

To address this restriction the WTO introduced a number of flexibilities into TRIPS to address the challenges of access to medicines necessary to deal with the public-health problems facing many developing countries. Notable of these decisions are: Decision on Paragraph 17 of the Main Doha Declaration of 14 November 2001; the Declaration on the TRIPS Agreement and Public Health of 14 November 2004; the Decision on the Extension of the Transition Period under Article 66.1 of the TRIPS Agreement for LDC Members for Certain Obligations with Respect to Pharmaceutical Products of 27 June 2002; the Decision on LDC members' Obligation under Article 70.9 of the TRIPS Agreement with Respect to Pharmaceutical Products of 8 July 2002; the Decision on the Implementation of Paragraph 6 of the Doha Declaration on the TRIPS Agreement and Public Health of 30 August 2003; the Decision on the Amendment of TRIPS Agreement of 6 December 2005; Hong Kong Ministerial Declaration on TRIPS and Public; and the Decision of 17 December 2009 to extend the deadline for accepting TRIPS Agreement Amendments.

The Doha Declaration on TRIPS was adopted by the WTO Ministerial Council at its conference held from 9 to 14 November 2001 in Doha, Qatar, to introduce flexibilities into TRIPS as identified in the Doha Decision on Paragraph 17 of TRIPS. Most importantly, it required that TRIPS must be interpreted and implemented in a manner that is supportive of public health. The Decision on TRIPS Extension for Least-developed Countries (LDCs) and the Decision on LDC members' Obligation under Article 70.9 of TRIPS, created a special dispensation for least-developed countries. In terms of the former, LDCs did not have to protect pharmaceutical patents and test data until 1 January 2010. Moreover, LDCs had the right to seek further extensions to this period. The latter Decision allows LDCs not to give exclusive rights to pharmaceuticals that are subject to patent application until 1 January 2016.

The TRIPS Decision of 2003 gives effect to the Doha Declaration on TRIPS by removing limitations on exports under compulsory licence to countries that cannot manufacture the pharmaceutical themselves. WTO Member states need to build flexibilities into TRIPS or to amend TRIPS to allow countries to address adequately their public health problems and situations of national emergency or extreme urgency (Sibanda 2009). The importance of the TRIPS Decision of 2003 was reaffirmed by the WTO during the Hong Kong Ministerial Declaration on TRIPS. In brief, the TRIPS Decision of 2003 primarily attempts to loosen the restrictive nature the protection of IPRs in the TRIPS Agreement has on access to patented pharmaceutical products. Article 31 of TRIPS permits the unauthorised exploitation of intellectual property rights (IPRs) by the WTO members. Pursuant to Article 31(f), the unauthorised production of patented pharmaceutical medicines may be justifiable in cases of national emergencies and other circumstances of extreme urgency, subject to license or exploitation of the IPRs being "predominantly for supply of the domestic market of the authorizing Member." Article 31(f) is restrictive in that it only allows compulsory licensing predominantly for domestic production for the supply of a country authorising such use. The restriction becomes more severe when applied to a country with insufficient or no pharmaceutical manufacturing capacity, which is the essential manufacturing facility, which would mean that such members lacking the capacity or infrastructure to manufacture pharmaceuticals have to rely on imported pharmaceuticals. In brief, Article 31 on its own is inflexible (Sibanda 2009:191-192).

## ALTERNATIVE ACCESS APPROACHES

### Ubuntu Claim

I am tempted to start this part of the paper with reference to three of the six different theoretical underpinnings of *ubuntu* set out by Metz (2007), namely: (1) "An action is right just insofar as it promotes the well-being of others without violating their rights; an act is wrong to the extent that it either violates rights or fails to enhance the welfare of one's fellows without violating rights", (2) "An action is right just insofar as it is in solidarity with groups whose survival is threatened; an act is wrong to the extent that it fails to support a vulnerable community", and (3) "An action is right just insofar as it produces harmony and reduces discord; an act is wrong to the extent that it fails to develop community".

As correctly observed by Justice Yvonne Mokgoro (1997) of the South African Constitutional Court there is no simple definition of the African philosophy of *ubuntu*. It is "one of those things that you recognise when you see it" (Mokgoro, 1997). *uBuntu* is a derivative of the *isuzulu* phrase *umuntu ngumuntu ngabantu*, which is loosely translated in English as "I am, because we are; and since we are, therefore I am" (Mbiti

1969:108-109). As noted by the Constitutional Court in the case of *MEC for Education: KwaZulu-Natal and Others v Pillay and Others* 2006 10 BCLR 1237 N the phrase is about the “communality and the interdependence of the members of a community.” The importance of *ubuntu* as a claim for access to essential medicine for HIV and AIDS patients is that it is relevant due to its emphasis on “essential unity of humanity and emphasises the importance of constantly referring to the principles of empathy, sharing and cooperation in efforts to resolve our common problems” (Murithi 2009:229). This, in my view, is fully aligned with multinational efforts to combat HIV and AIDS.

You should be asking the question” how do we reconcile property rights IP holders, which are enshrined in the Constitution? The rights in the Bill of Rights are not cast in stone. Justifiable exceptions are permitted. In case in point is the case of *Elizabeth Municipality v Various Occupiers* 2004 (12) BCLR 1268 (CC). This case was brought by the Port Elizabeth Municipality in the Western Cape Province of South Africa against illegal squatters on a certain piece of land, and who did not want to be resettled in Walmer township, arguing that Walmer was a dangerous and crime-ridden area. In his judgment which hinged around the interpretation of the Prevention of Illegal Eviction from and Unlawful Occupation of Land Act of 1998 (PIE), which was adopted with a clear objective to put a stop to forced removals, with the manifest objective of overcoming the brutal history of forced removals in the name of a future worthy of the values and ideals of the new constitutional dispensation, Sachs J made a few important observations regarding *ubuntu*. The following extract from the case is in which Sachs J called on the Constitutional Court to be involved in active judicial management which is underscored by the equitable principles espoused in *ubuntu*, is relevant to our discussion in this paper:

[The Court] is called upon to balance competing interests in a principled way and promote the Constitutional vision of a caring society based on good neighbourliness and shared concern...The spirit of *uBuntu*, part of the deep cultural heritage of the majority of the population, suffuses the whole Constitutional order. It combines individual rights with a communitarian philosophy. It is a unifying motive of the Bill of Rights, which is nothing if not a structured, institutionalised and operational declaration in our evolving new society of the need for human interdependence, respect and concern.(at para 37)

In the relevant parts of the judgment, Sachs J drew a balance between private property rights and rights to housing in sections 25 and 26 of the Constitution respectively, through a mediated approach underscored by the values of *ubuntu* which acknowledges the existence of an interrelationship between the two rights. According to Sachs J, section 25 and 26 must be read together with the intention of finding compassionate solution based on “humanised procedures that focused on fairness to all” (at para 13). Section 25(1) states that “[n]o one may be deprived of property except in terms of law of general application, and no law may permit arbitrary deprivation of property”. There are a series of qualifying sub-sections that follow thereafter. Thus Section 25(2) provides an internal qualifier by stating that property “may be expropriated only in terms of law of general application for (a) public purpose or in the public interest; and (b) subject to compensation, the amount of which and the time and manner of payment of which have either been agreed to by those affected or decided or approved by a court.” By property here is to be understood broadly to include intellectual property and other legally recognised property forms.

When interpreting and implementing rights in Bill of Rights it is imperative, according to the Constitutional Court, one must keep in mind that the constitutional state is established “not only on ‘democratic values’ and ‘fundamental human rights’ but also on ‘social justice’”(See *First National Bank of SA Limited t/a Westbank v Commissioner for the South African Revenue Services and Another; First National Bank of SA Limited t/a Westbank v Minister of Finance* 2002 (4) SA 768 (CC); 2002 (7) BCLR 702 (CC)). It is argued that *uBuntu* is a perfect embodiment of the overall elements of social justice doctrine. The principles of *ubuntu* for part of the value system first introduced unambiguously in the post-amble of the Interim Constitution of the Republic of South Africa 200 of 1993(Interim Constitution). *uBuntu* is not explicitly contained in the final Constitution of the Republic of South Africa of 1996, but, it remains one of the core values of the constitutional framework of the South African society. Quoting the European Court of Human Rights in *Dudgeon v United Kingdom* (1982) 4 EHRR 149, per Walsh J in the watershed Constitutional Court of *State v Makwanyane* 1995 (6) BCLR 665 (CC) that outlawed death penalty Mokgoro J said the following:

“ . . . in a democracy the law cannot afford to ignore the moral consensus of the community. If the law is out of touch with the moral consensus of the community, whether by being either too far below it or too far above it, the law is brought into contempt” (at para 305)

The moral consensus of the South African community is that all possible measures must be invoked in addressing our challenges as a nation. HIV and AIDS is South Africa’s biggest challenge in the public health sector. In fact, acting in accordance to the principles of *ubuntu* is well in line with the moral obligation of the government to ensure access to essential medicine. From morality point of view, using ubuntu argument to gain access to essential medicine finds support in Article XX of GATT provided all the requirements for Article XX will be met. Ideally, recourse to Article XX in the context of this paper must be based on the argument of public morals, and protection of human life. In laying ubuntu claim in the human rights context such claim must satisfy the elements of necessity and of non-discrimination and non-trade restriction, which resonates in almost all of WTO agreement referred to above. Firstly, it will have to be satisfied that the trade-related human rights measure employed falls within the range of policies in the particular WTO agreement. Secondly, that the measure is ‘necessary’ to fulfil the human rights objective. Thirdly, that the measure is in conformity with the chapeau or preamble of the relevant agreement, if the agreement has such.

Article XX exception calls for several questions to be answered. For example, when using ‘public morals’ exception, it may be necessary to answer a question as to what human rights fall under ‘public morals’ and whether such morals are inwardly directed or outwardly directed. It would be inwardly directed morality if one was to follow the *United States – Restriction of Tuna, (Tuna-Dolphin I)* August 16, 1992, GATT B.I.S.D (39th Supplement) , and outwardly directed morality if one was to follow cases like the *United States – Restrictions on Imports of Tuna (Tuna-Dolphin II)*, 33 I.L.M 839 (1994) and the *Shrimp-Turtles(AB)*. According to Charnovitz (1998), if for example one was pleading public morality, religion and compulsory and child labour would be among the range of considerations underlying such a trade-impacting measure. I would like to note a thought provoking and an intellectually stimulating writing on the public moral exception in the WTO agreements by Charnovitz (1998). Particularly important also is the observation that “there can be no crystallization of the ‘public morals’ concept into a universal sense. Morality will always differ from one jurisdiction to the other”. Sibanda, 2007:fn51).

It has been argued that public morality exception subsumes “public order” exception, which is found in GATS Article XIV (a); Agreement on Procurement Article 2; and TRIPS Article 27.2, or that the latter should be read as broadening the former in terms of meaning and context (Charnovitz 1998: 689). The fine reading of these agreements, particularly GATS Article XIV (a) concludes otherwise. The footnote to ‘public order’ in GATS Article XIV (a) states that “public order exception may be invoked only where a genuine and sufficiently serious threat is posed to one of the fundamental interests of society”. This implies that ‘public order’ defense may only be invoked in extreme circumstances. The emphasis on extreme circumstances suggests that the understanding of ‘public morality’ and ‘public order’ cannot be the same nor can ‘public morality’ subsume ‘public order’. However, nothing prevents a Member from using ‘public morals’ exception in order to justify a measure that falls within ‘public order’ exception but for the requirements

When viewed through the lens of *ubuntu*, the pharmaceutical companies demonstrated the indifferent and inhumane side of mankind, which unfortunately, has received acts of applause from certain members of the WTO. Typical example is the 1999 saga in South Africa when the pharmaceutical sector opposed the implementation of the Medicines and Related Substances Control Amendment Act (MRSCAA) 90 of 1997. The Act is aimed at enabling the Minister of Health to introduce measures “so as to protect the health of the public”, and to make pharmaceuticals more affordable (Sibanda 2009:193). The pharmaceutical companies took the matter to court, in *Pharmaceutical Manufacturers’ Association and Others v the President of the Republic of South Africa* arguing, amongst others, that *certain* provisions of MRSCAA were unconstitutional because they were denying intellectual property owners’ protection required by TRIPS Agreement. It was argued by the pharmaceutical companies that that by implementing MRSCAA South Africa will be in breach with her obligations under TRIPS (Collins 2001).

## Essential Facility Doctrine Claim



EFD properly within the competition law domain. In terms of the EFD a dominant firm is prohibited from refusing to give a competitor access to an essential facility. The South African Competition Act of 1998, which closely resembles the American unfair competition and anti-trust statutes (Sibanda 2001), contains EFD provision in section 8(b). In section 1(1) (viii) of the Act an essential facility is defined as “an infrastructure or resource that cannot reasonably be duplicated, and without access to which competitors cannot reasonably provide goods or services to their customers”. In terms of section 8(b) of the Competition Act a dominant firm is prohibited to “(b) refuse to give a competitor access to an essential facility when it is economically feasible to do so”.

The importance of the inclusion of EFD in the South African competition law was highlighted and acknowledged by the Competition Tribunal in the case of *Glaxo Wellcome vs. National Association of Pharmaceutical Wholesalers*. Unfortunately the tribunal did not involve the issue of general application of EFD including application to intellectual property and determining if intellectual property can be regarded as an essential facility for the purposes of applying EFD. The question before the tribunal, which had pharmaceutical wholesalers and distributors as complainants and manufacturers of pharmaceutical products as respondents, was whether scarce goods or products could be an essential facility. In particular, the complaint was that the conduct of the respondent, that of setting up a distribution agent, amounts to restrictive horizontal practices, restrictive vertical practices, abuse of dominance, and price discrimination. One of the arguments was that the respondents’ abuses its dominant position in the market and that it denies its competitors of access to an essential facility. However, the Tribunal dismissed the essential facility claim. According to the presiding officer the word “resource” in the Act was not meant to be interpreted as products, goods or services. Therefore, pharmaceutical products in question did not qualify as essential facilities and resources for anti-trust purposes. Interestingly, the Tribunal advanced as its reasons for the denial of EFD claim the fact that such a departure from the standard norm would be a disincentive for investment in the country, and that also that a decision to the contrary could have amounted to a substantial intervention and perhaps an unwarranted judicial activism. Be that as it may, the Tribunal was amenable to granting EDF petition provided the petitioners makes a convincing case.

Hovenkamp *et al* (2006:15) are of the view that “that an intellectual property right itself cannot constitute an essential facility, and that the doctrine should not be applied to cases that seek access to an intellectual property right in any but the most unusual of circumstances” Of course what I am proposing is the introduction of flexibilities in the national competition law, and intellectual property law, in order to address the problem of access to essential medicine and related products. It would seem that in order to have recourse to EFD in South Africa a claimant will have to convince the court that intellectual property in the form of patented medicines can be regarded as “infrastructure or resource” pursuant to the wording of section 8(b) of the relevant provision of the Competition Act. This can be the case in a situation where a dominant firm refuses a competitor access to an essential facility for patented medicine, even when it is economically feasible to do so, and it is done on reasonable and non-discriminatory basis (see generally Hovenkamp *et al* 2006).

There have been a few cases in the United States discussing the issue of EFD. In *Intergraph Corp. v. Intel Corp* (1999), for example, the essence of the court’s opinion was that EDF may only be used by the requester who is the competitor of the owner of the facility. What this means is that there should be a home industry with the relevant capacity to manufacture generic ARVs. This approach would work in South Africa given the government’s recent announcement of establishing essential medicine facility in Pretoria through public-private partnerships (PPP). South African courts are not obligated to follow strictly the jurisprudence in foreign countries; however, this jurisprudence may present valuable lessons. The case in point is *MCI Comm. Corp. v. AT&T* (1983), in which the following four-part test for an essential facility claim was prescribed as to be satisfied before access to the facility in question may be compelled, namely: “(1) control of the essential facility by a monopolist; (2) a competitor’s inability to duplicate the essential facility; (3) the denial of the use of the facility to a competitor; and (4) the feasibility of providing the facility” (at 1132-3338). In *MCI Comm. Corp. v. AT&T Bell System* refused to permit MCI to connect its long-distance calls to the Bell System’s local phone exchanges.

I should perhaps note that the EFD was dealt with in few other cases (E.g., *United States v. Terminal R.R. Ass’n*, 224 U.S. 383 (1912); *Otter Tail Power Co. v. United States*, 410 U.S. 366 (1973)). The US Supreme Court in *Verizon Communications v. Law Offices of Curtis V. Trinko* 540 U.S. 398, 411 (2004) without necessarily declaring EFD as non-existent in the US unequivocally claimed that it “never recognized such a

doctrine". The Supreme Court in part considers as priority for protection the commercial interests for IPRs holders. This approach of championing commercial interests over human life is hardly surprising given the role of the United States government in 1999 to force the South African government to abandon its amendment to MCCA. Makar (1994) notes that EFD is yet to gain broad support in any one explanatory theory, and commentators are split as to how to correctly interpret and apply the doctrine in the public health care sector.

Although the European Court of Justice (ECJ) have taken a similarly reluctant approach to endorse the EFD, jurisprudence in the European Union, however, suggest that EDF may be applied to IPRs when the issue is of "exceptional circumstances". In *Magill* Cases C-241/91 P&C-242/91 P, RTE & ITP v. Commission [1995] ECR I-743, [1995] 4 CMLR 718, [1995] 1 CEC 400 (ECJ), for example, the blocking of a new product due to protection of copyright concerns at the prejudice of consumers resulting from a refusal to license was considered, by the court, to be an 'exceptional circumstance'.

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# INTERVENTION OF SOUTH AFRICA GOVERNMENT IN THE MACRO GAME OF WALMART-MASSMART MERGER: IMPACT ON WTO OBLIGATIONS, AND RAMIFICATIONS ON COMPETITION, TRADE AND FOREIGN DIRECT INVESTMENT

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## ABSTRACT

*This paper examines the impact of the 2010 Walmart-Massmart merger and its ramifications on the country's regulation of industry competition; trade and foreign direct investment. The paper also discusses the opposition to the merger by the labour movement and the South African government in order to secure public interests, and to protect small and infant businesses. In order to contextualise the discussion the paper determines the relevant WTO obligations, and sets out permissible exceptions to this obligation. The argues that as in any foreign direct investment initiative there was political, economic and social threats that the government could not have just ignored.*

## INTRODUCTION

### General

Optimists usually describe Africa as the last great frontier for investment.<sup>1</sup> Pessimists, on the other hand, look at the consistently dismal economic performance of the region and discount any potential for brisk investment activity. However, both agree that any region that attracts large inflows of Foreign Direct Investment (FDI) is bound to register strong economic development and that FDI has been one of the principal engines for economic globalization.<sup>2</sup> Africa remains a marginal recipient of FDI. (Mosoti, 2003)

Since the dawn of democracy South Africa has experience a steady but consistent in flow of foreign direct investment (FDI), mostly because of its attractive non-discriminatory investment environment (National Treasury, 2011:1 -2. See also Rusike 2008). It is reported that most of the FDI has been in the area of mergers and acquisitions (Mosoti, 2003). One of the FDI that recently dominated headlines in South Africa is the Walmart-Massmart merger. In September 2010 Walmart announced its intention to acquire 51% stake in Massmart. At the time Massmart was the second-largest distributor of consumer goods in Africa. It is listed and based in South Africa, and 98 percent of its revenue is generated in South Africa (Kruger, 2012:2). Compared to the rest of Sub Saharan Africa (SSA) countries, South Africa is preferred as an attractive environment for direct foreign investment. Sub-Saharan Africa is a geographical term used to describe the area of the African continent which lies south of the Sahara, a desert land, or those African countries that are fully or partially located south of the Sahara. The merger is regulated by the Competition Act.

The Walmart-Massmart merger has received numerous challenges, inside and outside courts. There has also been intervention by trade unions some trade unions (SACCAWU, NUMSA SACTWU, FAWU and the

Labour Research Service); three government departments (the Department of Economic Development, the Department of Trade and Industry and the Department of Fisheries, Forestry and Agriculture; referred to collectively as “the Departments”); and the South African Small Medium and Micro Enterprises Forum (“SASMMEF”). This intervention is reportedly based of “public interest” concerns. The following allegations, succinctly set out in a March 2011 report prepared by RBB Economics at the request of Webber Wentzel, are noted: (a) potential job losses within the domestic economy which may result into foreclosure of retailers and suppliers; (b) Wal-Mart’s alleged history of labour law violation in other countries; possible lowering of employment terms and conditions; Walmart becoming a dominant industry and thereby suppressing effective competition; and alleged history of anti-competitive practices (See Nandi, 2007:119)

The question for determination by the Competition Tribunal is whether the Massmart –Walmart merger is justified on public-interest grounds. *There have been several decisions on the matter. The latest is the 9 March 2012 decision by the Competition Appeals Tribunal (CAT) which approved the merger.* However, the judgment was not well received by all involved. One of the strong political parties in South Africa, Inkatha Freedom Party (IFP), admonished the judgment particularly stating that: (a) The conditions imposed on the acquisitions by government, including local procurement is equally absurd, and contrary to the World Trade Organisation (WTO) principle of national treatment as none of the existing local retailers and distributors have such a requirement; (b) The intervention by trade unions some trade unions (SACCAWU, NUMSA SACTWU, FAWU and the Labour Research Service); three government departments (the Department of Economic Development, the Department of Trade and Industry and the Department of Fisheries, Forestry and Agriculture; referred to collectively as “the Departments”); and the South African Small Medium and Micro Enterprises Forum (“SASMMEF”) was unfortunate as it the country’s competition authorities into a political debacle, and that an “ambiguous precedent” has been set.

This paper examines the impact of the Wallmart-Massmart on South Africa’s WTO obligations, and its ramifications on the country’s regulation of industry competition; trade and foreign direct investment. In order to contextualise the discussion the paper determines the relevant WTO obligations, and sets out permissible exceptions to this obligation. Key WTO provisions under consideration include but not limited to Articles III, XI and XX of the General Agreement on Trade and Tariffs (GATT); Article II of Agreement on Trade-Related Investment Measures (TRIMs) and Articles II and XVII of the General Agreement on Trade in Services (GATS). Important critical aspects the discussions in this paper is the involvement of the government of South Africa in private litigation, the recourse to WTO law by private individuals, and the question whether WTO law is applicable in the South African municipal law to justify sanction for non-compliance with WTO obligations. The paper establishes that public interest dictated some degree of involvement by the government of South Africa in the merger controversy, particularly as it threatened to exacerbate the already high unemployment crisis in the country. It is beyond the scope of this paper to examine in-depth the details of the issues, all arguments, facts and outcome of these case including the case in lower tribunals.

## CONTEXTUALIZATION: FACTS OF INTERESTS

Before delving into the issues, however, it is helpful to provide some preliminary background concerning, first, the social, trade and economic, and political facts of interests in the country; secondly, a brief overview of the key principles and content of the competition and investment regulatory regime; and thirdly the fact complex of the case in question.

### Social Context

South Africa is a middle income developing country with a diverse population (O’Regan 2012) [consider other sources] According to the figures from the presidency Report in Development Indicators of 2010 the gross domestic product of South Africa in 2009 was US\$21bn which, which, according to according to Judge Kate O’Regan (2012:3) a former judge of the Constitutional Court of South Africa, “works out at less than US\$5000 per capita”. Perhaps without labouring the point one I must restate verbatim the position as succinctly put by O’Regan is her recent publication:

South Africa is a middle income developing country with an extraordinarily diverse population. Its gross domestic product in 2009 was US\$211bn which, with a population estimated at just under 50

million,<sup>22</sup> works out at less than US \$5000 per capita. The majority of South Africans, close to 75 per cent, are of African origin (approximately 39.5 million people). There is a significant minority of Indian descent (approximately 1.3 million) whose ancestors came to work the South African sugar estates as indentured labour in the late nineteenth century. There is also a significant minority of mixed race descent (approximately 4.4 million), the so-called Coloured population, whose ancestors include the indigenous Khoi people of the western Cape, the early Dutch settlers and slaves brought to the Cape from what are now Indonesia and Malaysia in the late seventeenth and early eighteenth centuries. White South Africans constitute just under 10 per cent of the population (about 4.5 million). Many white South Africans trace their roots in the country back to the seventeenth century. The effects of centuries of colonialism<sup>24</sup> and decades of apartheid<sup>25</sup> persist. South Africa is one of the most unequal societies in the world with a gini coefficient considerably above 0.6 (on a scale where 0 is equal, and 1 is unequal), estimated by the Presidency at 0.66 for 2008.<sup>26</sup> The Presidency estimates (using 2008 constant figures) that monthly income for the poorest 10 per cent grew from R783 to R1041 per capita between 1994 and 2009, while for the richest 10 per cent it grew from R71 055 to R97 899. The richest 10 per cent therefore earn monthly 100 times the amount earned by the poorest 10 per cent. While absolute and relative poverty have declined, according to the Presidency figures inequality has deepened. The pattern of inequality is also deeply racial, as is illustrated by the fact that the mean monthly per capita income for Africans is R775.46 while for whites it is R7 645.48.<sup>28</sup> The simple sad fact is that nearly twenty years into the new democratic order, poor black South Africans still fare miserably when it comes to the necessities of life: housing, education, health care and job opportunities.

It has been concluded by a government-commissioned analysis that every 1 percent shift from domestic to overseas suppliers by Massmart would cost the country 4,000 jobs. This is a very alarming possibility given what was said above, and for a country that already has about 25% unemployment rate.

## Constitutional Context

Why should we in the context of this paper specifically deal with the Constitution? There are several reasons for this approach. First, the Constitution of the Republic of South Africa of 1996 is the supreme law of the land and the determination of every issue will finally hinge upon the provisions of the Constitution. Second, the Constitution of 1996 is one of the most transformative Constitution in the world, and contains a specific chapter on a Bill of Rights. The Bill of Rights makes clear provision on the rights of every one to take part in trading activities, within the confines of the law of cause. In particular section 1 in the Bill of Rights in the 1996 Constitution provides that the. Third, constitutional rights are not without limitation. Section 36 of the Constitution provides for the permissible limitation of rights in the Bill of Rights. Section 36 provides that:

Some of the do have their own internal limitations. These limitations must be taken into consideration when discussing the issue in question. Third, section 39 of the Constitution provides three “hermeneutic tools for the interpretation of rights”. (O’Regan 2012:22). According to section 39 when interpreting the Bill of Rights a South African court, tribunal or any legally instituted forum must (a) promote the values “that underlie an open and democratic society based on human dignity, equality and freedom”; (b) must take relevant international law into account; and (c) may consider foreign national law. Thus, the consideration of how comparative jurisprudence deals with similar foreign investment issues will be “in part to honour the constitutional instruction that rights should be interpreted in a manner that promotes the values underlying an open and democratic society by considering how judges in other open and democratic societies have developed the content of the right” (O’Regan 2012”<sup>24</sup>). This view, and correct view I must add, is contrary to that of Flanagan and Ahren (2011) who simplistically suggested that the consideration of comparative jurisprudence is done to impress judges in other jurisdictions.

Finally, it is important in the context of this paper to indicate that the Constitution in its Preamble acknowledges the injustices of the apartheid and colonial past, which amongst others included social and economic injustices, sometime perpetrated with the assistance of multinational corporations (MNCs) doing business in South Africa.

## Competition Law Context

The primary legislation on industry competition is the Competition Act of 1998, which came into effect on 1 September 1999. In terms of the Act the statutory and investigatory body called Competition Commission, is empowered to investigate, control and evaluate restrictive business practices, abuse of dominant positions and mergers in order to achieve equity and efficiency in the South African economy (Sibanda, 2001). The Competition Tribunal is tasked with the responsibility of adjudicating these matters. Competition Appeal Court have exclusive jurisdiction over competition matters. Section 12A of the Act sets out the analytical framework that the Commission must when assessing mergers. This include determining if (a) the merger likely to substantially prevent or lessen competition in the relevant markets?, and (b) if it appears that the merger is likely to substantially prevent or lessen of competition in the relevant markets, the Commission must determine whether these anti-competitive effects can be outweighed by technological, efficiency or other pro-competitive gains and whether a merger can or cannot be justified on substantial public interest grounds by assessing the factors set out in subsection. In terms of Chapter 4 of the Act the decisions of the Commission may be appealed to the Competition Tribunal and the Competition appeal Court .

## Trade and Investment Context

**The government of South Africa think highly of FDI. In one of its discussion document the National Treasury (2011) had the following to say about FDI:**

“[c]ross-border direct investment is widely viewed as beneficial for South Africa because of the expected [positive] impact on employment, productivity and growth, including the transfer of skills and technology from multinational parent to the host economy, spillovers through the creation of linkages with domestic firms, and prospects for stronger integration with international markets. Internationally, these potential gains form the basis for policy intervention to encourage FDI [foreign direct investment], reflected in targeted investment incentives (both sectoral and locational) and associate investment promotion activities.”

Like many developing countries, South Africa has policies in place to attract foreign direct investment (FDI). Foreign investment will positively influence economic growth (Asiedu 2002), and can boost the country's development efforts (see Sauvart 2011). According to Rusike (2008:39), for example, the South African FDI inflow increase “from around R1.3billion to R3.5billion in 1996”, and to R17.6billion in 2007. One of the reasons for this positive development has been the conducive investment environment in the country after the 1994 democratic dispensations. Moreover, the South African investment regime provides for a conducive investment environment based on the principles of equality and mutual benefit.

## South Africa as a Member of WTO

South Africa makes best endeavours to have the necessary trade regulatory regime that is consistent with WTO rules. The WTO was established as an institution that regulates trade among member countries, sets out rules to guide certain actions by national authorities against dumping activities. The WTO, whose *mantra* is in favour of open trade relations and breaching protective barriers to trade, is a formal international institution responsible for the promulgation and/or development of the multilateral trading system, rules and regulations, intended to be binding on the nations of the world. South Africa is a founding member of the WTO and is also one of the first 23 Contracting Parties of GATT 1947.

Whether WTO law is applicable is South African municipal courts is still a contentious point. A number of South African international economic law scholars argue that WTO law is not part of the South African municipal law and that it is, therefore, not directly enforceable through South African law (Dugard 2005; Erasmus 2005; Ndlovu 2010; Schlemmer 2004). There is no specific legislation enacting WTO agreements into municipal law.

# RAMIFICATIONS ON COMPETITION; INVESTMENT AND TRADE; AND EMPLOYMENT CREATION OBLIGATIONS

## Protection of Domestic Industries

With the advent of multilateral trade domestic industries continue to be faced with the surge of imports, which are sometimes dumped into the national stream of commerce causing injury to the domestic industry or threatening to cause injury to domestic industries, the prudent course is for the South African government to ensure that local industries are not placed at a competitive disadvantage. This is the mandate clearly set out in the Competition Act, and in terms of which the departments intervened in the Walmart-Massmart case.

## WTO Obligations

One of the most contentious issues in the Walmart-Massmart merger debacle was the preferential procurement and/or “buy local” conditions. Kruger (2012:1) argues that the intervention of departments in the Massmart – Walmart case has the potential to put South Africa at a collision course with her WTO obligations, and that a case may be made against South Africa before the WTO under GATS, or alternatively under GATT and TRIMS. GATS Articles II and XVII deals with non-discrimination in the area of trade in services, while GATT Article III and TRIMS Article 2 deal with good in particular put into question the legality of conditions imposed on the merging parties. The obligation of national treatment prohibits discriminating between foreign and domestic products, investments, or investors. The view is that these provisions influence the ability of the South African government to impose performance requirements on multinationals and foreign companies. The view gained support from the Competition Tribunal when it in *casu* imposed minimal conditions on the merger, and held that stricter requirements such as those protecting local suppliers and labour rights “could violate the country's trade obligations” in the WTO. This, according to TRIMS, for example, would be the case if the conditions are imposed arbitrarily through measures that are explicitly regarded as inconsistent with either Article III or XI of the GATT 1994. Kruger (2012:9) makes reference to the Panel decision in *Indonesia- Autos*, in which the Canadian local content requirement was ruled as inconsistent with TRIMS.

Be that as it may, the following reality must be appreciated before arguing a carteblanche case for national treatment obligation violation: First, non-discrimination is a nebulous concept (see Horn & Mavroidis, 2004); Second, national treatment is “relatively new” in the field of investment (DiMascio and Pauwelyn, 2008:49 & 59). DiMascio and Pauwelyn (2008:49) points, and correctly so, a dispute in 2007 that involved an Italian mining companies that invested in South Africa, *Foresti v. South Africa*, ICSID Case No. ARB(AF)/07/1 (registered Jan. 8, 2007), that argued that the country’s Black Economic Empowerment (BEE) policy and the regulatory regime under the Black Empowerment Act was discriminatory; Third, the problem with the proponents of national treatment obligation in investment context seems, in my view, to stem from the fact that they tend to treat the obligation as a “discipline to facilitate competition and to protect foreigners against government abuse” (see DiMascio and Pauwelyn, 2008:49). In fact this has been the crux of the argument of those who were in favour of the merger; Fourth, GATS articles XVI and XVII require countries only to provide market access and national treatment in service sectors that they have specifically listed in the schedules annexed to the Agreement, with the permissibility of allowing specific exceptions for FDI in these sectors (see But, 1997). Sixth, the permissive stance taken by the *GATT Panel Report, United States- Restrictions on Imports of Tuna* (Tuna-Dolphin), which was unfortunately never adopted, in which there is a caution against a “more intrusive approach” in fostering the WTO obligations that “can potentially impinge upon arguably legitimate domestic regulation” (DiMascio and Pauwelyn, 2008). Seventh, one particular detail that is not clearly addressed in the Wall-mart – Massmart merger dispute is whether the merged venture will suffer harm as a result of the conditions regarded as in violation of the national treatment. I wholly agree with DiMascio and Pauwelyn (2008:70) that “[n]ational treatment in investment treaties focuses on harm to specific investments, not abstract competitive opportunities”. The truth is that those arguing in favour of the merger without any conditions attached thereto are overly looking at the issue from a competition position. A national treatment violation case will have to pass through a few loops and jump a few hurdles for it to succeed; Eight, the public or national



interest concerns raised by the departments and labour are genuine concerns, which may be raised in other countries, such as India, faced with massive investment in the current moment of economic crisis and high levels of unemployment (Nandi, 2007:119-122. See also Sauvart 2011:217 - 421)

## Labour Relations and Employment Obligations

Labour relations in South Africa are governed generally by the Labour Relations Act of 1995. (hereinafter LRA). I have noted above the not so positive social context of the South African society. It is in this light I argue that the government of South Africa had and continues to have an obligation to avoid potentially destructive effects caused by investment ventures. For a number of reasons, Walmart-Massmart wished to lay-off certain workers, and hires its own workers. Some of the local workers were found to be redundant. Admittedly, issues of employment are private matters that should be as a matter of fact be left to contracting parties to sort out. However, it would have been remiss for the South African government to disengage carte blanche from the issue. From the government point of view employment issues remain highly sensitive issues of national interests. Thus to lay-off a large number of workers would have put unbearable pressure on the South African government to reduce the rate of unemployment. As it is the South African unemployment status leaves much to be desired. The labour union's dismissive reception of Walmart was reminiscent of the 2007 demonstrations in India against a visit by Wal-Mart officials to India to sign the Bharti-Wal-Mart venture by key organisations including All India KISAN Sabha, All India Democratic Women's Association, Centre for India Trade Unions, Democratic Youth Federation, India FDI Watch, and Students Federation of India (Nandi, 2007)

## CONCLUSION

It is an undeniable fact that ventures such as Walmart-Massmart deal will pour in massive amounts of foreign capital and attract a lot of revenue. These are economic benefits which a developing economy like South Africa cannot just pass on. However, these economic benefits must be balanced against potential tensions with South African competition, investment and trade laws, and policies. Moreover, sight should not be lost of the fact that there is an additional challenge of South African industries in the form of the surge of imports. In Walmart-Massmart merger case, like in any foreign direct investment initiative, there was political, economic and social threats that the government could not have just ignored. At least the intervention convinced the court to rule in favour of unions that 503 workers who had been retrenched were entitled to reinstatement. Further gains are that: there will be no retrenchments resulting from operational requirements for 2 years; existing labour agreements must be honoured and that Walmart-Massmart will not challenge trade union's position for 3 years; and that R100 million programme be established for the development of local South African suppliers, including SMMEs.

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# **EXPLORING CONDITIONS FOR SUCCESSFUL MOBILE GOVERNANCE IN INDIA**

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## **ABSTRACT**

*The meteoric rise in the last decade in mobile phone subscriptions in developing countries such as India provides a strong base for using mobile telephony as an alternative or a complementary tool to support e-governance. Use of this service is generally known as m-governance and has been identified by both national and state governments of India as an instrument to deliver electronic service to its citizens. The adoption of m-governance in India, however, faces several legal and technological challenges. This working paper provides an overview of the legal and technical challenges of mobile governance in India.*

## **INTRODUCTION**

M-government is defined as ‘strategy and its implementation involving the utilization of all kinds of wireless and mobile technology, services, applications and devices for improving benefits to the parties involved in e-government including citizens, businesses and all government units (Kuschu and Kuscu, 2004). The term m-government and m-governance is often used interchangeably and referred to the same kind of applications. However, there is a difference between the two. M-Government applications are tools for efficient administration and data sharing within government departments (Hellström, 2008). M-Governance, on the other hand, is the use of mobile technology to make government ministries ‘even more accessible and citizen-centric by extending the benefits of remote delivery of government services and information to those who are unable or unwilling to access public services through the Internet or who simply prefer to use mobile devices’ (World Bank, 2007).

In the context of emerging economies like India where there is low Internet usage but high mobile phone connectivity,<sup>1</sup> it seems more viable to make a phone call or send a message from a mobile phone from any part of the country to a respective government department to send/receive particular information. High mobile phone connectivity and quick access may also facilitate government officials to communicate internally with each other in a more efficient way. However, the implementation and initiation of m-governance involves some legal challenges along with policy and technological issues. Some of these challenges are similar to the challenges of Internet use in e-governance that Governments in emerging economies have been trying to address mainly through ICT Acts (As-Saber et al, 2006). Against the above background, this paper briefly analyses the legal and technological issues associated with m-governance. In doing so it examines privacy and data protection, security, and authentication issues in the implementation of m-governance in India based on its existing legal regime.

## **M-GOVERNANCE: LEGAL AND TECHNOLOGICAL CHALLENGES**

### **Privacy and Data Protection**

A primary issue with m-governance, which to a large extent also exists with e-governance, is that the government institution delivering online services holds a large amount of personal data belonging to its citizens in their database. For example, under the E-Suvidha project in India, office of the Sub-divisional Officer issues Permanent Residence Certificates to its residents. These certificates contain personal information such as name, parents' name and residential address, are emailed to the applicant (Department of Information Technology, India, 2011). These personal information such as name, postal address, email address and mobile phone number run the risk of being disclosed by public servants to third parties and which can be used maliciously. Note that India is perceived as one of the more corrupt countries in the world. In 2011, Transparency International gave India a score of 3.1 out of 10 (Transparency International, 2011), with 1.0 to the most corrupt country and 9.5 to the least corrupt one. A large number of government officials in India are known for their corrupt practices and the notion of accountability is alien to many of them. Therefore, for m-governance to succeed, it is fundamental that adequate legal provisions for privacy and data protection are set in place. Unfortunately India neither has privacy nor data protection legislation. Privacy and data protection are covered, to some extent, by other legislation, primarily the Constitution of India, Information Technology Act 2000 and Right to Information (RTI) Act 2005. The Constitution of India does not provide any explicit provision guaranteeing right to privacy to its citizens as a fundamental right. However, there are a few provisions that have been interpreted by the Supreme Court of India to include right to privacy as a fundamental right under the Constitution. Article 21 of the Constitution states that 'No person shall be deprived of his life and personal liberty except according to the provisions established by law. In the case of *Kharak Singh v The State of UP*,<sup>2</sup> the Supreme Court held that right to privacy is an essential ingredient of personal liberty and thus fell within the ambit of Article 21. However, fundamental right to privacy is balanced by Article 19(1)(a) which states that 'All citizens shall have the right to freedom of speech and expression.' Art 19(2) imposes reasonable restrictions to the right guaranteed under Art 19(1)(a) in the interests of the sovereignty and integrity of India, the security of the State, friendly relations with foreign States, public order, decency or morality, or in relation to contempt of court, defamation or incitement to an offence. In *Gobind v State of Madhya Pradesh*,<sup>3</sup> the Supreme Court held that a violation of personal privacy is possible with the sanction of law. It was further clarified by the Supreme Court in the case of *People's Union of Civil Liberties v the Union of India*<sup>4</sup> that even though law permits violation of personal privacy it should be used in extreme circumstances. The Supreme Court held that tapping a person's telephone line violated his right to privacy, unless it was required in the gravest of grave circumstances such as in the case of a public emergency. For the purpose of m-governance, this case is a landmark decision as often data would be transferred by citizens to government and vice versa using mobile phones. Any tapping of mobile communication except in the gravest of grave circumstances would be considered as a violation of fundamental right. It is to be noted that so far cases decided before the Supreme Court under the Constitution have only been in the context of government actions that has resulted in deprivation of personal privacy of individuals. There has yet to be a case decided in the context of infringement of personal privacy by private citizens as to whether it breaches the provisions of the constitution.

In this relation, it could be noted that international community accords privacy the status of human rights through documents such as the as the Universal Declaration of Human Rights and the International Covenant on Civil and Political Rights (ICCPR). Article 17 of the ICCPR states that 'No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks'. Note that India acceded to the ICCPR on 10 July 1979. India's Human Rights Act, 1993 also aims to protect individual's privacy. It defines human rights as 'rights relating to life, liberty, equality and dignity of the individual guaranteed by the Constitution or embodied in the International Covenants and enforceable by courts in India (National Human Rights Commission, 2011). Thus, privacy of citizens in India is within the ambit of its Human Rights Act.

As mentioned above India does not have a data protection law. The IT Act 2000 was amended in 2008 (hereinafter referred as ITAA 2008) to incorporate certain provisions with an aim to confer data protection principles. However, the provisions of the ITAA 2008 are not yet effective as the Government of India still has to frame the related rules which are required under the amendments. Unless such rules are framed the amended provisions cannot come into operation. Section 43A of the ITAA 2008 states that, 'Where a body corporate, possessing, dealing or handling any sensitive personal data or information in a computer resource which it owns, controls or operates is negligent in implementing and maintaining reasonable security practices and procedures

and thereby causes wrongful loss or wrongful gain to any person, such body corporate shall be liable to pay damages by way of compensation to the person so affected'. Note that the provision only applies to body corporates, which 'means any company and includes a firm, sole proprietorship or other association of individuals engaged in commercial or professional activities'. With rising e-governance and potential for m-governance in India, a lot of data in digital form would be stored in computers and servers in the government department. However, the section does not include government institutions but only body corporates.

Section 72-A of the ITAA 2008 provides punishment for disclosure of information in breach of a lawful contract. It states that subject to any other legislation in force, if 'any person including an intermediary who, while providing services under the terms of lawful contract, has secured access to any material containing personal information about another person, with the intent to cause or knowing that he is likely to cause wrongful loss or wrongful gain discloses, without the consent of the person concerned, or in breach of a lawful contract, such material to any other person shall be punished with imprisonment for a term which may extend to three years or with a fine which may extend to five lakh (500,000) rupees or with both.' It is unlikely that government services would include 'providing services under the terms of a lawful contract' and would cover e-governance and m-governance activities. However, it would be applicable to telecom companies who provide mobile services for a fee. Their services will be considered as a lawful contract under the ITAA 2008.

In this regard, the Right to Information Act, 2005 gives right to access information held by public officials. However, this does not mean that any personal information listed in the files of a government department can be disclosed to the public. In fact, the RTI Act has provisions that prohibit unauthorized disclosure of certain information. For example, Section 11 prescribes that information relating to or supplied by a third party which has been treated as confidential by the third party cannot be disclosed without his/her consent. Similarly, sub section 8(1)(e) states that 'there shall be no obligation to give any citizen information available to a person in his fiduciary relationship, unless the competent authority is satisfied that the larger public interest warrants the disclosure of such information'. These provisions are not enough to protect digital data lying in government computers provided by citizens being part of m-governance initiatives.

As the potential of ICT use in governance along with mobile technology is increasing in India, every effort is being made by Central and State Governments to provide online services to its citizen. This implies that a substantial amount of data is likely to be collected and digitized by government entities. Governmental agencies currently hold a large amount of personal information on their citizen. Unfortunately, there is no provision in any legislation that protects them against the misuse of this data. Therefore, India urgently needs privacy and data protection legislation that addresses privacy concerns associated with digital data. Note that the Government of India is presently working on a 'Right to Privacy' Bill that aims to contain general and specific provisions applicable to public entities with regard to privacy and data protection.

## Security

There are two major security issues with the use of mobile phones for m-governance. Firstly, mobile phones being portable in nature are prone to loss or theft. A recent survey conducted by Symantec, a security product and solutions provider, reported that 53 per cent of adults in India have been victims of mobile phone loss or theft. More than three-quarter (77%) of the victims were angry with the loss of contact information whereas one in two were concerned about the loss or exposure of confidential information stored in their mobile phone [40]. Secondly, mobile phones use the Radio Frequency technology which has its own security risks. Any conversation or text message transmitted by a mobile phone is prone to eavesdropping and can be listened to and recorded (Schwiderski-Grosche & Knospe, 2011). For example, *Cellebrite UFED* can capture different types of data residing on mobile phones. This includes audio files, text messages, video clips and images, contact list, call logs and ring tones. Protecting mobile phone through password may not protect it from being compromised. *Roving bug* technology allows the targeted mobile phone to be used as a listening device to hear what is going on in the immediate vicinity of the targeted phone. *International Mobile Subscriber Identity (IMSI) catcher* is another technology that enables the tracking of a targeted mobile phone and enables the interception of its communication. If the mobile phone is used with a bluetooth technology then the *BlueSniper Rifle* can intercept the communication and download intercepted files from a distance up to a mile (Wolfe, 2010). As new mobile phones are Internet compatible, they are also susceptible to viruses and malware. Thus,

information stored and transmitted via mobile phones are vulnerable to external attacks. This can lead to identity theft, compromise and theft of personal and sensitive information and privacy infringement. A recent incident that needs mentioning is that of the British tabloid, *The News of the World*, which was in the news for hacking nearly 7000 mobile phones (Milmo & Hickman, 2011). This is a good example of how insecure mobile communications can be.

The ITAA 2008 contains certain provisions that punish the offender for stealing a mobile phone or eavesdropping. Stealing a communication device, accessing any communication device fraudulently or dishonestly through someone else's password and using a communication device to cheat by impersonation are punishable with an imprisonment which may extend to three years and/or fine which may extend to one lakh (100,000) rupees.

Section 43 of the IT Act 2000 deals with hacking and unauthorized interception of mobile communications. It states that 'if any person without permission of the owner or any other person who is in charge of a computer, computer system or computer network accesses or secures access to such computer system or computer network or downloads copies or extracts any data, computer data base or information from such computer, computer system or computer network including information or data held in any removable storage medium, shall be liable to pay damages by way of compensation not exceeding one crore (10 million) rupees to the person so affected' [44]. In the Act, computer network is defined 'as the inter-connection of one or more computers or computer systems or communication device' and communication device is defined as 'cell phones, personal digital assistant or combination of both or any other device used to communicate, send or transmit any text, video, audio or image'. Thus, it seems that security issues with mobile communications have been addressed by the IT Act. For telecom service providers the IT Act 2000 states that network service providers (which includes as per section 2(w) of the ITAA 2008 telecom service providers) shall not be liable for any third party information or data made available by a person if he/she proves that the offence or contravention was committed without his/her knowledge or that he/she had exercised all due diligence to prevent the commission of such offence or contravention. However, as mentioned above the provisions of the ITAA 2008 are not yet effective as the Government of India still has to frame the related rules which are required under the amendments. It would be interesting to see how the courts interpret these provisions once the ITAA 2008 comes fully into operation.

## Authentication and Signature

An issue with delivering services online is that when a signature is required on a document, a hard copy is printed out to get a physical signature of one or more of the parties. This introduction of paper into the workflow slows down the process by requiring additional time. It also increases cost and prevents from realising the true benefits of a fully electronic workflow environment. The technology of electronic signatures,<sup>5</sup> in particular digital signatures<sup>6</sup>, was established to overcome this issue. A digital signature is commonly considered as the most secure and robust form of electronic signature because of its ability to provide authenticity, integrity and non-repudiation (Smith, 2000; Lim, 2002; Mason, 2003]. Unlike manuscript signature, digital signature uses a digital key that attaches the identity of the signer to the document and records a binding commitment to the document (UNCITRAL Model Law on Electronic Signatures with Guide to Enactment, 2001). The IT Act 2000 was enacted with the main objective of promoting the use of digital signatures in e-governance. Section 5 of the Act gives legal recognition to electronic signatures, in particular digital signatures, based on asymmetric cryptosystems. Under the Act, digital signatures are treated as equivalent to hand-written signatures and electronic documents signed using digital signatures are treated as any paper based documents signed using a manuscript signature. Digital Certificates have successfully been used by various government organisations across different states of India. For example, under the Nemmadi Project of the Government of Karnataka 'Records of Rights, Tenancy and Crop Inspection' (RTC) and 'Rural Digital Service' (RDS) uses digital signatures. The revenue officials sign records using their digital signature. The e-district Application of Assam also issues certificates to its citizens that contain the digital signature of the authorised officer. Citizens collect a print out of the record/certificate from the designated office by paying a nominal fee [50]. Such use of digital signatures by government offices in India can be considered a success. However, these are only limited use of digital signatures as only the authorised officers use their digital signature and not the citizens. A more efficient way of using digital signatures for governance is that both parties use their digital signature; in particular,

citizens access government services by authenticating themselves using their legally binding digital signature. The rapid rise in mobile phones demands a better and efficient way of providing online government services ie through the help of mobile digital signatures. However, in order for mobile digital signatures to be used successfully, mobile phone operators in cooperation with Certifying Authorities (CAs) will have to supply special SIM to its subscribers. Presently there are five CAs and fifteen mobile phone operators in India but there is no provision for a mobile digital signature service. Other developing countries such as Turkey have already started issuing mobile digital signatures. Turkcell, Turkey's leading mobile operator has a mobile signature program based on qualified digital certificates by E-Guven, a Turkish Certificate Authority. Digital certificates are created and used as per Turkish Digital Signature Law, which is based on the European Union's *Electronic Signature Directive*. Subscribers of Turkcell can securely access e-government services through their mobile digital signature, anytime, anywhere (PR Newswire, 2007).

## CONCLUSION

M-government implementation faces legal and technological challenges as highlighted and analysed in this paper. Governmental agencies currently hold a large amount of personal information on their citizen. Unfortunately, there is no provision in any legislation that protects them against the misuse of this data. From a security standpoint, mobile phones are subject to physical, data and identity thefts. As with regard to authentication and signatures, adequate processes such as a legally binding digital signature, is required for citizens to access government services.

It is highly suggested that the Indian Government should take a proactive approach to address these challenges. For instance, CAs should be encouraged to issue special SIM cards to its subscribers that can be used for interacting with government departments. There should also be emphasis on quick enactment of related rules to make the provisions of the ITAA 2008 effective and comprehensive. The government should also bring a privacy bill at its earliest before the parliament. More importantly, India needs a Privacy Act and data protection provisions for implementation of m-governance imminently. While there would be Acts and its rules for m-governance, there would be interpretation by the courts, which would further strengthen the implementation process. If the legal and technological challenges highlighted in this paper are addressed India can be a successful model for m-government for other developing countries.

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## ENDNOTES

<sup>1</sup> In 2010, for every 1000 persons, India had 31.8 personal computers, 69.5 Internet users, 32.1 fixed telephone subscribers and 293.6 mobile phone subscribers against 5.8 personal computers, 15.914 Internet users, 39.8 fixed telephone subscribers and 12.2 mobile phone subscribers in 2003. It shows that there has been 2306 percent growth in mobile phone technology against 337 percent growth of Internet users within a span of seven years. See

<sup>2</sup> (1964) 1 SCR 332. For readers with non-legal background, this stands for (year) volume Supreme Court Records Page number.

<sup>3</sup> (1975) SCC (Cri) 468. SCC stands for Supreme Court Cases and Cri stands for Criminal Case.

<sup>4</sup> (1997) 1 SCC 318

<sup>5</sup> Electronic signature is defined as 'data in electronic form in, affixed to or logically associated with, a data message, which may be used to identify the signatory in relation to the data message and to indicate the signatory's approval of the information contained in the data message'.

<sup>6</sup> Digital signature is a type of electronic signature which is 'created and verified by using cryptography, the branch of applied mathematics that concerns itself with transforming messages into seemingly unintelligible form and back into the original form'.

# **E-SERVICES ADOPTION IN THE TELECOMMUNICATIONS SECTOR IN BAHRAIN**

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## **ABSTRACT**

*The telecommunication market in Bahrain has reached an oversaturation stage which reshaped the nature of competition to be solely based on innovation, cost and flexibility. This research aims to investigate the factors influencing customers' intention to adopt and use e-services in the Telecommunication Sector in Bahrain. It extends on the research that combine the Technology Acceptance Model (TAM) and trust (TR) by examining the effect of a proper regulatory environment (RGE) as a new construct on users' intention to adopt and use e-services (ITU). The findings show that perceived ease of use (PEOU) and regulatory environment (RGE) are major determinants of users' intentions to adopt e-services (ITU). This research contributes to the development of cost effective strategies for the service providers and to the ongoing multi-cultural empirical research on the adoption of e-services.*

## **INTRODUCTION**

E-Services are defined as “Deeds, efforts or performances whose delivery is mediated by information technology. Such e-service includes the service element of e-retailing, customer support, and service delivery” (Rowley, 2006); or simply services that are offered, provided and/or consumed through the Internet. Adoption is defined here as “the decision to make full use of an innovation as the best course of action available” (Rogers, 1995, p. 21). E-services adoption is different than conducting basic e-commerce purchases in terms of complexity and long-term relationship between the consumer and service provider (Featherman and Pavlou, 2003).

The telecommunications market in Bahrain is experiencing an oversaturation stage with 1.7 million mobile subscribers by the end of 2011, a penetration rate of 133%, according to the Telecommunication Regulatory Authority report (Sambidge, 2012). This provides little opportunity for service providers who are struggling under the financial pressures to compete based on price. Accordingly, Bahrain's service providers have to explore new competitive challenges like e-services that can improve efficiency, enhance flexibility, cut operational expenses and strengthen customer relations and satisfaction (Ruyter et al., 2001).

Despite of the recent Global rapid growth in B2C e-commerce and e-services adoption and use worldwide, they are still in the early stage in the GCC region and specifically Bahrain. According to the B2C e-commerce overview by the Gulf Cooperation Council (IMRG International, 2011), this is because of barriers like lack of trust, payment security, delivery options, satisfaction, and legal aspects; and offenses like unauthorized access, interference or unauthorized interception of data, and fraud. Bahrain, similar to many developing countries, is slow and far behind in terms of a legal framework that protect online transactions. Adoption and use of e-services depend on many factors like perceived usefulness, perceived ease of use, concerns of inherent risk (Hoffman et al, 1995), trust (Lee, 2009), and regulatory environment (Zhu et al. , 2006). These factors have proven to be a major inhibitor to adoption and are of great concern for many potential adopters. E-services, e-commerce, and e-government adoption have been studied in numerous research in various countries (Anderson & Srinivasan, 2003; Gefen et al., 2003; Pavlou, 2003; Cyr 2008; Kim et al., 2009). As for the Gulf region and Arab countries, few researchers examined the antecedents of e-commerce adoption and found that they are still limited (Kassim & Ismail, 2009; Said & Galaleldeen, 2009; Alawadi & Morris, 2008; Alshehri & Drew, 2010;

Al-Solbi & Al-Harbi, 2008). Our research model is based on the work by Lee (2009) who extended the basic Technology Acceptance Model (TAM) and investigated the effect of trust (TR) on users' intention to adopt and use e-services. The success adoption of e-services and e-government require "existence of an enabling legal framework encompassing privacy and security of data, legal sanction of new forms of storage and archiving, and laws that accept paperless transactions" Bhatnagar (2004). Considering this fact, we proposes to integrate the literature on TAM, trust and legal aspects by examining the effect of adding regulatory environment as a new construct.

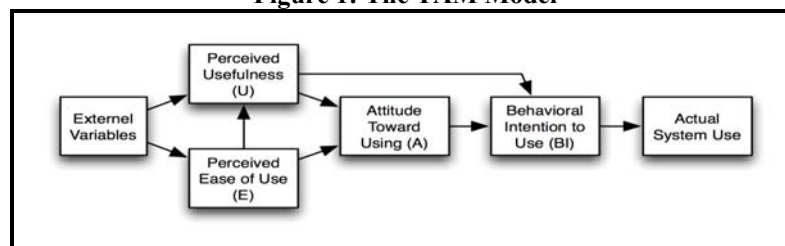
## THEORITICAL BACKGROUND

### Technology Acceptance Models

When it comes to technology applications, those who utilize them are required to take a specific stance as to adopt and use it accordingly. This poses the question as to what causes people to accept and adopt technology. There are many models that were developed to study technology acceptance but Davis's Technology Acceptance Model (TAM) (1989) is probably the most popular (Masrom, 2007). TAM (figure 1) is an alteration of the theory of reasoned action (TRA) by Fishbein & Ajzen (1975). It examines the impact of users' perceptions towards the usefulness (PU) and the ease of use of a given technology (PEOU) and the actual intention to use this technology (ITU). According to TAM, perceived usefulness and perceived ease of use directly affect attitude towards a technology which, in turn, affects behavioral intention to use that technology (Davis, 1989). TAM has been expanded subsequently to examine the antecedents of PEOU and PU including computer self-efficacy, objective usability, perceived enjoyment, anxiety; and subjective norms, image, job relevance, output quality, results demonstrability, experience, and voluntariness (Venkatesh et al., 2003).

TAM has been adopted and tailored in numerous researches that investigate the acceptance and adoption of the different applications of information and computing technology (ICT). Researchers have extended the model by integrating other variables to consider the influence of social and control factors to provide more comprehensive models of technology acceptance (Taylor & Todd, 1995). The model utilized in this research (figure 1) presumes that the intention to adopt and use e-services (ITU) is a function of perceived usefulness (PU), perceived ease of use (PEOU), trust (TR), and regulatory environment (RGE) where the proposed constructs are supported by prior studies in information systems literature.

**Figure 1: The TAM Model**



*Adopted from Davis (1989).*

### Perceived Ease of Use (PEOU)

Perceived ease of use (PEOU) is the degree to which a person believes that technology applications are easy to use (Davis, 1989). Information and computing technologies (ICT) applications that are easy to use and less complex are more likely to be perceived useful by customers. PEOU has a significant positive effect on perceived usefulness (PU) (Davis, 1989; Fagan et al., 2008; Guriting & Ndubisi, 2006). Numerous researchers found that perceived ease of use has a direct impact on intention to use technology (ITU) where customers are likely to adopt and use information and computing technologies (ICT) applications only if they perceive they are easy to use (Adams et al., 1992; Wolk, 2007; Masrom, 2007; Lee et al., 2003).

The effect of PEOU on trust (TR) in online shopping has been studied by Gefen et al. (2002) and Lee (2009) who found that PEOU positively influences trust (TR) because by help promoting customers' favorable

impressions of e-vendors during the initial adoption phase. It later, influences customers' willingness to make investments and commitment to the buyer–seller relationship. Thus, we hypothesize that:

H<sub>1</sub>: Perceived ease of use (PEOU) has a positive effect on perceived usefulness (PU).

H<sub>2</sub>: Perceived ease of use (PEOU) has a positive effect on trust (TR)

H<sub>3</sub>: Perceived ease of use (PEOU) has a positive effect on intention to use technology (ITU).

## **Perceived Usefulness (PU)**

In the context of the research, perceived usefulness refers to students' perception towards technology use in education settings. It has a significant positive effect on intention to use (ITU) technology in education settings (Davis, 1989; Adams et al., 1992). According to Chau (1996), PU is categorized into two distinct categories: near-term usefulness which improves job performance or enhances job satisfaction; and long-term usefulness that advances user's career prospects or social status). Chau showed that perceived near-term usefulness had more significant influence on the intention to use a technology than long-term usefulness. The research tests the following hypothesis:

H<sub>4</sub>: Perceived usefulness (PU) has a positive effect on intention to use technology (ITU).

## **Trust (TR)**

The online environment is characterized by uncertainty, lack of control and potential opportunism (Shankar et al., 2002). Therefore, trust is an important element that shapes customers attitudes and intentions in the online environment (Yeh & Li, 2009; Lu et al., 2010). Kaasinen (2005) and Keat & Mohan (2004) were among the first who suggested adding a component describing the conception of trust to the TAM. Trust and its connection to the TAM have been discussed in many researches (Lee, 2009). Lu et al. (2011) demonstrated that customers' conception of trust is lower in the online shopping environment due to lack of face-to-face interaction between consumer and product. Lee (2009) noted that one of the main concerns of customers is that online merchants may sell consumer personal information without their approvals. The use of personal information such as address, telephone number and financial information is worrisome for most online customers as they believe it is subject to financial fraud (March, 2006). Trust also includes the perceptions towards the information provided by the websites and its effectiveness (Kim et al., 2005). Customers' conception of trust in electronic commerce shape their attitudes towards adoption and use of e-services as the higher trust level, the more desire to establish long-term relationship with the vendors (Kim et al., 2010). The effect of trust (TR) on perceived usefulness in online environments was studied by Lee (2007) and (Wu & Chen 2005). They, both, found that trust is a significant determinant of PU because "part of the guarantee is that consumers will sense that the expected usefulness from the web site is based on the sellers behind the web site". Based on the above, we purpose the following hypotheses:

H<sub>5</sub>: Conception of trust (TR) has a positive effect on perceived usefulness (PU)

H<sub>6</sub>: Conception of trust (TR) has a positive effect on intention to use and adopt e-services (ITU).

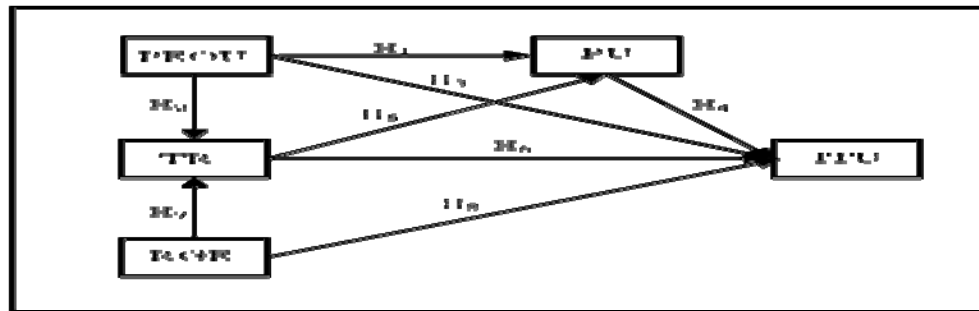
## **Regulatory Environment (RGE)**

E-services require supporting policy and regulation environment that addresses all potential threats that might arise during usage. The existence and effectiveness of a legal framework increase customers' confidence and guarantee the adoption and usage of e-applications (Alshehri & Drew, 2010). Customer's trust in e-banking services increases if there is an adequate legal framework supporting online transactions (Rotchanakitumnuai & Speece, 2003). Zhu et al. (2006) proved that the regulatory environment plays a more important role in e-business adoption in developing countries. Thus, we purpose the following hypotheses:

H<sub>7</sub>: Regulatory environment (RGE) has a positive effect on the conception of trust (TR).

H<sub>8</sub>: Regulatory environment (RGE) has a positive effect on intention to use and adopt e-services (ITU).

**Figure 2: The Research Model and the Proposed Hypotheses**



## RESEARCH METHODOLOGY

In this section, we describe the development of the survey, the sampling process, the demographic characteristics of respondents, and the data analysis approach.

### Survey Development

The research approach is quantitative. A paper survey was used to analyze the proposed hypotheses based on empirical data collected. The questionnaire consisted of 21 questions arranged in two groups: demographic profile and measures of the model constructs (see Appendix A). The model measuring scale was Likert-like items with 5-point scale from “strongly agree” to “strongly disagree”. A pilot study was done on 30 respondents to assess the questionnaire questions where the results provided initial insight into of the questions and some questions were properly modified. Data collected was analyzed using SPSS to ensure internal consistency of the measurement scale.

**Sampling Technique:** The population of the study consists of a random sample from the customers of two of the three service providers in Bahrain; Batelco and Viva. The questionnaire was submitted by hand to customers passing at different retail locations. A total of 600 questionnaires were distributed and 172 were received with a response rate of 28.67%. Out of the 172 questionnaires, 26 were lousy filled or incomplete and were excluded. Thus, the final sample for the analysis consisted of 146 questionnaires.

**Statistical Analysis:** SPSS descriptive statistics was used to analyze the demographic profile of the respondents’ profile. Following the two-step approach advocated by Anderson & Gerbing (1988), confirmatory factor analysis was used to test the constructs’ validity and reliability of the measurement model by examining the internal consistency, composite reliability and convergent validity. SEM technique, in lieu, is a useful tool when complicated variable relationships are involved (Gefen, et. al, 2000). It is at this instant where the relationships among the instrument and latent variables suggest the nature of the connections at a larger scale. Therefore, Structural Equation Modeling (SEM) technique was utilized to examine the proposed research model using AMOS 18.0 software.

## DATA ANALYSIS AND RESULTS

**Demographic Profile of Respondents:** The typical respondent is between the ages of 20-40 with nearly equal gender representation. Nearly 75% are Bahraini and 70% has at least an undergraduate degree. Also, 53.5% are accustomed to the internet and use it more than once daily.

**Reliability and Validity:** Constructs’ reliability and validity of the questionnaire was first tested. The internal consistency and unidimensionality of the constructs were assessed by calculating Cronbach Alfa ( $\alpha$ ) and composite reliability (CR) measures. Average variance extracted (AVE) was calculated to evaluate the convergent validity. The results are shown in Table1. All Cronbach Alfa measures exceeded the cut-off value of 0.70 (Schmitt, 1996) which proved a reasonable level of reliability. As for the constructs reliability, all values are above 0.7 (Segars, 1997). Finally, all AVE values are greater than 0.5. The results of the tests provided good evidence of constructs’ reliability and validity.

**Table 1: Construct Reliability and Validity Measures**

Construct Item	Item	Factor Loading	$\alpha$	CR	AVE
Perceived Usefulness	PU2	0.670	0.852	0.859	0.6729
	PU3	0.898			
	PU4	0.873			
Perceived Ease of Use	PEOU2	0.735	0.904	0.911	0.7761
	PEOU3	0.962			
	PEOU4	0.929			
Trust	TR2	0.658	0.838	0.848	0.6532
	TR3	0.869			
	TR4	0.879			
Regulatory Environment	RGE1	0.740	0.701	0.702	0.5406
	RGE2	0.731			
Intention to Use	ITU1	0.728	0.740	0.743	0.5912
	ITU2	0.808			

## The Measurement Model

Our first step was to examine the measurement model. According to the modification indices provided by AMOS, some indicators (PEOU1, PU1 and TR1) were excluded and the measurement model was evaluated to ensure a good model fit as proposed by Rainer and Miller (1996). Table 2 presents the estimated fit indices for the measurement model.

**Table 2: Model Fit Summary for the Measurement and Structural Models.**

Fit Index	Recommended Value*	Measurement Model	Structural Model
CMIN	NS	87.131	87.203
Degrees of freedom (df)	n/a	55	57
p-value		0.004	0.006
CMIN/df	<3.00	1.584	1.530
Goodness-of-fit index (GFI)	>0.90	0.918	0.918
Adjusted Goodness-of-fit index (AGFI)	>0.80	0.864	0.869
Comparative fit index (CFI)	>0.90	0.967	0.969
Root mean square residuals (RMSR)	<0.10	0.058	0.059
Root mean square error of approximation (RMSEA)	<0.08	0.063	0.060
Normed fit index (NFI)	>0.80	0.918	0.918
Tucker-Lewis coefficient (TLI)	>0.90	0.953	0.958
Parsimony normed fit index (PNFI)	>0.60	0.647	0.671

\* Based on Rainer and Miller (1996).

## The Structural Model

The computed values of fit indices have proven a good model fit with the data collected based on the benchmark values provided by Rainer and Miller (1996). The structural model is shown below in figure 3 and the values of fit indices are presented in table 2.

The structural model was tested using SEM to calculate the values of the regression coefficients. Table 3 presents the hypotheses results.

Figure 3: The Structural Model

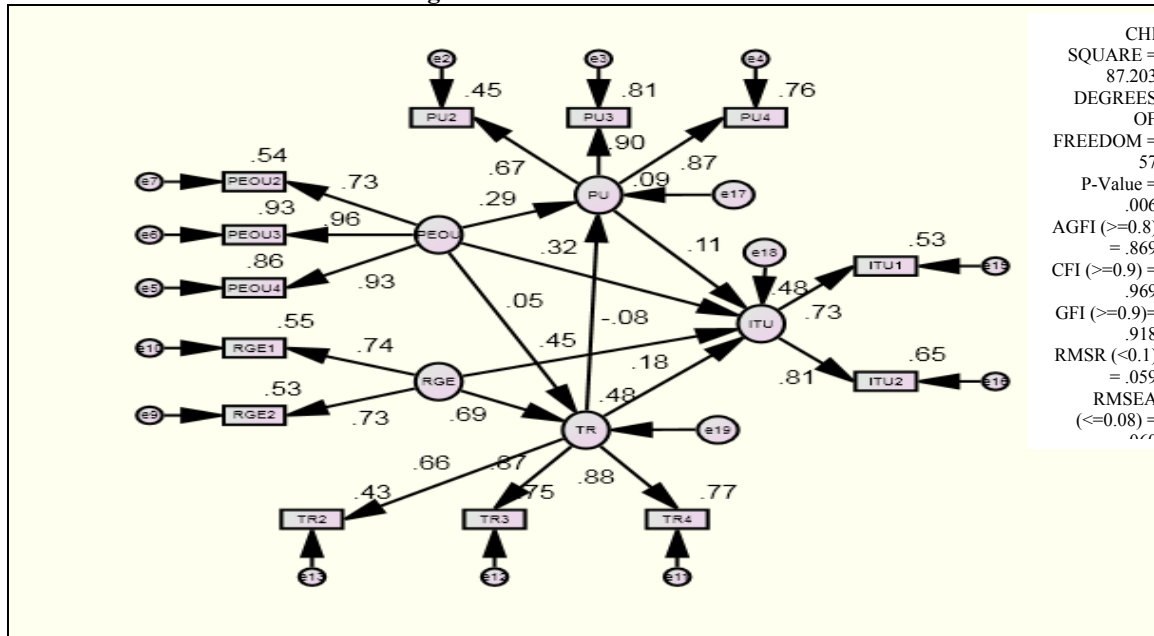


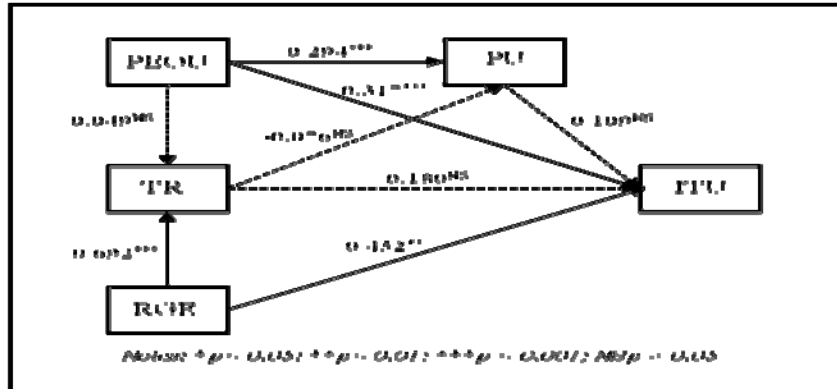
Table 3: Standardized Regression Weights and Hypotheses Results

Hypothesis	Path	$\beta$	Remarks
H <sub>1</sub>	PEOU $\rightarrow$ PU	0.294***	Supported
H <sub>2</sub>	PEOU $\rightarrow$ TR	0.049 <sup>NS</sup>	Not Supported
H <sub>3</sub>	PEOU $\rightarrow$ ITU	0.317***	Supported
H <sub>4</sub>	PU $\rightarrow$ ITU	0.109 <sup>NS</sup>	Not Supported
H <sub>5</sub>	TR $\rightarrow$ PU	-0.076 <sup>NS</sup>	Not Supported
H <sub>6</sub>	TR $\rightarrow$ ITU	0.180 <sup>NS</sup>	Not Supported
H <sub>7</sub>	RGE $\rightarrow$ TR	0.692***	Supported
H <sub>8</sub>	RGE $\rightarrow$ ITU	0.452**	Supported

Notes: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ ; NS  $p > 0.05$

According to the results, perceived ease of use has a significant positive effect on users' perception of the usefulness of e-services ( $\beta = 0.294$ ,  $p < 0.001$ ). Perceived ease of use of a given e-service was found to have a significant direct impact on the final decision to adopt and use this e-service ( $\beta = 0.317$ ,  $p < 0.001$ ). However, it has insignificant effect on trust ( $\beta = 0.049$ ,  $p > 0.05$ ). Also, the assumption that perceived usefulness has an impact on the intention to adopt and use e-services is not supported in our study ( $\beta = 0.317$ ,  $p > 0.05$ ). The conception of trust (TR) neither impact perceived usefulness (PU) ( $\beta = -0.076$ ,  $p > 0.05$ ) nor users' intention to adopt and use e-services ( $\beta = 0.180$ ,  $P > 0.05$ ). Finally, regulatory environment (RGE) was found to have a significant positive impact on both trust ( $\beta = 0.692$ ,  $P < 0.001$ ) and users intention to adopt and use e-services (ITU) ( $\beta = 0.452$ ,  $P < 0.01$ ). Therefore, users' perceived ease of use and regulatory environment (RGE) are the main determinants that drive users' intention to adopt and use e-services in our study. The path analysis and the beta coefficients are illustrated in figure 3 below.

Figure 4: The Results of the Structural Model



## DISCUSSION & IMPLICATIONS

In order to increase the rate of e-services adoption in Bahrain, service providers have to understand the factors that affect users' intention to adopt and use technology and employ the results in their business and marketing strategies. The study reveals that the conception of a proper regulatory environment and the perception of the ease of use are the main determinants that derive customers' intention to use and adopt e-services, where the prior is the most significant contributor. Several existing studies have also revealed the same results. Perceived usefulness has no significant effect on the intention to adopt and use e-services in our sample. The result is inconsistent with other researches but the reason might be due the fact that customers are unaware of the useful features of e-services. Trust also has no causal relationship with users' intention to adopt e-services which is against the outcome of many researches.

The results of the study have useful insights for service providers as well as Bahraini Government. The majority of respondents is internet experts and uses it more than once daily but still questioning the usefulness of e-services channels. Service providers should focus of diminishing this gap by communicating the usefulness of e-service channels through awareness campaigns. They can encourage customers by provide incentives to increase e-services use rate. The result will be tremendous cost saving and better service rate. It is important to recognize the cultural and national limitations of these findings. It is evidence that the successful adoption of e-services and e-commerce in Bahrain requires a proper regulatory framework to support it. The Government of Bahrain should act quickly and release the cyber crime law that has been delayed for years to minimize customers' concern and fear of the different legal issues that might arise due to the use of e-services. Issues related to Bahraini culture like favoring direct face to face interactions and the fear from online business should be addressed carefully to encourage Bahraini citizens to adopt e-services.

There are several limitations for the study. The sample studied combines users from two service providers that have different websites which are not fully aligned in terms of e-services provided. Additionally, the sample size (n=146) may limit the generalization of the research findings in the telecommunications sector in Bahrain. Also, some of the respondents haven't used e-services applications before which might have an impact on their experience regarding e-services adoption. The effect of education, gender and age haven't been considered in this research which is an interesting direction for future research.

In future work, we can contrast e-services adoption perceptions between customers from different service providers. We can also examine the anchors that determine the perceptions of ease of use and usefulness. Cross cultural studies that include multi-cultural samples can provide more insight about users' behaviors across cultures and compare perceptions towards e-services adoption in Bahrain with other developed countries. Another area worth further study is to use TAM to examine the acceptance of various forms of technology in different sectors.

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# HOW CORPORATE GOVERNANCE AND GLOBALIZATION AFFECT THE ADMINISTRATIVE STRUCTURE OF THE SHIPPING INDUSTRY

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## ABSTRACT

*According to recent studies administration systems in shipping are being developed continuously regarding two aspects. Firstly, using modern methods of design programs and measurement of performance and results and secondly with the adoption of main factors of corporate governance as defined by the Organization for Economic Co-operation and Development. As per prescriptive framework of the Organization, the fundamentals of corporate governance constitute one basic tool for the improvement of the legal, institutional, prescriptive framework of corporate governance and are focused not only in financial matters but in matters of organization and administration of listed companies in international stock exchanges including shipping companies. Globalization has affected the shipping industry to a great extent, in addition to the new developments in international trade which have changed the structure of the shipping industry especially during recession due to the fact that world production is diminishing. Maritime indices are closely related to macroeconomic developments and other financial indices as well, giving a grasp for a detailed analysis in this study. These developments constitute part of this research by using a structured questionnaire in a market analysis which has been conducted for the Greek shipping industry for the period 2011-2015.*

## INTRODUCTION

Recent studies (Lyridis et al 2005, McLellan 2006, Brown 2006, Spyriopoulos, Theotokas, 2007) have shown that administration systems in shipping are being developed continuously regarding two aspects following developments in the field of corporate management. Firstly, using modern methods of design programs and measurement of performance and results (Zampeta, 2010) and secondly with the adoption of main factors of corporate governance as defined by the Organization for Economic Co-operation and Development (OECD 2004, Zampeta et al 2010b). The fundamentals of corporate governance as developed in first stage on 1999, later on 2004 and finally on 2006 have been approved from countries of OECD as well as from some other countries. The fundamentals constitute one basic tool for the improvement of the legal, institutional, prescriptive framework of corporate governance and are focused not only in financial matters but in matters of organization and administration of listed companies in international stock exchanges including shipping companies worldwide.

Globalization on the other hand has affected the shipping industry to a great extent, in addition to the new developments in international trade which have changed the structure of the shipping industry especially during recession due to the fact that world production is diminishing. Maritime indices are closely related to macroeconomic developments and other financial indices as well, giving a grasp for a detailed analysis in this study.

These developments constitute part of this scientific research. Factors of corporate governance have been included in the questions of a structured questionnaire for executive officers of shipping companies for the period 2011-2015 in order to verify the importance that the executive officers assign in these developments and the likely future adjustment of the Greek shipping companies in the herein-below characteristics. Furthermore it

is worthwhile recording the views and trends emerging in the area of Greek shipping from senior executives and in terms of the impact of globalization and the recent financial crisis in the further development of Greek shipping.

## LITERATURE REVIEW

The importance given to the subject of corporate governance reflected by the extensive and recent research on business issues such as organization, leadership, ownership structure, strategy development and financial management than ever with the principles of corporate governance. The most important findings are listed below:

- Karpoff, Malatesta and Walkling, 1996: Lack of significant relationship between the mechanisms of corporate governance and profitability.
- Andrei Shleifer, Robert W. Vishny, 1997: This paper surveys research on corporate governance, with special attention to the importance of legal protection of investors and of ownership concentration in corporate governance systems around the world.
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- Goergen, Brewster, Wood 2007: An incorrect application framework of corporate governance reduces the growth of the company.
- Black, Kim, Jang and Park, 2008: Strong correlation between corporate governance mechanisms, performance and capitalization of companies in emerging markets.
- La Rocca, 2007: Corporate governance mechanisms can create corporate value if used on a proper way.
- Giroud, Mueller, 2008: Enforcement of laws that set the framework of corporate governance inactivates mechanisms inherent in the companies and creates inefficiency of management issues and thus reduced efficiency of the company.

## GLOBALIZATION

Globalization is not a recent phenomenon. The famous thinker I. Wallerstein, 1999, locates the first global system the 16th-17th century. In Europe the main area is emerging a global market where the participating countries compete. However, neither the state itself, let alone the mechanisms of the global market fail to penetrate the region of the country and reduce the relative autonomy. A second form of globalization is found in the period 1860-1914. The open international markets, capital flows freely, the focus shifts from local to state level and the role played by the supervisor, then the prince of Great Britain. The end of World War II and brings collapse of open markets such as the opposing forces are now raising their national walls which directly affect international trade. We come in the late 20th century. This time, the supervision of the U.S. again we see a new and abrupt opening of markets and an unprecedented mobility of capital. Today the focus has shifted to the world with multinational companies and organizations have infiltrated both the state space and the local.

Globalization is the increasing interdependence, integration and friction between people and companies in various parts of the world. It is a general term that refers to a complex of relations in the fields of economy, trade, society, technology, culture and politics. As mentioned earlier, globalization was primarily important issue since the early 1980's. In any discussion on the globalization, very few discussants deny the existence of the phenomenon. It is widely accepted that we all live in a globalize world.

A typical, although restrictive, definition is given by the International Monetary Fund, which emphasizes the growing economic interdependence of countries worldwide through increasing volume and variety of international trade in goods and services, free international capital flows, and rapid and widespread diffusion of technology. Although globalization is a very complex group of phenomena and relationships, however, one can

distinguish various aspects like industrial globalization - the strengthening and expansion of multinational companies, financial globalization - the emergence of global financial markets and easier access to external financing for corporate and government borrowers, political globalization - the expansion of political interests in areas and countries that are not adjacent to the politically powerful states, the globalization of information - increasing the flow of information between geographically distant areas, cultural globalization - developing intercultural contacts and creating a global culture.


















The key question is whether globalization will eventually help economic development. This depends on increasing productivity, innovation and breadth of the market. Countries that grew faster were those who achieved a growth based on exports. The economies that tried to do so, protecting the economy grew at a lesser degree. The first economists could not understand that production is an interconnected relationship between developed and developing countries.














However, there are two major obstacles to rapid economic growth brought about through globalization. The first is due to geography. The profits of trade, namely, are strongly influenced by transport costs. The second is the risk that «trapped» by the producers of natural resources in an unsatisfactory trade specialization and blocks the improvements that the industry is essential to economic growth.

## GLOBALIZATION INDEX

The globalization index (Table 1) used to measure the degree of globalization of each economy in relation to four main components: personal, technological, political, and economic. Personal refers to international travel, tourism, the volume of international telephone calls, in cross-border transfers and remittances. The technology includes the number of users on the Internet, the number of internet service providers (servers), receptor Internet services (internet hosts) and generally anything related to technology services and skills. The policy is based mainly in the number of participants in international organizations, number of UN missions involving a country either by manpower or financial support, number of (selected) international conventions it has ratified the country, balance transfers and end state economic, trade (balance of exports to imports), foreign direct investment (balance input-output).

**Table 1: Index of globalization**

COUNTRY	GLOBALIZATION INDEX				
	2007	2008	2009	2010	2011
 Belgium	91.96	92.09	91.51	92.95	92.60
 Austria	91.60	91.38	89.14	92.51	91.67
 Netherlands	89.15	88.40	89.92	91.90	91.16
 Sweden	89.89	90.02	88.68	89.75	89.26
 Switzerland	85.53	88.60	89.87	90.55	88.97
 Denmark	84.27	88.42	87.37	89.68	88.96
 France	87.71	85.38	83.68	86.18	87.65
 Hungary	81.15	82.52	85.15	87.00	87.62
 Portugal	83.06	81.57	83.92	87.54	87.28
 Ireland	83.09	79.82	91.02	86.92	86.45
 Finland	84.84	84.65	84.19	87.31	86.43
 Czech Republic	84.46	85.51	84.65	86.87	86.33
 Canada	87.49	81.21	86.32	88.24	85.80
 Luxemburg	74.18	72.88	86.28	85.84	85.62
 Slovak Republic	72.58	75.82	81.24	85.07	85.30
 Germany	82.48	83.01	81.75	84.16	85.10
 Spain	82.52	82.73	82.94	85.71	84.71

 Singapore	82.14	78.37	84.07	84.58	84.39
 Norway	77.75	79.75	82.27	83.53	83.23
 Cyprus	62.48	65.93	82.70	82.45	82.81
 United Kingdom	89.29	86.67	79.31	80.18	81.68
 Australia	80.91	77.35	80.49	83.82	81.40
 United States	80.83	76.76	74.93	78.80	79.83
 Italy	80.61	79.44	78.80	82.26	81.12
 Greece	74.94	73.43	77.00	75.83	76.97
 Malta	63.78	66.96	81.24	76.42	76.64
 Croatia	69.30	70.17	80.61	76.85	75.95
 Japan	64.22	60.91	63.54	68.16	69.13
 Turkey	63.45	69.96	66.42	64.91	64.04
 Korea, Rep.	64.82	63.56	65.87	64.73	65.57

Source: KOF index of globalization

The measurement of the degree of globalization of a country is based on proxies. One of the most commonly used indicators measuring the degree of globalization is the A.T Kearney / Foreign Policy Magazine Globalization Index (the KFP index). Another well-known measure of the degree of globalization is the «KOF Index of Globalization (KOF Index of the Swiss Institute for Business Cycle Research of the Federal Institute of Technology).

## CORPORATE GOVERNANCE

Corporate governance is a term that refers broadly to the rules, processes, or laws by which businesses are operated, regulated, and controlled. The term can refer to internal factors defined by the officers, stockholders or constitution of a corporation, as well as to external forces such as consumer groups, clients, and government regulations.

According to OECD (1999), corporate governance is defined as follows: *“Corporate governance is the system by which business corporations are directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as, the board, managers, shareholders and other stakeholders, and spells out the rules and procedures for making decisions on corporate affairs. By doing this, it also provides the structure through which the company objectives are set, and the means of attaining those objectives and monitoring performance.”*

Well-defined and enforced corporate governance provides a structure that, at least in theory, works for the benefit of everyone concerned by ensuring that the enterprise adheres to accepted ethical standards and best practices as well as to formal laws. To that end, organizations have been formed at the regional, national, and global levels.

In recent years, corporate governance has received increased attention because of high-profile scandals involving abuse of corporate power and, in some cases, alleged criminal activity by corporate officers. An integral part of an effective corporate governance regime includes provisions for civil or criminal prosecution of individuals who conduct unethical or illegal acts in the name of the enterprise.

## SUBJECT OF RESEARCH

The survey is based on the analysis of 56 questionnaires answered by senior executives of Greek shipping companies and had the following objectives:

1. To specify the way in which enterprises face the current financial crisis and developments due to globalization and the development of international trade from 2011 up to 2015.

2. To develop a model of administrative structure with the inclusion of corporate governance elements in modern management policies, especially during financial crises and effective practices in business development from 2011 up to 2015. The introduction of the corporate governance elements may create positive perspectives in the development of Greek shipping companies in the captioned period.
3. To assess the response of managers after the introduction of elements of corporate governance in business and how this development will affect the progress and performance of companies from 2011 up to 2015.

## Description of Sample and Methodology

The questionnaire that was used for this research is constituted by 21 questions divided in 5 detailed subjects with 146 sub-questions on a scale of 5 levels which are 750 points of analysis (Zampeta 2011). The approved sample side consists of 56 replies by top level executives from the industry. Factor analysis has been used to evaluate the answers and create the appropriate factors according to factor analysis methodology.

From the questions collected within précised limits, as put from the beginning the questionnaires have been analyzed increasing the number of analysis points to 42.000. The details aroused are constituted from 5 to 9 common characteristics with the use of factor analysis methodology and the results are considered extremely encouraging. The executive officers of this sample adopt the view of direct adoption of the concepts of corporate governance in shipping in a rate of 66, 07%.

Going one step further down the study analyses the results using multiple factor analysis. From the analysis of the sample of questionnaires with the method of factorial analysis useful conclusions have been raised regarding the executive officer's opinions who participated in the research for the consequences of the globalization in the development of Greek shipping companies. Simultaneously, useful conclusions have been raised regarding the strategies of development, financing and corporate governance in the Greek shipping companies. High percentage (73, 21%) has been placed positively in the necessity of use modern methods of the measurement of performance and in the use of corporate governance in the administration systems.

In order to understand better the methodology that was used in this research, the first question of the questionnaire is presented below in detail. The same method was used for the analysis of other questions that led to the selection of 27 factors. The factor analysis was significantly influenced by the quality of the data that we had available. The variables should correlate well with each other ( $r > 0.20$ ) but not to be too strong correlated ( $r < 0.80$ ). Relations should be straight and not in extreme values. These variables should be measured at least at a scale of equal intervals. The total number of variables which will be analyzed should be 3 to 5 times more than their supposed factors. The total number of variables / observations should be important (at least  $> 300$ ). The SPSS provides two indicators for the quality control of data. The Index of Kaiser-Meyer-Olkin evaluate the adequacy of the sample ( $KMO > 0.5$ ) and the Index Bartlett's Test of Sphericity assess whether the correlations between variables allow the application of factor analysis methodology ( $p < 0.05$ ).

Regarding question 1, the indicators Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity (BTS) are presented in Table 2 as hereby calculated from the corresponding program of SPSS. The KMO index is  $0.619 > 0.5$  and the BTS index  $0.00 < 0.05$ . This result implies that the adequacy of the sample is satisfactory and the data is suitable for factor analysis with respect to question 1. The correlations between variables allow the application of factor analysis.

**Table 2: KMO and Bartlett's Test (for question 1)**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,619
Bartlett's Test of Sphericity	Approx. Chi-Square	126,503
	df	15
	Sig.	,000



Going one step further the methodology calculates the percentage of the total variance explained by factor analysis. For question 1, this percentage is 70.711% as shown in Table 3 which means that the choice of factors in question 1 is successful.

How many players will eventually be exported is mainly based on the Eigenvalues. These factors having an Eigenvalue above 1 (criterion Kaiser) and the factors that explain 70-80% of the total variance are shown in Table 3.

**Table 3: Total Variance Explained**

Component	Initial Eigenvalues		Extraction Sums of Squared Loadings				Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	<b>2,286</b>	38,099	38,099	2,286	38,099	38,099	2,178	36,301	36,301
2	<b>1,957</b>	32,612	70,711	1,957	32,612	70,711	2,065	34,410	<b>70,711</b>
3	,720	12,000	82,711						
4	,585	9,758	92,469						
5	,290	4,835	97,304						
6	,162	2,696	100,000						

Extraction Method: Principal Component Analysis.

Table 4 shows the values of each component of each factor which has been selected. Question 1 led to the selection of two factors. For the first factor, the values of components are the values shown in the second column of the table and for the second factor in the third column of Table 4.

**Table 4: Component Matrix(a)**

	Component	
	1	2
q1.1	,816	,418
q1.2	,841	,358
q1.3	,376	,654
q1.4	-,209	,678
q1.5	-,610	,646
q1.6	-,596	,590

Extraction Method: Principal Component Analysis.

The Communalities indices of the extraction column represent the percentage of the variance of each question that interprets the factor analysis through the analysis of main components and according to the criterion set the values should be greater than 0.50. For example, 84% of the variance associated with the first variable is the common variance between the sub-question 1 compared with the rest of the question 1. Similarly, 83.5% of the variance associated with the first variable is the common variance between the sub-question 2 compared with the rest of the question 2. Similarly 56.9% for the sub-question 3, 50.4% for the sub-question 4 etc. as shown in Table 5. Initially all the variation is considered as common (Initial Communalities = 1) due to the Principal Component Analysis.

**Table 5: Communalities**

	Initial	Extraction
q1.1	1,000	,840
q1.2	1,000	,835
q1.3	1,000	,569
q1.4	1,000	,504
q1.5	1,000	,790
q1.6	1,000	,704

Extraction Method: Principal Component Analysis.

The factor rotation aims to improve the detection and interpretation of the factors that can describe the data leading to the achievement of a simple structure. In summary, the term of a simple structure means that there are clear loadings (structural coefficients) on the factors and each variable has high loadings on one factor and low on other factors. The factor loadings constitute the element size of each variable in each factor (correlation index) which is key information for interpreting the factors, the higher the load the easier interpretation of the factor. An important loading is considered when the value is over 0.30. The main methods of rotation is the orthogonal rotation which implies that there is no correlation between the factors and it is used for the rotation of the factors in this research as shown in Table 6. Based on the results of Table 6 sub-questions 1, 2 and 3 of question 1 belong to component 1 and sub-questions 4, 5 and 6 to component 2.

**Table 6: Rotated Component Matrix(a)**

	Component	
	1	2
q1.1	<b>,908</b>	-,124
q1.2	<b>,894</b>	-,188
q1.3	<b>,683</b>	,321
q1.4	,217	<b>,676</b>
q1.5	-,130	<b>,879</b>
q1.6	-,151	<b>,825</b>

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.  
a Rotation converged in 3 iterations.

The criterion of Alpha-Cronbach is used for the reliability analysis. For question 1, the coefficient is reliable because Cronbach's Alpha is 0,717 > 0,7 as shown in Table 7 here below.

**Table 7: Reliability Statistics (for the question 1)**

Cronbach's Alpha	N of Items
,717	3

## CONCLUSIONS

The main objectives of this research were to identify the developments of the recent financial crisis and the process of globalization on growth, developments and prospects of the Greek shipping industry in the period 2011-2015. At the same time, the views of executives interviewed regarding specific issues of concern in this area, for example, the penetration elements of corporate governance in the administration of the Greek shipping companies and the use of modern models of administrative and operational structure were really interesting. From the questionnaire, additional evidence emerged that provide answers to questions rose with respect to the confirmation of objectives and identification of the conceptual factors emerged from factor analysis of 56 questionnaires. The initial analysis resulted in 27 factors.

The research is summarized in the following findings as follows:

- Results confirm that corporate governance can affect the increase of shipping. There are 2 factors related to corporate governance (question 7): Main factors of corporate governance and minor factors of corporate governance.
- Basic measures of corporate governance can be adopted from Greek shipping companies for the increase of their productivity (question 8): Main administrative measures and minor administrative measures

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# DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN MEXICO

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## ABSTRACT

*The role of FDI determinants is crucial for attracting inflows to any given country. The following paper analyses the impact on FDI of the four most popular determinants in Mexico: Market size, Regulatory frame, Labour skills and Environment. The findings show a) the Mexican macroeconomic stable situation is not enough for attracting FDI flows when the most popular determinants are not addressed properly and b) Planning for better education, decreasing layering for tax regulation, reinventing the market and lowering crime rates, have a positive impact on FDI.*

## INTRODUCTION

Foreign investors tend to analyse macro determinants as their first approach to a set of selected countries where investment could potentially be placed. Before deciding their investment allocation, investors review the behaviour of some of the host economies' determinants and the relationship with Foreign Direct Investment (FDI). In the hunt for capital, economies require controlling and bettering the condition of essential determinants for nurturing investors' needs and attract flows. The aim of this paper is to increase Mexico's awareness of the current situation regarding the acclaimed four most popular determinants for FDI (market size, regulatory frame, labour force and country's environment). It is crucial for Mexico to underpin and commit to the sustainability of these in benefit of its competitiveness amongst other emerging markets. The wide variety of FDI determinants arose from the mid 60's neoclassic theory, followed for years by Global Multinational Enterprises (MNEs), whereby return rates were seen as the main FDI determinants to host country's capital following economic development and social wellbeing (Bergten, Horst & Moran, 1978). The neoclassic theory satisfied investor's interest of mounting wealth by allocating high return rates in well developed economies that lowered investors' risk. In addition to capital return rates and development Eclectic Theories embraced during the following years a larger set of determinants such as market size, portfolio diversification, liberalisation of trade, fiscal reforms, property rights, government layering, etc. but failed assigning appropriate weights to each variable. While Agarwal (1980 cited in Sekkat & Véganzones-Varoudakis, 2007) focused on the host country market size, capital return rate and portfolio diversification strategy, Blomström & Kokko (1997) pointed out to regional integration, domestic liberalization and macroeconomic stabilization. According to Sethi et al. (2003), the latter has apparently to be combined with a mix of traditional FDI determinants since MNEs investments were higher in regions complying with the referred combination. In the ensuing decades academics have contributed to increase the already long list of determinants in which authors classify the variables in five different strands: Macro, Location, Strategic, Structural and Micro, providing a clear view of what foreign companies strategy might be. Macro determinants focus on factors that all participants are exposed to such as market size, host country growth, labour cost, tax incentives, political risk, exchange rates, openness, etc. as mentioned by Ali & Guo (2005). Location determinants focus on the special economic zones - coastal location- and geographic proximity as described by Görg & Greenaway (2004), Fung et al (2002), and Jordaan (2008b). Strategic determinants focus on existing foreign markets (Ali & Guo, 2005), flexible regulatory frames, open trade regime (Balasubramanyam, Salisu & Sapsford, 1996), diversification of activities within companies, diversifying foreign market, presence in foreign territories, gaining knowledge of a particular brand or industry and strategically due to liberalization of trade and other regulatory changes with underlying strategic motives. Structural determinants focus on the absorptive capacity, i.e. the need of sufficient technological knowledge to absorb new trends coming from FDI spillovers (Jordaan, 2005; Blomström & Kokko, 2003; Crespo & Fontoura,

2007). Micro determinants focus on firm ownership/size, product differentiation and others affecting the company as well as the political scene. These five types of factors for a number of years have successfully attracted important inward investments resulting in bettered production techniques, increased know-how, enhanced managerial skills, employment generation and diversified capital goods (Wang & Blomstrom, 1992) and thus are often believed to lead MNEs investment decision.

## **CONTEXT AND LITERATURE REVIEW**

Up until the second half of the 20th century it was believed investment policy to be the single most important variable in attracting FDI (Broadman & Sun 1997, Chen 1997, Andreosso-O'Callaghan & Cassidy 2003, cited in Ali & Guo 2005) since investors looked for the differences in capital rates of return in diverse countries to benefit the most. Researchers ignored important determinants for FDI including market size, tax incentives, regulatory liberalisation, labour skills, crime rates, international mobility, imperfect markets, volatile market assumptions, product differentiation, economies of scale, etc. (Dunning, 1993). The 1990's saw Mexico emerging as part of the OECD (1994) and the G20 (1999), gaining visibility within the world economy using economic and political platforms. Around the mid 90's Goldman Sachs introduced the notion of the so called N-11 as the next eleven emerging economies – Bangladesh, Egypt, Indonesia, Iran, Korea, Mexico, Nigeria, Pakistan, Philippines, Turkey, and Vietnam – drawing investor's attention to this new block once the BRIC countries were already flourishing. Although the scale of most of the N-11 countries was thought unable for achieving a huge impact, it was expected for a couple of these countries (including Mexico) to rival or perhaps join the largest economies in the medium term. It is clear 15 years down the line that despite its large population size most of the N-11 countries are still struggling to increase their growth and be competitive worldwide, Mexico included. This research seeks to increase understanding of specific determinants and its relationship with FDI in Mexico and will try focusing on why Mexico lost a few places at the Global Competitiveness Index. FDI contributes to a country's GDP and thus to the country's economic growth. UNCTAD develops annual statistics determining FDI inflows and outflows by country amongst over 200 countries. The complete database published from 1970 up to 2009 disclosed Mexico as one of the top 16 economies receiving foreign inflows per year up to 2005. In fact, around 25 countries as at 2009 were receiving in excess of USD 10 billion. In most economies the year 2008 was a high historical mark for FDI inflows but then 2009 and especially for Mexico the global economic down turn lowered severely global inflows. Most of these countries (75%) received higher FDI inflows in 2008 than in 2009, the rest were recovering from serious FDI downfalls occurred during the year 2008. During the 1980s the country reached 5th place at the FDI inflows ranking but started falling in the early 1990s by over ten places. At the time NAFTA was signed in 1994 FDI inflows rose again positioning the country in 11th place but this was far from being sustained during the following years when Mexico's ranking fall again for numerous factors: collapse of domestic market, tequila crisis, peso depreciation, etc. During the last five years, Mexico's position at the world ranking has been the lowest in its history where its share of FDI inflows fell from 2.3% in 2005 to 1.1% in 2009 outlining the need of reviewing the openness and investment climate in Mexico as well as whether macro, location, strategic, structural or micro determinants are affecting FDI attraction to Mexico.

### **FDI and Market size**

Foreign direct investment has for years related to the market size and its growth because foreign investors benefit from the immense reach possibilities and the economies of scale potential. Theories during the 1980s and consequent years focused in market size as one of the most popular determinants influencing inward foreign investment. All external participants are exposed to market size and it is one of the twelve pillars driving productivity and competitiveness within the GCI.

Market size and growth of the economy are seen as macro determinants providing benefits to businesses. Market size is characterized by the number of buyers and/or sellers at a particular time leading to an estimated total value of the market which will try to gain interest from local and external investors. Studies in the past confirmed that the larger the market size and its expected growth, the higher the positive effect on FDI inflows. Since FDI is a forward-looking decision in the long-term, investors benefit from the current market size and the expected market growth because that is where the potential market and future profit comes from. Researchers such as Jaumotte (2004) and Sun et al. (2002 cited in Ali & Li, 2010) proxied market size with

GDP, GDP per capita, GDP growth or retail sales. The higher these indicators are, the larger the market size and its demand. In this research GDP is considered and analyzed as the market size proxy and it is compared against FDI. The authors calculated a correlation of around 0.65 between FDI and Market Size taking into consideration the last five years of FDI and GDP (as market size proxy). The latter means that these two are positively related and therefore there is a clear impact of market size in FDI. Other factors such as market intensity, commercial infrastructure, economic freedom, market receptivity, location and type of industry are related to market size as well. These are later considered in the GCI analysis. Mexican's large size market has been viewed positively by top investor economies (e.g. US and Europe) because of its fast growth pace, consumption capacity and market receptivity. In particular the location has direct link to both the frequency and the total amounts that are invested (Globerman & Shapiro 2003, Rossi & Volpin 2004, and Di Giovanni 2005). The location of the market, in this case Mexico, plays an interesting role including the state by state basis, especially in northern states due to their proximity to the US. Almost 2,000 miles long trading border (Beaver, 2006) and the economic, social, and cultural ties naturally generate exchange amongst these two neighbours confirming the US as Mexico's largest trading partner. After NAFTA and up to the year 2000 the total share of US FDI flowing to Mexico went up to around 80% followed by the European Union with around 15% and other smaller contributors such as Japan (2.3%) and Canada (2%) (Mapsoftheworld, 2010). Ali & Li (2010) showed the importance the US places on China's market size when attracting FDI. Therefore, retaining the US as a top FDI provider requires Mexico to be vigilant on how to keep its market size interesting and grow it when possible especially when compared to its peers in groups like OECD, G20, LA5 or N11. Mexican market potential has been constantly classified amongst the top 15 countries. During 2010 Mexico (13<sup>th</sup>) was ranked above all countries from LA5, Russia from the BRIC block and seven countries from the N11 group. Mexico follows Brazil as emerging market in Latin America and its market size / potential is recognized in front of the other four most important economies in the LA5 group. Other countries with higher market potential include three nations of the BRIC block (All but Russia), three countries of the N11 group (Korea, Turkey and Indonesia) and other five countries Hong Kong, Singapore, Czech Republic, Israel and Hungary. China, whose market size and relatively cheap labour force attracted the most FDI flows in recent years, has become a country to watch and follow for its market potential offering a solid base for export potential, manufacturing, engineering and retail. Interestingly, Mexico's ranking beats China in four specific components: Market intensity, Commercial infrastructure, Economic Freedom and Market receptivity. However, Mexican market growth ranked 22nd suggesting stagnant growth. This should be seen as a red flag and take immediate action. During 2008 Mexico was at its best at the Market Potential Index in 8th place but the international turmoil since then impacted negatively the country pushing it back as from 2009 some places at the Global Edge MIP ranking. Krajnyak et al. (2010) suggested that the financial crisis may have lowered potential growth in Mexico by about 75 to 100 basis points. Some concerns were aired by Nunnenkamp, Alatorre Bremont & Waldkirch (2007) referring to the shift of investors' preferences. Their view is that earlier findings may no longer be applied considering during the last decade the vast majority of FDI transactions were cross-border acquisitions (62.07%) against traditional investments or manufacturing. The importance of cross-border mergers and acquisitions (M&As) has been recognised as an essential form of foreign direct investment that represented expenditure in excess of USD 687 billion, and as Owen & Yawson (2010) described it cannot be underestimated and should be investigated further. During the last years the BRICM countries showed an increase on the annual average of FDI inflows and to their GDPs bettering their position at the ranking of annual average FDI inflows 2000-2009 (Table 7). Mexico's annual average inflows during the last decade were similar to the rest of BRIC (except for China) with circa USD 20b but Mexico's market potential is below China, India and Brazil. Mexican market size is seen as a competitive advantage when compared to other emerging markets. Its size, according to Schwab (2010) is similar to Brazil's and its correlation (close to 1) confirmed they are both closely related. On the other hand, although FDI inflows are positively related, the correlation is very close to zero. Brazil and Mexico have been at the forefront of the LA multilatinas phenomenon based on superior technology and organization where few local companies successfully turned global. Brazil has outperformed all of the LA5 and can be used as an example to follow. Mexico's strong recovery and macroeconomic stability helps GDP grow at faster rates than those observed before the crisis. A 5.5% GDP increase from 2009 to 2010 reflected the highest growth since the year 2000. If market size or its proxy, GDP, is growing at this pace, foreign investors' confidence will rise again portraying a better future in the next years that might lead to increased investment in the country. The country is going through some consumer confidence. There is investment in machinery and equipment, and several large infrastructure projects are in the pipeline. Manufacturing related exports are expected as growth drivers 2011. Mexico is dealing however with a positioning problem that has yet to be addressed because many local and international bodies refer to its stable macro-economic situation with a growing market size. Perhaps the focus should be placed in whether the Market

size is growing as expected. If the Mexican Economy Ministry projections of GDP for 2009-2050 developing countries were to be achieved, Mexico's GDP and thus Market size could outpace G20 advanced economies. However, it is difficult to believe that market size in Mexico could grow exponentially in the following decades as Mexican population has started to reduce its base at its distribution. This means that the birth control policy had a stopping effect and therefore the potential market will only grow for a few more years and then will decrease. Mexico should plan ahead and reinvent the market, create opportunities and make the most out of the potential market that young people represent.

## **FDI and Regulatory frame & Tax**

Traditionally, Mexico was a closed economy maintaining tight restrictions on foreign ownership before the 1980s as part of a conscious policy to promote domestically-owned manufacturing (Whiting, 1992 cited in Jensen & Rosas, 2007). A severe balance of payment crisis in the 1980s led the Mexican government to FDI capital flow liberalization, importing restrictions relaxation, exporting activities promotion and regulatory frame modification with quite successful macroeconomic stabilization and structural reform programs in several sectors. This led ultimately to the negotiation and implementation of NAFTA in 1994 resulting during that decade in increased FDI inflows concentrated in mostly five industries during 1994-2003 (Nunnenkamp, Alatorre Bremont & Waldkirch, 2007): i) Automobile & truck parts, ii) Automobiles & trucks production and assembly, iii) Cigars production, iv) Production of carbonated beverages and other non-alcoholic beverages, and v) Electric materials and accessories. All five industries required mainly blue collar workers. After 1985 the high proportion of illiterate population deterred growth in specific states (Chiquiar, 2005), but cheap labour was part of the reason why FDI was getting to the country. Labour skills will be discussed in the following section (2.3).

For Mexico the 1980s liberalization of regulatory frame increased FDI attraction. Regulatory policies required finding a way into being more flexible especially when the real GDP lies below the potential GDP level. Emerging economies have sometimes referred to other economies' frames and customised those. NAFTA reforms to diverse sectors such as automobiles, textiles, finance, telecommunications, and land transportation (Hufbauer et al., 1993) encouraged the alignment of the Mexican FDI definition to the international version. Policies reforms, location advantages (mainly cheap labour), and free access to a considerable part of US and Canada markets promoted economic growth in Mexico. Late 1980s FDI inflows went from around USD 3b to nearly USD 8b in 1994 (IMF, 2010) and reached the highest point in 2008 with over USD 17b. Blomström & Kokko (1997: 5) asserted "the most positive impact on FDI occurred when regional integration agreements [have] coincided with domestic liberalization and macroeconomic stabilization in the member countries".

A few Latin America (LA) countries adopted an inflation targeting framework pioneering in improving significantly their monetary policy frame. Canales Kriljenko et al. (2010: 5) mentioned the LA5 countries as "adopted inflation targeting (IT) between 1999 and 2002. This framework provided flexibility to monetary policy and became an alternative to exchange rate management or the use of traditional money targeting as a nominal anchor". At the time significant changes were required from all LA5 central banks who undertook a holistic reform with macroeconomic, institutional, financial, operational, and policy changes.

The monetary policies that affected most sectors of these economies were directly linked with fiscal policies but they differed in the speed with which each took effect. In order to promote local and foreign investment, tax incentives were targeted to certain industries, diverse internal locations, size of ventures and specific foreign countries with which free trade agreements were in place or planned to be signed. Foreign companies in an attempt to benefit from local tax incentives end up investing in the host country impacting positively on FDI. Local and external free trade tax incentives go hand in hand, but external ones are key to free trade agreements. Liberalisation of trade, fiscal reforms, property rights, and government layering were found amongst the positive determinants of FDI (Nunnenkamp & Spatz, 2004). Therefore, the significance placed in negotiation of IPPAs focused on countries that could be: a) Current Investors, b) Potential investors, and c) Those where Mexico invests in.

Most authors agree that decentralization of the regulatory frame helps creating a better horizontal planning that should end up with greater autonomy and decision making for attracting FDI. When Fiscal decentralization eliminates layers and decreases compliance costs foreign inflows attraction is highly attired to



the host economy. Mexico is aware of the positive link between FDI and trade liberalization (Cuadros, Orts & Alguacil, 2004). The introduction of trade liberalization caused “structural and far-reaching changes in the Mexican economy” (Jordaan, 2008: 406) which resonated in the benefits spill-over and a high level attraction of FDI during the following years. However, even when reforms were introduced in Mexico, foreign enterprises participation was and still is restricted to some activities (ECLAC, 2008). Tax incentives are very useful for negotiating IPPAs specially because tax regimes are country-specific and tend to stimulate particular types of FDI. The literature portrays little evidence of the effect of specific tax regimes to FDI and whether fiscal changes impact FDI in different ways. It is therefore important to deepen the knowledge in Mexico because of its potential contribution specifically to foreign investment, growth and development. The champion industry of tax incentives – maquiladoras – was set in Mexico after NAFTA was signed in 1994 as a fiscal strategy for attracting FDI. Tax holidays, one type of tax incentives, had a positive impact on the manufacturing industry for developing countries during 1985–2004, included Mexico (Klemm & Van Parys, 2009 cited in Van Parys & James, 2010). Extended tax holidays (10 years) to exporters, who are more sensitive, generated an extra 0.64% FDI as a percentage of GDP. The empirical study from Kessing, Konrad & Kotsogiannis (2007) showed both: a) Positive impact of tax incentives on FDI over different territories and b) Negative effects when government layers are introduced (the ‘vertical’ dimension of decentralization) resulting in a deteriorated investment climate. For Klemm & Van Parys (2009 cited in Van Parys & James, 2010) apart from the tax incentives themselves, the number of legal guarantees and the complexity of tax incentives is important for foreign investors since increasing one layer lowers FDI by 0.35% of GDP in developed countries. For Canales Kriljenko et al. (2010) all fiscal frameworks from the LA5 region were significantly strengthened and by adopting fiscal responsibility laws. Mexico and Chile hold a competitive advantage over other Latin countries waiting to implement helpful technology. With fiscal rules enforcement, Mexico launched online fiscal payment options and offered accounting software. The administrative burden and fiscal vulnerabilities reduced from 2006 to 2011 positioning Mexico in fourth place within Latin America after Colombia, Peru and Guatemala. This resulted in increased corporate income and cash deposit payments. Taxation, privatization and unit labour costs appear to have a larger effect on inward FDI than earlier studies revealed. On the other hand, Bellak & Leibrecht’s (2009: 1) did not find evidence on FDI and taxation consistently mattering for location decisions for the CEE countries. “One possible reason for this somewhat unexpected evidence is due to the use of a flawed indicator of tax burden. One percentage point decrease in the tax rate will increase FDI inflows by 1.45%. Host-market size and distance are the most important determinants of net-FDI-outflows.”

It can be said that Mexican regulatory frame change has had a positive impact on foreign inflows. At the LA5 block, Mexico showed stability in FDI growth during 2010. Excluding 2009 where the decline in inflows growth most likely relate to the global crisis hit, Mexican FDI growth rate are volatile. Considering Mexico is one of the Latin America leaders it should be benefiting from its 27 IPPAs and around 2,500 in-force agreements around the world. Progress has been made; over 40 countries have signed free trade agreements with Mexico representing FDI inflows of over USD 17 million. However, work could be followed on domestic liberalization allowing foreign investors not only in the currently open industries but as well those like deepwater reserves and hydrocarbons fields that still have restricted access. During 2009 and 2010 changes to business regulation were measured at the Doing Business project assessing whether these were positive or negative. Business regulation towards starting business, dealing with permits, registration of property, loans, trading across borders, enforcing contracts, closing business and tax were considered. Except for Venezuela where most companies are state-owned, countries within Latin America have progressed towards lessening the burden for starting business. The latter might reflect the importance of getting new business started up for collecting taxes once the earning flows commence. Some countries focused on the regulation around trading across borders and protecting their investors.

## **FDI and Labor skill & Employment**

The education received by an individual, measured in number of years, is globally accepted as a proxy of the skills available in any actively working population. Depending on the structure of the industry, different levels of education and training are required before enforcing new technologies and fully developing the particular high-technology and/or high-skills industries that ultimately attract FDI. Some authors go further and proxy labour quality by the number of research engineers and scientists (tertiary education) and indirectly the underlying employees’ background education (Ali & Li, 2010). The higher the studies and knowledge based level, the lower

unemployment rates become. The exception being tertiary education as the surplus of university not always corresponds to the production apparatus needs. Investors historically sought and directed investment to Mexico because of its relatively skilled and cheap labour force. Mexico's education at around 4% of illiteracy showed good levels compared to many countries offering cheap labour force. Important deficiencies in Mexican basic education were recognised by the end of the 1980s as inhibitors of growth. As relatively more educated labour force attracted a larger share of FDI in over 70 developing countries from 1980 to 1999 (Jaumotte, 2004), and thus elementary school days in Mexico were increased to 200 as from 1994 (US average of 180 and International average of 193 - US Department of Education, 2010). This was a government's effort for closing the gap with other countries' education levels considering American and European FDI (Mexican prime investors) generally seek regions with high labour productivity and strong local base (Zhao & Zhu, 2000 in Ali & Li, 2010). In the past, our top FDI investors (US mostly) dictated in a sense the level of skills required from the Mexican labour force. Net FDI flows into Mexico during the 1990s were focused on either the investment for the manufacturing industry - maquiladora exports- or the innovative 'greenfield' technology (Ramirez, 2006) where manual and highly specialized skills were required. Unfortunately Mexico was unprepared for the latter and had since shifted from greenfield manufacturing to services and mergers and acquisition inflows. Jordaan's (2008a) findings suggested the regional labour force educational level and infrastructure investment enhance the probability of attracting FDI. Görg & Greenaway (2003: 25) discussed in addition the importance of "upgrading general skills; [creating] technology [and] public investment policies aimed at developing efficient and reliable transportation / communication networks". Mexico accounts for the highest proportion of manufacturing workers amongst LA5 countries. It is said that around of 70% of the formal economic population work for industries that do not require high skills standards. Distribution during the 90's referred to 60% manufacturing, 12% retail, 25% Financial Services and 3% other industries (Ramirez, 2006). As at 2010 the proportion has seen little change 60% manufacturing, 15% retail, 15% Financial Services and 10% other (construction, transportation, mining and telecom included). Intense work is required as Mexico is one of the few Latin American countries that have not changed its labour laws. For a number of years during international company summits both a) a new working culture and b) a visionary new Labour Law have been the centre of discussion for creating change. Progress is yet to be made.

Korea, one of Mexico's competitors at the N11 group, has managed to prepare its population for and enhanced technology and skilled environment. Its highly educated population (225 school days on average) is at the opposite far end of the range facing without problems the global skilled competitiveness of the current demands. Although evidence shows Korea's FDI inflows during the last 5 years are inconsistent with the average education levels it could be argued that economic underlying reasons in Korea might be affecting the appeal of foreign flows. For Asian countries cheap labour cost is important (Ali & Li, 2010) but inflows from Asian countries apart from China are usually very low around the world. Countries interested in foreign inflows could benefit from aligning their education system programs to satisfy required skills serving particular industries where, of course, technical skills are required. Better infrastructure appears highly and positively related to FDI (Mariotti & Piscitello, 1995; Cheng & Kwan, 2000). Mollick, Duran & Silva-Ochoa (2006, cited in Jordaan, 2008) went further into focusing on regional infrastructure that influenced FDI inflows from 1994 to 2001. Kwok & Tadesse (2006) specifically pointed out communication networks and supply of power and later on Owen & Yawson (2010) mentioned 'telephone usage'. For some authors, FDI is correlated to labour skills existing in sight since investors felt comfortably allocating their investments in areas with previous history of FDI and high quality infrastructure relying on the skilled labour force in sight (Mariotti & Piscitello, 1995). Therefore preparing workers today will most likely get increased levels of FDI in the future.

Attracting FDI is useful not only for increasing Mexico's GDP and the country's profitability but for getting technology spillovers, enhancement of environmental and social variables, labour quality increase, potential impact of non-governmental organizations and corporate codes of ethics as well as openness of economic sectors such as oil, gas and agriculture. (Meyer, 2004) Unsurprisingly, employment generation appears to be an important motivation underlying the fierce competition for FDI inflows. Some authors have shown that FDI has a positive impact, though quantitatively modest, on manufacturing employment in Mexico. Nunnenkamp, Alatorre Bremont & Walckirch (2007) showed that FDI is typically concentrated in economic activities that contributed little to overall formal employment. Unemployment in Mexico increases when output falls in economic downturns, just as happens in industrialized countries. The reality of 2010 FDI was unprecedented; the top FDI source came from the Netherlands (USD 8,658.8 million during the year) with a strategic acquisition for accessing the food/beverage market rather than a particular interest in cheap or skilled

labour. It had a spill-over effect on its own of USD 6,960 million (America Economia, 2010) representing over 40% of total 2010 FDI inflows. The rest was divided amongst USA, \$4,891.6m (27.6%); Spain, \$1,305.3m (7.4%); Canada, \$755.9m (4.3%); Great Britain, \$471.3m (2.7%); and other countries, \$1,643.0m (9.2%) (Mexican Ministry of Economy, 2010). This was the first year the US was relegated from the top after many years of dominating that field.

For Mexico to maintain levelled or continuously increasing new foreign investments, proposed changes have to be in place and it is now the time to work on education, high skills, and flexible regulatory frame if the country is to succeed in the following years. According to Fierro (2010) “Mexican legislation continues to be more restrictive concerning hiring, trial periods, training contracts (apprenticeships) and severance payments. The essential principles of the existing Labor Law, which are focused on ensuring employment stability, have not avoided the emergence of precarious work or generated better-quality jobs. Contrary to what people might expect, although manufacturing is typically the industry that captures the most FDI it is not the one producing the highest employment rates in Mexico. Similarly, financial and other services attract reasonable FDI levels to the country without having high levels of employment.

Mexico has to contemplate there are no plans for unemployment insurance or support for the unsalaried worker. Significant groups of the population still do not have health care or retirement plans”. There is an underlying positive relationship between FDI, education (labour skills) and ultimately employment. Knowing the education levels are far from the OECD average it can be implied that FDI in Mexico is being deterred by this determinant.

## **FDI and the Mexican environment**

Liberalization of regulatory frame helped Mexico attain the 5<sup>th</sup> position at the world FDI share ranking during 1980's. NAFTA (1994) brought it back to the 11<sup>th</sup> place (4% of world FDI inflows) after a fall during the early 90's. The early 2000 years the rise in the manufacturing industry (metal, chemicals, and food/beverages/tobacco) noted a small increase on FDI share. However, Mexico hasn't sustained itself constantly in the top ranking due to market collapses, several economic crises, currency depreciation, and lately the global turmoil. It is during the five years period 2005-2009 when Mexico ranked the lowest (FDI share went from 2.3% in 2005 to 1.1% in 2009). BRIC outperformed Mexico's FDI inflows by at least a ratio of two in only four years' time. During this period, the inward World FDI exceeded over fifty times Mexico's, outlining the need of reviewing the openness and investment climate in the country. A number of emerging markets are now considered strategic since opportunities in alternative countries that are fundamentally different with enhanced competitive advantages. Mexico, labelled as an emerging market from the mid-1990s, appears to be struggling for attracting higher FDI inward flows. Most economies weren't slapped as strongly despite cruising themselves through difficult times suggesting the majority revisited their planning strategies before the crisis and thus were able to tune their economic policies regarding open trade, regulatory frames, taxing systems, labour skills and/or kept their countries with acceptable security measures. Mexican economic indicators show the country as macro-economically stable standing on top of the N-11 (along with Korea) even when “technology and its macro-economic conditions (investment and openness) performed poorly compared to other countries” (Wilson & Stupnytska, 2007: 12). The relatively strong economic position and stable financial situation is contrasted by the insecurity problems. Literature has been unable to cover in depth hostility problems and insecurity concerns but it is well known that “Mexico is currently ranked in 134th place, down nine places from the previous year” (Schwab, 2010). The relationship between FDI and the collective drug-related violence, civil unrest in different states, etc. is considered negative resulting in lower investment amounts.

The authors are inclined to thinking there must be elements within the four popular FDI attractors for Mexico that might be deterring FDI in Mexico despite the good macroeconomic position aired by current local and international economists. It is suspected that not only the mix balance of historically popular determinants is changing but the competitive advantages of other emerging markets are getting better at a faster pace. Mexico was during 2009-2010 ranked in the upper half of the GCI rankings amongst the region's most competitive economies (60th) and fell to 66th place in the 2010-2011 ranking which for Schwab (2010) “clearly demonstrates the need for continuous improvement in order not to lose ground in competitiveness vis-à-vis the rest of the world”. Mexican human capital, macroeconomic stability, development levels and growth conditions

have positively outperformed some of its rival countries but still the country is at its lowest position in the ranking of FDI share within the world. Herzer, Klasen & Nowak-Lehmann (2006: 28), in their analysis however, “concluded that FDI in Mexico is a consequence of Mexico’s economic growth rather than a cause”.

## CONCLUSIONS

From the numerous FDI determinants have been mentioned throughout economic history, the aim of this research was to prepare a gap analysis of where the most important FDI determinants were and to assess whether their impact has been translated in additional FDI generation. The historically four most popular determinants in Mexico -*Market size, Regulatory frame, labour force and overall situation in the country*- were analyzed with the intention of increasing awareness of how these in the current climate are impacting FDI and whether inflows are getting easily to the country. In this way, all participants could raise their awareness towards the current climate and as mentioned previously in the introduction, make sure all of them underpin and commit to the sustainability and good performance in benefit of Mexico’s competitiveness amongst other emerging markets.

Mexico as an Emerging market is falling short from attracting high inflows and has lost FDI share from the total World’s FDI during the last five years. In fact, finding that Mexico’s FDI levels haven’t changed much from the 1970s and 1980s increased the authors’ concern about the current situation Mexico is going through. If anything, evidence shows inflows to the country have proportionally gone down in terms of the world’s FDI share. The study of –market size, regulatory frame, labour skills and overall environment – as determinants portrayed a serious image of Mexico as all of them have had an impact on FDI attraction that apparently is negative.

Market size has not being growing tremendously and do have a cap in the future years considering the population growth and its projection in the next years in Mexico. The findings pointed out that an increase in market size has an important positive impact on FDI since the correlation of FDI and Market Size is positive and above 0.6. This implies that once the market size is not growing, FDI flows will follow the same destiny. Also, it was observed that when the world and other related countries, for example the US, increased their FDIs, Mexico did not follow closely that increase resulting in a vulnerable position for the country that has to be addressed. When the opposite happens (i.e. FDI decreases for example following a global crisis) Mexican FDI inflows are the first to head down. It was quite apparent that the views of the Mexican government and other international bodies reflected positive projections and future outcomes of increased FDI and GDP from the macroeconomic stable situation within the country. The authors’ view however, is that the macroeconomic stable situation is not enough for sustaining FDI flows to the country. On the contrary, it is believed that by analyzing the underlying factors within the market size such as the composition of the population, for example, inflows can be redirected to Mexico once investor’s confidence is increased resulting in a positive impact in the future. Creativity and out of the box thinking is going to be required to reinvent the positive frame around market size and continuously attract investors during the following decades.

Regulatory frame especially considering the tax framework has stepped back by including additional layering in tax payments in the last years in Mexico. Tax incentives attract FDI overall and is reported more for companies that export their goods which relate to the US who is one of Mexico’s most important FDI generators. Companies believe tax incentives to be one of the top changes required in Mexico for attracting additional FDI. The positive steps taken in the last two decades towards responsible fiscal policies, liberalizing, and diversifying Mexican economy and the latest support to small-and medium-sized enterprises, housing, antipoverty programs, oil prices, and the peso helped Mexico and although these showed that even when the country is very dependent on US movement towards slow or negative growth, there are steps that are still to be taken. It is important though to mentions that Mexico showed some resilience during the crisis. Labour skills are far from being at OECDs levels and therefore impact in a negative way the attraction of FDI. Education in general has a positive impact on FDI. Secondary education has a higher impact than tertiary education and less educated the population implies lower FDI reception. Considering Mexico’s stage of development it is clear the need of an enhanced educational system. “A specific role for education and training policies aimed at upgrading general skills; technology policies aimed at developing clusters; public investment policies aimed at developing efficient and reliable transportation and communication networks”. However, according to UNCTAD (2010) there is little employment absorption effect and labour productivity gain. Despite the number of days at school and the high literacy rates, “the [Mexican formal economy] labour market is ranked at a dismal 120th place [...] with less than-efficient use of talent (122nd). [...] The poorly rated higher education and training system (79th) does not

seem to be producing a highly skilled labour force, notably scientists and engineers (89th), and is not sufficiently conducive to technology adoption and innovation. Although the current administration has adopted, or plans to adopt, a number of competitiveness-enhancing reforms addressing many of these shortcomings, further action is sorely required to reinforce Mexico's competitiveness fundamentals" (Schwab, 2010).

Mexican environment which overall shows a good economic macro-stability but a civil unrest situation is underlying and again, creating a negative effect in FDI attraction. Also increasing certainty by extending the legal guarantees for investors should help attracting foreign investment. Further research on when tax holidays are effective is required. The good macroeconomic environment Mexico is going through is helpful for attracting FDI as well as being ranked 66th in the overall GCI. The ranking position at the 19th place regarding the government budget balance plays favourably to Mexico and could be helpful given its overall position. Therefore, Mexico's economic environment seemed safe and inspired confidence to foreign investors constituting a competitive advantage just as Schwab (2010) pointed. It was mentioned earlier that elements within the four popular FDI attractors were deterring FDI despite the overall apparent good macroeconomic position of Mexico and unsurprisingly these were confirmed. The balance of the determinants mix has been changing as well as the competitive advantages of other emerging markets by getting better at a faster pace than Mexico's. The implication is that the country needs to focus on bettering its situation, regard what other successful FDI attractors are doing and start implementing measures that could maintain the country at the global scene. Otherwise, Mexico could lose its grip and fall even further down. The comparative measures were mainly against countries that are or have been in line with Mexico in recent years or countries that rival Mexico within its multiple associations with diverse bodies. The gap in education for example with Korea, which is competing against Mexico at the N11 emerging markets, is so big that many years are required to close the gap and get to those levels and implicitly implies that there would be a time when Korea would be prepared to receive other countries' inflows related to technology and highly skilled industries. With some intentional planning by creating the appropriate steps to close the gaps that Mexico is currently aware of, the country could excel in the future and keep its position at the international stage and at some point evolve from emerging to established market. A positive macroeconomic position in which all indicators disclose a strong performance does not necessarily mean inflows are attracted to the host economy, and despite being the current picture happening to Mexico, the intention is to get this solved.

The continuous decreased levels of FDI during the last five years suggest a stagnant position for Mexico and therefore changes should be proposed in all four areas particularly in regulatory frame for tax incentives, labour education and the vigilance and monitoring of crime rates which is now a necessity in the country. The hostile environment is impacting investors who are more and more losing appetite in a country seen at the classification of the competitiveness rank in an unchanged 60<sup>th</sup> place from 2008 to 2009 and then fallen to 66<sup>th</sup> in 2010.

The requirement of action is proposed to make the country go towards sustainability. Given Mexico's close association with the US in terms of financing availability, trade, and remittances it would be important to develop a strategy for keeping inflows entering Mexico from this territory and creating opportunities for increasing inflows from other countries round the world, in particular Europe and Japan considering the Triad (US, EU & Japan) provide around 80% of total FDI in the world. Many researchers note that FDI flow to healthy economies and is most likely that the positive factors in the Mexican market should result in better attraction of foreign flows. The fact that FDI is attracted to states with high level activity agglomerations and regional prosperity might be flagging an upcoming trend. Manufacturing industry is still at the leading position in the country. Mexico could benefit from alternative and innovative thinking in order to shift's the country's traditional way of perceiving the world and creating situations that could impact hugely FDI in Mexico in other industries. The study case of Finland could become a good leading example considering it went from building ship-boats to being one of the biggest countries involved in the mobile and electronics industries. The latter inevitably attracted foreign inflows to that country. Annual FDI is not dependent on its consecutive years' history and its reaction to changes in the investment climate only shows its volatility. FDI speedy reaction to changes in the investment climate implies its adaptability to new defined situations. The overall analysis shows that Mexico would only need to address the negative impact these determinants are having on FDI by reinventing and finding ways of growing its market size, decreasing layers in the way taxes are being paid, making the regulatory framework more flexible, creating additional education programs for bettering the skills of the Mexican labour force and decreasing substantially the crime and civil unrest that the country is going

through. If these are achieved the new defined situation should attract much more FDI. It is recommended that academics and/or researchers continue the analysis for these four determinants in the years to come especially for understanding whether further steps have been carried out addressing the apparent negative impact on FDI flows.

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# DOES LUNACY INCREASE INVESTOR PESSIMISM? LUNAR PHASES AND SHORT SELLING RELATION IN ISTANBUL STOCK EXCHANGE

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## ABSTRACT

*The psychology literature has well discussed the impact of lunar cycle on human behavior. Studies on this area find evidence of abnormal behavior around full moon. From the financial perspective, lunar phases are important because it shows investor irrationality as well as predictability in markets, which would be a refutation of efficient market hypothesis. Previous literature examines the association between lunar cycle and stock markets, and the null hypothesis of no effect of moon on returns and volatility is mostly rejected (Dichev & Janes, 2003; Keef & Khaled, 2011; Yuan, Zheng, & Zhu, 2006). However, to the extent of our knowledge, the linkage between lunar phases and short selling decisions is left uninvestigated. This is a motivating research area since short selling is considered as proxy for pessimism of investors in the behavioral finance. As a result, this paper aims to show the possible relation between new and full moon and short selling decisions in Turkey as a developing country. By doing so, the objective is to provide new evidence for the impact of investor mood on financial decisions as well as for the predictability in financial markets. The findings show no statistical significance for the cumulative abnormal trading volume around different lunar cycles, which would constitute a support for market efficiency in Istanbul stock Exchange.*

## INTRODUCTION

Behavioral finance area criticizes the rational behavior assumption of efficient market hypothesis since investors are subject to bounded rationality. Behavioralists argue that investors create heuristics which facilitate their decision making process (as pointed out in Tversky and Kahneman (1974)) and their mood impacts the financial decision itself (as discussed in Simon (1959); Loewenstein (2000); Lucey and Dowling (2005) and many others). This paper aims to provide new evidence on the area of behavioral finance by looking at lunar phases and short selling decisions in Turkey as a developing country.

The impact of lunar cycles on human psychology has well been discussed in the psychology literature. Some argue that moon effect tests have lack of reliability; there is no substantial link between moon phases and human behavior (Angus, 1973; Campbell & Beets, 1978). Garzino (1982), however, argues in his review that “lunar related changes” as well as weather and geomagnetic storms can be influential on human behavior, such as on homicides, suicides or emergency telephone calls. Others demonstrate that full moon effect is only a superstitious belief, but has no impact on human biology. Nevertheless, there is still a belief in that direction (Rotton & Kelly, 1985; Wilson II, 1990). All in all, even though psychology literature provides conflicting evidence about the impact of lunacy; they all agree on the belief that moon phases are associated with the human behavior.

From the financial perspective, the effect of lunar phases is important, because it indicates that investors do not always take decisions based on rationality assumption. Instead, investors can be biased and economically neutral events, such as weather, moon phases or geomagnetic storms, might be influential on portfolio choices.

In addition, many of these events are foreseen very accurately, which brings predictability together as well. Such a finding is of importance, because it would lead to refutation of efficient market hypothesis.

Several studies again point out conflicting findings. Dichev and Janes (2003), and Dowling and Lucey (2005) find strong evidence indicating that lunar phases as an investor mood proxy are influential on portfolio decisions. Yuan, Zheng, and Zhu (2006) illustrate internationally that lunacy is important independently from other calendar anomalies. There are contrary findings, however. Chandy and Haensly (2007); Dowling and Lucey, (2008) and Herbst (2007) cannot find a persistent and statistically significant change in stock returns depending on moon cycle. A recent study of Keef and Khaled (2011) investigate 62 countries with panel data regression with fixed effects as an alternative model and demonstrate that although new moon mean return is superior, there is no depressed impact of full moon. All of these conflicting studies have one common point: They all look at the effect of lunacy on stock returns and trading volumes with various methodologies. However, our paper aims to show the possible association between short selling decision and moon phases, to the extent of our knowledge, which is left uninvestigated. This is a motivating research area since short selling is considered as proxy for pessimism of investors in behavioral finance.

Although Ringgenberg (2011) defends that short-sellers have heterogeneous beliefs, the literature mostly considers short selling as an indicator of investor pessimism. Aitken, Frino, McCorry, and Swan (1998) investigate the market reaction to short sales on an intraday basis. They conclude that short-sales are almost instantaneously bad news within a transparent market setting, since negative abnormal return is observed as a result of short-sale transactions examined in their study. Arnold, Butler, and Crack (2005) present short interest as a bearish indicator, since short-selling is relatively costly and subject to more restrictions than selling shares outright. Edwards and Hanley (2010) state that if a typical investor has a pessimistic appraisal about an IPO, he/she will prefer to short-sell it. Blau (2010) examines short-sale and trade size relation, and indicates that the short-sellers use different trade sizes to signal pessimism to the rest of the market.

In this regard, taking short-selling as a proxy for investor pessimism, we aim to provide new evidence for the impact of investor mood on financial decisions as well as for the predictability in financial markets. Another novelty of our paper is that the research will be conducted by using event study methodology. In this vein, we investigate the impact of lunar cycle on trading volume of short selling decisions. Comparing the other studies examining mostly linear and nonlinear relations around diverse moon phases, this will provide direct evidence about the real effect of moon on investor mood. Additionally, the psychological hypothesis that full moon has a depressing impact on human mood can be tested by investigating the pessimism level of investors, which is proxied by short selling decisions.

Besides these contributions to the existing literature, the findings would be important for the policy makers and managers as well from the predictability point of view. Since the exact dates of lunar cycle are known, additional caution would be needed in particular for the fund managers if such an effect triggers investor pessimism.

Using the event study methodology, we are able to test the null hypothesis of no impact of lunar cycle on investor pessimism. In this analysis, daily short selling data from Istanbul Stock Exchange (ISE) is used for the period between January 2009 and December 2010. Both the new moon and full moon dates are used as event dates in a 7-day event window. Results indicate mostly insignificant abnormal trading volume and support no behavioral bias in Istanbul Stock Exchange in the sense of lunar cycle, even though there is an observable pattern in short selling volume in the event period both around the full moon and new moon periods.

## **DATA AND METHODOLOGY**

This study requires daily short selling data from Istanbul Stock Exchange (ISE). The period covered for the analysis is between January 2009 and December 2010. In the analysis, the data from 318 firms trading in the ISE is used. The information related to lunar cycle is obtained through the website of NASA (<http://eclipse.gsfc.nasa.gov/phase/phasecat.html> retrieving date: 23.04.2012). In order to observe the specific effect of the moon on the short selling volume, we conduct an event study while accepting full moon and new moon dates as separate events. There are 24 new moon and 25 full moon dates. The event date, i.e. the new

moon date and the full moon date, is considered 0. Previous dates are shown as -3, -2 and -1; while later dates are nominated as 1, 2, 3. The same format is used for estimation period as well. Next, we determine the event and estimation windows. Yuan, Zheng, and Zhu, (2006) take different event periods for their analysis, such as 15 day event window and 7 day event window. However, in 15 – day event window, we would have only full moon and new moon dates. In this 0 – 1 setting, the estimation window and the event window would totally coincide. In addition, Keef and Khaled (2011) point out that 7 – day event window provides greater precision in statistical analysis. As a result, 7 – day event and estimation periods are chosen for the event study methodology.

In order to show the behavioral bias on short selling decisions, we investigate the changes in trading volume of each share. Here, if a share has more than one short selling order during the day, we take an average of these trades, so we acquire an average trading volume for every share. Additionally, to avoid the non-normality in the data, following Chae (2005), we apply the log transformation and compute in the same vein the following turnover:

$$\text{Log Turnover}(LT_{i,t}) = \log(\text{Trading Volume}_{i,t} / \text{Number of Shares Outstanding}_{i,t}) \quad (1)$$

Next, the abnormal turnover is computed by using the mean of estimation period as the normal turnover rate:

$$\text{Abnormal Turnover}(AT_{i,t}) = LT_{i,t} - \bar{LT} \quad \text{where} \quad \bar{LT} = \sum_{t=-4}^{-11} LT_{i,t} \quad (2)$$

Next, we construct the following null hypotheses:

$H_{01}$ : There is no impact of new moon on short selling trading volume

$H_{02}$ : There is no impact of full moon on short selling trading volume

Following both the psychology and behavioral finance literature (for instance, higher suicidal tendency or homicide rates around full moon as in Garzino (1982), and the depressed impact of full moon as in Yuan, Zheng, and Zhu (2006)), we expect to observe an increasing effect on the short sell decisions around the full moon. On the other hand, we do not expect to see a lunar effect on new moon days.

## FINDINGS

This paper tests the effect of lunar cycle on individual short selling decisions. In this vein, first we compare the short selling means around new moon and full moon days by paired t test and Hotelling T test. For the t test, the normality of the data is checked by Shapiro – Wilks test and no indication of non-normality is found due to the log transformation. The results of these tests show that while null hypotheses of mean difference is less than 0 and equal to zero is rejected at 1% confidence level (0.0000 p-values for both of them); the hypothesis demonstrating that mean difference is higher than 0 cannot be rejected at any levels (p - value of 1.0000). From this table, one may conclude that the difference of means is not equal to zero at 1% level; hence the short selling decisions on different cycles of the moon are not equal. Further, we compare the mean daily returns as in Dichev and Janes (2003) by using Hotelling's T test. The findings show that the vector of means is not equal to zero (with an F test statistic of 4459054.5, and the probability of 0.0000), supporting the previous t test results. Put differently, the trading behavior of short selling is not the same in new moon and full moon periods.

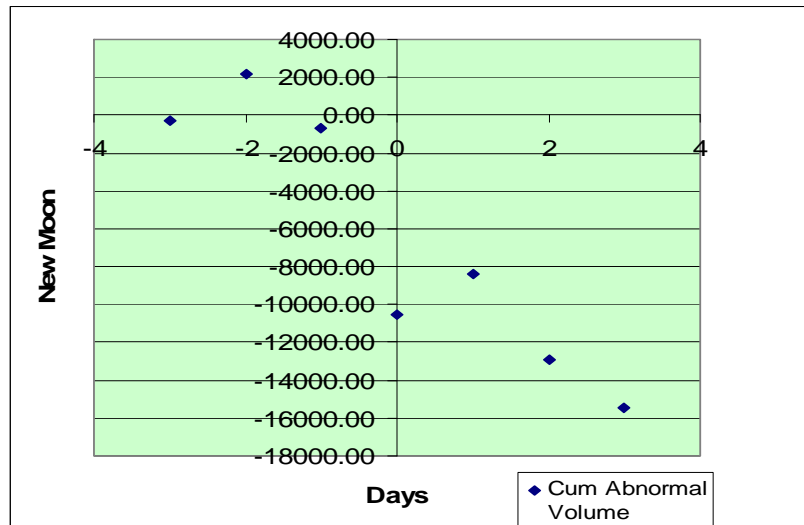
To analyze this issue deeper, an event study methodology is applied according to the new moon and full moon dates. Both the abnormal and cumulative abnormal trading volume for short sales is calculated with their significance values. Student's t test is employed for the significance. Following results are obtained:

**Table 1. Abnormal and Cumulative Abnormal Trading Values during New Moon.**

New Moon Days	Abnormal Volume	t stat	Cum Abnormal Volume	t stat
-3	-287.7729	0.45126184	-287.77	0.909897
-2	2422.071	1.08709559	2134.30	1.259418
-1	-2836.317	-0.1467248	-702.02	0.850118
0	-9859.313	-1.7945901	-10561.33	-0.57265
1	2196.244	1.03410787	-8365.09	-0.25571
2	-4527.558	-0.543555	-12892.65	-0.90907
3	-2584.315	-0.0875954	-15476.96	-1.282

From the table above, one may observe that both the abnormal trading volume and the cumulative abnormal trading volume for short sales are not statistically significantly different from zero around the new moon. The pattern of this event – window cumulative abnormal volume is still important, and can be found in the Figure 1.

**Figure 1. Cumulative Abnormal Volume around New Moon**



Although there is no statistical significance, one can observe from the distribution that pre – event observations are closer than the ones in the post – event part. In an efficient market, one would expect to see a totally even distribution of cumulative values. Nevertheless, these findings conclude the first null hypothesis indicating no evidence of new moon on short selling decisions, which is in the same line along our prior expectations.

The full moon event period, however, has the abnormal volume in the Table 2 presented below.

**Table 2. Abnormal and Cumulative Abnormal Trading Values during Full Moon**

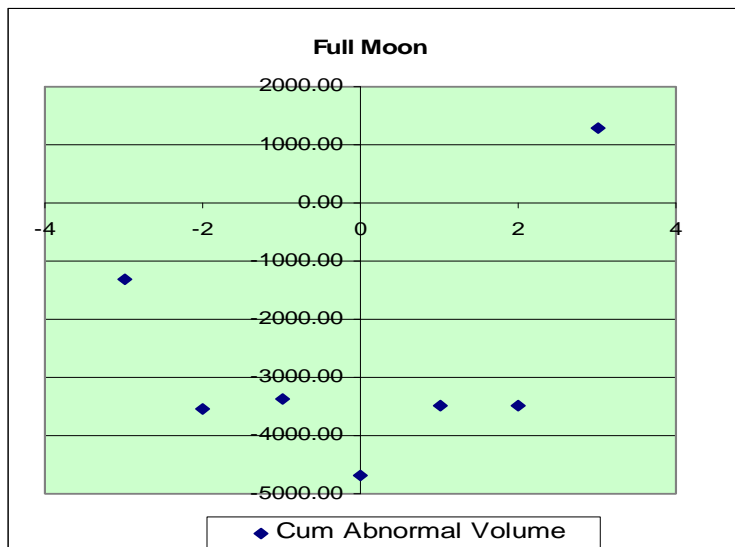
Full Moon Days	Abnormal Volume	t stat	Cum Abnormal Volume	t stat
-3	-1315.886	-0.645492	-1315.89	0.667622971
-2	-2234.515	-1.040638	-3550.40	-0.44548072
-1	186.9391	0.000944	-3363.46	-0.35235867
0	-1318.713	-0.646708	-4682.17	-1.00926378
1	1185.792	0.4305979	-3496.38	-0.41857208
2	18.67569	-0.071434	-3477.71	-0.40926895
3	4770.918	1.97273	1293.21	1.967321232

Again, one cannot find statistical significance in the abnormal and cumulative abnormal trading volume of short sales except the third day after the full moon. In other words, we fail to reject the second null hypothesis stating that full moon does not influence the pessimism of individual traders. However, the negative pattern in the cumulative abnormal volume is easily observable. This pattern is clearer in the Figure 2. Around the full moon day, the short selling trading volume is negative and has a peak at the day 0.

Even though the statistical evidence demonstrates no impact of full moon on short selling decisions, this is an interesting result because the prior expectations were in the positive direction for the trading volume. That is, one might expect to see an increasing pattern in the short selling trading volume if full moon really increases the negative thoughts, so the pessimism of individual investors. Instead, investors seem to prefer not to short sell their stocks around the full moon. Based on the findings from two different event studies, one may conclude that we cannot present evidence for the negative effect of full moon on individual decision making process. The

findings indicating predictability, in this sense, are very weak, so one cannot infer inefficiency in the financial markets.

**Figure 2. Cumulative Abnormal Volume around Full Moon**



## CONCLUSION

This study aims to provide new evidence on the mood effects in individual financial decisions by looking at the lunar cycle effect on short selling trading volume. Since short selling activity is considered a proxy for individual pessimism, investigating different lunar cycles presents support if the personal mood really triggers irrational behavior in financial markets. This study also contributes to the knowledge of efficiency degree of Istanbul Stock Exchange because the existence of such an effect would bring predictability, so support inefficiency. Different from the previous literature, we take the short selling trading volume separately as well as we use a different type of methodology.

The basic findings of this paper are as follows: First, we show that short selling trading volume is statistically significantly different in new moon periods than full moon periods. Second, we conduct two event studies and find that there is no statistical significance in cumulative abnormal trading volume. Put differently, the null hypotheses of no impact of new moon and full moon on short selling decisions cannot be rejected. While this conclusion confirms the prior expectations for the trading behavior around the new moon, it conflicts with the anticipation of negative influence of full moon. Interestingly, examining the cumulative abnormal volume graph for full moon points out that short selling trading volume is negative around this period. That is, full moon does not increase pessimism; instead individuals prefer to decrease their short selling trades.

Last but not least, the evidence for the predictability of the direction of financial decisions is very weak. No support for market inefficiency can be found. Similarly, we cannot confirm the psychological hypothesis of depressing full moon effect on human mood. Our findings can be considered a result of one of two. Either full moon has no depressing effect on human mood which is reflected in financial decisions as well or individual financial decision making process is not influenced by irrationalities. Hence, there is no need for the extra caution while trading around these cycles. This conclusion is of importance for fund managers.

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# **A NEWLY EMERGING ECONOMIC WORLD ORDER AND ITS IMPLICATIONS FOR GLOBAL BUSINESS: THE CHALLENGES TO FREE MARKET ORIENTED ENTERPRISES FROM THE EVER GREATER ROLE OF GOVERNMENT AND STATE OWNED CORPORATIONS**

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## **ABSTRACT**

*This paper addresses the issue that given that the countries whose economic systems can be characterized as being state or government capitalist systems and include the majority of the world's population, are already and are expected to continue to be the sources of most of the world's economic growth and will in the near or foreseeable future also represent the world's largest markets, a fundamental question is: Does state or government capitalism threaten globalization and the stability and expansion of free markets?*

## **DISCUSSION**

The successful re-emergence and broad scale expansion of the state or government capitalist system in an increasing number of countries, which hold the majority of the world population, could represent a major threat to the continued success and, potentially, even to the survival of the currently still dominant global companies from the democratic, free market capitalist countries.

At the same time, these changes are also increasing dramatically the size of the markets for practically all goods and services and thus are creating huge new growth opportunities for global companies able to adapt their business strategies and their implementations to compete successfully in both free market and state capitalist systems.

Political economics will have to guide the role that governments will play and which companies will have to integrate into their strategies and their implementation processes in both the free market capitalist countries as well as in state or government capitalist systems in order to be successful. Individual companies will have to determine whether they can develop a business strategy which is suitable for all the different types of political systems where they conduct business or, as it is most likely, they need to develop a multi faceted strategy adaptable to the different political – economic systems of the countries in which they are doing business.

The objective of these strategies is both offensive and defensive. The offensive posture aims at gaining new business by taking advantage of the explosively growing opportunities within the rapidly growing emerging markets with a state or government capitalist system. The defensive posture enables companies, especially those coming from free market Western capitalist systems to defend their already existing or newly developed businesses locally and globally from businesses coming from and benefiting from the overt or covert financial, legal, regulatory and business ethical support from state or government capitalist countries.



We have identified and made reference to a relatively new political-economic system which is developing in two forms that may be referred to as government capitalism and state capitalism.

Government capitalism represents the interests of a particular government and their chosen protégés while state capitalism represents the broader interests of the state or country primarily from an economic point of view but it also factors in the political philosophies and interests of the government. As a result, state and government (or government agency) owned or controlled companies become tools and weapons of government self-preservation. The degree to which this happens depends on the extent of control a government has over companies which tends to vary by industry and from company to company.

One of the key factors that can make doing business so much more complex and more risky in a country with a state or government capitalist system versus a free market capitalist system is the difference between the way local laws and regulations work. In a free market capitalist system the “rule of law” applies. This simply means that laws, rules and regulations are explicit, written and available to all, that is, they are transparent and apply to all equally, be they government entities or individual companies and regardless of size. Under a government or state capitalist system the rule of law is replaced by the “rule of government”. There is significantly less transparency under such a system (though the degree of transparency can vary significantly from country to country or even from one government to another within the same country), the laws and regulations and how they are applied can change at any time, without advanced notice and according to the wishes and interests of a particular government at any point in time or according to any specific situation.

In differentiating between government versus state capitalism, it is found that global or foreign companies have to recognize the implications of doing business with governments (or government agencies) versus state owned or controlled companies. Challenges concerning doing business in such countries are more accurately described as doing business with a particular country’s government (e.g. technology sharing, large capital investments) and, therefore, supporting that particular government and to a certain extent depending on that government.

Given that the countries whose economic systems can be characterized as being state or government capitalist systems and include the majority of the world’s population, are already and are expected to continue to be the sources of most of the world’s economic growth and will in the near or foreseeable future also represent the world’s largest markets, a fundamental question is: Does state or government capitalism threaten globalization and the stability and expansion of free markets?

Another key question is whether the expansion or rather the dominance, at least from an economic/business importance point of view, of the state or government capitalist systems threaten the very existence of the free market capitalist system as we know it or, at least, will it require some significant changes in the economic and business role the government/state will have to play in order to “re – level” the global playing field and protect the competitiveness of home companies. In other words, will the governments of countries with a free market capitalist system have to move towards a state or government capitalist system by taking on a much more active role in the business conduct of home as well as foreign companies and, conversely, will home companies have to accept and even seek this increased government involvement in order to protect their continued competitiveness at home and globally.

This project aims to create a better and more specific understanding of the threats and opportunities facing global companies from free market economies when they compete in state or government capitalist systems. Most importantly, it also attempts to develop strategies and tactics that could help companies as well as governments from countries that are part of the free market capitalist system to compete successfully and to assist them to take advantage of the growth opportunities in countries which have or are in the process of adopting a government or state capitalist system.

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# CHANGES IN ENTREPRENEURIAL INTENTIONS OF UNIVERSITY AND VOCATIONAL SCHOOL STUDENTS

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## ABSTRACT

*The aim of this research paper is to present results using the Entre Intentio instrument for tracking the changes in entrepreneurial intentions from 1<sup>st</sup> to 2<sup>nd</sup> study year of bachelor level students in universities of applied sciences and students in vocational schools in Finland. The collected data enables longitudinal follow-up of the same individuals. The objectives set for this study are threefold: (1) to analyse change in entrepreneurial intentions and its antecedents from 1st year to 2th year of study; and (2) to compare the change between university students and vocational school students in different study fields, and (3) to examine the effect of various factors on the change in entrepreneurial intentions including gender, age, participation in entrepreneurship courses and subjective impact of studies on entrepreneurial abilities.*

## AIM OF THE PAPER

The aim of this research paper is to present results using the Entre Intentio instrument for tracking the changes in entrepreneurial intentions from 1<sup>st</sup> to 2<sup>nd</sup> study year of bachelor level students in universities of applied sciences and students in vocational schools in Finland. The collected data enables longitudinal follow-up of the same individuals. The objectives set for this study are threefold: (1) to analyse change in entrepreneurial intentions and its antecedents from 1st year to 2nd year of study; (2) to compare the change in intentions between university students and vocational school students in different study fields, and (3) to examine the effect of various factors on the change in entrepreneurial intentions including gender, age, participation in entrepreneurship courses and subjective impact of studies on entrepreneurial abilities.

## REVIEW OF LITERATURE AND THEORETICAL MODEL

In order to study the relative importance of intention antecedents, we will adopt an existing intention model, namely the Theory of Planned Behavior by Ajzen (1991), which has become one of the most widely used psychological theories to explain and predict human behavior (Kolvereid, 1996; Tkachev and Kolvereid, 1999). The Theory of Planned Behavior (TPB) suggests that intention is the immediate antecedent of behaviour and, thus, the stronger the intention to engage in specific behaviour, the more likely should be its actual performance (Ajzen, 1991; see also e.g. Kautonen et al., 2013). The core of the TPB is the idea that intentions have three conceptually independent determinants, namely attitude towards the behavior, subjective norm and perceived behavioral control (Ajzen, 1991, p. 188).

*Attitude* towards the behavior refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question. The more positive an individual's perception is regarding the outcome of starting a business (see e.g. Krueger et al., 2000; Segal et al., 2005; Pruett et al., 2009) the more

favourable their attitude towards that behaviour should be and, consequently, the stronger the individual's intention to go ahead and start a business should be. *Subjective norm* refers to the perceived social pressure to perform or not to perform that behavior. It is based on beliefs concerning whether important referent individuals or groups approve or disapprove of an individual establishing a business, and to what extent this approval or disapproval matters to the individual (Ajzen, 1991, p. 195). Generally speaking, the more the opinion of a particular referent group or individual matters to the individual and the more encouraging the individual thinks it is of enterprising activity, the stronger should be the individual's intention to start a business. Cialdini and Trost (1998) suggested that social norms have the greatest impact when conditions are uncertain. Pruett et al. (2009) operationalized social norms as family experience and support in addition to knowledge of others who had started businesses. *Perceived behavioral control* refers to the perceived ease or difficulty of performing the behavior. It is based on beliefs regarding the presence or absence of requisite resources and opportunities for performing a given behaviour (see Bandura et al., 1980; Swan et al., 2007). In general, the greater this perceived behavioural control, the stronger the individual's intention to start up in business should be. According to Ajzen (1991) this is most compatible with Bandura's (1982) concept of perceived self-efficacy.

According to Ajzen and Fishbein (2004), the three theoretical antecedents should be sufficient to predict intentions, but only one or two may be necessary in any given application. In other words, the theory of planned behavior posits that the relative importance of the three factors can vary from one context to another. In most of the studies the best predictor of intentions has been *perceived behavioral control* (Boyd and Vozikis, 1994; Krueger et al., 2000; Autio et al., 2001; Melin, 2001; Henley, 2005; Segal et al., 2005; Sequeira et al., 2007; Wilson et al., 2007; van Gelderen et al., 2008; Prodan and Drnovsek, 2010; Chen and He, 2011; Drost and McGuire, 2011; Lee et al., 2011; Lope Pihie et al., 2011). The second common predictor has been *attitudes* (Zampetakis et al., 2009; Moi et al., 2011) followed by *subjective norm* (Aizzat et al., 2009; Lope et al., 2009; Engle et al., 2010; Siu and Lo, 2011). Ajzen's (1991) model has been widely used in entrepreneurial research, and almost without exceptions amongst student populations (exceptions to this tendency include, for example Tornikoski & Kautonen, 2009). All in all, much more empirical studies on entrepreneurial intentions can be found among university students than among vocational students (e.g. Melin 2001; Wilson et al. 2007; Kickul, et al. 2008; Wilson et al. 2009; Lope Pihie & Hassan 2009; Lope Pihie et al. 2011). Although there are very few previous longitudinal studies of changes in entrepreneurial intentions, we claim that changes in perceived behavioral control, in attitudes, and in subjective norm are the key ingredients to understand the development of entrepreneurial intentions over time. As such, our theoretical model will reflect this emphasis on changes in these central antecedents of intention formation and development.

## METHODOLOGY

The instrument used in the study has been developed and piloted in Finland but also tested with a Spanish sample (Varamäki et al, forthcoming). The scales are largely based on Kolvereid (1996). The data was collected using a self-administered questionnaire in fall 2010 and 2011 in seven different universities of applied sciences with students representing seven different study fields, and in two different vocational schools with students representing seven different study fields. For the follow-up of the same individuals from 1<sup>st</sup> to 2<sup>nd</sup> year, 516 responses were received from the universities of applied sciences and 442 responses from the vocational schools.

### Control variables

*Gender.* Since research has shown that women have less desire to start new businesses than men (e.g. Crant, 1996; Kourislky & Walstad, 1998; Wilson et al, 2004; Sequeira et al. 2007; Linan, & Chen, 2009; cf. Pruett et al., 2009; Yordanova & Tarrazon, 2010; Lee et al., 2011), gender is going to be controlled as part of the statistical analysis. Gender was included in the analysis as a dummy variable with the value one for male and zero otherwise.

*Age.* Research has also demonstrated that age may affect to entrepreneurial intentions. On one other hand it has been found positive correlation between age and intentions (e.g. Lee ym 2011; Sequeira et al. 2007) but on the other hand also negative correlation (e.g. Linan & Chen 2009). Moreover, in some studies age has not been

any significant variable (e.g. Sandhu et al. 2011; Siu & Lo 2011; Linan, & Chen 2009). Age was included in the analysis as respondent's age in year 2010 (the first study year).

*Participation in entrepreneurship courses.* Research is ambivalent on the impact of education on entrepreneurial intentions. Some studies suggest that higher education in itself reduces the likelihood of entrepreneurship (Henley, 2007; Pihkala, 2008; Wu and Wu, 2008; Nabi et al., 2010). Entrepreneurship education is of particular interest. Studies show positive impacts of entrepreneurship education on intentions, attitudes and self-efficacy (e.g. Zhao et al., 2005; Jones et al., 2008; Wilson et al., 2009), but also negative impacts have been reported (e.g. Pihkala and Miettinen, 2004; Oosterbek et al., 2010). Packham et al. (2010) found an entrepreneurship course to have positive attitudinal effects for Polish and French students but negative for German students. We include the variable "participation in the entrepreneurship courses" for the analysis as a dummy variable with the value one for those respondents who had participated in entrepreneurship courses during the studies and zero otherwise.

*Subjective impact of studies on entrepreneurial abilities.* Entrepreneurial skills are included in the generic competences for Bachelors graduating from Finnish Universities of Applied Sciences, according to the national framework for qualifications. Hence entrepreneurial skills should be incorporated in all Bachelor curricula, even those that do not specifically include entrepreneurship education. Intentions, however, are primarily influenced by a person's subjective appraisal of whether he or she has relevant skills. For examining the subjective impact of studies on entrepreneurial abilities we included the variables "*My studies so far have given me tools to start my own business*" and "*My Degree Programme encourages an entrepreneur-like way of action*" for the analysis. The variables were measured on a 7-point likert-scale.

## Respondents

The mean age of the *university students* was 22 in year 2010. 55 percent of the respondents from the universities were female. 3 percent of the students had an earlier experience of establishing an own business at the moment when they started their studies at the university. 12 percent of university students' mother has worked as an entrepreneur while 31 percent of university students' father has worked as an entrepreneur. 51 percent of the university students had taken part in entrepreneurship courses during their first year of the study. The mean age of the *vocational students* was 17 in year 2010. 50 percent of the respondents from the vocational school were female. 2 percent of the students had an earlier experience of establishing an own business at the moment when they started their studies. 12 percent of vocational school students' mother has worked as an entrepreneur and 26 percent of vocational school students' father has worked as an entrepreneur. 32 percent of the vocational school students had taken part in entrepreneurship courses during their first year of the study, i.e. much less than university students.

## ANALYSIS AND RESULTS

Table 2 presents the results of the longitudinal follow-up of the same university and vocational school students from 1<sup>st</sup> to 2<sup>nd</sup> study year. Among university students the entrepreneurial intentions, and all the antecedents of it, i.e. subjective norm, entrepreneurial attitudes and perceived behavioral control decreased from the 1<sup>st</sup> to 2<sup>nd</sup> study year among the total sample. The changes in intentions and attitudes were also statistically significant ( $p \leq 0.01$ ). There are some differences between the study fields. In Natural Resources the intentions are higher than in other study fields. In this study field intentions also increase during the studies although the difference between the first and second study year is not statistically significant. In Social Services and Health, intentions and attitudes decrease statistically significantly (intention  $p \leq 0.001$ , attitudes  $p \leq 0.01$ ). Also in Technology, attitudes decrease significantly ( $p \leq 0.001$ ).

Also among vocational school students the Entrepreneurial intentions decreased from the 1<sup>st</sup> to 2<sup>nd</sup> study year among the respondents ( $p \leq 0.001$ ). Moreover, entrepreneurial attitudes and perceived behavioral control also decreased ( $p \leq 0.05$ ). Unlike among university sample subjective norm was a little less negative at second year compared to first year among vocational school students. There are some differences between the study fields. Likewise among university students, the intentions in Natural Resources are higher than in other study fields

among vocational students. In Technology, intentions decrease significantly ( $p \leq 0.001$ ). Also the perceived behavioral control decreased among Technology students ( $p \leq 0.05$ ).

We also tested the differences between university and vocational students. There are no scientifically significant differences between the students in entrepreneurial intentions, subjective norm, attitudes and perceived behavioral control in 1<sup>st</sup> or 2<sup>nd</sup> year among the whole sample. Also there are no scientifically significant differences between university and vocational students in the changes in intention, changes in subjective norm, changes in attitudes or changes in perceived behavioral control. However, when comparing different study fields, there are some differences between the university and vocational students. In the field of Business, perceived behavioral control in 2<sup>nd</sup> year is a little higher among the university business students than vocational business students ( $p \leq 0.05$ ). Also in the field of Culture there is a difference in intentions in the 2<sup>nd</sup> study year. Vocational Culture students have higher intentions than university Culture students ( $p \leq 0.05$ ). Also among Culture students, the change in attitudes is more negative among vocational students than among university students. In the field of Natural resources, perceived behavioral control is higher among vocational students in the first study year ( $p \leq 0.05$ ). Also attitudes are higher in the first study year among vocational Natural resources students than among university Natural resources students ( $p \leq 0.001$ ). There are also several differences between university and vocational students in the field of Social services and health. Intentions are higher among vocational students than among university students both in the first ( $p \leq 0.05$ ) and the second year of studies ( $p \leq 0.01$ ). Attitudes in the 2<sup>nd</sup> year are also higher among vocational students ( $p \leq 0.001$ ) in the field of Social services and health. The change in subjective norm is more positive among vocational students ( $p \leq 0.01$ ).

**Table 2: Results of the follow-up of the same students from 1<sup>st</sup> to 2<sup>nd</sup> study year**

Variable / Field of study	Entrepreneurial intentions		Subjective norm*		Entrepreneurial attitudes		Perceived behavioural control	
	University	Vocational	University	Vocational	University	Vocational	University	Vocational
Total sample N=516/440								
1 <sup>st</sup> year	3.4 (1.15)	3.5 (1.14)	-2.3 (15.58)	-2.7 (16.22)	4.9 (0.87)	4.9 (0.90)	4.1 (1.00)	4.0 (0.94)
2 <sup>nd</sup> year	3.3 (1.22)	3.3 (1.12)	-3.6 (15.22)	-2.3 (14.60)	4.8 (0.89)	4.8 (0.99)	4.0 (1.02)	3.9 (0.94)
Sig.	**	***	-	-	**	*	-	*
Business N=120/94								
1 <sup>st</sup> year	3.5 (1.09)	3.3 (1.11)	-1.1 (15.81)	0.6 (16.44)	5.0 (0.84)	4.9 (0.84)	4.2 (0.91)	4.0 (0.91)
2 <sup>nd</sup> year	3.4 (1.09)	3.2 (1.19)	-1.7 (14.83)	1.1 (16.20)	5.0 (0.81)	4.8 (1.04)	4.2 (0.96)	3.9 (1.06)
Sig.	-	-	-	-	-	-	-	-
Culture N=37/15								
1 <sup>st</sup> year	2.9 (1.13)	3.5 (1.13)	-0.6 (13.73)	6.2 (15.85)	4.4 (1.04)	4.7 (0.68)	3.6 (1.09)	3.9 (0.73)
2 <sup>nd</sup> year	2.8 (1.14)	3.6 (1.48)	-3.2 (15.10)	-7.0 (13.08)	4.4 (1.00)	4.2 (1.25)	3.4 (1.21)	4.1 (1.02)
Prob.	-	-	-	-	-	-	-	-
Natural Resources N=62/12								
1 <sup>st</sup> year	4.2 (1.44)	4.8 (1.16)	-2.3 (15.62)	2.0 (22.95)	4.8 (0.80)	5.7 (0.89)	4.3 (1.07)	5.1 (1.05)
2 <sup>nd</sup> year	4.3 (1.47)	4.7 (1.03)	-3.4 (17.05)	-6.5 (20.52)	5.0 (0.88)	5.3 (0.83)	4.5 (1.10)	5.0 (1.01)
Sig.	-	-	-	-	-	-	-	-
Social Serv. & Health N=122/35								
1 <sup>st</sup> year	2.9 (0.91)	3.5 (1.49)	-1.4 (14.16)	-4.2 (18.34)	4.8 (0.86)	5.1 (0.89)	3.8 (1.01)	4.2 (1.13)
2 <sup>nd</sup> year	2.7 (0.96)	3.4 (1.21)	-3.5 (13.43)	1.6 (18.76)	4.5 (0.85)	5.1 (0.74)	3.7 (0.91)	3.9 (0.87)
Sig.	***	-	-	-	**	-	-	-
Technology N=143/204								
1 <sup>st</sup> year	3.4 (1.03)	3.6 (1.03)	-5.4 (16.87)	-4.5 (15.75)	4.9 (0.86)	4.8 (0.87)	4.2 (0.99)	4.0 (0.91)
2 <sup>nd</sup> year	3.3 (1.08)	3.3 (1.01)	-7.1 (14.62)	-3.8 (12.99)	4.7 (0.88)	4.7 (0.99)	4.1 (0.97)	3.9 (0.88)
Sig.	-	***	-	-	***	-	-	*
Tourism and Catering								

N=26/69								4.0 (0.87)
1 <sup>st</sup> year	3.6 (1.16)	3.4 (1.13)	2.0 (15.72)	-1.2 (15.69)	5.2 (0.92)	4.8 (1.05)	4.3 (0.75)	3.9 (0.86)
2 <sup>nd</sup> year	3.6 (1.36)	3.2 (1.06)	4.1 (20.32)	-2.5 (13.49)	5.1 (0.82)	4.7 (0.93)	4.3 (0.83)	-
Sig.	-	-	-	-	-	-	-	-

We were also interested in students who had a high initial level of intention in their 1<sup>st</sup> study year. We decided to classify someone as having a high level of intention when he/she scored over 4 and a low level of intention when the score was 4 or below (scale 1-7). Rather than using a median of intentions, we used this approach because we wanted to find individuals with high intentions in absolute sense – not just relative to other respondents. This approach also allows us to identify the number of individuals who experienced either a positive or negative change in their entrepreneurial intentions and the magnitude of these changes. The level of intentions of those students with a high initial level of intention fell more than those students with a low initial level of intention both within the university students and within vocational students. There are more students with a negative change in intentions than with a positive change in intentions.

The results of the linear regression analysis are presented in Table 3. Results indicate that the explained variance of changes in intentions both in universities of applied sciences and vocational schools are more or less similar to each other. The R<sup>2</sup> is a little higher with the vocational students. The most important contributors of the changes in intentions in both institutions seem to be changes in attitudes and perceived behavioral control. In universities of applied sciences change in subjective norm also explained the change in intentions while in vocational schools change in subjective norm didn't have any role. With the university students, participation in entrepreneurship courses didn't directly explain change in intentions but it correlated with the item "*My studies so far have given me tools to start my own business*". This item, in turn, had a role in regression model in explaining the change in intentions. With the vocational students, the item "*My Degree Programme encourages an entrepreneur-like way of action*" had also a role in explaining the change in intentions.

**Table 3: Results of the linear regression analysis on the change in intentions**

	<b>Model 1 University</b>	<b>Model 2 University</b>	<b>Model 1 Vocational</b>	<b>Model 2 Vocational</b>
<b>Control variables</b>				
Gender	-0.02	-0.03	0.07	0.07
Age (2010)	0.06	0.08	0.03	0.02
Participation in entrepreneurship courses	0.01	-0.02	-0.06	-0.03
My studies so far have given me tools to start my own business	0.18 **	0.14 *	0.13	0.04
My Degree Programme encourages an entrepreneur-like way of action	0.02	-0.05	0.17 *	0.13 *
<b>Independent variables</b>				
Change in attitudes		0.31 ***		0.31 ***
Change in subjective norm		0.14 ***		-0.00
Change in perceived behavioral control		0.18***		0.26 ***
<b>Model fit statistics</b>				
Adjusted R <sup>2</sup>	0.03	0.19	0.05	0.25
F-statistics	3.603 *	6.751 ***	5.133 ***	16.509***
F change		34.683 ***		33.259***

+ p< .10. \* p< .05. \*\* p< .01. \*\*\* p<.001  
Standardized coefficients reported.

## IMPLICATIONS

In an effort to understand how entrepreneurial potential is developed among young people, and more particularly why some individuals develop entrepreneurial intentions and others not, we set to investigate in this study the formation of entrepreneurial intentions from 1<sup>st</sup> to 2<sup>nd</sup> study year among a sample of Finnish higher education and vocational school students. The results are not very promising from the point of view of formation of entrepreneurial intention either in higher education or in vocational education. Our results suggest that the

students in 1<sup>st</sup> year seem to show a greater self-confidence in starting businesses than they do in 2<sup>nd</sup> year. However, it isn't untypical for people to overrate their intention to perform a distant action. Hence, a 1<sup>st</sup> year student may overrate his intent to start a business after graduation, whereas in the 2<sup>nd</sup> year, closer to the actual event, the student is more realistic about his intentions. Closer analysis indicated that intentions decreased most among students with high initial intentions and increased among a group of those with low initial intentions. These are interesting observations because they seem to indicate that education programs have a tendency to equalize the level entrepreneurial intentions of young people over time, regardless of the starting point of each individual. As if there was some kind of equilibrium point towards which entrepreneurial intentions gear over time in education programs. It is encouraging to note that attitudes and perceived behavioral control – both factors at least theoretically within the scope of influence of education programs – contribute to change in entrepreneurial intentions. This signifies that in order to increase the entrepreneurial potential, we should focus on improving the knowledge base of young people (to change their attitudes) and put the young people into pedagogical situations where they can develop their skills and competencies in entrepreneurship related tasks (to improve their perceived behavior control).

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# **PUERTO RICO AND THE UPCOMING ELECTIONS/STATUS REFERENDUM: REAL CHANGE OR JUST MORE OF THE SAME AND ITS IMPACT ON REGIONAL AND GLOBAL TRADE**

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## **ABSTRACT**

*The island of Puerto Rico has demonstrated classic symptoms of dependency since the Europeans colonized in the early 1500s. This paper suggests, that even after American occupation since the late 19<sup>th</sup> century, little has really been done to change that dependency, which has led to a continuous “boom-bust” economy. The paper concludes, however, that 2012 potentially poses a possibility for change. There will be fresh insular elections, and perhaps more urgently, a plebiscite, which could conceivably lead to changes regarding the island's political and economic status and future.*

## **INTRODUCTION**

For over five hundred years, since the first Europeans set foot on the island of Puerto Rico, the land has been caught in the web of dependency, on the periphery, concerning the process of development. The main contention of this study is that the island is jammed, to date and seemingly irrevocably trapped, in what may be described as a case of classical dependency theory, clearly an illustration of the theories presented by Hans Singer, Raul Prebisch, and Andre Gunder Frank, as well as by the Americans Paul Alexander Baran and Paul Malor Sweezy. Despite endless efforts at so-called reforms, this small island “on the periphery” of international politics and the international economy, remains confined by the fact that both its politics and its economics are largely controlled by outside forces, particularly those exerted by the United States and by the international economic system at-large.

Virtually from its settlement by the Europeans, who basically replaced the earlier Taino subgroup of the Arawak indigenous Americans in the early 1500s, the island has been subjected to what has often been described as a “boom-bust” economy. It is a cycle which thrives on a particular economic mono-culture for a relatively short period of time, until it is then over-taken by competitors or is otherwise lost and is replaced by the next scheme, which in turn experiences limited success for a short period. Meanwhile, the island economy continues to muddle along on various endeavors that may keep it “afloat” in a manner of speaking, but which never really solve basic economic problems or eliminate the pervasive underemployment and unemployment, which remain the basis of widespread poverty throughout the land.

There is little doubt that there is a significant need for radical change. Perhaps this is a propitious moment, because 2012 represents significant national elections for the U.S. Presidency, the U.S. House of Representatives, and the U.S. Senate; moreover, the year also represents insular-wide elections for governor and for both houses of the island legislature. Truth be told, though, there have been elections every four years for all of the 20<sup>th</sup> century and the first decade of the 21<sup>st</sup>, and there has been relatively little to show in terms of the lessening or elimination of that aforementioned underemployment and unemployment and the widespread resulting poverty, with all the social as well as economic problems that result from such conditions. Today, the “boom-bust” economy appears to continue unabated. What is it that might now make a difference?

## A BRIEF BACKGROUND

The “boom-bust” economy referenced above continued throughout the Spanish colonial period, roughly the 1500s through the 1800s, and then continued into the American occupation period. Initially, the Americans took Puerto Rico as a colony, giving few civil rights (as the U.S. Supreme court ruled “the Constitution does not follow the flag,” as ruled in the *Insular Cases*, e.g., *Downes v. Bidwell*). Furthermore, there was very limited self-government, no grant of U.S. citizenship until 1917 (Jones-Shafroth Act), a quite controversial allowance in-and-of itself, and no elected governor until the elections of 1948. With these elections, a new party emerged, *Partido Popular Democratico*, headed by don Luis Munoz Marin (complete name don Jose Luis Alberto Luis Marin), whose goal was to remedy the “boom-bust” cycle with the assistance of the Democratic administration of President Harry S Truman, who like his predecessor, the late Franklin Delano Roosevelt, had turned a sympathetic ear towards the problems of the island. Roosevelt had even dispatched one of his “brain trust” members to examine the situation, an Undersecretary of Agriculture who eventually became one of the island’s most essential appointed governors, Dr. Rexford Guy Tugwell, author of the many key political and economic studies of Puerto Rico of that period.

## OPERATION BOOTSTRAP

PPD, under Munoz, and with solid support from the Puerto Rican electorate, initiated both political and economic reforms. In the belief that the public sector constituted a leading force in economic development, the Munoz administration established a program known as Operation Bootstrap. As implied, it became a self-help program that would use external funding (today referred to as direct foreign investment) principally from U.S. mainland corporations, which would establish labor-intensive operations on the island and thus reducing the drastic underemployment and unemployment, while taking advantage of opportunities open to investors, some being peculiar to the island. Among the most obvious is the fact that such investments are within the U.S. area of protection, including currency, banking, defense, and a wide variety of capital development programs which would be available through Federal grants, loans, and the like. Additionally, the island continues to benefit from all previous Federal legislation, including exemption of corporate profits from all Federal taxation, as well as personal income tax exemption. There is simply no doubt that the lack of Federal taxation (both income and excise) on income made on the island and retained there was a significant incentive for mainland investors, providing they could work out the problem of not being able to repatriate those profits to the mainland. Moreover, the Puerto Rican insular government worked diligently to provide training for works such as (1) vastly improved general public education, (2) attention to the sciences and applied sciences in higher education at the Universidad de Puerto Rico on its various campuses, and (3) establishing specific industrial training programs, especially in semi-skilled textile and similar industries and significant infrastructural improvements, including vast electrification, roads, ports, improved airports, and the like. They also took advantage of the new “containerization” processes in shipping, which enabled much less hand-labor and drastically reduced shipping costs. It also involved the use of private shipping lines and later the nationalization of some shipping lines. It was accompanied by the construction of huge container ports, allowing articulated lorry trailers to be moved from rig to port to ship to port to rig with minimum effort and labor. Unfortunately, this situation did not help employment on the docks, but it did severely cut overall shipping costs. (It might be noted that this development was essential, as ships between Puerto Rico and the U.S. mainland are considered travelling between domestic ports and are therefore fully subject to U.S. Coast Guard regulations, usually requiring far more expensive ship maintenance than those registered in some foreign countries).

Thus, the insular government, under don Luis and his successors, sought to attract considerable investment from the U.S. mainland and established factories throughout much of the island, taking significant strides in the elimination of unemployment and underemployment, which was traditionally more or less on a par with that of other developing nations, running as high as 50% or more of the labor force (depending, of course, on how the particular nation calculated such un/underemployment – for example, those residents chronically without work and who out of despair had stopped registering for such employment were often not included in the calculations because they were no longer “actively seeking” positions in the workforce). A final note might be made of extensive reform concerning island taxation. Many benefits were established to assist the initial investor, particularly graduated tax relief, in the sense that there would be substantial waiver of taxation on

business for a number of years, often exceeding a decade, with only gradual application of the various taxes as the business became more established. Additional incentives were offered to those who established themselves in rural and more depressed areas. All this was strengthened by the fact that Puerto Rico also established its own minimum wage, which during the early years of Commonwealth, steadily rose but was maintained below the Federal minimum wage for the mainland.

Furthermore, the government made great strides to improve external tourism by seeking U.S. mainlanders and inviting U.S. hotel chains to establish properties on the island (which at one point in time included five Hiltons), by constructing a major convention center in the main beach area (Condado) of San Juan, by introducing casino gambling, and by improving air traffic through the modernization of what is today Aeropuerto International Luis Munoz Marin. They enhanced the area of San Juan Antigua, particularly that portion which is situated close to the harbor to encourage the prolific cruise ships that plied the Caribbean to make San Juan Antigua a port of call. The government actually established even a hotel management school to support this industry and as noted above, directed much of the island's education to subjects that would improve the economic condition of the island. It should be noted in all this time that the government also sought to pay attention to living conditions on the island, establishing programs for inexpensive housing, public health, public transportation and the like.

Without going through detailed descriptions, which we have already done in previous papers and publications, we conclude with little doubt that, at least to begin with, Operation Bootstrap was a significant success despite the extremely limited natural resources available on the island, which often necessitates importation of raw and semi-processed items prior to their completion on the island and then trans-shipment to other nations for final disposition. Initially, the programs developed under Bootstrap were greeted with considerable enthusiasm, and for some decades, the island seemed to almost flourish, with many mainland investors establishing industrial plants, particularly in the semi-skilled, intensive-labor industries, such as textiles and in tourism, aided all the more by the closing of Cuba to American tourists by the early 1960s. Literally thousands of positions of employment were created. Factories were opened throughout the island. New schemes such as Free Tax Zones [FTZs], e.g., in the Western town of Mayaguez, further assisted employment by importing semi-produced items, adding to production, especially in labor-intensive operations, and exporting the finished goods to elsewhere in the Americas. All these changes occurred without the product price being negatively impacted by U.S. tariff or excise taxation.

## **THE BOOM-BUST SYNDROME CONTINUES**

While the initial aspects of Operation Bootstrap appeared exceedingly successful, and the island was utilized by the United States as a model of self-development [*sic.*], the island economy eventually encountered serious setbacks. Local conditions came into play, not the least of which was the continuing rise of wages, including minimum wage regulations, which started to price Puerto Rican works out of the low-income intensive-labor market that now sought locations on a global basis. Consequently, the insular government developed schemes such as “twin-planting” with nations with lower wage levels, e.g., Haiti. However, that effort has been severely curtailed by the unrest and unstable conditions of that nation and by various U.S. economic endeavors with Latin America, from the North American Free Trade Association [NAFTA] to the more recent Central American Free Trade Area – Dominican Republic [CAFTA-DR] agreement, which have caused the relocation of many such industries from Puerto Rico to the nations such as Mexico and in Central America.

The Puerto Rican Economic Development Administration [EDA], or Fomento Econmico, as noted above, has sought to replace such losses by Fortune 1000 companies. Yet, while they have been attracted to the island, e.g., pharmaceuticals, automobile components, they did little to stem the under/unemployment crisis. One specific incentive was passage of Section 936 of the Internal Revenue Code in 1976. This permitted repatriation of profits earned on the island to the U.S. mainland without Federal taxation, and it was estimated to have created 100,000 direct positions of labor, with a possible doubling of the figure when including indirect positions (Economy, 2012). However, approximately two decades later, during a time of increasing Federal expenditure and debt, the provision was removed with provisions for a phase out through 2006.

These mounting setbacks have had a devastating effect on the island economy. So-called 936 companies fled the island, increasing under/unemployment and costing millions of dollars in lost local tax revenue. The Federal Reserve Bank of New York estimated in 2005 nearly 60% of children lived in poverty. The per capita income was \$12,502 (as compared with mainland \$34,586), approximately 45% of the island lived below the poverty line, and over ten *municipios* had over 60% living in poverty, while even San Juan held in excess of 30%. The Puerto Rican Development Bank announced that by the end of 2007 the island was in recession, which of course, deepened with the U.S. economic crises the following years. As the bank stated further, “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. By 2009, Banco Popular announced that “the economy of Puerto Rico continues in decline. After fourteen consecutive quarters of negative economic growth, the patterns of deterioration in economic activity suggests that the local economy is struggling in the face of serious difficulties over and above the recessionary cycle,” noting further that unemployment had risen “to levels not seen for over twenty years.” Unfortunately, one answer traditionally has been creation of public employment in an endeavor to reduce this under/unemployment. However, by this same period, some 60% of the labor force was on the public payroll, at an expense which could no longer be sustained by local and insular governments.

## PROSPECTS FOR THE FUTURE

As we have cited in earlier presentations, James L. Dietz has claimed that the island’s dependence on the United States “is another fetter to” its development due to “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-à-vis* the US has consumed untold financial and human assets....that have diverted the allocation of scarce resources from higher-valued uses.”( Melendez, 1993). Serious efforts have been undertaken, for instance, by the current administration under Governor Luis Guillermo Fontuno Burset, an attorney and public official who had previously served as Resident Commission in the U.S. House of Representatives, to reduce public budgets, mainly through the reduction of public places of employment (which, of course, has the adverse effect of creating higher unemployment on the island and also causes indirect loss of jobs in the private sector). In its report on the fiscal year 2010-2011, Banco Popular reported on “the clear recovery of public finances (6.2%), a slight increase in retail sales (1.3%) and a resurgence in tourist activity (5.7%). Yet the problem remains much deeper. The Bank added, “Declines continue to be seen in jobs related to transportation, communications, public utilities and manufacturing. In total, some 26,000 jobs were lost,” and it concludes, “This panorama indicates that the island’s economy may be going through a period of transition between a deep prolonged recessionary cycle and the end of a period of contraction that should not, however, for the moment, be interpreted as recovery.”(Banco Popular 2011). In a report this year, the bank added that the population of the island had decreased by 2.2% between 2000 and 2010, which means “fewer income earners, fewer consumers, and fewer taxpayers.” It commented that this was the first such population loss in recorded history (Banco Popular, 2012). The problem was somewhat alleviated by President Barack Obama’s stimulus package. The issue is also affected by current Puerto Rican administration policies, such as tax reform and a Public Private Partnerships (PPPs) initiative. However, it has been suggested that the new tax policies (raising revenue for government) increase the possibility that these will “lead to a contraction of the manufacturing sector.” The PPPs are said to “have only a limited effect in the outlook period as [the] projects take time to implement, and gross fixed investment will suffer as US pharmaceutical companies, the island’s largest export sector, transfer their operations outside Puerto Rico.” (Economic Forecast, 2011). Continuing, reducing government expenditures through reductions in force (RIF), another goal, have had the adverse effect of reducing income tax revenues and may well put additional burdens on the public expenditure. Specifically, under today’s harsh economic realities, former public servants are unable to find private sector employment. One study suggested that the insular government needs to cut spending by US \$2bn, despite well-intentioned efforts so far, which for example have reduced the deficit from 46% to 11% of the annual budget. Beyond budgetary slicing, though, most likely “raising government revenues will be the key to longer-term fiscal stability.” That said, the island’s narrowing tax base is likely to make this particularly difficult over the medium term (West Caribbean..., 2010). As *Caribbean Business* reported last year, the island was still maintaining an unemployment rate greater than the government figures of 16.5%, but that conditions would have been much worse if \$4.4 billion had not been received from the American Recovery and Reinvestment Act (ARRA) (Casiano, 2011). The report of the presidential task force in 2011 lists a considerable number of reforms (U.S.

Report, 2011). They are far too numerous to be discussed in this paper, but the problems that remain are the fact that most of these rely on continued association with the United States, and secondly, they come as suggestions without actual ability to place them into effect.

Yet, numerous other suggestions have been proposed. For instance, *Caribbean Business* has suggested that there is an urgent need to reduce the island's dependence on oil and turn instead to natural gas, reducing both cost and pollution (Marino, 2011). In earlier reports, including the Midwest Political Science Association Conference and GBATA, Le Veness, along with Flanagan and Juan Manuel Fernandez, recommended the study commissioned by the Center for the New Economy of San Juan along with the Brookings Institution, entitled *The Economy of Puerto Rico: Restoring Growth*. This study emphasized six urgent issues which require immediate attention: (1) raising the employment rate of adult Puerto Ricans; (2) promoting a more dynamic private sector that would create additional job opportunities; (3) improving the skills of the workforce; (4) investing greater resources in the economic infrastructure; (5) reforming government with a more efficient tax system and targeted expenditure programs (Collins, 2006). Finally, we have also noted the study *Globalizacion y desarrollo: desafios de Puerto Rico frente al siglo XXI* which urges (1) the necessity to strengthen the chains of value in manufacture; (2) the increase in the promotion of investments in the service sector and consequent grounding in manufacturing; (3) an increase in public and private services of support for Puerto Rican enterprises; and (4) an improvement in the method of financing, including venture capital (Comision Economica, 2006).

## THE IMPORTANCE OF 2012

All these deteriorating factors have stuck Puerto Rico with a type of malaise, an inability to grasp the term *carpe diem* and to take full responsibility for the island's economic and political future. As noted towards the start of this essay, Puerto Rico seems trapped at the "periphery" of the international economy, unable to shake itself from American domination or seriously offer the goods and services which might be attractive to Direct Foreign Investors from other nations of the North.

This year, however, brings forth a real possibility of change. Perhaps it is one of those defining moments in history. As is well known, the 2008 insular elections brought significant change in the power relationship between the major parties of the island. For decades, while development lies at the core of each party's platform, the issue of the territory's status tends to dominate the political science. There have been, at least since 1952 when the current Commonwealth (*Estado libre asociado*) government was formed following the passage of a new Constitution, three apparent alternatives: (1) continuation of the present ELA; (2) statehood; or (3) independence. While, as everywhere, elections are based on multiple issues to say nothing of personalities, parties tend to revolve around these three positions, with the Estadistas (Partido Nuevo Progresista) assuming the statehood position, Partido Popular Democratico that of ELA, and various groups that of *independencia*. Over the decades the statehood and ELA advocates have jockeyed for position, while the independence advocates have tended to lag far behind. Neither of the first two, however, was able to attain a majority. That effectively changed in 2008. The current governor defeated the incumbent PPD governor, Anibal Salvador Aceveda Vila by over 200,000 votes. PNP also gained the Resident Commissioner seat in the U.S. House of Representatives, (don Pedro R. Pierluisi Urrutia) and secured a supermajority in both houses of the insular legislature, (thus causing a constitutional provision to be invoked for the first time since its inception in 1952 [Art. II, Sec. 7]) ensuring a guaranteed minimum representation for opposition members when a single party secures over a two-thirds majority. This happened in both houses in 2004. The Senate saw a majority for PNP of 22 to PPD 5 (PNP 81.5% and PPD 18.5% of votes), the House of Representatives PNP 37 to PPD 14 (PNP 72.5% and PPD 27.5% of votes) (U.S., Central Intelligence Agency, 2012). This represented quite a change, as in 2004 the governorship had gone to PPD while the House and Senate had gone to PNP, causing what some considered to be a political stand-off or stalemate. Should this reoccur, it might well have a very urgent impact upon the plebiscite which is also being held in Puerto Rico this fall.

Specifically, plebiscites concerning the status of Puerto Rico have been held periodically, starting in 1967 with the last occurring in 1998. The results over the years normally saw statehood making grounds over the years against Commonwealth, with independence running a very distant third. Yet in 1998, conditions changed. Instead of the usual three alternatives, there were five: territorial commonwealth, which received 0.1%, free association, which received 0.3%, statehood which received 46.5%, independence which received



2.5%, and none of the above which received just over 50% (Alvarez-Rivera, 1998). This most unusual result was caused by the fact that PPD boycotted the vote, urging members to vote none of the above, due to the fact that it disputed the term “territorial” in the first choice. In a sense, supporters of PPD and PNP were still running “neck and neck” on the issue.

However, what the issue brought to the fore was what had been expected for some time. The entire issue revolves around the definition of Commonwealth. Back in the 1950s and 1960s, the Commonwealth status had been often referred to as a “compact” or “contract” between the two signing parties, i.e., the U.S. government and the government of Puerto Rico. That is most certainly the case. Unlike a normal legal contract, though, which must be maintained for its duration by both sides, this was an indefinite contract (no end determined) between a sovereign state and what is legally described as an unorganized territory. As a consequence, there is no question that Congress cannot only change the compact at will but that one Congress may not bind a later one to the compact. This puts heavy doubt on the permanence of the Commonwealth or to the island’s ability to create some sort of “new” Commonwealth which would afford it more autonomy. Moreover, independence would have serious political as well as economic consequences for Puerto Rico and for its citizens. Various measures could be taken to achieve this end, and the residents of the island, according to a 2007 presidential task force report, though currently U.S. citizens (8 U.S.C. 1402), could become citizens of the new nation of Puerto Rico (U.S. Report, 2007). Although it would seem they could also retain U.S. citizenship, it is unknown what any legislation a new national government of Puerto Rico might pass in this regard. However, independence has never fared well in these plebiscites, and that continues to be the general rule. It has been suggested that while there is little doubt Puerto Ricans are strongly nationalistic, their “definition has the concept of ethnicity as its core, the awareness of ethnic identity shared by the members of the groups. Puerto Rico exhibits a very high degree of ethnic cohesiveness, a cohesiveness seen by some as ‘romantic’ attachment. Ethnic nationalism is not simply confined to cultural manifestations, but includes political dimensions as well.” The author of that statement concludes: “In Puerto Rico, the generally accepted conception of the nation is one based on cultural considerations, on ethnicity. The identification with *patria* as the source of the distinctive identity is one shared with Hispanic countries. *La patria* is not in conflict with the political state in Puerto Rico. Each is a separate entity that receives loyalty and dues from the people. (Arroyo, 1985). This may explain, at least in part, the reluctance, except for a radical few, of the Puerto Ricans to embrace the concept of political independence. At any rate, the issue remains far beyond the scope of this paper.

So, as a result, under Puerto Rican law 283 (2011), a referendum will be held this fall to determine views on status. It will be novel in the sense that it will come in two parts. The first will be an answer to a question as to whether the voter is satisfied with the current status (Commonwealth). If not, then the voter is asked to pick from an alternative of statehood, free association, or independence. As the current Resident Commissioner stated, if the no’s to question one prevail, it will then be necessary to determine the voters’ stand with regard to the alternative. If none receives a majority, it would indicate indecision on the part of the voters at present (Perluisi, 2012).

Statehood, which seems to be on the rise, would offer permanent stability. Of course, it would mean the loss of the current tax benefits, but given the removal of Sec. 936 and the current lack of incentives to invest on the island, that may not be seen as such a major obstacle. After all, statehood would bring political power, voting for the president, U.S. Senators and U.S. Congress members. It would also bring social and economic benefits which the government has made available only to states. That may very well be the long-term decision of the Puerto Ricans. Those advocating free association look to examples of states such as Palau, of the Federated Micronesian States, which maintain a relationship with the United States, although achieving independence. Other forms of independence speak for themselves. The question today remains unanswered, but more importantly, so does the economic consequence of this decision for the island of Puerto Rico. Will it ever be able to break the “dependency?” Which status do the Puerto Ricans believe is most likely to be beneficial? Is it a full relationship with the mainland, which moves it from the periphery to the center? Or is it some sort of Association, which seeks to accomplish the same results (not so easy if you watch the example of the Mariana Islands), or independence, which will put them on equal footing with other nations, but may not necessarily move their economic position?

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# **TYPOLGY, CLASSIFICATION, AND CHARACTERIZATION OF FIRMS FOR MANAGEMENT BEST PRACTICES MONITORING (CASE OF RUSSIAN DOMESTIC ENERGY SECTOR)**

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## **ABSTRACT**

*The notion that certain management practices at all levels create substantial competitive advantages for the company in the market received a lot of attention in the academic community over the years. A large body of work was accumulated as a result, though it appears that a comprehensive understanding of the relationship between management practices and firm performance is still lacking. This study is a part of a larger project aiming at closing this gap. The objective of this study was to create a typology of companies based on efficiency, using a number of objective criteria obtained from publicly available information.*

## **INTRODUCTION**

The notion that certain management practices at all levels create substantial competitive advantages for the company in the market received a lot of attention in the academic community over the years. The idea that there is a relationship between the actions of managers and company effectiveness was first introduced in early 1950s (Carlson, 1951), when researchers first noticed that there is a link between managerial actions and effectiveness and productivity of the units and companies as a whole (e.g., Guest, 1951; Jasinski, 1956; Strong, 1956; Dubin & Spray, 1964). Since then, a number of studies have looked at various individual management practices and their impact on all productivity metrics. A large body of empirical and theoretical work was accumulated as a result, though it appears that a comprehensive theory of the relationship between the management practices and firm performance is still lacking.

The interest in the relationship between the management practices and company performance has been revived recently, with the work of Bloom and colleagues (Bloom & Van Reenen, 2010). Bloom and Van Reenen (2006, 2010) and Bloom, Kretschmer, and Van Reenen (2009) have looked at management practices in medium-sized manufacturing firms in the US and several European countries. They have found significant cross-country differences in the management practices and their impact on firm-level productivity, profitability, sales growth, and other measures of performance. A large number of studies<sup>1</sup> have already extended this work, looking at competition policy (e.g., Buccirossi, Ciari, Duso, Spagnolo, & Vitale, 2009), corporate culture (e.g. Cronqvist, Low, & Nilson, 2007), compensation (Falato, Li, & Milbourn, 2011), as well as individual management practices and their clusters (e.g., Fu, Eisingerich, & de Hoyos, 2009). Current research agenda, however, appears to be missing a very important aspect of knowledge creation: the long-term monitoring of these practices for the establishment of causal relationship with firm performance. While there are a large number of studies on the relationship between management practices and firm performance, to the best of our knowledge, none of them are longitudinal, looking at the progression of management practices over the years and relating them to firm performance metrics. The exploratory study presented here is the first part of a multi-part, multi-year project aimed at filling this important gap in our current knowledge in this domain.

At this time, the first objective of the project is to create a typology of companies and classify them as more or less efficient based on a number of theoretically-driven, objective criteria that can be observed from the “outside” of the company – that is, from publicly available information. There are several reasons for doing so. First, because collecting publicly available information does not require company involvement, and can be done in an efficient manner by researchers without expanding sufficient time and resources on data collection. Second, in the monitoring process we need to include different companies, with various degrees of efficiency. Finding which companies are efficient *before* entering the company for data collection can only be done by analyzing publically available data. Third, if our method of company analysis by using external data proves to be an efficient way to evaluate companies, other researchers will be able to use our methodology in their analysis.

Prior attempt at creating company typologies have taken many different approaches. The best well-known are typologies of Miles and Snow (1978), strategic typologies based on industry characteristics (e.g., Kearns, 2005), or typologies based on management characteristics (e.g., Hass, 1996). However, these typologies are somewhat limited, because they cannot be easily applied to every industry, and may not offer as much insight into the company as the typologies based on performance. Therefore, the main goal of this study is to create such typology based on the objective performance metrics, and then classify and describe the companies that fit different typological profiles.

## **THEORETICAL FOUNDATION**

The overall study is based on a rich theoretical foundation formed on the intersection of several classical managerial theories. We use the theory of the allocation of time (Guest, 1956) and Vroom’s (1964) expectancy theory to explain the mechanisms of formation of individual management practices and practice clusters within companies; industrial organization approach for looking at resource allocation within management domain; and resource-based view of the firm (Wernerfelt, 1984) to explain the relationship between managerial practices and firm performance. As management performance measurement is a rather complex process (Chiang & Lin, 2009), a large number of inputs and outputs are expected to be involved in the process. One of the methods for identifying individual inputs and outputs suggested previously (Chiang & Lin, 2009) is the Balanced Scorecard (BSC) approach, which has been shown to provide a realistic framework for the relationship between performance measurement and strategic objectives (Hasan & Tibbits, 2000).

The BSC approach is a formal measurement system, first offered by Kaplan and Norton (1992) to address the issues of agency issues between stakeholders and the company management. Per Kaplan and Norton (1992), there are four balanced perspectives to company management: financial, customer, internal business processes, and learning & growth, integrating a large number of both financial and non-financial indicators of company performance. These perspectives are connected through complex cause-effect relationships (Rusjan, 2005). Out of the four, financial and customer indicators are the dimensions that can be assessed from the “outside,” without getting access to the inside information, aligning well with the goals of this study. While what constitutes financial performance is relatively clear, performance measures from the customer perspective are usually the subjective attributes such as customer satisfaction, loyalty, retention, and acquisition of customers (Kaplan & Norton, 1996), usually measured through behavioral summated rating instruments. Therefore, through the BSC approach has been thought of as a top-down approach to organizational management with heavy management input (e.g., Kanji & Moura, 2001; Malina & Selto, 2001), it is apparent that some BSC dimensions can be obtained and evaluated from the information not limited to the insiders, and through their causal interrelationships with other BSC factors, could serve as indirect indicators of the overall company effectiveness.

## **METHOD**

### **Analysis Tool**

For the purposes of management effectiveness benchmarking, one of the tools that has been used previously is the Data Envelopment Analysis (DEA) (e.g., Chiang & Lin, 2009). Though not widely used in management,

DEA is a linear programming method (Charnes, Cooper, & Rhodes, 1978), which allows decision-making units (DMUs) to be assessed on a basis of multiple inputs and outputs, even when the production function is unknown (Adler, Friedman, & Sinuany-Stern, 2002). It is thought by some as superior to other methods (such as cluster analysis) because it does not only separate companies by certain characteristics, but also evaluates their output measures relative to each other on a number of different parameters. The main benefit of using DEA for this particular project is the ability to use several performance metrics as outcomes simultaneously. As company performance is not one-dimensional, and different companies may achieve a relatively superior efficiency level by using different means, using DEA as an analysis tool allows us to remove the subjectivity when weighting various performance metrics for company evaluation, and use the composite measure of performance efficiency to separate the companies. There are several methods of post-hoc DMU classification (such as the level of efficiency, e.g., Norman & Barry, 1991), all of which allow comparing companies relative to their efficiency peers. For further review of DEA please see, e.g., Adler et al., 2002.

## Sample and Measures

As it is evident that different countries (Bloom and Van Reenen, 2010) and industries may have not only different managerial practices, but different performance indicators as well, we have started our exploratory work with the Russian domestic energy distribution sector (total sample size  $n = 38$ ). Russian economy is unique, with both the elements of the developed and the emerging market economies present. Findings obtained in the Russian market may become useful for companies operating in either market, or for comparative cross-cultural research. We have focused on the energy sector as a starting point for a number of reasons. First, energy companies are relatively similar in their approach to management and business modeling. Therefore, it is less likely that the observed differences in management practices would be due to drastic differences in strategic orientation. Second, energy distribution business is relatively robust to fluctuations in BSC customer perspective. This is because energy distribution companies divide the market on a regional basis, with little to no competition, and customer demand, loyalty, and retention remain relatively stable compared to other industries, eliminating the need for introducing subjective summated rating indicators into the efficiency evaluation process. With a rare exception, companies are named for the region in which they operate, and that is how they are identified throughout the study.

Because financial performance indicators vary by industry (Braker, Keates, & Pearson, 2006), we have identified a number of performance metrics relevant to the energy distribution sector (e.g., Gutermuth, 1998). These indicators serve as the performance measurement inputs (current and long-term investments, company ownership status, costs, composite financial indicator -a simple average of large number of such indicators as financial liquidity, debt ratio, etc.) and outcomes (economic value added, labor productivity, costs, number of employees, and a number of calculated metrics based on the available outputs) for the DEA. Company size was measured in the number of employees and used as a control: all financial inputs and outputs were divided by the number of employees. We have also accounted for the fact that energy industry may be regulated, and some companies have guaranteed supplier contracts. Data was analyzed with Frontier software using denominator minimization approach.

## RESULTS

DEA results are presented in Table 1 below. Using input/output contribution and availability of peers, we have further classified the companies into three distinct clusters. All but four companies were assigned a cluster based on their relative performance. First cluster was grouped together based on their lack of contribution on the long-term investment indicator; second – EVA indicator, and third – labor productivity indicator. Last four companies did not appear to belong in any of the first three categories.

**TABLE 1: Results of Data Envelopment Analysis**

Note: <sup>a</sup> Input/Output Contributions: CI – Current Investments, LTI – Long-Term Investments, EVA – Economic Value Added, LP – Labor Productivity, CFM – Composite Financial Measure.

CL <sup>c</sup>	CO <sup>2</sup>	EL <sup>d</sup>	RIA <sup>e</sup>	Input/Output Contributions <sup>a</sup>						Peers <sup>b</sup>									
				CI	Costs	LTI	EVA	LP	CF	A	B	C	D	E	F	G	H	I	J
1	C1	99.14%	3B1	97%	3%	0%	68%	25%	6%	+		+	+						+
1	C2	73.67%	3B2	90%	10%	0%	20%	30%	50%			+	+	+					+
1	C3	71.34%	1A	99%	1%	0%	71%	29%	0%		+	+							+
1	C4	58.71%	3B1	88%	12%	0%	30%	30%	40%			+	+	+					+
1	C5	43.11%	1B	97%	3%	0%	54%	39%	7%		+	+	+						+
1	C6	41.49%	3B1	98%	2%	0%	49%	38%	13%		+	+	+						+
1	C7	41.45%	3B2	96%	4%	0%	52%	25%	23%			+	+	+					+
1	C8	38.22%	3B1	97%	3%	0%	49%	44%	7%	+		+	+						+
1	C9	28.21%	3B1	98%	2%	0%	49%	40%	12%	+		+	+						+
1	C10	23.81%	1B	97%	3%	0%	44%	56%	0%	+								+	+
1	C11	16.49%	3B1	100%	0%	0%	46%	6%	48%			+	+	+					
2	C12	100.00%	1A	2%	90%	8%	0%	100%	0%		+								
2	C13	100.00%	1A	76%	24%	0%	0%	100%	0%									+	
2	C14	100.00%	2B	113%	-13%	0%	0%	100%	0%										+
2	C15	100.00%	2A	100%	0%	0%	0%	72%	28%				+						
2	C16	74.56%	3B1	7%	40%	53%	0%	100%	0%		+				+		+		+
2	C17	67.93%	3C1	87%	13%	0%	0%	88%	12%					+				+	+
2	C18	61.60%	3B1	11%	25%	64%	0%	67%	33%		+		+		+				+
2	C19	34.36%	3B1	86%	14%	0%	0%	82%	18%				+	+				+	
2	C20	31.74%	3C2	5%	4%	91%	0%	100%	0%		+						+		+
3	C21	100.00%	3B1	100%	0%	0%	100%	0%	0%			+							
3	C22	100.00%	3B1	37%	0%	63%	100%	0%	0%							+			
3	C23	100.00%	3C1	91%	2%	7%	79%	0%	21%						+				
3	C24	91.68%	3C2	88%	12%	0%	77%	0%	23%			+		+					+
3	C25	74.45%	3A1	100%	0%	0%	67%	0%	33%			+		+					
3	C26	60.73%	3B1	70%	15%	15%	80%	0%	20%			+		+	+	+			
3	C27	57.75%	2A	68%	0%	32%	66%	0%	34%				+		+	+			
3	C28	35.26%	3B1	61%	4%	36%	60%	0%	40%			+	+	+		+			
3	C29	32.87%	3B2	77%	23%	0%	74%	0%	26%			+		+					+
3	C30	27.86%	3B1	60%	12%	28%	62%	0%	38%			+		+	+	+			
3	C31	19.92%	1B	103%	-3%	0%	100%	0%	0%			+							+
3	C32	18.41%	2B	100%	0%	0%	57%	0%	43%			+		+					
3	C33	12.16%	2B	100%	0%	0%	35%	0%	65%			+		+					
3	C34	6.00%	1A	96%	4%	0%	100%	0%	0%			+							+
	C35	100.00%	2B	53%	9%	38%	43%	16%	42%	+									
	C36	100.00%	3B1	50%	50%	0%	0%	0%	100%					+					
	C37	100.00%	3C2	11%	15%	74%	0%	100%	0%								+		
	C38	97.32%	3B1	48%	0%	52%	36%	0%	64%				+		+	+			

<sup>b</sup>Peers: Some of the same companies as above; in order listed, from A to J. Novosibirsk, Siberia, Ryazan', Belgorod, Buryatya, Dagestan, Chuvashia, Kalmykia, Moscow, Perm'.

<sup>c</sup>CL – Cluster number.

<sup>d</sup>EL – Efficiency Level.

<sup>e</sup>RIA – Regional Investment Attractiveness.

## Post-Hoc Analysis

As was apparent from the presented results, the companies were clearly different in their level of efficiency. The more interesting question was whether there was anything in common between the companies belonging to a particular cluster that first, could be identified without obtaining additional company data; and second, was not accounted for with all the previous indicators. Upon careful analysis of the data, it was determined that indeed, the companies did have something in common – namely, the investment attractiveness of the region in which they operated. Regional investment attractiveness<sup>3</sup> (RIA) is a complex composite index calculated by the “RA Expert” Russian rating agency, based on a large number of indicators (financial, social, management, economic, ecological, and criminal). Based on a complex formula, a region is assigned one of ten possible grades, starting with 1A (most attractive) to 3D (the least attractive). This rating is shown in column 4 of Table 1. Because the resulting scale is obviously ordinal, we have assigned a number 1-10 to each rating category in a descending order (1A = 10, 1B = 9, etc.) for further analysis.

Based on the RIA, we have determined that the companies belonging to the first cluster, united by their lack of output contribution to long-term investment, belong to the regions with very high levels of risk. The three exceptions are companies that are established for providing energy to specific large companies, and are, therefore, not subject to the same operating conditions as their peers in the cluster. For clusters 2 and 3, united by the lack of contribution to EVA and labor productivity, there was a clear relationship between effectiveness level and RIA. To further test the strength of this relationship, we have regressed the efficiency level on the RIA, and obtained the R-square (variance explained) of 0.68 for the second cluster and 0.43 for the second cluster. Considering that these clusters were formed using financial input and output measures without taking the regions into account, this is a very high percentage of variance explained by just one variable. In order to verify that the region did not play any role for the overall sample, the same regression was performed for all companies simultaneously, with resulting R-square very close to zero. In other words, knowing the investment attractiveness of a region in which the company operates could help determine which of the financial indicators would not contribute to the output, and therefore should not be used for evaluating the company’s efficiency.

## CONCLUSION

The objective of this study was to create a typology of companies and classify them as more or less efficient based on a number of theoretically-driven, objective criteria observed from the from publicly available information. Using an inductive approach based on DEA, we have determined that such classification is indeed possible. Results of the analysis indicate that once the inputs and outputs are selected and the DMUs’ relative efficiency is obtained it is possible to further find the patterns not accounted for previously.

## Contribution to Theory, Practice, and International Community

Results of this study have clear implications for research and practice. First, we have clearly demonstrated that it is possible, by using public information only, to separate the companies based on their levels of efficiency and further describe them using patterns and regularities not accounted for previously. Second, we have shown how the DEA could be used to evaluate relative efficiency of a company based on a large number of indicators, potentially aiding managers in the corporate performance review and evaluation. Third, by conducting the analysis on a sample of companies in Russia, we have opened the door for further research in comparative developed-emerging market research.

## Limitations and Directions for Further Research

This study, clearly, has several limitations. First, it was conducted on a very narrow sample – that of an energy distribution industry. Because this industry is relatively homogeneous, there is less of a chance of third variable interference when evaluating a new method of efficiency analysis. On the other hand, it is too early to talk about the generalizability of the results, and the method has to be tested on a variety of different samples. Second, only the financial indicators were used, though the BSC approach, among many others, calls for a more complex evaluation of the company’s efficiency. While it is not uncommon for BSC evaluation to be reduced to financial analysis only, including other indicators, especially the customer perspective observed from the outside, could

substantially enrich the analysis process and the resulting outcomes. Future studies could address these limitations, and find other uses for the classification process described in this paper.

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## ENDNOTES

<sup>1</sup> According to Google Scholar, as of now, work of Bloom and colleagues has been cited over 500 times.

<sup>2</sup> CO = Companies. All companies have "Energy Distribution" in their names. In order listed, from C1 to C38: Archangelsk, Atom (Atomic Energy), Belgorod, Dagestan, Kalmychia, Karachaevo-Cherkesovo, Kirov, Kostroma, Lipetsk, Mordova, Moscow, Moscow region, Krasnodar, Novgorod, Orel, Perm, Ryazan', Samara, Saratov, Sverdlovsk, Novosibirsk, Sibur, Smolensk, Stavropol, Tula, Tumen', Udmirtia, Ulyanovsk, Chelyabinsk, Chita, Chuvashia, Rostov, Moscow (second), Vladimir, Volgograd, Vologda, Voronezh

<sup>3</sup> Detailed information about the rating agency, as well as RIA calculation and composition, can be obtained at: <http://raexpert.ru/ratings/regions/2011/tab8/>

# AN EMPIRICAL INVESTIGATION OF THE RELATIONSHIP BETWEEN TRANSFORMATIONAL LEADERSHIP AND WORK ENVIRONMENT

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## ABSTRACT

*This article examines the relationship of transformational leadership and the work environment in developing organizations. Transformational leadership is considered the best alternative for long-term success in employee development. Transformational leaders create an organizational culture whereby employees feel free to express themselves and create and discuss new ideas openly (Kaifi & Mujtaba, 2010). This study continues the great research in leadership and the work environment. This study examines developmental organizations located in an expanding global market, which may provide insight into developing countries' international approach to business in the 21st century (Directory of Development Organizations, 2010).*

## INTRODUCTION

This study investigates and describes the relationship between transformational leadership, work environment, and organizational commitment in developing organizations. The research concentrates on employees of international organizations, governments, private sector development agencies, civil society, universities, grant makers, banks, microfinance institutions, and development consulting firms to assess the relationship of transformational leadership (idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration) and the work environment. *Idealized influence* refers to the way leaders are perceived to yield power and influence on their followers. *Inspirational motivation* expresses shared goals and mutual understanding of what is important. *Intellectual stimulation* communicates the ideas and values of which the transformational leader is able to encourage others to think about their problems in new ways. *Individualized consideration* simply means understanding and sharing concerns with others while considering them individually. This concept of consideration helps the follower maximize their full potential (Bass & Avolio, 1994). Avolio and Bass (1998) defined these four terms as the representation of the transformational leadership process. These commonly associated terms consider the individual and elevate the consciousness of the leader to the follower. This illumination constitutes the basis of transformational leadership. The reliance of transformational leadership lies in the motivation of individuals to do more than they thought was possible. This development increases their capability to chart a course of action of increased responsibility and exemplary performance well beyond belief and expectation at the individual level (Bass, 1960).

Moos (1974) and Moos and Insel (2008) developed the work environment scale (WES) to measure the work setting and social climate at the organizational level. Two dimension sets are measured in this study: Personal Growth/Goal Orientation and System Maintenance. This study focuses on *Autonomy* (independence), *Clarity* (expectations in their daily routine), *Managerial Control* (use of rules by managers to control the environment), *Innovation* (measures the degree of emphasis on variety, changes, and new approaches), and *Physical Comfort* (measures the extent to which the physical surroundings contribute to a pleasant work environment). These five items will help measure perceptions in the current work environment and social climate, thus providing a compensatory view into how transformational leadership impacts the work environment across cultures internationally, regionally, and locally. This analysis at the individual and

organizational level enhances the field of study of leadership, as there is limited research based on these two areas of interest in the sub-Saharan region of Africa.

## THE LITERATURE REVIEW

Leadership has been defined in many ways, advocating the movement of ideas and concepts for the benefit of accomplishing the intended goal. It is commonly believed that there is more than one way to capture the essence of the term *leadership*. However, it is understood that leadership is a process that ultimately influences others to accomplish a stated goal (Northouse, 1997). Leadership shapes perceptions, responses, and acceptance of change and innovation. The definition of leadership is broad-based and is defined differently by many individuals. Bass (1960) observed that leadership is an attempt to alter the motivation of others and is necessary to change their habits. Northouse (1997) was symbiotic in categorizing the components of process, influence, group context, and goal attainment from leadership influence. His research and writings are well-documented and cover a myriad of theory-based disciplines. Yet, at the core of leadership is the simple process of causing action in others. The most popular research streams carry the banner of a European-centric leadership context (Bass, 1990; Bass & Avolio, 1989; Burns, 1978). However, those views ultimately vary considerably in different cultures and nations.

As a complement, the field of work environment research is relatively new and is evolving in other cultural studies. Moos's (1974) approach to the work environment sought to define and measure the perception and preferences regarding an ideal environment and the expectation of the work setting. This research attempts to complement and build upon understanding the daily routine through rules and policies that are communicated; the amount of control the rules and procedures have on employees; the emphasis on variety, change, and new approaches; and the extent to which the physical surroundings contribute to a good work environment. The research in this area as it relates to East Africa is sparse if not non-existent. More work is needed to expand Moos's seminal research.

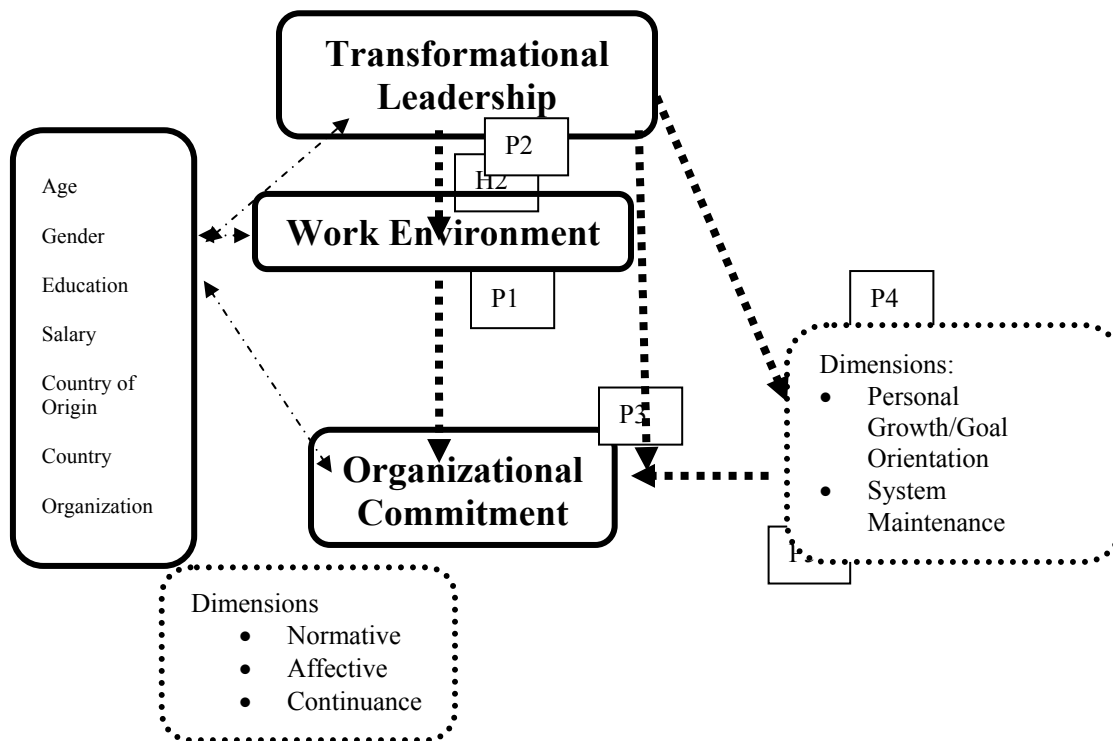
Figure 1 is a graphical depiction of the interchanging paradigm of the transformational leadership, work environment, and organizational commitment model. Individually, each model in isolation is a valid and reliable representation based on sound empirical research. The resulting analysis of each conveys a higher degree of understanding of leadership, the work environment, and the commitment to remain with the organization (Bass, 1998; Bass & Avolio, 1994; Moos, 1974; Moos & Insel, 2008).

The current research suggests that the positive influences of the transformational leader can indeed impact the work environment. Addressing the complexities of a higher arrangement of variables in a largely feministic value center, such as East Africa, makes this task more challenging. The model (see Figure 1) does not exist; however, as a baseline it is essentially a framework to begin the process of understanding how the chosen independent variables moderate between dimensions. As an example, Claes (1999) addressed the values and leadership styles of women, finding that female gender leadership leaned more towards a transformational leadership style than male leadership. Further complicating the impact of gender as a consideration are organizational cultures that impinge upon the complexity of Western-based societies (Jacobs, 1989). This research suggests that demographic variables considered will provide insight into the moderation of model dimensions proposed in the framework. Similarly, transformational leaders prefer to work in a close environment, such as clans, tribes, and kinships (Masood, Dani, Burns, & Backhouse, 2006). This leads to a belief that transformational leadership may show moderation in the WES scales (Moos, 1974). By creating a work environment that is conducive to motivation, the outcome eventually becomes positive and successful and strengthens organizational commitment (Meyer & Allen, 1991; Moos & Insel, 2008).

Work environment scales are specifically designed for a milieu of work environments, particularly hospital wards, school classrooms, and military work environments (Moos, 1974). The framework suggests that one can examine developing organizations in kind and should see similar results. This research captures the Personal Growth and Goal Orientation and System Maintenance and System Change Dimensions in a variety of organizations and work milieu. Fisher and Fraser (1983) were able to sample an international audience of teachers in Australia and Tasmania to validate its relevancy in differentiating between perceptions of teachers and schools. This should allow for organizations and nationality to impart how organizational commitment may

differ in the work environment. By addressing the dimensions of the WES and TCM, a strong correlation of each dimension (normative, affective, and continuance) should moderate.

#### Transformation leadership, work environment, and organizational commitment



If an increase in the work environment is present, there should be a correlation to organizational commitment and transformational leadership dimensions. One should see an equal or moderate relationship from the subdimensions of each perspective category (Meyer & Allen, 1991; Moos & Insel, 2008). Because WES measures the social environment of the work area, it is anticipated that higher scores in the work environment will lead to a greater commitment within the organization. Therefore, Proposition 1 is as follows:

*P1: There will be a significant positive relationship between work environment and organizational commitment; as work environment increases, organizational commitment will increase.*

De Frias and Schaie (2001) were able to produce empirical results showing significant differences in perceived work environment based on age, gender, and occupation type. They found that responders aged 50–56 had the highest perceived autonomy, control, and innovation in the workplace. Men who participated in all occupations had a higher perception of the work environment. Likewise, responders in managerial positions had the highest perceived levels of autonomy, control, and innovation in the workplace. As in the work environment where high levels of transformational leadership take place, one expects to see an equal level of moderation commensurate with the work environment. Transformational leadership traits and style evoke upon the follower to exceed his or her expectation by providing continuous encouragement on behalf of obtaining a more robust outcome beyond what the individual expects or anticipates. Therefore, Proposition 2 is as follows:

*P2: There will be a significant positive relationship between transformational leadership and work environment; as transformational leadership increases, work environment will increase.*

Undoubtedly, understanding organizational cultures and the types of organizational influences that affect transformational leadership and work environment is important. The international business sphere of organizations demands understanding the internal and external pressures that extend beyond the work environment (Hofstede, 1980; House, Hanges, Javidan, Dorfman, & Gupta, 2004). Hofstede (1980) insisted that

value, dominant leadership style, language, and symbols all play a role in determining success in the global consideration. By researching a high contextual community of employees in the East African work environment, one anticipates that demographics provide a complex determinant of behavior that, if correct, will positively increase the work environment and organizational commitment as each area increases. Transformational leadership has been shown to impact organizational commitment in low- and high-context societies (Avolio, Zhu, Koh, & Bhatia, 2004). The global community consists of a mixed society of low and high-context communities. Extensive research suggests that contextual work environment results in psychological empowerment and social distance as mediators and moderators in their work areas, respectively (Barling, Slater, & Kelloway, 2000; Yip, 1989).

Further, transformational leadership was shown to have strong and positive effects on organizational commitment in both Kenyan and U.S. cultures (Walumbwa, Orwa, Wang, & Lawler, 2005). The purpose of their study was to continue to expand upon the empirical and meta-analytic studies on transformational leadership in East Africa. Kenya is a regional example; however, a variance is anticipated, as Kenya has a strong British influence that may be a reason why Kenyan and U.S. cultures respond in kind. Further examination of non-British cultures is recommended. Positive results under the guise of transformational leadership have shown to result in fewer turnovers, increased work performance, and a longer-term organizational commitment from employees. Transformational leaders provide more confidence, more motivation, and the personal attention required to achieve success (Walumbwa & Kuchinke, 1999). The Kenyan studies provide a brief glimpse into the cross-cultural challenges found in high-context societies, such as East Africa. This study does not examine the tribal, kinship, and super tribe levels; however, it begins a necessary dialogue to cross-cultural examinations accordingly. Therefore, Proposition 3 is as follows:

*P3: There will be a significant positive relationship between transformational leadership and organizational commitment; as transformational leadership increases, organizational commitment will increase.*

Avolio et al. (2004) found a strong correlation between transformational leadership and organizational commitment after examining nurses in Singapore. Jung and Avolio (1999) likewise solidified transformational leadership impact in high-context societies by examining Asian and Caucasian students in a laboratory. The end results reported that Asian students garnered more ideas working with a transformational leader than did the Caucasians. Finally, Geyer and Steyrer (1998) reported transformational leadership had positive effects on employees' level of effort and objective performance in Australian bankers. This researcher anticipates that there will continue to be a strong correlation among this sample of employees in developing organizations in East Africa. Therefore, Proposition 4 is as follows:

*P4: Transformational leadership significantly correlates to work environment and organizational commitment in developing organizations.*

The relationship of transformational leadership and organizational commitment is well documented. The correlation between transformational leadership and the work environment (social environment) should likewise show a strong and dominate relationship. Koh, Steers, and Terborg (1995) reported a similar positive association between transformational leadership and attitudes and performance in Singapore. Jung, Butler, and Baik (2000) reported that transformational leadership had positive effects on followers' perceived attitudes and performance in another high-context community of students. Howell and Hall-Merenda (2002) reported transformational leadership produced significantly higher follower performance in close physical distance situations in Canadian bankers. As the work environment is improved upon, it is anticipated that environmental elements of Autonomy (independence), Clarity (expectations in their daily routine), Managerial Control (use of rules by managers to control the environment), Innovation (measures the degree of emphasis on variety, changes, and new approaches), and Physical Comfort (measures the extent to which the physical surroundings contribute to a pleasant work environment) will have a positive correlation with organizational commitment. Therefore, Proposition 5 is as follows:

*P5: Work environment significantly correlates to organizational commitment in developing organizations.*

East Africa's increasing importance in the economic market is dependent upon sound leadership and organizational commitment. This study argues that developing organizations rely heavily on transformational leaders who can influence and instill confidence in followers to achieve greater results than expected. Once leaders understand the importance of their unique environment and the myriad of complexities that may challenge their local market, such as kinship, clan, and tribalism, they can provide the required advice to lead to increased rents and lower transaction costs. Applying the Multifactor Leadership Questionnaire to this study of developing organizations in East Africa may reveal a relational outcome that is much different than those in developed nations (Bass & Avolio, 1994).

## CONCLUSION

The purpose of this study is to investigate the relationship between transformational leadership and work environment. As the research questions abound, particularly in the subject of cultural constraints, Africa poses major considerations from the public sector framers (Blunt & Jones, 1986; Nguni, 2005). This is new territory in research, specifically in an area that is rich in language, culture, religion, and social traditions. This study samples individuals who are servicing developing organizations in East Africa: They include international organizations, government institutions, private sector support organizations, finance institutions, training and research centers, civil society organizations, development consulting firms, and grant makers. Investigating the relationships between transformational leadership and work environment will provide valuable quantitative data to examine Bass and Avolio's (1997) assumptions concerning transformational leadership across country, tribal, and clan-based societies in Africa. This research continues the focus on effects of transformational leadership, work environment, and organizational commitment in the global paradigm.

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# **INFUSING BUSINESS AND ENTREPRENEURSHIP EDUCATION INTO A COMPUTER SCIENCE CURRICULUM – A CASE STUDY**

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## **ABSTRACT**

*Due to the need for innovation in STEM areas, it is becoming more necessary to provide our students with the opportunity to build business and entrepreneurial skills to complement and promote their knowledge in a particular discipline. We explore existing research on entrepreneurial education, describe the Virtual Enterprise (VE) pedagogy and platform, and present a case study where VE is infused into an e-commerce course. Virtual Enterprise facilitates students' learning of entrepreneurial skills in a business simulation environment. VE can be incorporated into courses in a variety of disciplines and inter-disciplines; in this case, we apply VE within the context of a computer science curriculum.*

## **INTRODUCTION**

There is currently an increased emphasis on stimulating innovation and supporting future entrepreneurs in the United States, especially in areas of emerging technologies. The recently approved Jumpstart Our Business Startups Act, or JOBS Act, allows entrepreneurs to use “crowdfunding” as a mechanism to raise equity funding from a larger number of smaller investors. This legislature is particularly important for technology start-ups who, given the high volition of the path to market, can now raise more equity quicker by not necessarily depending on larger VC or Angel funding. Recognizing the critical need for technological innovation and advances, U.S. corporations are also investing in Science, Technology, Engineering, and Math (STEM) education. It is necessary to provide the proper foundation for the next generation of entrepreneurs to enable them to transition their innovative ideas into successful commercially viable and properly sourced products and business ventures. This requires a renewed focus on education in the STEM areas, as well as promoting multidiscipline cooperation and embedding business and entrepreneurial skills into curricula. The U.S. Bureau of Labor Statistics projects that five of the fifteen fastest-growing occupations in 2006–2016 are computer or IT related, which indicates that these skills will be of increasing importance (U.S. Dept. of Labor, 2007). Students who are able to apply their computer or engineering knowledge to other fields will have a competitive advantage.

## **ENTREPRENEURSHIP EDUCATION BACKGROUND**

Entrepreneurship education has gained wide-spread adoption across the globe. In the United States alone, presently over 2000 colleges offer courses in entrepreneurship (Cone, 2012). Consequently, research on entrepreneurship education has resulted in a variety of approaches to measure and evaluate entrepreneurial

learning. According to Kelley, Singer and Herrington (2011) who publish the annual Global Entrepreneurship Monitor (GEM), entrepreneurship education is a subset of a larger entrepreneurship ecosystem and influences entrepreneurs' attitudes, activities and aspirations. While research on entrepreneurship education is still fragmented to draw any set conclusion on how various methods of teaching can lead towards the development of entrepreneurial behavior (Pitaway & Cope, 2007), a recent meta-analysis by Sluis, van Praag and Vijverberg (2008) linked the impact of entrepreneurship education to actual selection into entrepreneurship. Further, a survey of graduates (Lange, Marram & Bygrave, 2012) highlighted the importance of entrepreneurship education and subsequent real world experience. While the importance of entrepreneurship education is well established, further research is needed to investigate which approaches to teaching and learning entrepreneurship yield the best outcomes. Neck and Green (2011), for instance, propose approaching entrepreneurship education and research through the lens of entrepreneurship as a method by focusing on a wide selection of applied approaches in the entrepreneurship curriculum. This will give students the opportunity to not only learn about entrepreneurship but also "practice" entrepreneurship through starting businesses, serious games and simulations, design-based learning or reflective practice. Through this approach, entrepreneurship education becomes student-centered and student-led, encompassing a variety of variables that facilitate learning by moving from a "learn then do" to a "doing then learn" approach. This proposed framework has strong similarities to Bandura's (1986) social cognitive theory which describes learning as a triadic reciprocal relationship between personal variables, behavior and environmental variables. We thus propose a socio-cognitive approach to entrepreneurship education and would like to illustrate on how these principles can be applied in a modern global entrepreneurship learning environment: The case of Virtual Enterprise (VE).

## THE CASE OF VIRTUAL ENTERPRISE (VE)

Virtual Enterprise (VE) pedagogy encompasses principles of active learning to give student entrepreneurs the ability to practice entrepreneurship in a safe simulation environment, connecting personal entrepreneurial behavior and learning to a larger entrepreneurship eco-system of student entrepreneurs. Virtual Enterprise is not a curriculum, rather a pedagogy that can be developed into a *free-standing* course or *embedded* within a course of any content discipline. The goal of VE is that students start and operate a simulated business in the classroom, thus applying acquired interdisciplinary knowledge and skills within the classroom. Similar to Neck et al's (2011) notion of "doing then learn," students in a VE classroom are constantly engaged during the business development process by making the connections between what they've learned and how the "real world" makes use of it. Students don't operate in isolation and contribute towards their own learning in a collaborative learning environment, ranging from research to group projects and work, and discussion (Schulman, 2004).

The City University of New York (CUNY) Institute for Virtual Enterprise (IVE) has a track record of over ten years of successfully training and supporting faculty in VE pedagogy through online resources and peer mentorship. Since its inception, the IVE has trained over 350 faculty members from over 80 institutions across the globe that have developed over 1,000 student-run simulated businesses. It is important to keep in mind that the term "simulation" refers to tasks that are contextualized within the entrepreneurial classroom. Students act as members of an entrepreneurial team and communication happens both online and face-to-face. Students assume leadership roles and tasks, and corresponding responsibilities are developed within the self-determined team construct, thus forcing students within the VE simulation to make strategic and operational decisions alike. Whereas, the instructor is there to structure the learning environment and assume the role as facilitator or consultant, students actively participate in their learning and explore the entrepreneurial experience themselves. The instructor keeps a close watch as firm members grapple with company issues and intervenes only when students need additional scaffolding during discussions by posing questions or offering alternative perspectives (Borgese, 2004). These experiences give students a much greater responsibility and more complex problems to solve than internships or entry-level jobs typically would offer. These opportunities are diverse in nature and account for skills improvement in especially careers, soft-skills, and business and entrepreneurship domains (Morgulas, 2007).

In a *free-standing* course, VE students develop and run a simulated business over the course of the semester, moving their business from its conceptualization to implementation. Student learning is supported by tools, such as the IVE MarketMaker, through which they can interact locally as well as with other enterprises in a global marketplace, an international community of simulated firms (the IVE Partner Network). In addition,

student firms can participate in a series of online and locally organized trading days (IVE, 2012). Especially the latter gives student firms the opportunity to showcase their virtual companies, products and services via distance using the online presentation and web conferencing tools. The presentations, which usually span over three one-hour sessions, connect students representing between 25 and 35 VE's, spanning 9 time zones and 3 continents. After the presentations students log on to the IVE MarketMaker, and start using their virtual credit cards to purchase goods and services from each other. Students are further able to track their sales by accessing a GIS tracking feature that is part of their corporate IVE MarketMaker accounts.

The *embedded version* of VE offers a more flexible approach curriculum adoption and is easily customizable across a wide range of disciplines that are directly applicable to the career world and are conducive to group work, interaction, and hands-on tasks. For instance, in an English composition and literature course, the students could develop a literary magazine that transforms the assigned readings and corresponding reports in a unifying deliverable that could be disseminated via the virtual network or even the College community. It is important to note that this approach did not necessarily change the overall course objectives but simply changed the course delivery mechanism by contextualizing the student writing assignments in a business setting.

Within a STEM framework, recent funding from the National Science Foundation (NSF)<sup>1</sup> has allowed for extending the Virtual Enterprise program to the information technology (IT) and biotechnology (BT) fields to address the soft- and entrepreneurial-skills needs of technicians (Winkler & Troutt, 2008). The project resulted in the development of two course formats:

(1) *ve<sup>it</sup>-Careers*, a course for entry-level IT students, aims to increase students' motivation to pursue careers in IT. At the center of this approach is an exploration of the breadth of the jobs in the field and associated skills and pathways. The VE simulation would engage students in an existing IT department in a firm, which could be predetermined by the instructor or developed by the students. Students would then research the associated positions, apply for them and operate the department by solving a technical business problem.

(2) *ve<sup>it</sup>-Capstone* is a course for the graduating IT student, where students put into practice their IT skills, while developing an entrepreneurial mindset. Here, the students would create an entrepreneurial enterprise, based on a product/service that has an IT focus. Students would address all aspect of a business start-up (business planning), to securing virtual funding on IVE's MarketMaker, to eventually operating their business in the IVE marketplace. The overall business structure will be determined by the students and could revolve around different departments (marketing, R&D, etc.). While the instructor could predetermine the product or IT-subfield, it is recommended to let the students decide on the actual business they would like to operate.

This work aims to create a nationally replicable model for technician training that meets the need for technical workers with the skills to promote innovation. *ve<sup>it</sup>*, like the basic VE model, can be adapted for use in four-year baccalaureate and master's degree programs.

## VIRTUAL ENTERPRISE IMPLEMENTATION IN AN E-COMMERCE COURSE

Virtual Enterprise was incorporated into an Electronic Commerce course which is part of an undergraduate computer science curriculum at St. John's University. The course consisted of mostly junior and senior level computer science majors. The objective of infusing Virtual Enterprise is to expose STEM students to entrepreneurial and business skills in a meaningful way through the process of business planning and simulation. VE is naturally suited for an e-commerce course since it is based on the creation of a virtual e-business. The VE component was interleaved into the course, as students worked on the development of an e-business in a series of phases that correspond to the e-commerce content areas.

In the beginning of the semester, students formed groups of approximately four members to serve as teams for their virtual enterprise firms. In the first phase of the project, students were tasked with evaluating existing e-commerce businesses for a type of industry, product, service, or organization of their choice. Industries could range from online booksellers to auction websites, travel agencies, digital content and streaming media providers, etc. Students also had the option of creating a non-profit organization; in this case, purchases

could be in the form of items to be donated. In this evaluation phase, the groups also had to design the evaluation criteria they would apply to these e-commerce sites, which could include categories such as website content and design, product or service offerings, competitiveness, navigation and search features, marketing and business strategies. The groups were also asked to highlight the unique features of each e-business and analyze the competitive advantages and weaknesses of each. This phase resulted in a final ranking and comparison of e-commerce sites, which the groups presented and discussed with the class.

The second phase of the project was the design of a new concept for an e-commerce venture and development of a prototype for their e-commerce website. Each group developed a pitch to introduce and promote the concept for their e-business and, given their background research, needed to define the novelty of their ideas and identify a competitive advantage over existing businesses. Each student firm also needed to request and justify the need for start-up funds, which needed to be approved by the instructor. Using the Virtual Enterprise platform, each group setup a corporate account and associated employee accounts. The corporate accounts are used to manage finances, human resource tasks, inventory, and the company website. The employee accounts are for individual employees are used for receiving salaries from the e-business and making purchases from classmates' groups in the virtual economy using the IVE credit card system. As a group, students had to assign company roles to each group member, develop a company website and inventory, as well as manage employee salaries and company stock portfolio.

There was a need for a student to emerge as the leader of each group to facilitate the group's interactions; however, major decisions should be agreed upon as a group with input from all members and each "employee" should be comfortable with their designated roles. For example, a group member who is skilled in graphic design may work on the company logo and images for the inventory database, someone who has a background in finance will manage the virtual stock portfolio investments in the IVE MarketMaker, another teammate with strength in web design may be responsible for developing the company web site, etc. At this stage, the elements of group collaboration were essential. The most successful groups were those that established good coordination and communication early on. Student groups that were comprised of members with a variety of disciplinary strengths benefited from multiple perspectives and better coverage of required tasks.

The last phase of the group project is the development of an e-commerce business plan. The e-commerce business plan phase included revenue model selection, marketing and Customer Relationship Management (CRM) strategies, and survey of enabling technologies. Groups were also asked to define how their e-business would utilize social networking capabilities to enhance CRM in terms of customer identification and target marketing, how GIS information from the customer tracking feature can be used, and how customer web experiences could be personalized. The business plan also included plans for future development of the enterprise and specifications for technologies that will be required for its implementation. At the end of the semester, the students presented their virtual enterprises to the class, along with their business plan. Students then "voted" for their classmates' e-businesses by making purchases from their websites in the virtual IVE economy.

Since this is a computer science course, students were also assigned an individual project in which they had to implement one aspect of their e-business to implement. Choices included creating a web system, database, enhanced web interface, web search engine, or mobile application.

## CONCLUSION

It is vital that students are equipped with the necessary foundation and exposed to a variety of skills before venturing into the workforce or developing their own innovative ideas into a business. After completing the e-commerce course with the Virtual Enterprise component, students came away with the experience of creating a virtual e-business and an awareness of the facets of a business, as well as collaboration skills needed to work well in a group. This experience can support students in their development toward becoming an entrepreneur or innovative and effective members of any organization. Leadership, communication, and business skills, along with knowledge from multiple STEM disciplines are desirable and valuable assets in a variety of career paths. Future work will involve focus on further STEM and inter-disciplinary adaptations of VE.

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# LIVE PERFORMANCE IN A DIGITAL AGE: AN EXPLORATION ANALYSIS FOR AUDIENCE'S PERCEPTIONS OF LIVENESS

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## ABSTRACT

*In “live and technologically mediated performance”, Auslander ( 2008) stressed that liveness was defined through history and culture; especially, the media environment is an important source for audience's perceptions of liveness. Because audience perceptions and understanding about liveness is changing accompanying to the development and use of new media technology. There never has been completely liveness sense without any mediated media .This study, drawing on the “liveness” concept of Auslander (2008), Aimed to explore the audience perceptions of liveness for live performance and the interaction relationship of audience perceptions, media environment and performance. In this study , we choose 30 live concert audiences to be interviewees and hold 6 focus groups to collect interview data. For understanding the effect of media environment, the interviewees were divided into three generations according to the timing for emergence of digital technology: 1. digital generation( under 30 years old): those people who are growing up in a digital environment; 2. intermediate generation(31 to 50 years old): those people who are across the non-digital and digital technology era; 3. non-digital generation (above 51 years old): those people who are growing up in a non-digital environment. The research results revealed that although emphasize liveness , all live performances were filled with considerable number of media, such as large-screen TV, microphone, lighting etc... Especially large-screen TV played an important role , most interviewees watched the live performance through this media, because the performer was far from them, they could not see him/ her clearly. That is, all “live” performances isn't live, they are all mediated performances. In addition, the previous media experience of interviewees will influence their perceptions of liveness. For example, singer's album is the important criteria for performer's live voice performance. And most interviewees used to use media terms such as "TV News", "screen", "sound effect" to describe their perception. In generation difference, the digital generation interviewees(under 30 years old)who mostly are digital media heavy user and performer's fans. Due to adore the performer, most of interviewees were fully invested in live concert, even they were crazy to shake their bodies and scream for the performer in live concert. And because they frequently repeated listening to the album of the performers in everyday life, resulting in a more sensitive perception of the sound, most of them know exactly which section of the song should be the whirlwind treble, where singer is out of tune. That is, they have more sensitive liveness. Otherwise, the non-digital generation interviewees (above 51 years old) who were growing in a literary culture and seldom touched digital media. Most of them were just seated quietly and listened carefully to the music in live concert . They don't join the performance with singer. Because seldom used sound media in everyday life, resulting in a more insensitive perception of the sound. Unless it is a big mistake, or most of them can't just where is out of tune.*

## RESEARCH MOTIVATION AND PURPOSE

In recent years, large-scale live concerts are more and more popular in Taiwan, and attract a large number of spectators to anticipate . Even if the fare was expensive, the tickets usually were sold out in a short time. Though there are many CD, DVD and other media of the singers filled with the music market, and even the audience can listen or watch the performances of these singers on TV, but in Taiwan, it seems to be the first choice for many audiences and fans that attend the singer's live concert .

In Taiwan, it seems that the "liveness" is increasingly seen as some kind of consumable commodity, many audiences attend the concert just for purchasing the "liveness" feeling. Although the mass media is far-reaching arrived at the audience's home to pass the live show for them, but there are still many people willing to spend a lot of money to get the first-hand experience for the show. For these people, the scene of the viewing experience is obviously different from the performances presented in the media. What is the magic of live performances that can make audiences willing to pay a lot of money to consume? What's the difference with the performance of electronic media? Whether are there specific characteristics of audiences liveness experience? What's the substantive content of this characteristic? All of these questions are interested in researcher.

For the past century, the electronic media (for example, television, radio and Internet) has become key technologies, these media broadcast the programs of various genres to home, transform and adapt a variety of image and sound information for audience. In some ways, they take the audience away from the live scene of the concert halls, theaters and sports playground, at the same time let them see / hear the events that occur in these scene. So that the audience can across space, instantly see the occur events in the far distance. Therefore, we can say, radio, television and the internet are across spatial media. Although they have become the important source of entertainment in our daily lives, contemporary also affect our life and cognition. Although the characteristic of the "live" and "immediate" for the electronic media (including Internet) is often emphasized, however, no matter for broadcast or internet content, in the relevant researches, it is often based on the manufacturing side and the media design angle to think about the produced process of the "live" information, the research usually focus on the "real time" technology improvements (Morris & Trivedi, 2008; Mortimer, Nosko & Sorensen, 2010) and ignored the audience's demand. Actually, the receivers and users of real-time information are audience, therefore the perceptions and feelings of the audience should be the most important concern issues for the information producer.

In this study, we hope the research result to be a guideline for the electronic media content provider. While the message providers produce and design a "live" and "immediate" media content, they can offer a more match content of the audience perception for the live performance. At the same time this research result can remind technical designer, while design various types of interface (such as internet) and technology (such as camera angles accessible collection of sound), we should more comprehensive to understand the real needs of the audiences. In particular, the development of media is more and more to emphasis and toward the presence sense and live feeling of performance (this trend can be seen from the emergence of 3D TV and movies), we believe that this study can offer a considerable reference value for the designer of virtual reality content.

## LITERATURE REVIEW

### The development of "live"

The concept of "live" has been a long-term controversial issues for performance theory from the early theater performance to radio, TV and internet about the discussion of the live performances, even in performance research and the cultural studies, it is still a problem and continues to be controversial.

The mainly reason is because "live" is often seen as the "essence" or "traits" of performance, is the essential things for performance. Stanislavski (1987) stressed that the performance was the live event, it can not endure through time. Barba (1992) also mentioned that the performance is an art of the present, "live" is its man value. This has led many scholars claim that the main characteristic of performance is its transience nature, for example, Phelan, (1993) mentioned that performance becomes itself through disappearance. For emphasizing its transience nature, therefore, many performance researchers were holding a very negative attitude for performance recorder media. Like Phelan talked about:

Performance's only life is in the present. Performance cannot be saved, recorded, documented, or otherwise participate in the circulation of representations of representations: once it does so, it becomes something other than performance. To the degree that performance attempts to enter the economy of reproduction it betrays and lessens the promise of its own ontology' (Phelan 1993, p. 146). Performance study emphasizes the transience and can't be copied nature of "live", in the definition of live performances, it is more specific extension to the concept of "spatial and temporal coexistence. According to *Dead Media Archive*, the

definition of live performances is the status of an event or performance listened, watched or broadcasted in the same space and time. It is two persons dialogue, theater performances, athletic competitions, and even parade carried . It is a status that encoding and decoding system occur simultaneously(Source: <http://cultureandcommunication.org/deadmedia/index.php/Liveness>, December 15,2011)

Through the previous definition and discussion, we can sum up a few "live" performance characteristics:

- • Performers and audiences exist in the same time and space
- • Live performance can not be copied

## The involvement of electronic media

But as time goes by, today, we also use the term "live" to describe those scene that does not meet these basic conditions of performance. Especially accompany the development of broadcasting technologies (radio, television, etc.), "Network", "mobile phones and other electronic media, we start to use the term " live broadcast", "live record", " direct broadcast satellite. The use of these terms for example " live broadcast", "live record" and " direct broadcast satellite" tells us that the concept of the so-called "live" has been expanded far beyond its original connotation, and articulated with all kinds of emerging technologies. And its process of continue change, mainly related to the development of science and technology, especially electronic media intervention. In the example of "live record", the audience and performers share neither the time nor the physical space, but the experience after the performances at different times, and re-experience of the show. "Live record" encourages the audience to feel like they are involved in a specific performance, and enter an alternative affective to live performances.

If "Live" just like Phelan (1993) said, has particular characteristics, then we call the live event, is a stable thing. However, from the previous discussion, we know that this argument is contestable , the concept of the "live" itself is a moving target, its definition will change according with the development of science and technology. For the multiple use of "live" concept contemporary, Wurtzler (1992, p.89) proposes, "separating the spatial and temporal parameters" to create four general positions in which various states of presence can be defined. The following chart was recreated from Wurtzler's essay to demonstrate the positions:

**Table 1: Some associated representational technologies/practices**

	Spatial Co-presence	Spatial Absence
Temporal Simultaneity	LIVE(I)	(II)
Temporal Anteriority	(III)	RECORDED(IV)
Position I: Public address, vaudeville, theatre, concert Position II: Telephone, "live" radio, "live" television Position III: Lip syncing, Diamond vision stadium replays Position IV: Motion pictures, recorded radio and television		

Source: Steve Wurtzler, "She Sang Live,"p. 89.

This chart effectively represents the notion that "the socially constructed categories of live and recorded cannot account for all representational practices and they do not exhaust the possibilities of the audience's relationships to posited original events." Modern technologies make "simultaneous presence and absence" possible by providing "a combination of qualities of both the live and the recorded, the immediate and the mediated. As such they problematize the binary oppositions on which dominant notions of representation are based, live/recorded and the related oppositions event/representation or original copy" (Wurtzler, 1992, p. 90).

## Live and technologically mediated performance



In other words, we cannot treat the qualities traditionally assigned to live performance that putatively differentiate it from technologically mediated performance as inherent or ontological characteristics. They are, rather, phenomenological and historically defined. They are phenomenological (as opposed to ontological) in the sense that they are not characteristics of the performance itself but things experienced and felt by performers and spectators(Auslander,2008)

As Wurtzler(1992) has pointed out, a great many performances blend elements of both, blurring the distinction between them. The particular performance with which he starts his discussion was by Whitney Houston. When Houston sang “The Star pangled Banner” at the 1991 Superbowl , the audience present at the stadium saw her live body, but heard her recorded voice. She was singing “live”, but her live voice was inaudible and replaced by the recorded one. Such a performance is indisputably technologically mediated but it is also simultaneously live and not-live: it contains elements of both live presence and recording.

So, “ live” is not an absolute condition – it is not the case that a performance either is or is not live. Rather, live elements can be combined with recorded and otherwise technologically mediated ones to produce a hybrid event. And our experience of liveness and our understanding of what counts as a live performance change continually over time in response to the development of new media technologies(Auslander,2008,p.109).

## **Liveness**

Before talk about liveness, we first need to return to the definition of perception. in Latin, perception was originally to receive, collect meaning. In Wikipedia, the perception refers to a course, which is equivalent to the senses to accept outside information and transferred to the organism. This course include receiving messages, interpret, select, organize and organizations to provide the organism to interpret and respond to stimulation(Source: <http://en.wikipedia.org/wiki/Perception>, December 10,2011) ) If we apply the definition of perception to the concept of "live", liveness can be defined as the sensory for information processing and behavioral responses in interactive process of audience and live performance.

Then, What’s the substantive content of this perception? Where did they come from? Weather does exist this audience experience ? What’s its characteristic? What’s the relationship between liveness and the outside world? Why could human be so easy to adjust in a great many mediated live performance?

### **(1) Liveness is the continuity of cognitive evolution between human and the media**

Although Boyd does not deal specifically with the live vs. mediated debates,but in his *On the Origin of Stories: Evolution, Cognition, and Fiction*, Boyd (2009) provides an excellent synthesis of much of the current knowledge on these matters., his insights, garnered from several hundred scientific accounts and theories, set the stage for investigating this problem.

According to Boyd , our impulse to craft performances and to engage with the performances of others comes from our evolutionary heritage of play. That is, play is a species-wide behaviour in some mammals, birds, and others that functions in ways that ultimately helped and continues to facilitate those species’ ability to reproduce and survive. Boyd(2009,p.14) summarizes the logic and evidence that lead to this conclusion:

Play evolved through the advantages of flexibility; the amount of play in a species correlates with its flexibility of action. Behaviors like escape and pursuit, attack and defense, and social give-and-take can make life-or-death differences. Creatures with more motivation to practice such behaviors in situations of low urgency can fare better at moments of high urgency. Animals that play repeatedly and exuberantly refine skills, extend repertoires, and sharpen sensitivities. Play therefore has evolved to be highly self-rewarding. Because it is compulsive, animals engage in it again and again, incrementally altering muscle tone and neural wiring, strengthening and increasing speed in synaptic pathways, improving their capacity and performance.

According to Boyd, playing allowed proto-humans to flourish because it increased their cognitive flexibility, especially their ability to recognize, repeat, and refine patterns. It is evident from Boyd's examples as well as his definition that he would include popular performances, from parades and sports events to musical comedies, under his umbrella of "art." Like the other arts, performances helped evolving hominids to pattern their lives, coordinating curiosity, memory, attention and empathy in socially engaged and open-ended ways. That is, the relationship between the individual and the environment, only can be understood in the association. The environmental information embodied in individuals, become an integral part, and vice versa. Within this framework, the technology should be understood as part of our cultural environment, and part of the biological and cognitive structure (Wu, 2007). Biological, physical and technical devices belonging to the same system, and subject to the same information feedback process. If we combine this argument with the previous concept, that is the relationship is not completely divided and fixed but the mutual involvement in the process between live and mediated performance, then we will know, liveness is not for a pure, unmediated perception, but a product of well affected by the experience in the technology-based performance.

Speaking of attending the theatre, the playwright and actor Wallace Shawn has said (Auslander, 2008): I've been spoiled like a lot of people by watching movies and television, where you can see very well and you can hear what the actors are saying. It's really, really hard for me to sit in row HH and not be able to see the faces of the actors and have to either strain to hear their voices or listen to projected voices which I know are grotesquely unnatural and which make it absolutely impossible for me to take the whole thing seriously. The situation Shawn describes is not at all unusual; it is something anyone who attends a live event of any kind (theatrical performance, concert, sports event, political rally, and so on) may encounter. In the case he describes, it is mediated both by the physical characteristics of the performance space, which can either enhance or undo the potential for contact between performer and spectator, and by his own experience as a film and television viewer. He also implies that the sense of immediacy can actually be stronger when watching film or television than at the theatre. Shawn suggests something very similar when he speaks of having been "spoiled" by the watching experience of film and television and of expecting something similar when he goes to the theatre. As a historical being, he cannot treat the theatrical experience simply on its own terms; inevitably, his perception of the theatre, of live performance, is mediated by his experience of technologically mediated dramatic forms.

## **(2) Liveness is the product of history and culture**

In *Theatre History: An Introduction*, Zarrilli, Phillip B. et. al (2006) trace theatre history to explain the affect of the history and culture factor for liveness. They found live performance began in cultures of primary orality, when face-to-face speaking and gesturing dominated communication for example drumming, storytelling, singing, dancing, and chanting. During the performance, the audience played an important constituent element, they would be in close interaction with the performers, and even work together to create stories and take part in the program, all performers in such cultures were necessarily "amateurs," although some probably enjoyed elevated status within their tribes.

When the new media of writing and print altered live performance in significant ways, the linear, visual, and materialist perceptions that came with cultures of print and photography had largely overwhelmed the acoustic and mythic sensibility that helped to structure oral cultures. But McConachie (2010) contend they did not challenge the basic set up of live performers appearing before spectators at the same place and time. This situation continued in market places, at court, on stage, under circus tents, and in other venues, even as performances shifted to accommodate the more "civilized" cultures of writing and print. As time goes on, the new electronic technology (varied scenery, stage lighting, sound effects) extends the idea of live performances, and the perception of the eyes, ears and voice. By 1900, live performance in the West had changed significantly from its origins in cultures of primary orality.

Film and broadcasting in the early twentieth century to extend our visual ability (film) and to increase our voice and auditory sense (radio) in an impressive way. "Direct satellite", "internet" and so on, more and more media emphasis on simultaneity, then we begin to use the term "live" to describe mediated performance. "Live performance" concept began to change.

Auslander, (1999,p.15) emphasizes that TV can immediately broadcast the events across thousands of miles away, extended our visual abilities. Another trait is the intimacy (Intimacy) that was less well explored. Auslander(1999,p.16) pointed out that it makes TV audience closer to the feeling that is like sitting in a front of the performing scene through the close-up and enlarged technology. We even can watch the performer's facial expressions and body movements through new technology. Here the immediate referent to the time dimension, the intimate referent to the spatial dimension. In other words, beyond time and space constraints, "liveness" can provide a different and even better sense of the viewing experience. So Auslander(1999) contend the liveness in electronic culture is not the true perception for the live performance , but mediated perception product.

### **(3) Liveness is the accumulation of a personal viewing experience**

In the related empirical research for audience's theater experience, Reason (2004) found that those groups who went to the theatre more regularly talked more about the actual performance; while those who went less frequently (or on occasion never) were much more firmly rooted in their responses to the broader experience of being in the theatre. Obviously, watching show is a learning activity, and is related with individual theater and media experience. It takes audiences to internalize certain things, in order to know how to appreciate and comment the performances. For all these reasons, the experience of watching live show always have a great degree of difference.

## **RESEARCH METHOD**

Because this article is an exploratory study, there are not too much related information available, and the relationship between the variables can not be established, so we adopt a broad and in-depth exploration research method . In this study, we mainly adopt focus group interview, and further analyze s with the contents of the interview. A focus group is a form of qualitative research in which a group of people are asked about their perceptions, opinions, beliefs, and attitudes towards a product, service, concept, advertisement, idea, or packaging (Henderson, 2009). Questions are asked in an interactive group setting where participants are free to talk with other group members. Usually carried out for 1-2 hours, the number of respondents to the 6-8 is appropriate. In this study , we choose 30 live concert audiences to be interviewees and hold 6 focus groups to collect interview data. For understanding the effect of media environment, the interviewees were divided into three generations according to the timing for emergence of digital technology: 1. digital generation( under 30 years old): those people who are growing up in a digital environment; 2. intermediate generation(31 to 50 years old): those people who are across the non-digital and digital technology era; 3. non-digital generation (above 51 years old): those people who are growing up in a non-digital environment.

### **Research Question**

According to the research motivation and literature review, in this study , we try to know what's the content of liveness in this digital time? Whether are there differences between different generations? What is the difference in different generations for the perception of liveness ?

## **RESEARCH RESULT**

### **What's the content of liveness in this digital time**

#### **(1) Large-screen TV played an important role**

After interview with 30 interviewees we found that although emphasize liveness , all live performances were filled with considerable number of media, such as large-screen TV, microphone, lighting etc Especially large-screen TV played an important role , most interviewees watched the live performance through this media, because the performer was far from them, they could not see him/ her clearly.

#### **(2) The familiar degree for the songs is a key factor for viewing experience**

No matter which generation it is, when we ask why they don't like somebody's live performance which they had participated in, some people answer us just because they don't like the performer, but most interviewees think that's because they don't sing performer's songs. John had ever participated in a young girl singer live concert to accompany with his wife. John doesn't really like the singer very much and isn't familiar with her songs. He constantly complains that it's a very boring viewing experience for him during interview process, because he totally didn't know what to do. That is, the familiar degree for the songs is a key factor for viewing experience. Just like Judith said: You must acquaint with all songs of this performer very much. Then you will enjoy it.

### **(3) Singer's album is the important criteria for singer's live performance**

In addition, we found that the previous media experience of interviewees will influence their perceptions of liveness. For example, singer's album is the important criteria for performer's live voice performance. And most interviewees used to use media terms such as "TV News", "screen", "sound effect" to describe their perception. For example, when we ask interviewee to evaluate the performance, we usually heard the following comment:

She sings very well just like the album (Linda, 2011.11.25)

Her voice quality is as good as album (Amy, 2011.12.12)

The sound effect is very good, you will feel the immersive (Dora, 2011.11.25)

Through the discussion mentioned above we can say, all live performances in a digital times are mediated performance. The perception of liveness for all audiences was affected by media. As Auslander (1999) contends the liveness in electronic culture is not the true perception for the live performance, but mediated perception product.

## **Generation difference in perception for liveness**

### **Digital generation**

In generation difference, the digital generation interviewees (under 30 years old) who mostly are digital media heavy users and performer's fans. Due to adore the performer, most of interviewees were fully invested in live concert, even they were crazy to shake their bodies and scream for the performer in live concert. And because they frequently repeated listening to the album of the performers in everyday life, resulting in a more sensitive perception of the sound, most of them know exactly which section of the song should be the whirlwind treble, where singer is out of tune. That is, they have more sensitive liveness.

### **Non-digital generation**

Otherwise, the non-digital generation interviewees (above 51 years old) who were growing in a literary culture and seldom touched digital media. Most of them were just seated quietly and listened carefully to the music in live concert. They don't join the performance with singer. Because seldom used sound media in everyday life, resulting in a more insensitive perception of the sound. Unless it is a big mistake, or most of them can't just where is out of tune.

### **Intermediate generation**

In our research, intermediate generation means those people who are across the non-digital and digital technology era, their age scope is from 31 to 50 years old. Their liveness in live concert are very diverse compared with digital and non-digital generation. Some interviewees are super fans for some bands, they have all albums of these bands and listen them anytime and anywhere, resulting in a more sensitive perception of the sound just like the digital generation. On the other hand, there are a lot of interviewees who enter the live concert to listen music just for memories of youth. They can sing some songs of the performer's album, but seldom listen the album in everyday life, they don't remember the detail of song and are more insensitive perception of the sound just like the non-digital generation.

## CONCLUSION

In this study we found that the perception of liveness for all audiences was mediated by media. Different generation have different perception of liveness. For frequently repeated listening to the album of the performers in everyday life, digital generation are more sensitive for the sound and stage effects. Otherwise, the non-digital generation interviewees are more insensitive perception of the sound and visual effects.

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# ASSESSING THE IMPACTS OF NEW PRODUCT DESIGN ON SATISFACTION, FUTURE BEHAVIORAL INTENTIONS AND THE IMAGE OF A THEME PARK SPECIAL EVENT

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## ABSTRACT

*This paper investigates the impacts of new product design of a theme park special event on visitor satisfaction, visitor perceptions toward the image of the event, and future behavioral intentions of visitors. Four product dimensions, namely authenticity, concept, entertainment and interaction, were extracted from ten product features by factor analysis. Authenticity and concept were found among the four product dimensions to be the most powerful factors in terms of positive impacts on overall satisfaction, perceptions toward the image of the event and future intentions of visitors, while entertainment was the only product dimension which did not reveal any significant influence on any of the dependent variables examined.*

## INTRODUCTION

Nowadays, attractions visitors are sophisticated and they are looking for more than just quality service. In a highly competitive environment, attraction managers are always trying to find ways to attract new guests as well as retain existing ones, and to hopefully prevent their products from entering the decline stage of the product life-cycle. Having a novel approach or a unique idea is crucial in order to be successful in the attractions industry (Swarbrooke, 2002). Apparently, innovations in product design seem to be one of the keys to success in sustaining the life well-known and established products.

On top of the routine rides and shows offered, special events are introduced to enrich the product portfolio of attractions and stimulate the number of visitors especially in theme parks during low seasons. Popular festivals are often the best times to hold special events to attract crowds. The importance of Halloween has been growing in its contribution to culture exchange and economic benefits during the past two decades (McKefchnie & Tynan, 2008). Halloween events in theme parks have continued to grow in terms of number, size, and its duration, and so have the associated revenues (Barbier, 2002; Burnside, 2003; Emmons, 2003; Koranteng, 2003). This western festival trend started to hit attractions in Asia since Ocean Park, Hong Kong first introduced their Halloween Bash event in 2000. Attendance at Ocean Park Hong Kong's Halloween Bash during the month-long event was approximately 500,000 in 2007 and more than HK\$10 million was spent in organizing Halloween Bash 2008 (Lau, 2008). Halloween Bash at Ocean Park is now one of the biggest events of its kind in the world in terms of number of haunted attractions and attendance.

Customer satisfaction is the outcome of experiencing various product components and often the key assessment measure of the service providers' performance. Event homogenization in the market makes it difficult for attractions to stand out with their events from competitors (Janiskee, 1996). Poor product design or boring elements may lead to dissatisfaction with visitors with their attraction experience. Novelty is one of the key motives of visitors attending festival events (Crompton & McKay, 1997). New onsite attractions opened tend to have positive long-term impact on attendance at theme parks (Cornelis, 2010). Post-purchase behaviors like word-of-mouth and customer loyalty are critical in market studies and often result from customer

satisfaction or dissatisfaction. Customer retention is a growing concern nowadays for all service providers in a highly competitive and cost-conscious environment, while good word-of-mouth may gain new customers. Moutinho (1988) stated friends and family members were the important sources of theme park information as television and radio advertising. With the popularity of online social networking nowadays, the power of word-of-mouth should not be underestimated. The image of a special event often represents product quality and standards in the mind of customers. Innovations in product features may enhance the projection of an exciting and creative image of the product supplying company for its customers and differentiating its brand from competitors. Development of new products and guest experiences are one of the key to success in the global theme park industry (Milman, 2010). However, the question is raised – What elements make up a successful formula that works in sustaining a special event?

Themed attractions have a story to tell. The haunted house experience of a Halloween special event is very much like a theater experience, except that the former has a higher degree of customer involvement. Grove and Fisk (1992) suggested the service experience can be seen as a theater experience where ‘actors’ (service providers/park managers), the ‘audience’ (guests) and ‘setting’ (physical environment and atmosphere) all contribute to the performance of a play (service experience). These components are often key contributors to overall customer satisfaction of an attraction experience. Marketers - Kotler, Bowen and Makens (2006) identified four augmented product elements and three of them, namely: 1) ‘customer interaction with the service delivery system’; 2) ‘customer interaction with other customers’; and 3) ‘customer co-production’, are highly related to the ‘actors/audience’ components of an attraction experience. The final augmented product ‘atmosphere and physical environment’ identified by Kotler, Bowen and Makens (2006) corresponds to the service component ‘setting’ as suggested by Grove and Fisk (1992). The top three perceived likely future themes to appear in the setting of theme parks and attractions in response to the market needs were ‘interactive adventure’, ‘fantasy and mystery’ and ‘movies and TV shows’ according to Milman (2001). McClung (1991) suggested learning themes were good ways to draw attendance in theme parks.

A number of previous studies on the importance of the overall theme park attributes have been conducted. Moutinho (1988) studied consumers’ choice criteria for attending a theme park. McClung (1991) revealed the theme park selection factors influencing attendance. Ap and Sandiford (1998) compared staff and guest perceptions of the importance of theme park attributes. Haahiti and Yavas (2004) developed an importance-performance analysis of theme park attributes to investigate the image and positioning of theme parks in the mind of visitors. No prior study, however, has been conducted with a focus to examine the impact of the new product design of a special event at theme parks on visitor satisfaction, visitor perception to the image of the event and future behavioral intention of visitors.

Ocean Park had nearly 7 million visitors in 2011 (Ocean Park Hong Kong, 2012). As one of the largest theme parks in Hong Kong with a focus on family market segment, Ocean Park has been always keen on improving their products and new ideas have been continuously injected into their Halloween event every year since it was established in 2000. The purpose of the study is to investigate and assess how visitors react to the new features in Ocean Park’s 2009 Halloween Bash special event. Specific study objectives are:

1. To assess the impact of new special event product features on overall visitor satisfaction.
2. To examine how the new product features affect the image of the special event.
3. To investigate the influence of the new product features on visitors’ behavioral intentions regarding word-of-mouth recommendations and future visits to the special event.

## METHODOLOGY

This study adopts a descriptive research design involving use of in-depth interviews with Ocean Park managers and designer for identification of the new product elements (features different from their previous events) in Halloween Bash 2009 and the targeted image of the event projected to visitors, and a survey questionnaire with their park visitors to identify their profile characteristics and to assess their: 1) perceptions toward these new product elements; 2) overall satisfaction; 3) perceptions toward the image of the event; and 4) future behavioral intentions. Due to limited resources and practical constraints, a non-random quota sample based on a 50:50 gender split was used to select 307 guests who successfully completed the survey questionnaire. Data was collected with a questionnaire as guests left the park. Respondents were asked to rate their level of agreement

towards a set of statements related to individual product elements on a five point Likert scale, where 1=strongly disagree to 5=strongly agree. Overall satisfaction was measured based on a ten point Likert scale, where 1=very dissatisfied to 10=very satisfied. Perception towards the image of the event, and future intentions were measured based on a ten point Likert scale, where 1=strongly disagree to 10=strongly agree.

Descriptive statistics were employed to analyse the data. Factor analysis was conducted on the product element items to identify the key product feature dimensions, which served as independent variables for subsequent analysis. Multiple regression analysis was used to examine the importance of the product feature dimensions on guests' overall satisfaction, perceptions toward the image of the event, and their future behavioral intentions.

As a non random sample was used, the findings reported may not be generalisable to all guests and this is acknowledged as a study limitation. Despite this limitation, the findings do provide some important insights on the role and influence of new product innovations and design on the guest experience with a special event.

## FINDINGS

Three hundred and six (306) completed questionnaires were obtained from respondents composed of 86% residents and 14% tourists. The majority of visitors (72%) were aged between 15 to 29 years. More than half of respondents (54%) came in pairs to the event. Most respondents (42%) came with friends followed by boy/girl friends (28%), and then families and relatives (20%).

Principal Component Analysis (PCA) with Varimax rotation was used and the results are presented in Table 1. The decision to include a variable in a factor was based on factor loading of 0.4 or above together with an Eigen-value greater than 1 to retain a factor. Out of 14 variables, four variables were deleted and, four factors, namely 'Authenticity', 'Concept', 'Entertainment', and 'Interaction' were emerged from the factor analysis. These four product dimensions explained 69% variance and in terms of the reliability of the items that were retained, the Cronbach's alpha was 0.79. The composite mean score of each of these dimensions were 3.94, 3.86, 3.69 and 3.27 respectively (see table 2). Under these four dimensions, the top four rated items, in terms of mean score ratings, were 'local movie theme' (3.99), 'acting of characters' (3.97), 'costume of characters' (3.96), and 'physical setting' (3.90) while the items 'acceptable number of visitors' (3.42) and 'use of tool for interaction' (3.11) received the lowest scores.

**Table 1. Factor Analysis Results of Perceptions toward Halloween Bash Features (n=306)**

Halloween Bash (Product) Features	Factor Loadings				Communality
	F1	F2	F3	F4	
<b>F1. Authenticity</b>					
In terms of physical appearance, the costumed Halloween characters were realistic looking.	0.82				0.72
The costume, furniture, fittings and other settings at Halloween Bash were realistic.	0.81				0.70
The Halloween characters provided good acting.	0.80				0.73
<b>F2. Entertainment</b>					
Involving multiple senses at Occult Lab to enhance visitor experience was a good idea.		0.84			0.82
Using cubicle at Occult Lab to create isolation was a good idea.		0.83			0.79
While waiting in the queue, the Halloween characters provided good entertainment.		0.67			0.56
<b>F3. Interaction</b>					
The number of guest allowed in the haunted house each time was acceptable.			0.83		0.73
I enjoyed using 'bak hwa' at Police Station No.13.			0.78		0.67



<b>F4. Concept</b>					
Having multiple paths to choose and follow at Campus of the Living Dead was a good idea.				0.82	0.73
Developing a haunted house based on the features of a local movie – “Recycle” - was a good idea.				0.61	0.50
Eigenvalue	2.14	2.05	1.45	1.30	
Variance (%)	21.4	20.5	14.5	13.0	
Cumulative Variance (%)	21.4	41.9	56.4	69.4	
Cronbach’s Alpha	0.76	0.73	0.53	0.34	
Number of Items (n=10)	3	3	2	2	

Note: KMO=0.77 ; Barlett’s Test of Sphericity=558.23 at  $df=45$  with a significance level of 0.001. Principal component method with Varimax Rotation: Loadings  $\geq 0.4$ ; 5-point scale was used with 1=strongly disagree and 5=strongly agree

**Table 2. Level of Agreement on Perceptions towards Halloween Bash Features (n=306)**

Halloween Bash Features	Disagree (%)	Neutral (%)	Agree (%)	Mean#
<b>I. Authenticity</b>				
The Halloween characters provided good acting.	2.6	17.4	80.0	3.97
In terms of physical appearance, the costumed Halloween characters were realistic looking.	4.2	16.7	79.1	3.96
The costume, furniture, fittings and other settings at Halloween Bash were realistic.	5.9	17.7	76.4	3.90
	<b>Composite Mean Score</b>			<b>3.94</b>
<b>II. Concept</b>				
Developing a haunted house based on the features of a local movie – “Recycle” - was a good idea.	2.2	19.1	78.7	3.99
Having multiple paths to choose and follow at Campus of the Living Dead was a good idea.	7.0	29.8	63.2	3.72
	<b>Composite Mean Score</b>			<b>3.86</b>
<b>III. Entertainment</b>				
Involving multiple senses at Occult Lab to enhance visitor experience was a good idea.	9.1	24	66.9	3.73
Using cubicle at Occult Lab to create isolation was a good idea.	14.8	21.3	63.9	3.68
While waiting in the queue, the Halloween characters provided good entertainment.	12	19.4	68.6	3.66
	<b>Composite Mean Score</b>			<b>3.69</b>
<b>IV. Interaction</b>				
The number of guest allowed in the haunted house each time was acceptable.	21.2	20.2	58.6	3.42
I enjoyed using ‘bak hwa’ at Police Station No.13.	29.5	28.2	42.3	3.11
	<b>Composite Mean Score</b>			<b>3.27</b>

(#Based on a scale from 1 to 5 where 1=strongly disagree and 5=strongly agree)

Table 3 presents the multiple regression results of influence of the four extracted product feature dimensions on overall satisfaction, guests’ perceptions toward the image of the event, and guests’ future behavioral intentions. The regression equations were determined to be significant at the 0.05 (p-value) level. The standardized coefficient, beta values, indicated the relative importance of each of the independent variables. According to the results, all the significant relationships were positive. ‘Authenticity’ was the most important factor affecting overall satisfaction ( $\beta=0.28$ ), guests’ perceptions towards a unique image ( $\beta=0.26$ ), guests’ perceptions toward the image of ‘something for everyone’ ( $\beta=0.16$ ), and guests’ intention on word-of-mouth ( $\beta=0.14$ ). The product dimension ‘Concept’ showed significant impact on revisit intention ( $\beta=0.17$ ), overall satisfaction ( $\beta=0.14$ ), intention on word-of-mouth ( $\beta=0.12$ ), and the perception of a unique image ( $\beta=0.12$ ). The factor ‘Interaction’

also influenced guests' perceptions toward a unique image ( $\beta=0.12$ ) and overall satisfaction ( $\beta=0.12$ ). However, the last product dimension 'Entertainment' did not reveal any significant impacts on any dependent variables studied.

**Table 3. Multiple Regression Analysis Results**

Factors	Dependent Variable (Satisfaction)		
	Guest Satisfaction (n=306, mean#=7.1)		
	Std. ( $\beta$ )	$t$ -value	$p$ level
F1: Authenticity	0.28	5.16	0.001**
F2: Entertainment	0.04	0.74	0.457
F3: Interaction	0.12	2.22	0.027*
F4: Concept	0.14	2.48	0.014*
	$R^2=0.113$ , Adjusted $R^2=0.101$ , F=9.558		

Factors	Dependent Variable (Image)					
	For Everyone (n=306, mean#=6.2)			Uniqueness (n=306, mean#=7.3)		
	Std. ( $\beta$ )	$t$ -value	$p$ level	Std. ( $\beta$ )	$t$ -value	$p$ level
F1: Authenticity	0.162	2.851	0.005**	0.262	4.817	0.000**
F2: Entertainment	-0.014	-0.238	0.812	0.103	1.887	0.060
F3: Interaction	0.064	1.128	0.260	0.123	2.268	0.024*
F4: Concept	0.043	0.763	0.446	0.115	2.116	0.035*
	$R^2=0.032$ , Adjusted $R^2=0.019$ , F=2.510			$R^2=0.108$ , Adjusted $R^2=.0096$ , F=9.096		

Factors	Dependent Variable (Future Behavioral Intentions)					
	Revisit (n=306, mean#=6.5)			Word of Mouth (n=306, mean#=7.5)		
	Std. ( $\beta$ )	$t$ -value	$p$ level	Std. ( $\beta$ )	$t$ -value	$p$ level
F1: Authenticity	0.065	1.146	0.253	0.135	2.399	0.017*
F2: Entertainment	0.060	1.062	0.289	0.049	0.873	0.383
F3: Interaction	0.013	0.234	0.815	0.054	0.958	0.339
F4: Concept	0.170	3.003	0.003**	0.124	2.190	0.029*
	$R^2=0.037$ , Adjusted $R^2=0.024$ , F=2.879			$R^2=0.039$ , Adjusted $R^2=0.026$ , F=3.058		

(\*Significant at 0.05, \*\*Significant at 0.01, #Based on a ten-point scale where 1=strongly disagree to 10=strongly agree)

## DISCUSSION AND CONCLUSION

Description statistics show that the majority of guests to the event were local and it implies that new product ideas to stimulate repeat visitors are crucial to the theme park. Most guests were aged between 15-29 years of age and the theme park should put more efforts in understanding the product preferences of this age group, who are particularly interested in the Halloween experience. Most respondents came in pairs with friends or as boy/girl friends. Respondents are therefore seeking fun and exciting interaction with someone whom they know and to experience being scared. It provides an excellent opportunity for the theme park to consider double ticket sales promotion or a 'combo' package with dinner and tickets included for lovers.

The four factors emerged from the factor analysis, namely 'Authenticity', 'Entertainment', 'Interaction' and 'Concept' revealed that the product features of a special event at theme park were not correlated under the theater experience framework proposed by Grove and Fisk (1992) or the augmented product level concept by Kotler, Bowen and Makens (2006). Apparently, the Halloween or special event experience can be quite different from general service experiences as the former features a specific theme. 'Authenticity' may represent the tangible elements of a themed event while 'Concept' may refer to its intangible features. With good collaboration of 'Authenticity' and 'Concept', the theme of a special event can be made to easily stand out. 'Interaction' was found to be the only common product dimension found in both the special event and the service experience proposed by Kotler, Bowen and Makens (2006) and this supports the claim by Milman (2001)

that 'interactive adventure' experience would be a trend in the theme park business. There is no surprise that 'Entertainment' is one of the key product dimensions in an event experience as guests go to a theme park for fun, entertainment and leisure.

The combined mean scores of the four individual product dimensions reveal that how the guests were impressed with performance of these features in the theme park. The top two rated product dimensions, namely 'Authenticity' and 'Concept', demonstrated that the theme park was relatively good in providing the Halloween atmosphere in their event in terms of both tangibility and intangibility. In terms of individual product elements under the four product dimensions, 'local movie theme' was the top rated item and this supports the importance of another theme trend 'movies and TV shows' claimed by Milman (2001). The other top three rated items, namely 'acting of characters', 'costume of characters' and 'physical environment', which all came under the 'Authenticity' dimension suggests that Ocean Park has done well in tangibilizing the Halloween theme. The items 'use of tool for interaction' receiving the lowest mean score followed by 'acceptable number of visitors' make 'Interaction' the lowest rated product dimension. Exciting tools (e.g., toy guns shooting with sound and fake blood) for guests' interaction with cast members or other customers are recommended. It is often a challenge to manage the experience of a large number of guests at a Halloween attraction. If too many guests are allowed to enter a haunted house at the same time, the scary atmosphere will be diluted. If only a few visitors are allowed to enter each time, the waiting queue will be too long. Theme park managers may need to find a good balance between quality experience and capacity control.

'Authenticity' and 'Concept' were found to be the most important factors in terms of the impact on overall satisfaction, perception towards the image of the event, and future behavioral intentions of guests as both showed positive influence on four of the studied dependent variables with three common ones, namely overall satisfaction, perception towards a unique image and intention on word-of-mouth. The fourth positively affected variables by 'Authenticity' and 'Concept' were perception towards the image of 'something for everyone' and intention to revisit, respectively. Again, the significance of illustrating the theme in special event was confirmed to contribute to multiple benefits as guests tend to be impressed by the theme and the associated atmosphere that has been created. Both tangible and intangible elements coherent to the theme should be emphasized in a special event. The 'Interaction' product dimension has a positive effect on overall satisfaction and perceptions toward a unique image, which suggests the importance of managing the number of guests allowed in a haunted attraction at any one time for a quality visit experience and to facilitate guest interactivity. However, 'Entertainment' did not reveal any significant impacts on customer satisfaction, behavioral intentions, or perceptions toward the image of the event and should be considered as a supporting service or added value in a special event. The results of this study contribute to a better understanding of guests' reactions and preferences with new product features incorporated in a special event and provide valuable information for park managers and designers in their planning and design of future Halloween events to achieve their target objectives.

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# CHINA'S CHANGING LANDSCAPE" THE CASE OF REGINA MIRACLE AND INTERNATIONAL PROTECTIVE APPAREL SUPPLY (IPAS)

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## ABSTRACT

*The traditional business model of manufacturing in China is changing. Integrating retail development has become a key variable in building business development and extending the supply chain process throughout manufacturing entities. The supply chain is a continuing process that begins with a customer's order form, following through raw material supply, storage, production, and delivery to the customer. The research uses a case study methodology to highlight the process of transitioning from manufacturing to retailing by developing a Design to Retail (D2R) Model. Qualitative research methods were used to create two case studies of manufacturers wholly owned flagship stores. The purpose of the research is to include the development of a new supply chain management model for a Design to Retail (D2R) concept to include: design process, product development, merchandise planning, production, marketing and retail operations.*

## INTRODUCTION

In 2008, researchers started a hybrid course to China for students studying fashion at Philadelphia University. The purpose of the course was for students to tour mills, production facilities, retail operations and study intercultural business activities. Increased technology and globalization have resulted in a greater need for Americans to become "globally intelligent" (Tucker, 2003). In fact, developing a world perspective is now considered a basic life-skill (Knight, 2006).

Regina Miracle and The International Protective Apparel Supply were two of the partner companies in Asia. Upon the conclusion of each business visit, the researchers were compelled with the development and strategies that manufacturers were taking to remain competitive in the marketplace and in hindsight "save their companies". For years, manufacturers in China have focused on the production of products for the United States and have overlooked the billions of potential customers who could purchase products by building their own brands. The 2009 recession caused a great deal of companies to alter their business strategies to include wholly owned flagship stores. Zhang (2010) posed that own brand has become the world's booster in various regions to promote the growth of retail businesses, AC Nielsen research shows that in the global market, the rate of development of two thirds of the own brand are more than that of manufacturer brand. The emerging Southeast Asian markets are still dependent on traditional distribution and retailing systems. These markets are ripe for cultivation by international retailers whose advanced systems, processes, and management and marketing skills can bring added levels of efficiency and enhanced performance to these markets (Samiee et al, 2004). Adding retail operations to the extension of the supply chain is one of the key models that manufacturers are employing to capture market share and offer value added services.

Many people spend most of their income on shopping to get material wealth. As status symbols, Chinese consumers wear imported European and American designer brands. Shopping has become an important social occasion in the major cities of China (Sternquist, 1998) where customers are more sophisticated and demanding, and are more likely to be attracted and encouraged by novelty in the apparel retail market (Li et al, 2004).

## PROJECT METHODOLOGY

This research focused on two manufacturers' business models. Regina Miracle recently opened their store in Hong Kong and the International Apparel Protective Supply (IPAS) will open their first retail establishment in Beijing in Fall 2012. The researchers have received approval to conduct a case study on the both companies to build upon the short course experience and maintain the partnership that has been developed. Philadelphia University and students at Ohio State University have been the sole students to conduct educational business meetings with Regina Miracle. The overall findings will be shared with the Hong Kong Trade and Development Corporation to educate their manufacturing firms that are seeking to transition from manufacturing to retailing. A series of interviews, information regarding company background, technological applications, production processes, and merchandise planning and assortment were gathered and formulated in the case study to create the D2S model.

## D2R (DESIGN TO RETAIL) MODEL

### Regina Miracle

Regina Miracle is the largest producer of intimate apparel for Victoria's Secret (VS). In 1985, Hong Kong Shun Cheong Shoulder Pad Factory Ltd. was established by Mr. Y.Y. Hung and by 1988 Mr. Hung shifted his production from shoulder pads to bra pads thus establishing Regina Miracle International Co., Ltd., which paved the way for the company's growth and development. The Regina Miracle Factory is located on the bank of Shiyan Lake, in Guangming New District of Shenzhen, China. The area covers more than 300,000 square meters with a current staff of more than 20,000 people. Throughout the history of Regina Miracle, the company has focused on innovation through new concepts, materials, and new technology.

In 1999, Regina Miracle worked with the Hong Kong Productivity Council to develop a 3-D Computer Aided Design/ Computer Aided Manufacturing (CAD/ CAM) technological system that standardized product measurements for lingerie that enabled the company's Research and Development Team to better grasp and analyze the dynamic market trends of the intimate apparel industry. Due to the development of the 3-D CAD/ CAM system, a whole new generation of digitally controlled manufacturing technology was born in the industry. This development introduced a new mold-making technology technique used in bra pad manufacturing and replaced the traditional handmade plaster molds that improved consistency and accuracy of the finished product. The CAD/ CAM technology allows for designers to develop innovative concepts and transfer the information directly to create prototypes and in turn further the production of intimate apparel. Technology has been one of the key drivers of success for Regina Miracle's supply chain. Du (2007) stated in his research that there are two major links in establishing a global supply chain. Product development describes the activities from the initial product concept to production. Following this process is procurement, which includes ordering, producing and delivering products to retailing. Regina Miracle has capabilities to produce approximately ten million units per month in its Shenzhen facility.

Building brands based on the American consumer is at the forefront of the fashion industry and Asia has not reached its peak of retail and consumer development. The emerging Southeast Asian markets are increasing the source of high-quality brands that are price-competitive with their developed-market counterparts. These brands have a wide appeal and tend to be available in China. Thus, Multi-national Corporation (MNC) retailers need to incorporate local and regional brands in their merchandising strategies (Samiee et al, 2004). Though the buying power of the Chinese middle class is still a fraction of their western counterparts', Chinese society is creating the right atmosphere for launching a moderate US brand in China today (Frumkin & Gencalioglu, 2006). During the past years, the intimate apparel industries have become more innovative and have started using the molding technology to improve products. Regina Miracle has cultivated its processes and has extended their supply chain to include retail development. The 2,000 square feet retail operation is located in Hong Kong in the Kowloon Tsim Sha Tsui section with additional mid-tier retail operations. The product assortment is an array of colorful undergarments that spurs innovation, comfortability, and comparable price points similar to the Victoria's Secret brand and services that meet the needs of middle to upper class consumers. Regina Miracle's focus is innovation and the creative process is captured in the production of their seamless

undergarments, molding technology, and materials sourced from Europe, India and China. Regina Miracle has been the sole manufacturer for Victoria Secret's products and the design of Regina's Miracle's products coupled with its innovation is transcendent throughout products showcased at the retail store.

## **International Protective Apparel Supply (IPAS)**

China is rapidly moving into a consumer and brand centric society with a desire to purchase American brands especially in the areas of luxury market and high quality. The International Protective Apparel Supply manufactures military attire, performance apparel and safety gear for Lacrosse, the New York Police Department and other companies. The owner, Mr. Yu Ding is a graduate of Drexel University and has produced products for the apparel division of LaCrosse Footwear for over six years. With offices in US and China, IPAS initiated the process of transitioning into the retail sector in Beijing, which is considered a Tier 1 prime location for retail. Since the economic downturn, manufacturers have been identifying ways to reinvigorate their businesses. Manufacturers have focused on producing and offering full package services for Western and European brands and have disregarded the 1.3 billion potential consumers in China. Today, trade organizations are offering seminars for manufacturers to develop design strategies, merchandising concepts, and marketing plans to support the restructuring of entities to remain competitive. Most retail spending is concentrated in such big cities as Beijing, Shanghai, Tianjin, Guanhzhou, Chongqing, Shenyang, Wuhan, Zhengzhou, Chengdu, Shenzhen, and coastal cities (Samiee et al, 2004). Today, IPAS' focus is to develop a line of luxury performance outerwear with exceptional functionality, quality and style for the sophisticated consumer through a series of channel integration. Fashion retailing involves less asymmetric relations and the various players see their relationship with other entities as a channel partnership. Thus, channels more approximate the political economy structure suggested by Stern & Reve (1980) and later Achrol (1990). (Shemwell & Aun, 2010).

In 2009, IPAS faced a number of challenges that precipitated the revamping of the existing business model. One, Lacrosse was their major account and was in the process of closing a number of their apparel divisions. Two, the increase of employee wages and the growth of service industries were attracting workers and posed challenges to hire potential employees in Shenzhen. Finally, the growth of the luxury market was growing rapidly in Asia and IPAS encompassed a series of skills that are necessary to transition into the functional luxury market industry. IPAS embodied a strong ethical reputation in the US for producing quality products with a focus on price and on time delivery. The latter are three main criteria's for sourcing products and selecting a manufacturing facility.

Design is an essential component of the manufacturing process and companies in Asia are lacking this particular skill. During our past business meeting with the manufacturers in 2011, our representatives have asked for assistance to identify US based designers. There is an underlying need for US designers because of the increased growth and revenue stream for US brands in Asia. It is also an opportunity for Asian manufacturers to embark on the creativity of US based designers. In addition, designers understand the US customer and could create ways to infuse creative design applications that are transferable to the Asian consumer. The majority of the fashion representatives are skilled in technical design, which is the process of transforming a 2-dimensional flat sketch into a 3-dimensional product by identifying construction, measurement, and fit specifications. The United States based apparel companies' focus on creativity, innovation and unique marketing strategies to support their company goals and objectives. Infusing a variety of marketing channels to spur growth and product development is at the forefront in the U.S., but is at the baseline of fashion and manufacturing firms in Asia.

As a function of the design strategy and marketing techniques, IPAS has partnered with faculty from Philadelphia University to research trends and streamline the design process by identifying student and local designers to serve as freelancers. Each team member is responsible for creating products for the women, men or children's design division of IPAS. In turn, technical packets are created and distributed to China for prototyping the design concepts. The marketing concepts and material selections were developed to represent the upper echelon of brand development to interconnect the line of luxury outerwear that is marketed to upper class consumers in Beijing and Shanghai.

Currently IPAS designs, sources, markets quality apparel and accessories by selling through a diversified network of retailers, digital commerce, and licensing channels in China. IPAS synthesizes luxury designs with

space-aged technology to offer comfort, style, durability and utility to consumers.

## EVOLUTION OF THE APPAREL VALUE CHAIN

### Apparel Value Chain Overview

The global apparel value chain has undergone massive changes in the production network configurations over the past 3 decades (Gereffi & Frederick, 2010). As the production and sourcing networks evolved and spreaded across the globe, the bargaining power began to shift.

The apparel industry has become a buyer-centric model, a power asymmetry away from producers to the global buyers of final apparel products; thus making the most valuable activities of the apparel value chain not with the manufacturing phase, but to the design, branding and the marketing of the products. Over the past 30 years, those non-manufacturing (most value-added) activities were performed by lead companies, which are largely global retailers and brand owners in the apparel industry. In all cases, these global players outsource the manufacturing processes to a global network of suppliers. Li & Fung is one firm that has specialized in managing the global sourcing aspects of the apparel value chain.

The bargaining power within the manufacturing phase has also been in constant change, from shifting from southern China (rising wages) to the lower wage scale regions, including Vietnam, Cambodia, Bangladesh, Pakistan, and the Philippines. Developing countries are in constant competition for foreign investments, as well as contracts with global branded companies, thus leaving little leverage for the suppliers in the value chain.

During the 1970s, apparel suppliers from East Asia began to emerge from being simple assembler, and segmented into different roles such as (Gereffi and Frederick, 2010):

- OEM (original equipment manufacturer) package production
- ODM (design)
- OBM (brand development)

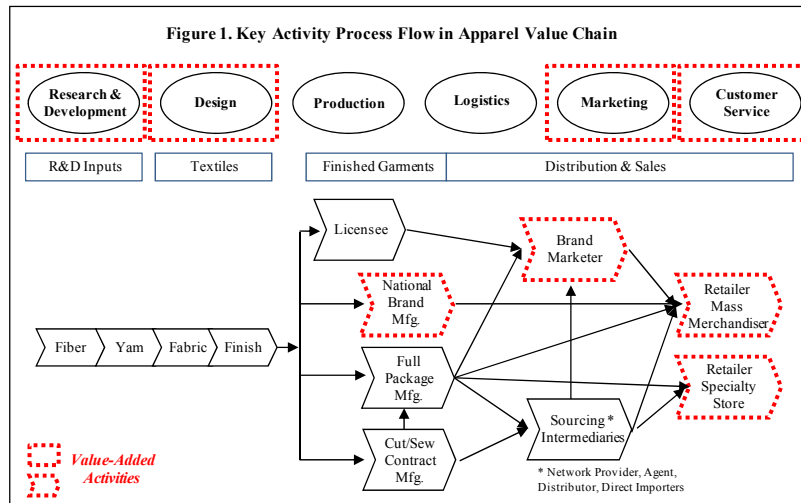
The segmentation demonstrated that the ‘intangible’ aspects of the value chain (marketing, brand development, and design) have become more profitable for the lead firms, making ‘tangible’ activities, such as production and manufacturing of the final garment to ‘commodities’. The main stages of the functional segmentation include:

- **Assembly/CMT:** a form of subcontracting in sewing the garment with imported inputs for assembly and exports. CMT stands for ‘cut, make and trim’ or CM (cut and make) represent a factory is simply paid a tolling fee, not the price of the garment, and uses the fabric sourced by, owned by, the buyer.
- **OEM/FOB/Package Contract:** a manufacturing-centric business model, where the contractor is capable of sourcing and financing piece goods (fabric) and trim, and providing all manufacturing services, from finishing to packaging for delivery to the retail channel. FOB is free on board, which refers to the transportation costs are part of the quoted price. The finish goods are delivered on-board a ship or carrier at no cost to the buyer.
- **ODM/Full Package:** a business model centers on design, rather than branding or manufacturing. Full package supplier takes on all the steps in producing a finished garment: from design, fabric sourcing, cutting, sewing, trimming, to packaging and distribution. This is a ‘turnkey’ contractual model, where the full package supplier will organize, coordinate, and execute the end-to-end value chain activities.
- **OBM:** a business model focuses on branding only, rather than on design or manufacturing. This is a form of upgrading to migrate into the sale of own branded products.

Figure 1 illustrates those key activity process flows in the Apparel Value Chain, where the value-added activities are highlighted in red and dashes.

**Figure 1: Activity Process Flow in Apparel Value Chain**





## Changing Roles, Capabilities and Relationships in China's Apparel Value Chain Network

Recently the roles and relationships among national and global firms, apparel manufacturers, and intermediaries have become increasingly blurry. The changing global economic landscape, advances from information technology, the rise of the Chinese economy and consumerism in Asia are factors in causing this shift. Notable shifts are:

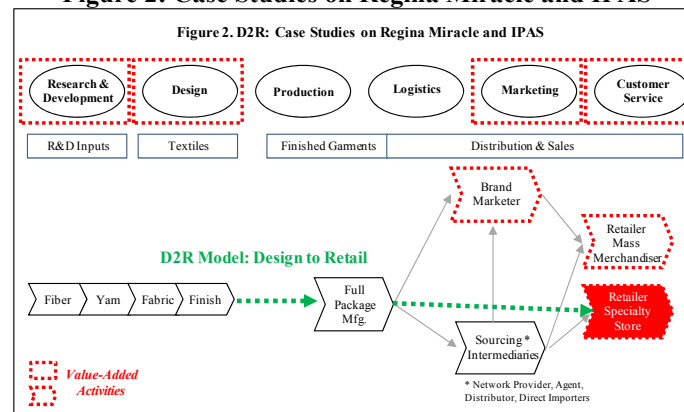
- **Brand Owners Becoming Specialty Retailers:** Brand manufacturers and marketers are increasingly opening up their own stores. Furthermore, brands with existing retail operations are leaning to grow their own business and store operations, than meeting the needs of their external customers (Euromonitor, 2009)
- **Full – Package ‘Manufactures’ Becoming Intermediaries:** Beyond just manufacture, they establish a network of global suppliers. In essence they provide full-package services along with production capabilities.
- **Private-label Brands Increasing:** A sharp rise in the volume and varieties of retailer private labels. Retailers that develop proprietary brands use in-house design team, and outsourced manufacturing capacity, often by foreign sourcing. This eliminates the middleman associated with national brands; retailers can realize cost savings and increase profit margins. The scope of private label offerings and higher-margin private-label garments are on the rise.
- **Importance of Social and Environmental Standards:** The advent of corporate social responsibility (CSR) campaigns, and social advocacy organizations, as well as environmental compliance requirements, green initiatives are all moving to the forefront (International News Services 2009). Consumers are demanding more responsible and transparent about their practices. Recently Apple made their entire list of suppliers available for the first time, and Patagonia gaining traction on promoting ethical clothing brands.

## STRATEGIC IMPLICATIONS ON A D2R MODEL

There have been seismic shifts to rationalize the supply chain, driven by recent economic environment. Energy costs continue to rise, sustainability efforts to reduce carbon footprint, as well as pressure on margin enhancement. Investment and advances from information technology, as well as flexible manufacturing systems also help to streamline the traditional supply chain. Furthermore, with the integration of the product development chain into the supply chains also simplify the apparel value chain network. Our research with the two companies have both gradually streamlined their respective value chain by working with internal design capability or by

outsourcing to boutique design teams, leverage their own manufacturing infrastructure, and gradually building up their own retail presence, as mentioned in this paper earlier. Such Model can be illustrated below in Figure 2.

**Figure 2: Case Studies on Regina Miracle and IPAS**



The strategic benefits of this D2R Model include:

1. The digital design (CAD/CAM) capabilities have been well documented to enhance organizational agility. In this case, bypassing the transactional steps in working with a Brand Marketer, the decision making process is simplified, thus improve the speed to market greatly.
2. Since the Full Package Manufacturers (IPAS and RM) target Chinese consumers, with their own brands, and domestic retail specialty stores, they eliminate the export logistics steps (freight forwarder, customs clearance, etc.), thus allowing them to take on the role of the sourcing intermediaries uncomplicated.
3. By integrating the design team, and product development chain into the manufacturing chain, this mimic the Zara's (Spanish Inditex apparel company) Fast Fashion business model, where the Full Package Manufacturer can produce new design to suit the changing consumer trend in amazing speed. Zara's successes come from using local designers to 'patrol the streets', so they could pick off those trendy features and preference quickly, and embed into their design strategies.
4. Incremental demand on the existing manufacturing infrastructure helps to share fixed costs, and add to their purchasing bargaining power across their logistical fronts. By going to retail directly, their profit margins would be much greater than just manufacturing for a Brand Marketer, or selling to a sourcing intermediary, such as Li and Fung. Since they are launching a non-foreign brand, and will not be subject to a foreign brand tax by the Chinese government. This opens the door for the development of a Chinese luxury brand development; however the scope of this paper does not cover luxury brands.
5. Those Full Package Manufacturers also have the advantage of a cluster network of subcontractors, and could benefit from sourcing the finished garments closer to the retail store locations, thus saving transportation, associated warehousing costs, and increasing the speed to market products.

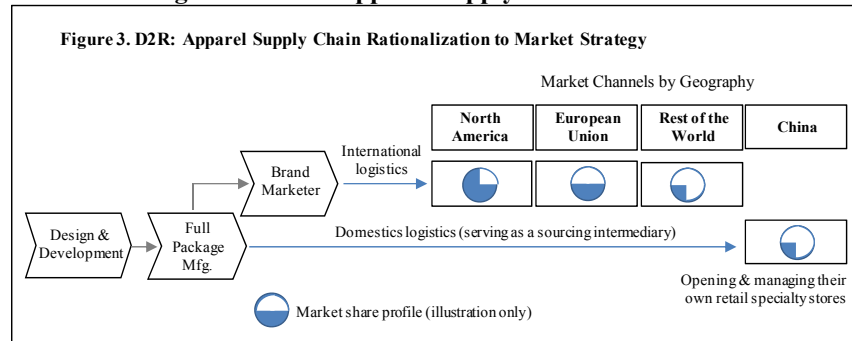
These advantages cannot be easily duplicated for a foreign Brand Marketer, as they would have a tax liability in China. Figure 3 shows such an apparel supply chain rationalization model, where the Full Package Manufacturer becomes a value-added player in the apparel value chain.

## INTERNATIONAL MARKETING OF WHOLLY OWNED FLAGSHIP STORES IN ASIA

Manufacturers in China that have the resources and support channels to add value-based initiatives to their existing business models will gain a competitive advantage in the retail market. While Regina Miracle and IPAS selected to engage in wholly owned flagship stores, Luk and Yip (2004) identified additional strategies for entering international retail markets. These models consist of manufacturer-run shops which are identified as wholly owned retail stores in our research, retail shops as part of hotel or foreign residential facilities, retail stores as tenants of shopping complexes, management companies (or holding companies), joint construction

projects, joint operations and licensing agreements, single license-many outlet operations, and miscellaneous types.

**Figure 3: D2R - Apparel Supply Chain Rationalization**



The process for entering China's international retail market is dependent upon building a partnership with a local company. Since 1990, restrictions on the foreign market have been eased. China has been accused of the long application process and timeframe necessary to establish foreign retail establishments. IPAS and Regina Miracle will not face such challenges. In the past, the approval process was established at the local government level. To date, the Chinese government in Beijing has long adopted a classification scheme to facilitate the screening of applications for the establishment of retail joint ventures in China (Retail in China, 2009). Retail MNCs must clearly identify the category to which the proposed retail establishment (i.e. joint venture) belongs when submitting applications for approval. This is an important stage which will have serious implications insofar as the processing of the application and the subsequent decision criteria are concerned (Samiee et al, 2004). IPAS has a prime advantage because the owner, Yu Ding has established a network of global suppliers due to his relationship with Lacrosse and other US based suppliers that encompass positive brand recognition that will lead to the growth and business development in Tier 1 cities. The Retail in China study identified Tier 1 as the most developed cities, Tier 2 as the fastest growing cities, Tier 3 of regional importance and Tier 4 and beyond are still traditional retail segments (Retail in China, 2009). Regina Miracle has infused similar marketing strategies that are employed at Victoria's Secret in the United States. Previous studies from Bird et al (2008) states that middle class consumers are more brand conscious, less price sensitive, want a better shopping environment, and high quality goods and services. The stores are located in areas that contain high traffic, global brands and strong local brands to support the previous values mentioned.

The study also supports IPAS and Regina Miracle's target market to consumers between the ages of 30-40 years old. Consumers who extend beyond that latter mentioned age bracket are more focused on saving and are less focused on innovation and prefer to support local brands. A study conducted by Deloitte, researchers found that 70% of Shanghaiese are willing to try new brands and are not rigid consumers (Winning the Wallet of Today's Chinese Consumers-A look at Consumers Buying Preferences, 2010). Regina Miracle and IPAS have identified verbal marketing as their main strategy because of the location of their retail establishments. Deloitte's research also supports word-of-mouth promotion and a well-positioned media and advertising campaign to integrate as marketing strategies.

## CONCLUSION

Regina Miracle and IPAS are exemplary business models that have added value based services as an extension to their supply chain. Based on our research, we have learned that manufacturers that are engaged in providing full package services are able to transfer the skills and core business processes from their Western counterparts are at the forefront of international retail innovation. Both companies are optimistic that their combined skills of producing quality products, employing strategic marketing tactics and entering Tier 1 retail locations are key strategies to build their networks and extend their channels of integration. The D2R Model illustrates key activities that add value to the business structure of IPAS and Regina Miracle. While it is imperative to maintain the quality of products from fiber to the final stages of finishing, it is equally important to conduct research, design products according to the identified target market, and select appropriate marketing strategies that will in turn gain brand recognition. Retailers in China are experiencing a new paradigm in international marketing and supply chain management. In order to remain competitive, retailers must continue to adapt to the ever-changing

marketplace to meet consumer needs and exceed their expectations. As the market begins to ripen, it is imperative to focus on cultural adaptations and incorporate core values to sustain wholly owned flagship stores.

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# INVESTIGATING THE POST AWARD STAGE OF CONTRACTING: CRITICAL MANAGEMENT ROLE OR JUST AN AFTERTHOUGHT?

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## ABSTRACT

*Contracts are the heartbeat of commercial organisations and the management of contracts plays a key role in the success of the procurement process. A tremendous effort is made to get a contract signed, however once a contract is awarded, little attention is seemingly paid to manage the contract. Subsequently, contract management is usually an afterthought. As a result, organisations are continuously facing loss in terms of value and cost. This study is set to explore this afterthought, technically described as post award contract management afterthought (CMA), a stage when much contract risk occurs however is not well researched. In this research, we examine the factors that are associated with CMA. Then, a web-based online survey that includes both public and private sector has been conducted to provide empirical analysis. The results are expected to provide evidence of the challenges of post award contract management. Furthermore, it helps to determine the management factors associated with the possibility that contract management as an afterthought. Finally, some specific recommendations are made to improve contract management for both academia and practitioners.*

## INTRODUCTION

Procurement is of growing importance to organisations (Chen and Paulraj 2004; Dimitri, Piga *et al.* 2006; Zheng, Knight *et al.* 2007; Thai 2010). With the pressure of increased competition, improved time-to market and cost reduction, organisations are endeavouring to achieve these competence requirements by equipping themselves with better knowledge of supply chain management, relationship management, strategy formulation and implementation (Knight, Harland *et al.* 2005). Furthermore, organisations may respond by re-engineering their supply structure to match the strategic pressures and priorities that are being placed on them (Emberson and Storey 2006). Before reaping any procurement outcome, the starting point is to enter a buyer-supplier relationship for a business transaction.

Generally, the buyer and supplier enter their business relationship through a contract agreement to achieve mutual goals (James 1995; Brown, Potoski *et al.* 2006; Argyres and Mayer 2007) a view supported by the legal definitions of a contract: an agreement between two or more parties which creates obligations enforced by law. From a buyer's perspective, this contractual relationship will secure their access to goods and services to meet their supply need. From a supplier's perspective, such a relationship recognises their obligation and responsibility to achieve a desired business return.

Aberdeen Group's (2007) examination of enterprise contract management programs consistently found that while many companies have defined processes and protocols for contracts negotiations, few have well-defined roles, responsibilities, or processes for contract management. In many cases, they found that contracts and the related compliance are only reviewed as contracts come to term (Aberdeen Group 2006), that is, are approaching completion. Furthermore, Aberdeen Group (2006, p.8) concluded: "Such an approach to contract administration can lead to a myriad of factors, including, incorrect pricing, late payments, missed service milestones and revenue opportunities, insufficient certifications and insurance, and increased risk".

In the public context, a central government audit report regarding post award contract management in UK found that organisations are not always according contract management the priority it deserves (National Audit Office 2008). Furthermore, organisations do not always allocate appropriate skills and resources to the management of their contracts (Gilmour and Wise 2007; National Audit Office 2008). Consequently, contract management practices demonstrate a need for reform to achieve better procurement performance (Wang and Bunn 2004; Australia National Audit Office 2007; Knight, Harland *et al.* 2007; Commonwealth of Australia 2008; Johnston and Romzek 2008; National Audit Office 2008; Thai 2010). With current and potentially growing levels of globalization, organizations generally aim for better contract management performance.

For the purpose of this study, contract management is defined as the processes undertaken to maintain the integrity of a contract, and to ensure that the roles and responsibilities contractually agreed between the parties are fully understood and are carried out to the contracted standard (Grimsey and Lewis 2004). In simple terms, contract management aims to ensure a supplier provides the right quality and quantity, right cost, right time, and right item of each purchasing in accordance with awarded contract, known as 5R's (Thai 2007).

Afterthought is the action or an act of reconsidering something done earlier, with a view to changing a decision respecting it (Oxford University Press 2011). For the purpose of this study, afterthought is defined as the level of consequence an organisation faces based on its contract review frequency. We argue that the higher the review frequency is, the lower the contract management afterthought and risk is.

Contracts often present unforeseen challenges and administrative consequences that make for difficult situations for both the buyer and their suppliers (James 1995; Davison and Sebastian 2009; Apte, Apte *et al.* 2010). Of these concerns, the notion of the contract management afterthought is one that leads to higher contractual risks (Romzek and Johnston 2002; Dobriansky 2006; Garrett 2007). It is often the result of inadequate resourcing and insufficient information (Romzek and Johnston 2002; Dobriansky 2006; Garrett 2007). Consequently, it leads to higher contract risk, lack of compliance, and poor contract management performance.

In summary, practically, a significant amount of effort is often devoted to placing a contract (Argyres and Mayer 2007). However, once the contract has been awarded, little effort tends to be spent on managing the contract unless specific and obvious problems occur (Dobriansky 2006; Garrett 2007) and which require immediate intervention. Buyer and supplier are seemingly passively engaged by their agreement during life of the contract, unless problems arise. Consequently, contract management is often an afterthought in both the public and private business sectors (Romzek and Johnston 2002; Dobriansky 2006; Garrett 2007), usually insufficiently staffed in both the quality and quantity of resources (e.g. contract manager). Typically, buyers focus their time, attention, and key resources on soliciting, proposing, negotiating and forming the contract, which is, just making the deal. As a result, there are often very limited resources available to manager, administer, and manage the deal (Dobriansky 2006), hence the problem of afterthought.

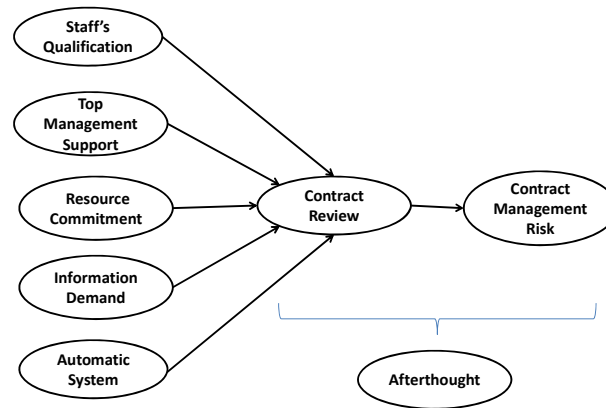
## CONCEPTUAL FRAMEWORK

There are many factors that lead to contract management afterthought. Some factors can be staff qualifications (Brown, Potoski *et al.* 2006; McPhee 2006; Johnston and Romzek 2008), top management support (Tan 2001; Chen and Paulraj 2004; McPhee 2006), resource commitment (Romzek and Johnston 2002; Dobriansky 2006; Garrett 2007; Johnston and Romzek 2008; Kamradt, Choi *et al.* 2010), information demand (Cox, Chicksand *et al.* 2005; McPhee 2006; Okere 2010) and the use of automatic management system (Mawji 2002; Franchini and DiVirgilio 2003; Aberdeen Group 2006; Anonymous 2007). Figure 1 shows the relationship between these factors.

For example, building contract management capacity includes acquiring and nurturing physical infrastructure, financial resources, and perhaps more important, human capital (Brown, Potoski *et al.* 2006). Highly trained and qualified contract management staff plays a key role in the contract management process (Romzek and Johnston 2002; Brown, Potoski *et al.* 2006; McPhee 2006; Johnston and Romzek 2008). Adequate management training will increase the ability of the buyer to monitor supplier performance and provide technical assistance to the supplier as they assume their new responsibilities (Romzek and Johnston 2002; Callender and McGuire 2007).

The absence of adequate training is likely to reduce the effectiveness of contract management (Romzek and Johnston 2002). Furthermore, it will inevitably increase contract management afterthought.

**Figure 12: Research Framework**



Source: Original diagram

Procurement management needs the encouragement and support from top management to expend their resources within an operation (Li, Humphreys *et al.* 2003). Top management involvement is a key enabler in initiating any program based on the firm's competitive strategy (Tan 2001; Chen and Paulraj 2004 ; McPhee 2006). Better implementation needs to be consciously driven from the top down. It requires continuing executive oversight and support (McPhee 2006). Furthermore, top management support demonstrates the critical role contract management staffs have in an organisation. As a result, limited or low support from the top executives will lead to inadequate contract management effort. A higher level of top management involvement mitigates the potential for contract management afterthought.

Resource commitment (e.g. financial budget) is critical to successful contract management (Romzek and Johnston 2002). It affects the capacity of buyer to fund staff and other expense related to accurate cost projections, analysis of supplier capacity and training for contract management staff (Romzek and Johnston 2002). Without adequate and appropriate resources, contract professionals will continue to face difficulties in life of a contract (Dobriansky 2006). Diverting resources has often caused instability (e.g. risk) in managing contracts (Johnston and Romzek 2008), while contract management can be improved through enhancing resource commitment to the contract professionals (Kamradt, Choi *et al.* 2010).

Information about a contract can provide situation awareness to both of the buyer and supplier. It indicates the level of understanding a contract manager has around a contract. Often suppliers/contractors hold more immediate information than the buyers. One source of insufficient information around a contract may come from the internal transition process (McPhee 2006). Often there is a transition stage at the commencement of the contract. For changes from one supplier to another there will be need for close coordination to ensure continuity of service and transfer of relevant information and assets. Ensuring that both the supplier and the contract management team understand what is needed and are appropriately resourced, is important. Another issue for a contract management team is to ensure contract information flows smoothly from one stage to the next. Seamless processes can ensure adequate contract information is passed from pre-award stage to post award stage (Cox, Chicksand *et al.* 2005; McPhee 2006; Okere 2010). Overall, insufficient knowledge around a contract may lead to incorrect decision-making.

Automating the contract management system can help a contract manager control cost, manage revenues, comply with financial regulations and mitigate risks (Mawji 2002; Franchini and DiVirgilio 2003; Aberdeen Group 2006). Tools such as contract life-cycle management (CLM)(Bartels, Leaver *et al.* 2007), are claimed to provide a reliable and comprehensive solution for managing all types of contract, license agreements and business commitments and includes directs support for key functions, such as legal, regulatory, sales and procurement (Anonymous 2007). Furthermore, it is easily integrated into existing Enterprise Resource Planning

(ERP) systems and any Customer Relationship Management (CRM) solutions. Such an automated system can also facilitate buyer-supplier relationship with fulfilled contract commitment. Therefore, the use of such system can help reduce afterthought and provide continuous monitoring over contract performance. Notwithstanding the fact that companies planning in using such system is increasing, Aberdeen Group's (2006) research also concluded that roughly 25 per cent of firms reported using some form of contract automation.

## RESEARCH QUESTIONS AND DESIGN

The overall objective of this research project is to develop a comprehensive understanding on how various factors such as contract management staff's qualification, top management support are associated with the post award contract management as an afterthought. The specific objective is focused on answering the following research questions:

- 1) What are the critical factors associated with CMA?
- 2) How much variance of afterthought does each factor account for?
- 3) Which is the greatest contributor to contract management afterthought?

The methodology used in this research consisted of an online web-based survey instrument specifically developed to answer the research questions listed above. Some survey demography is showed in Table 1, 2 and 3.

**Table 1:Industrial Classification**

	Frequency	Per cent	Cumulative Per cent
1 Agriculture, Forestry and Fishing	2	4.2	4.2
2 Mining	2	4.2	8.3
3 Manufacturing	4	8.3	16.7
4 Electricity, Gas and Water Supply	5	10.4	27.1
5 Construction	3	6.3	33.3
7 Retail Trade	1	2.1	35.4
9 Transport and Storage	4	8.3	43.8
10 Communication Service	4	8.3	52.1
11 Finance and Insurance	1	2.1	54.2
12 Property and Business Services	1	2.1	56.3
13 Government Administration and Defence	15	31.3	87.5
14 Education	3	6.3	93.8
15 Health and Community Service Personal and Other Services	3	6.3	100.0

**Table 2:Position Category**

	Frequency	Per cent	Valid Per cent	Cumulative Per cent
1 Clerical	1	2.1	2.1	2.1
2 Supervisory	2	4.2	4.2	6.3
3 Professional	6	12.5	12.5	18.8
4 Management	20	41.7	41.7	60.4
5 Senior Management	19	39.6	39.6	100.0

**Table 3:Organisation Sector**

	Frequency	Per cent	Valid Per cent	Cumulative Per cent
1 Private	16	33.3	33.3	33.3
2 Public	31	64.6	64.6	97.9
3 Not for profit	1	2.1	2.1	100.0



Total	48	100.0	100.0
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The survey instrument included core questions related to the methods and procedures used in the post award contract management process with specific demographic data for respondents being surveyed. An invitation to participate in the survey was mailed to 200 procurement practitioners, 48 valid respondents were included for data analysis. The response rate was 24 per cent which was considered acceptable given the length and detail of the survey. The participants represented public and private sector organisations, though the major of responses came from the public sector.

## FINDINGS

Multiple regression analysis was conducted to answer the research questions mainly to assess the ability of the five factors in explaining contract review (afterthought). Preliminary analyses were conducted to ensure no violation of the assumption of normality, linearity, multi-collinearity and homoscedasticity.

ANOVA result shows in Table 4 indicates that the present model is significant ( $p < .0005$ ), which means that some coefficients of these five factors contribute to CMA are not zero. In fact, this model explains 48.1 per cent (Table 5) of CMA.

**Table 4:ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.150	5	3.430	9.715	.000 <sup>b</sup>
	Residual	14.829	42	.353		
	Total	31.979	47			

a. Dependent Variable: Contract Review

b. Predictors: (Constant), Automatic System, Information Demand, Staff Qualification, Top Management Support, Resource Commitment

**Table 5:Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.732 <sup>a</sup>	.536	.481	.594

a. Predictors: (Constant), Automatic System, Information Demand, Staff Qualification, Top Management Support, Resource Commitment

b. Dependent Variable: Contract Review

**Table 6:Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.325	.372		3.557	.001
	Staff Qualification	.294	.108	.389	2.731	.009
	Top Management Support	.366	.101	.501	3.629	.001
	Resource Commitment	-.188	.123	-.226	-1.526	.134
	Information Demand	.141	.120	.172	1.177	.246
	Automatic System	.034	.077	.054	.446	.658

a. Dependent Variable: Contract Review

Furthermore, contract management staff qualification, which is the greatest of contributors explains 25 per cent (square of .501) ( $p < .05$ , Table 6) of CMA followed by top management support which explains 15 per cent (square of 0.389) ( $p < .05$ ) of CMA. Nevertheless, resource commitment (4 per cent) and information demand (2 per cent) do not make a significant unique contribution to the dependent variable (contract review). More surprisingly, the use of an automated system which as currently claimed to be a key trend in managing a contract is the least significant factor (0.3 per cent) to CMA in the present model. As a result an equation is derived to explain these relationships, and is expressed as:

$$\text{Contract Review} = 1.325 + 0.294 * \text{Staff Qualification} + 0.366 * \text{Top Management Support} + 0.100 * \text{Resource Commitment} + 0.141 * \text{Information Demand} + 0.34 * \text{Automatic System} - - - - - (1)$$

## CONCLUSION AND IMPLICATIONS

Contract management is an emerging issue for both public and private sector as organisation continually contracting out their business supply demand. However, inadequate effort has been put into managing contracts, and consequently contract management is often an afterthought. Moreover, research in the field of contract management is often neglected due to the fact that many contracts may be politically driven which sometimes lies beyond the control of contract managers (Brown, Potoski *et al.* 2006). This study is expected to add knowledge to the emerging issues of contract management, theoretically and practically. The findings from this study indicate that as more and more business transaction involve contracts, contract manager's training and qualification in managing contract and procurement plays critical role in ensuring their capability to secure a firm or public agencies' commercial benefit, consequently lowering the effect of this afterthought. This finding is consistent with previous study findings (e.g., Brown, Potoski *et al.* 2006) that claimed the need of new management skill for staff qualification with regard to contract management. Furthermore, the finding also confirms that the current trend of using automated systems in managing contract is still quite low in terms of percentage (Aberdeen Group, 2006). Although some factors do not significantly contribute to CMA, we cautiously argue that these factors are intertwined with each other, for example, staff qualification and top management support may also involve resource commitment and information demand in favour of contract management and that each factor's unique contribution to contract review (afterthought) could be underestimated. Overall, we argue that sense of a management afterthought is preventable if contract managers possess more knowledge, resources, top management support, information and management system to manage their contracts. Future study can be focused on investigating these factors in more detail using a case study approach.

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# THE EU EXPANTION 1973-2007 AND ITS IMPACT ON KEY MACROECONOMIC INDICATORS

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## ABSTRACT

*Theory and practice shows that the national economy participation in integration processes enables it for more successful function in the global economic system. The European Union is one of the key players in the world market, which currently represents a full-fledged common market. Trade policy is one of the most important goals of the EU. It helps to preserve and enhance competitive advantage in today's global economy. Over the years, the European Union passed through several stages of expansion. But some of them pursued not only economic goals, which resulted in decrease of efficiency of the development of the European Union*

## INTRODUCTION

*"Life inside the EU and outside its borders is changing rapidly. He must decide how to adapt itself to evolve and change. EU enlargement is a turning point for Europe, the opportunity which it should take for their own security, its economy, its culture and its status in the world. "*

Jacques Santer

The current stage of global economic development is characterized by the presence and activation of the regional integration process of interaction. And the structure of the world economy is changing under the influence of these complexes. Theory and practice shows that the national economy participation in integration processes enables it for more successful function in the global economic system. Tendencies to merge their national economies into a single, global system based on the mobile movement of the active capital, informational transparency of the world, on the technological revolution, and liberalization of goods and labor transfer. So we can say that all of them are the main characteristics of the late XX and early XXI centuries.

Now days the European Union is one of the key players in the world market, which currently represents a full-fledged common market. Trade policy – is one of the most important goals of the EU. It helps to preserve and enhance competitive advantage in today's global economy. Over the years, the European Union passed through several stages of expansion. The purpose of this study to determine how the EU enlargement has affected the dynamics of key macroeconomic indicators, such as population, GDP, GDP in PPP terms, GDP per capita and foreign trade indicators.

## THE ECONOMIC CONSEQUENCES OF THE EU EXPANSION

The most important strategic goal of the EU at the present stage of its development is – try to create a dynamic and competitive economy. Of course, the enlargement opened a new stage of the EU development. However, there are great number of questions concern the content of this enlargement, its goals and objectives, its impact on a foreign trade within the EU and the impact on other macroeconomic indicators.

T

he goal is to try to determine the effect of expansion on the dynamics of core macroeconomic indicators of the participating countries at different stages of expansion.

To achieve this goal the following objectives were set:

- to identify the economic conditions of the EU formation;
- to investigate the causes of the expansion wave;
- to reveal features of the influence of the expansion waves on the key EU macroeconomic indicators;
- to identify the economic consequences of the EU enlargement.

Formation of the EU was carried out in stages, with the integration increase between its member states and peoples. The first wave of expansion occurred in the period from 1958 to mid-80s. The population was formed by Germany, Britain, France and Italy, which accounted for 68% of the EU population. In this period, the population increase was due to natural increase

Since the mid 80's in the dynamics of the population significant structural changes have happened. Natural growth in the leading countries began to decline. Actual population growth was due to foreign workers. In Austria and Italy, nearly 100% of the population formed by the migrants. In Germany and Sweden population decrease took place and general population increase occurred due to migrants. Luxembourg was the absolute leader in terms of arrivals of foreigners from other EU countries.

Enlargement of the number of participants had a positive effect on the development of national economies as long as the basic formation principles has not been violated – in the European Union included only countries with a similar level of economic development. Accession of Ireland, Spain, Greece and Portugal to the EU, led to the fact that growth of total EU GDP in absolute terms, occurred on a background of decline in GDP per capita. For example, in 1981 GDP per capita of EU member states was \$ 14,115, and the accession of Greece resulted in its decrease by 1.33%. This is due to the fact that neither Greece nor Spain, nor Portugal was not ready to compete in an open economy, and the free movement of goods, capital and services. Thus, the general deterioration of the EU economy, has stimulated the development of national economies of the less developed members of the alliance.

## **FOREIGN TRADE IN THE EU**

It is known that the level of economic development is characterized by a state foreign trade. After a "common market" foundation on Jan. 1, 1993 the internal borders between EU members were virtually abolished and progress in trade became tangible.

The analysis showed that the internal trade was dominated by exports over imports, which showed a positive balance of trade, as well as the level of economic development in general. The efficiency of the economy was also proved by the fact that since 1995 to 1998 in foreign trade outside the EU dominates exports over imports. Since 1999 there has been a downward trend in exports, imports and dominance, which is explained by the fact that the EU's major trading partners have strengthened their position in the world.

It was found out during the research that the main EU trading partners are USA, China and Japan.

In the 2000's, China's economy developed rapidly and became a major trading partner of the most developed countries in the world. The EU export to China increased thrice. EU exported to China machinery, equipment and chemical products, and imported all other goods, that led to a negative balance of trade.

The next stage of the Community development were Agreements of the integration between the EU and CEE countries. The transformation of the EU-15 to the EU-27 was one of the greatest achievements in the entire half-century history of European integration. Extending area of economic integration at the expense of the CEE countries, was motivated not by economic but by political considerations. Obviously, the last 2 stages did not correspond to the general principle of the EU foundation and the level of economic development of the EU-15. However, it positively impacted on new member countries' economies. As to the dynamics of basic

macroeconomic indicators, all of them grew in absolute figures. But all this was happening against the background of the deteriorating situation within the EU.

According to Eurostat, the aggregate macro-economic indicators for the period from 2000 to 2010. formed the basis of 27 member states, excluding the timing of the entry of 5 and the second wave of expansion. Because of this, for a more objective assessment, an attempt was made to adjust the statistics with the timetable for the entry of new countries into the EU, and recalculated by means of which were able to identify the effect of extensions on the main macroeconomic indicators and on the economies of EU member states as a whole. The last two stages of the EU enlargement were characterized by its enlargement to the East, what influenced greatly the EU's international position in the global market. It also affected the foreign policy of its "old" and "new" members. In the course of 5 and 6 extensions to the 2008 European Union has become a major international player in world trade. The volume of trade exceeded 2.8 trillion euros. However, since 2000, the trend is the prevalence of imports over exports. And in 2008 the trade deficit exceeded 255 billion euros as a result,. The main positive outcome of the fifth enlargement is the establishment of stability in the CEE countries and as a consequence of expanding the zone of stability in Europe. In this expanded area of integration, economic growth and welfare of the 10 new countries. Despite this, the CEE countries have not succeeded in reducing the economic gap between Western European states, and most likely in the near future, do not reach the level of developed countries in the EU-15.

According to numerous expert in the event of adverse conditions, the gap in levels of development and differentiation of national interests may lead to the fact that in a crisis situation, the EU can be split into several regional groups. EU enlargement to the East also has serious social and economic consequences. It entails significant changes in the nature of economic relations and the development of economic systems throughout Europe, firstly, greatly increasing the EU's economic power and increasing the weight on the world market, and secondly, contributing to the strengthening of competitiveness in the world due to the economies of new EU member states and an increase in trade flows.

The main competitive advantage of the CEE countries is the low wage costs compared with Western Europe, especially Germany. For example, in Slovenia in 2004 the average wage in the manufacturing sector for the year amounted to 10.4 thousand euros, in other CEE countries, it has not exceeded the level of 6.2 thousand euros. It is evident that large differences in wages have attracted Western businessmen to their location, requiring considerable labor.

Most Western European countries implement projects in the CEE countries. Large Western firms, taking into account cost savings and favorable geographical position placed in the region of its production capacity and created it as export centers for the sale of components and finished products to neighboring countries. For example, in the Czech Republic, Hungary, Poland and Slovakia, where the enterprises of the concern "Volkswagen." Due to the interaction of the EU-15 countries from Central and Eastern Europe, the main macro-economic and socio-economic indicators of the CEE countries have improved.

Significant changes occurred in the structure of trade flows between the EU15 and CEE. Certainly, the involvement of CEE countries in the integration processes negatively affects the economic situation of the EU-15. Based on the above analysis it follows that the part of Western Europe, the main advocate some large states, not the EU as a whole, despite the integration process, its policies continue to form separate states, such as Germany, France, Italy and the UK. A similar situation occurs with the formation of population, GDP and other socio-economic indicators. Heterogeneity of GDP per capita between the EU-15 and EU-12. The entry of new countries is reflected in the founding of the economy. Reduces the GDP of the EU-15 and EU-12 GDP is growing.

In order to identify the trend of further development of the European Union within the EU-15 and EU-27, the statistical data were grouped and the forecast for the next three years (2010-2012.).

**Table 1: Forecast of the EU-15, EU-27 figures, depending on the time (t)**

Name		2010	2011	2012
Population	EU-15	387,15	389,29	391,44

	EU-27	501,15	503,12	505,08
GDP at PPP	EU-15	11 686 214,54	11 994 377,22	12 301 266,49
	EU-27	12 924 592,00	13 288 307,69	13 650 855,69
GDP at PPP per capita	EU-15	30 276,60	30 925,37	31 574,87
	EU-27	25 849,49	26 481,03	27 111,63

Source: Compiled and calculated on the basis of Eurostat data

Estimated forecast shows that, *ceteris paribus*, if during the period from 2003 to 2010 The European Union has existed in the 15 countries, the population in 2010 would amount to more than 385 million people, and by 2012 - 391 million people. GDP in PPP terms in 2010 amounted to \$ 11,686,215, and in 2012. - \$ 12,301,266. Given a population of 27 countries to 501 million in 2010, and 505 million in 2012, and GDP in PPP terms would have been at more than \$ 12,924,592 in 2010 and 2012 amounted to - \$ 13,650,855. In turn, the GDP PPP per capita EC-15 in 2010 would have been at the level of \$ 30,276.6, and with 27 countries under the same conditions, it would amount to \$ 25,849.5, that is, as soon as the new 12 countries probably not reach the level of developed countries of the EU-15.

## CONCLUSION

As the years of experience make predictions based on economic and statistical calculations, their reliability is very relative. Therefore, in this case, do not take into account a number of other factors affecting the development of the economy as a whole. For all the differences and nuances in the estimates of the effects of the new expansion to 27 countries, the estimated forecast clearly indicates a slight growth in GDP in the last 7 years and the development of differentiation and heterogeneity within the EU.

Summing up the four extensions of the EU in the period from 1973 to 1995, the following conclusions:

- expansion led to the expansion of territorial boundaries;
- an increase in the total population and GDP;
- the first expansion has led to the fact that the EU was adopted by Ireland - the first EU country in which the level of development of the national economy was much inferior to the level of development of the economies of other member countries;
- each subsequent expansion increased the differentiation between its participants, which in turn was reflected in the reduction of some macroeconomic indicators, in particular - GDP per capita;
- integration processes positively influenced the development of the economies of countries such as Spain, Greece and Ireland, which in the integration improved their macroeconomic performance and approached the average for leading countries. However, it took more than 10 years.

The last two stages were characterized by enlargement of the EU enlargement to the East, which greatly influenced the EU's international position in the global market. Could it not also affect the foreign policy of his "old" and "new" members. The implications of 2004-2007. cause conflicting feelings. Talking about the prevalence of positive trends of the process of negative or vice versa, it is hardly possible. We can only say that the new international and European situation in the course of EU enlargement to the east, have an important impact on the adjustment and adaptation of the "new" countries.

Overall, twelve new countries have been able to reduce the gap between the level of the EU-15 only 4% did not overcome the bar for 50% of the average level of GDP per capita in the EU-15

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# KNOWLEDGE ECONOMY AND ENTERPRISE FINANCIAL MANAGEMENT

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## ABSTRACT

*This article is dedicated to solving problems of a management in an enterprise in accordance with the knowledge economy models. The problems of a quality control, management quality and financial management quality are the key problems in any enterprise. This very problem can be solved by constant enterprise financial monitoring & by using its results in knowledge management.*

## INTRODUCTION

Both the financial management and management of knowledge at the enterprise are connected with such scientific category as data. Approaches to management of data and their transformation into knowledge became a subject of steadfast studying recently. We shall consider most often mentioned modern concepts of knowledge management and their application to the financial management.

This article continues the solving problems of a quality control, management quality and financial management quality in an enterprise.

## MAIN KNOWLEDGE MANAGEMENT MODELS

Knowledge management models have common and distinguishing features [1. Milner, 2009; 2. Nonaka, Takeuchi, 2011; 3. O'Connor, 2006; 4. Porter M., 2011; 5. Hunt R., Bazan T., 2002].

I. Nonaka's model (this model also named Quadriphase model SECI (socialization, externalization, combination, internalization). Its elements are:

- two forms of knowledge - not formalized (implicit) and formalized (obvious);
- dynamics of interaction - transfer of knowledge from a phase to a phase, from a cycle to a cycle;
- three levels of social aggregation - the individual, group, a context;
- four phases of creation of knowledge (SECI); conditions of knowledge creation;
- a structure of the organization focused on knowledge.

What is the implicit not formalized knowledge in the financial analysis? Most likely it is a synthetic estimation and the future financial condition of the enterprise, its financial potential; the knowledge of actual sizes of parameters, and quantitative (values of factors), and qualitative (for example, a degree of probability of bankruptcy of the enterprise) is obvious.

Dynamics of interaction is a complex enough mechanism as on time (as it is frequent and as quickly information should be transferred), and in space (transfer of the information from one expert to another, from one manager to another).

Levels of social aggregation are: an expert, a division, a management, an information environment.

Phases of creation of knowledge - socialization, externalization, combination, internalization.

Conditions of creation of knowledge should correspond to requirements to their quality.

The structure of the organization focused on knowledge is Organizational structure should meet the requirements of rational management of knowledge on the enterprise.

Hedlund Model - the organization of M-form. Hedlund has entered concept of M-form organization as the organization which are based knowledge. The main model attribute is the analysis of two sets of concepts: type of implicit knowledge and type of obvious knowledge (each of the types has three forms of knowledge: cognitive, skill, embodiment), and also four levels of social aggregation or four levels of the carrier (individuals, small groups, the organizations, interorganizational area). Hedlund enters motive powers of carry of knowledge and transformation which are expressed by processes:

- registration and internalization, which interaction is the reflection;
- distribution and mastering, which interaction is dialogue;
- assimilation and dispersion which concern to extraction of knowledge from the environment and to input of knowledge on environment.

M. Erl's Model has three categories of knowledge. As the expert on informatics, Erl spends distinction between data, information and knowledge. Knowledge he divides on three categories (three levels).

Therefore the model can be named as Knowledge of three categories:

- 1) accepted knowledge - a science (Data);
- 2) workable knowledge - judgment (Information);
- 3) potential knowledge - Experience (Knowledge).

The potential knowledge, in its opinion, is the most expensive and having the greatest potential feedback. "Data" and partly "Information" (judgment) is a basis of competition and preconditions of existence of the organization. Application of "Experience" can give the competitive advantage based on knowledge.

Erl supposes, what the organization can create and protect knowledge, using knowledge actives and four following functions:

- Inventory - mapping individual and organizational knowledge;
- Audit - an estimation of the nature and sizes of the planned ignorance, development of knowledge through cognitive actions;
- Socialization - creation of events which do possible for people an exchange of implicit knowledge;
- Test - a problem of unknown ignorance is considered by training on the basis of experience, action and analysis of unusual situations.

Being based on these positions, Erl gives model of management of knowledge. It includes four technical and social components: system of knowledge, a network, worker the knowledge trained the organization.

E.Karayanis's model is "a network of organizational knowledge". The model has united in knowledge management information technologies with administrative and organizational knowledge. In the issued kind the model is designated as Organizational Knowledge Network, or OK-Net.

This model is constructed on three key elements:

- Metacognition,
- Metatraining,
- Metaknowledge.

The matrix "2x2" (see fig.1), consisting of consecutive cycles of knowledge which century an individual or the organization overcomes 4 stages of understanding and ignorance, is:

- Ignorance about ignorance;
- Ignorance about understanding;
- Understanding of ignorance;
- Understanding of understanding.

State	Ignorance	Understanding
Ignorance	Ignorance about ignorance	Ignorance about understanding
Understanding	Understanding of ignorance	Understanding of understanding

Fig.1. A matrix "2x2"

The situation in one of these cells (quadrants) is designated. Action direct on management of transition from one condition in another. Transitions fulfilled by two ways: Ability to interaction; A coordination of actions. Interaction is carried out by means of information technology in the effective way. Correctly operated, it generates not only spiral knowledge or the increased wisdom (metaknowledge), but also and knowledge training methods.

K.Viig's model – "Knowledge-technology- business-management". Viig's model is based on four positions on which should be focused the initiative on management of knowledge:

- a base of management of knowledge consists of how the knowledge as it is used at the decision of problems and decision-making as it is shown cognitively in technologies and procedures is created;
- constant researches of knowledge are necessary;
- a estimation of knowledge is necessary for each business prior to the beginning, during and after the termination;
- active management of knowledge on all life cycle of the organization, at all stages of life cycle of the goods and innovations is necessary.

L.Edvinsson's model – model of the intellectual capital. The central model is the scheme of the organization of actives of the firm, four components of the intellectual capital and their interaction for creation of cost:

- a human capital, including knowledge and skills which can be converted in cost;
- a structural capital as an auxiliary infrastructure of firm;
- business-actives are defined as structural capital, the firm uses for creation of cost in commercial process (processing capacities, networks of distribution);
- intellectual property - the intellectual legally protected actives of firm.

Dynamic character of model consists in creation of cost on two sources:

- 1) innovations;
- 2) products and the services resulting commercialization of innovations.

D.Snouden's model - model of ecology of management of knowledge. Snouden develops the system of knowledge consisting of four elements focused on action:

- obvious and implicit knowledge;
- actives of knowledge;
- belief;
- definiteness and uncertainty of decisions in relation to the purposes and causal attitudes.

In the model a matrix of decisions operate process of four types of transitive actions is include:

- an exchange of obvious knowledge through systems and structures;
- an exchange of implicit knowledge through psychosocial mechanisms;
- transformation of implicit knowledge to obvious knowledge;
- liberation of implicit knowledge through belief and its motive powers.

All this conducts to ecology of management of knowledge in firm.

Model of Century Buren - management of the intellectual capital.

The model includes two sets of characteristics:

- first - which concern stocks of the intellectual capital, including:
- the human capital,
- the innovative capital,

the process capital,  
the client capital;  
second - which concern financial functioning and efficiency of business.

The concept is entered “Critical points of strengthening of potential of knowledge management” and “Critical managerial processes by knowledge”, and also concept of “Starting devices”.

Despre & Shauvel model - taxonomy of management of knowledge. They mark out four aspects meeting in the majority of researches:

Time - in connection with the linear and simplified representation cognitive process;  
Type - in relation to implicit and obvious knowledge;  
Level - concerning various levels of social aggregation;  
Context - any element of knowledge is not meaningful outside of the given context.

In the model actions in the field of management of the knowledge, applied are classified by the organizations all.

Seven basic operate activity clusters:

Business-intelligence;  
Benchmarking;  
Construction of storehouses of data;  
Software for group work;  
Communities of practice;  
Innovation and synergies, creativity;  
Training, the competence, development of employees.

Enterprise management control system therefore must include elements of knowledge management, financial analysis, and financial monitoring, and finance management system. [6. Anthony R.N., Dearden J., Govmdarajan V., 1992; 7. Davenport T. & Prusak L., 1998; 8. Bitutckix E., 2007; 9. Grjaznova A., 2008; 10. Caravanova B., 2006; 11. Grant R.M., 1993].

## FINANCIAL MANAGEMENT DATA

From financial monitoring one can get, for example, the following data of enterprise financial statement [12. Zhilkina, 2012; 13. Zhilkina, 2005; 14. Zhilkina, 2008]:

a level of Finance stability;  
a level of Liquidity;  
a level of Probability of bankruptcy;  
a level of Return on sales (Profit margin);  
a level of Return on assets;  
a level of Return on equity.

Finance stability has four levels:

1) Absolute finance stability:

$$FA + Inv \leq Eq,$$

were: FA - fixed assets;  
Inv - inventory  
Eq - equity

2) Normal finance stability:

$$FA + Inv \leq Eq + LTD,$$

were: LTD – long-term debt

3) Finance instability:

$$Eq + LTD < FA + Inv \leq Eq + LTD + STC$$

were: STC - short-term credit.

4) Critical finance stability:

$$FA + Inv > Eq + LTD + STC$$

Liquidity also has four levels:

1) Absolute liquidity:

$$DA \geq DD,$$

were: DA - discount asserts (Cash + 0,5\* Accounts receivable + 0,3\* inventory)

DD - discount debts (Accounts payable + 0,5\*Short-term debt + 0,3\*Long-term debt )

2) Admissible liquidity:

$$DA \geq 0,75 * DD$$

3) Low liquidity:

$$DA \geq 0,5 * DD$$

4) Critical liquidity:

$$DA < 0,5 * DD$$

Probability of bankruptcy has three levels:

1) Low probability of bankruptcy:

$$MCA \geq CL,$$

were: MCA - material current assets (cash and inventory),

CL - current liabilities.

2) Middle probability of bankruptcy:

$$MCA \geq 0,75 * CL$$

3) High probability of bankruptcy:

$$MCA < 0,75 * CL$$

Return on sales (Profit margin), Return on assets, Return on equity interesting to see in dynamic. So they can Increasing, be Invariable or Decreasing.

1) Increasing, for example, return on sales when:

$$ROS_{bp} > ROS_{ep},$$

were:  $ROS_{bp}$  – return on sales at the beginning of the analyzing period;  
 $ROS_{ep}$  – return on sales at the end of the analyzing period.

2) Invariable return on assets:

$$ROA_{bp} = ROA_{ep}$$

3) Decreasing return on sales (profit margin):

$$ROS_{bp} < ROS_{ep}$$

Return on sales (Profit margin):

$$\text{Profit margin} = \frac{\text{Net income}}{\text{Sales}}$$

Return on assets:

$$\text{Return on Assets} = \frac{\text{Net income}}{\text{Total assets}}$$

Return on equity:

$$\text{Return on Equity} = \frac{\text{Net income}}{\text{Total equity}}$$

## CONCLUSION

Summarize the listed models it is possible to say that the financial analysis system, undoubtedly, is an important element of a control system of knowledge at the enterprise and that this financial analysis system makes to enterprise knowledge management special demands. Integration of data of the financial analysis into the general knowledge management system at the enterprise will allow to raise quality of a control system of the enterprise, and to create enterprise competitive advantages.

Therefore the problems of a quality control, management quality and financial management quality can be solving by constant enterprise financial monitoring and by using its results in enterprise management including knowledge management.

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# **E-GOVERNMENT RELATIONSHIP WITH COMPETITIVENESS, CORRUPTION PERCEPTION AND ENTREPRENEURSHIP**

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## **ABSTRACT**

*The relationships between e-government, business climate, corruption perception and the rate of new entrepreneurs was the object of study of this article. Data was collected from various databases The reports used were The Doing Business Report and E-Government Survey from the United Nations, Corruption Perception Index by Transparency International and World Bank Entrepreneurship Report. After joining the databases correlation analysis and panel least squares regressions were performed to test the relationships between the variables. The results indicate that when a country is more “e-gov” ready it reaps some benefits such a more dynamic business sector and less perception of corruption as well. The probable causes of the relationships are discussed, including a suggestion for a more integrative approach to make it possible to less developed countries diminish the gap of e-government sophistication.*

## **INTRODUCTION**

The volume of e-Government research is growing at a fast pace. The first articles only appeared in the 90's, and did not receive much importance until the early 2000's, with the consolidation of the internet and a more widespread use to conduct business, first in the private sector, being then followed by the governments as a source of information for its taxpayers and citizens (West, 2000; Morgesson & Mithas, 2009).

When it comes to e-government articles, E-government is the most frequently cited term according to literature findings, but other terms like e- governance, online government, digital government, one-stop government, and electronic government, among others have been used, interchangeable, although some authors point conceptual different between them (Layne & Lee, 2003). West (2005) presents e-government as “public sector use of the Internet and other digital devices to deliver services, information, and democracy itself.” (West, 2005). Lau et al. (2008) define it as “the process of connecting citizens digitally to their government in order that they might access information and services offered by government agencies.”. Howard (2001) defines e-government as the application of the tools and techniques of e-commerce to build the government interface with its stakeholders, focusing on cost reduction, efficiencies and gains of scale.

Even though there are some dispute about the e-government frameworks and definitions, the benefits of the sharing governmental information is enormous, for example public finances can be easily consulted by anyone with internet access, being a hindrance to corruption in many countries (Andersen, 2009; Brunetti & Weder, 2003). Updated statistics in governmental sites can help citizens and business to take more informed decisions (World Bank, 2003). Reduction of administrative costs, and time spent on government employees are also pointed out as results of successful implementation of e-government (Jaeger, 2003). A government can generate interest in the political process among young citizens who frequently use the Internet by using modern

tools (MacIntosh et al, 2003). One successful example is the Obama's run for presidency in the U.S using social network and web 2.0 tools to keep contact with the electors. Gupta and Jana (2003) state that e-government is no longer just an option but a necessity for countries aiming for better governance.

Also, Brunetti & Weder (2003) point out that free press has a strong association between level of press freedom and level of corruption across countries, even when using various instruments to measure freedom and corruption. The same effect could be extended to the governmental information sharing, indicating that it could potentially improve country ranking in corruption rankings, contributing to less corruption in some countries.

Newer e-government technologies also aim to provide a more direct contact between business and the government (Moon, 2002). E-procurement systems can facilitate the interaction between governmental agencies responsible for the purchase of goods like agricultural commodities from sellers. This process adds transparency, because such process usually can reduce total costs and provides more equal opportunities to the agents, regardless of their size or access to information (Rauch & Evans, 2000; Brunetti & Weder, 2003).

The list of services offered by e-platforms is growing to be par with the total services provided in the governmental buildings. This tendency is being better observed in developed countries, where citizens already can make most of their transactions without the need to be physically present at a governmental office, while in less developed countries the same level of interaction is not observed and most citizens have to be physically present and wait for long times before they can get documents, consult data or even pay their taxes (UN, 2009).

The e-readiness concept was created to provide a unified framework to evaluate the breadth and depth of the digital divide between more and less developed or developing countries during the late 1990s (Hanafizadeh et al, 2009). Hanafizadeh et al (2009) state that the first efforts to define e-readiness were undertaken in 1998 by the Computer Systems Policy Project (CSPP), as the degree to which a community is prepared to participate in the networked world. But even with the initial intent of providing a single framework, in the following years a great number of e-readiness measures have been developed (Grigorovici et al., 2003).

Also the e-readiness the level of e-government use and sophistication is widely unequal throughout the world, and as an initiative to measure the progress of the adoption of the electronic government solutions in different countries the UN has created an index known as E-government Readiness Index, that is composed by three sub-indexes: The Human Capital Index is a composite of the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio (UN, 2009). The Telecommunication Infrastructure Index 2008 is a composite of five primary indices relating to a country's infrastructure as they relate to the delivery of e-gov services. The Web Measure Index 2008 is based upon a five-stage model (Andersen & Henriksen, 2006).

The services provided by a consistent e-government structure can be very useful for its citizens that have the convenience to request services from the government anytime, and most of the time without waiting times that are typical of traditional bureaucratic paper-based services provided by local, state and federal governments. But all these services tend to be good to business as well. All those characteristics are known as facilitators for enterprise creation and maintenance are measured by The Doing Business Report, which provides a quantitative measure of regulations for starting a business, dealing with construction permits, employing workers, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts and closing a business—as they apply to domestic small and medium-size enterprises (WB, 2009).

Other database used was The Global Competitiveness Report which is a yearly report published by the World Economic Forum, since 1979. The 2009-2010 report covers 133 major and emerging economies and “measures how productively a country uses available resources. Finally, the last report utilized was the Corruption Perception Index (CPI) 2009, which is published since 1995 by Transparency International, which measures the perceived level of public-sector corruption in 180 countries around the world (Transparency International, 2010).

## METHOD

The analyses were performed with the software PAWS 18 (SPSS Inc.) to compute non-parametric correlations to test the strength of relationship between the studied variables. Before the data could be used, some procedures had to be performed. The databases were obtained in the Reports Doing Business 2010 edited by the World Bank (World Bank, 2009), UN e-government survey 2008 (UN, 2009) and UN e-government survey 2010 (UN, 2011) in PDF format, and imported into Microsoft Excel 2010. The following reports were in proper format (XLS) and could be used directly: The World Bank Entrepreneurship report measured more than 100 developing and industrial countries (WB, 2010). The Corruption Perception Index published by Transparency International had 180 countries, while Global Competitiveness reported 133 countries.

## ANALYSIS

To compute the relationship between the variables the Spearman's correlation coefficient was used. According to Miles and Shevlin (2001) when the relationship between two variables is not normally bi-variate or when one is measured at a ordinal level the more widely used Pearson coefficient may not be the best estimative of the correlation of the variables. The Spearman coefficient measures the intensity of relationship between ordinal variables, using ranking position instead of the observed values, therefore not being affected by asymmetries of the data, lack of linearity, presence of outliers and non-normality of the data (Miles & Shevlin, 2001). Therefore non-parametric correlation analyses were performed with the different variables that compose the Ease of Doing Business index and with E-Government Readiness ranking indexes: infra-structure, human capital and web measure. The results are presented in the table 1:

**Table 1: E-government indexes and ease of doing business variables**

Spearman's Correlation Coefficient	Infra-structure	Human Capital	Web Measure
Infra-Structure Index	1,000	,792**	,705**
Human Capital Index	,792**	1,000	,632**
Web Measure Index	,705**	,632**	1,000
Ease of Doing Business Rank	,743**	,692**	,647**
Starting a Business	,485**	,457**	,390**
Dealing with Construction Permits	,445**	,340**	,224**
Employing Workers	,184*	,177*	,060
Registering Property	,408**	,439**	,449**
Getting Credit	,626**	,632**	,672**
Protecting Investors	,386**	,435**	,412**
Paying Taxes	,368**	,269**	,241**
Trading Across Borders	,701**	,542**	,594**
Enforcing Contracts	,517**	,595**	,455**
Closing a Business	,627**	,553**	,551**

\*\* . Correlation is significant at the 0.01 level (2-tailed) \* . Correlation is significant at the 0.05 level (2-tailed).

Data from the correlation analysis performed indicate that there is a strong correlation between the indexes that compose the E-Government Readiness index, with the correlations ranging between 0,632 and 0,792, indicating that most developed countries, that's is, countries with best infra-structure, most educated population have taken the lead in the e-government presence and occupy the best positions on the rankings. Since the correlation coefficients between the three sub-indexes were calculated and all were statistically significant, the next analysis was performed with the composite index, e-government readiness index in Table 2:

**Table 2: Spearman's Correlation Table: E-Government Readiness Index and Doing Business Ease**

Variable	E- Government Readiness	Control effects of Infra-Structure / Human Capital
Starting a Business	,515**	-0,082
Dealing with Construction Permits	,449**	-0,123
Employing Workers	,221**	-0,049
Registering Property	,479**	0,209**
Getting Credit	,684**	0,392**
Protecting Investors	,436**	0,207**
Paying Taxes	,400**	-0,036

<b>Trading Across Borders</b>	,704**	0,218**
<b>Enforcing Contracts</b>	,568**	0,082
<b>Closing a Business</b>	,646**	0,164*

\*\* . Correlation is significant at the 0.01 level (2-tailed) \* . Correlation is significant at the 0.05 level (2-tailed).

The correlation coefficient found suggests that e-government readiness does have an effect on the ease of doing business in general and most of its dimensions. As happened with the analysis with separated indexes, the trading across borders index, getting credit and closing a business sported the higher correlation coefficients, therefore appearing to be more influenced by a more connected e-government.

With the objective to test if a larger number of services being provided made a country a better place to do doing business in the general index and its various indexes a non-parametric correlation analysis was performed to test the relationship between total number of services delivered, considering all five stages and the dimensions that compose the Ease of Doing Business Rank. This analysis was also performed controlling for infra-structure and human capital indexes effects. The results are available in the following table:

Table 2: Spearman's Correlation– Number of Services Delivered While Controlling the Effects

	<b>Total Number of Services Delivered</b>	<b>Controlling effects of Infra Structure / Human Capital</b>
<b>Ease of Doing Business Rank</b>	0,648**	-
<b>Starting a Business</b>	0,388**	0,035
<b>Dealing w/ Construction Permits</b>	0,252**	0,148*
<b>Employing Workers</b>	0,081	-0,083
<b>Registering Property</b>	0,457**	0,196*
<b>Getting Credit</b>	0,653**	0,333**
<b>Protecting Investors</b>	0,417**	0,180*
<b>Paying Taxes</b>	0,240**	-0,076
<b>Trading Across Borders</b>	0,603**	0,159*
<b>Enforcing Contracts</b>	0,484**	0,092
<b>Closing a Business</b>	0,580**	0,171

\*\* . Correlation is significant at the 0.01 level (2-tailed) \* . Correlation is significant at the 0.05 level (2-tailed).

As can be inferred from the table five, a higher number of services delivered by the government had a statistically significant relationship with all dimensions related to business, except employing workers dimension. This could be attributed to the components of this indicator, that are mainly related with rigidity of hiring, firing and working hours, that is: inflexibility of employment relationship as determined by governmental legislation, that aren't directly affected by e-government initiatives.

The data show that for the countries analyzed the e-government readiness is related with better business indicator for most countries, indicating that there is a strong relationship between the government use and disposal of e-services to the population and the impact of the business atmosphere in any given country. Partial correlation analyses were employed to measure the relationship between the total number of services, controlling for the effects of human capital index and infra-structure, an important moderating effect was found, that is, most of the variables did not keep any significant statistical relationship. suggesting that not only the web presence is important, but also an educated population and computers or other tools needed to use the e-government need to be present, if not, the investment on electronic data could be useless.

Nevertheless, the dimensions of getting credit, dealing with construction permits, registering propriety, protecting investors and trading across borders, did keep their significant relationship, although smaller, even when the effects of infra-structure and human capital were controlled, suggesting that the web-presence does have positive impacts of ease of doing business, even on less developed countries, being a viable solution to improve the easiness of doing business, while the other indicators are still being improved. In an analogous manner we tested if easiness of doing business would be itself a good hindrance to corruption in a country, given that, the easier and more simple a procedure is, the less likely it would be to be room for corruption.

A non-parametric correlation analysis between the studied variables was also performed. To make the results more meaningful we performed inversion of the variables of Ease of Doing Business and e-government

readiness to make the relationships between the variables show as positive, but this result does not affect the strength of the correlations.

**Table 3: Correlation Analysis: E-government readiness, Corruption perception and Ease of Doing Business**

Variable	Corruption Perception Score	Ease of Doing Business
E-government readiness	.795**	.783**
Corruption Perception Score	1	.745**
Ease of Doing Business (EoDB)	.745**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed) \* . Correlation is significant at the 0.05 level (2-tailed).

The results show a strong relationship between the variables, as predicted and following the diagram. We read the results as a stronger e-gov readiness is associated with a better score in corruption perception score (CPS), that is, less perceived corruption in that country, also, Ease of Doing Business(EoDB) is strongly related with the CPS. The relationship between EoDB and e-gov readiness had been performed before and shows a strong relationship as well. Since EoDB and e-gov readiness had both strong relationships with the corruption perception score, we performed partial correlation analysis, while controlling the effects of EoDB and e-gov readiness in turns:

**Table 4: Partial Correlation Analysis**

Variable	Corruption Perception Score
Ease of Doing Business (Controlling for E-gov readiness Effects)	.321**
E-gov Readiness (Controlling for EoDB effects)	.506**

\*\* . Correlation is significant at the 0.01 level (2-tailed) \* . Correlation is significant at the 0.05 level (2-tailed).

These results indicate that both variables have their importance on explaining the variation on the perception of corruption, even when effects of the other variable are controlled, possibly each variable explains a different facet and could help to diminish the corruption perception in different ways. Next, to complete the models, we tested the relationships between the Global Competitiveness score, EoDB, E-government Readiness, and Corruption Perception. Again the results show a strong relationship between the variables, even though it was expected, the strong correlations between the variables indicate that the indexes and scores have also external validity and are related in theory and empirically. The analysis performed was Spearman's correlation analysis, and the results are displayed in the Table 5:

**Table 5: Spearman's Correlation Table: E-Government Readiness Index and Doing Business Ease**

Variable	Global Competitiveness	Corruption Perception Index
Global Competitiveness Rank	1.000	-.859**
Ease of Doing Business Rank	.811**	.765**
E-governmental readiness Rank	-.850**	-.742**
Corruption Perception Index	-.859**	-1.000

\*\* . Correlation is significant at the 0.01 level (2-tailed) \* . Correlation is significant at the 0.05 level (2-tailed).

For a second time, strong coefficients were found, suggesting that the more the country has an established e-government structure the easier is to perform business and the higher the competitiveness and lower corruption perception. The relationship between ease of doing business and global competitiveness is high since the Global Competitiveness Index is comprised of the some of the indicators used to calculate the Ease of Doing Business by the World Bank, although there are several differences between the two indicators. Finally we performed Spearman's correlation analysis between Work Bank Entrepreneurship Survey 2008 edition with data from 2000-2008. We used the last available year as the variable result, and to make comparisons feasible. The used variables were total registered firms, number of new firms registered during the calendar year, number of total corporations divided by working age population, number of newly registered corporation divided by working age population, and entry rate- measured by number of new corporations divided by total of

corporations. We performed the correlation analysis with the World Bank indicators against Global Competitiveness, E-government Readiness, Corruption Perception Index and Ease of Doing Business. The correlations are presented in the table 6.

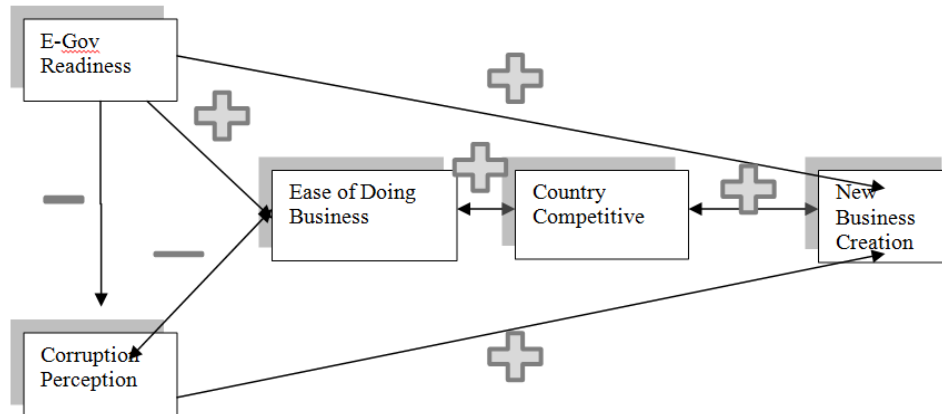
**Table 6: Spearman's Correlation– Number of Services Delivered While Controlling the Effects**

	Global Competitiveness	E-Gov Readiness	Corruption Perception Index	Ease of Doing Business
Total Registered New Firms	.418 <sup>**</sup>	.542 <sup>**</sup>	.375 <sup>**</sup>	.334 <sup>**</sup>
Business Density	.513 <sup>**</sup>	.563 <sup>**</sup>	.466 <sup>**</sup>	.384 <sup>**</sup>
New Density	.452 <sup>**</sup>	.660 <sup>**</sup>	.655 <sup>**</sup>	.515 <sup>**</sup>
Entry Rate	.676 <sup>**</sup>	.764 <sup>**</sup>	.808 <sup>**</sup>	.674 <sup>**</sup>
	.272	.135	.287	.181

\*\* . Correlation is significant at the 0.01 level (2-tailed) \* . Correlation is significant at the 0.05 level (2-tailed)

The analysis shows that Global Competitive was associated with all forms of measurement of new firms, but Entry Rate, with correlations being more strongly associated with new density, that is, newly registered corporations per working age citizen, what could be associated with entrepreneurship, instead of the Business density that shows already present business per working age citizen. The same relationship between New Density and e-government readiness, corruption index and ease of doing business held true, and was the strongest of all. We performed a general condensation of the findings and compiled an E-Government Effects Framework, indicating the multiple relationships present in the study, defined as a complex set of interactions and inter-relations, as is presented in the figure 2:

Figure 2: E-Government Effects Framework



The results of the correlation analysis provide some empirical support to indicate that this model is feasible and in fact account for a good explanation of the e-government externalities not only to business, but to citizens' perception of corruption, what in turns improves the creation of new business via more trusted governmental functioning. A better e-government strategy would diminish the Corruption Perception via added transparency and accountability of governmental transactions and also provide easier access to population services to start or operate a business, avoiding opportunities for corruption, once the procedures are fast, working and well reported. That in turn would make a country more competitive because the lower corruption and the ease of doing business there, resulting in firms creation.

## CONCLUSIONS

The data shows that e-government readiness, and its composing indexes have enough predictive power to sustain the hypothesis that electronic government indeed facilitates business, in most of the studied dimensions. The number of total services delivered by electronic means also was found to be significantly related to be easier to start a new business, to get credit, pay taxes and trade across borders, implying that the investment on education, infra-structure and website services is harvesting its results in those selected countries (Gil-Garcia & Pardo, 2005). Also, the e-government readiness was statistically related with lower corruption perception, higher

competitiveness and creation of business, including some indirect effects of the e-government on new business creation, via less corruption and easiness of starting and operating a business.

But as the construction of the e-government readiness index suggests, providing a complete web-presence is not the sole answer for a successful e-govern implementation (UN, 2009). The dimensions of formal education and infrastructure are vital and can account for much of the actual use of the electronic platforms. The more prepared the population is to use the tools provided, the higher would be the effectiveness of a given e-govern initiative. According to Carter and Belanger (2005) the perceived ease of use of the e-government solution, the compatibility and trustworthiness are significant indicators of citizens' intention to use e-government services, therefore should be enforced.

In the same way, studies point out that in the implementation of e-government projects the main problems usually are not technical, but instead were policy issues (EGOV, 2003). Some of the greatest challenges to maximizing the potential of e-government may involve social dimensions of information policy related to the Internet (JAEGER & THOMPSON, 2003).

This implies that the demand side of e-government should be regarded as well, that is the interaction between the citizens and the government (Reddick, 2005). This dimension is affected mainly by the awareness of the citizens and their skills to use the created resources, and use it to its full potential. The partial correlation analyses in this paper provided empirical support to affirmation, showing that human capital index has an important moderating effect, as well the infra-structure availability that is crucial for a e-government successful implantation. But the same analysis provided support to indicate that a web presence can have positive effects even on developing countries that still struggle with weak infra-structure.

The lack of adequate means to access the government services is almost a guarantee that the initiative of the government of creating an electronic presence is bound to fail, simply for the lack of users of the service. This is what Reddick (2005) calls the concern with the supply side perspective, that has as its objective to have the system available and as functional as it can be, but if the demand side is not considered, the failure of this initiative can happen despite a very well structured website or service. According to the Technology Acceptance Model (TAM), one of the most widely used models to study user acceptance of technology (Davis, 1989; Carter & Belanger, 2005), for any particular system to have success in terms of actual use, the users should perceive the system as useful and easy to use, representing a real benefit over the current alternatives. That's means that the governments should make the actual use easier, by the use of well-designed interfaces, but also by turning their citizens into functional internet or computer users.

Cultural factors can also be an important factor determining the usage of e-government services, and should be better investigated in the future research (Carter & Weerakkody, 2008; Hofstede, 2001). How people deal with new services offered in a totally different media, may be a key factor to explain the success of e-government especially in the older generations that were not raised in the computer or internet era.

Cultural issues are also present in corruption perception in any country. Therefore the simple presence of a complete e-government structure and even its use cannot be accounted for the elimination of corruption. The learned behavior of some corrupt officials or corrupt businessman must be punished by effective laws accordingly. The e-government role in this case is to provide a very powerful tool to track public expenses, transactions, providing tracking ability, to hinder this conduct to the lowest levels possible

Another finding was that some dimensions that represent the easiness of doing business were more affected than others, partially due to the nature of the dimension and its dependence on technology, but also on governmental issues. Although it provides tangible benefits to the population, it is still an interface, and the simple use of technology can improve but not compensate a country's laws or procedures that hinder the presence of maintenance of business, even if that outdated procedures are brought online. Even though some high correlations were found between most variables, the results must be seen with some care. Since there is a strong correlation between more advanced countries, better e-government, better infra-structure (e.g.: roads, ports, railroads), better communication availability, more educated population and other variables. Therefore it is hard, if not almost impossible, to control the effects of other variables, but the e-government, even when partial correlation analysis are used.

For future research we recommend that more databases be analyzed, especially with longitudinal studies, even though this strategy has problems as well, especially with complex variables like Competitiveness and Corruption Perception relationship with e-government (Andersen, 2009). We suggest more multi-country research conducted to measure directly the impacts of e-government on a series of indicators, cultural impacts and challenges to the implementation and of course the population perception of e-government. These researches could provide a better understanding of how e-government is changing governments and improving some indicators in countries around the world.

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# DESIGNING OF MANAGEMENT STRUCTURES IN PROCESS-ORIENTED ORGANIZATIONS

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## ABSRTACT

*An important management question is how to enhance the performance of a company's business processes. Over the past few decades, firms have increasingly structured their activities along end-to-end business processes and the "process-centric" perspective of a company's activities became prevalent. This research implies to find a kind of a universal mechanism of building organizational structures, the hierarchy of regulations in the process-oriented organizations, taking into account different characteristics, companies' goals and the changing external environment in Russia. All these will help the company maintain its competitiveness and successfully build a network and interact within it. This is important both from practical and theoretical point of view.*

## INTRODUCTION

Among the major problems raised by modern realities of the Russian economy, a special place belongs to a package of measures aimed at the development and improvement of the management of companies in accordance with the changed conditions of their operation and the new requirements dictated by the external factors. These issues are equally relevant for both start-ups, growth rates of which depend directly on the economic situation, and for traditional industrial and economic systems, seeking to reorganize and optimize primary business processes in accordance with the new economic conditions.

To ensure long-lasting competitiveness of a company it to be provided with well-developed management tools and a transparent model of its own value chain. Only if the internal structures, including the structure of business processes are constructed in such way they can be measured and compared the company has the opportunity to make permanent and consistent changes depending on market conditions.

The majority of Russian enterprises use a functional approach in organizing their activities. But as a rule, lack of regulatory documentation of the processes and a well-defined sharing of responsibility, as well as the presence of complex organizational hierarchies reduces management flexibility. Lack of clear regulation of the separation and the implementation of certain functions leads not only to lower quality products and services, but also to inefficient cost structure, and hence reduction of the company's profits.

Review of the literature shows that a structured approach based on different types of organizational structure, usually hierarchical. But nowadays this approach does not meet all the needs of Russian companies in the process of competition.

The purpose of the research is to develop a theory and methodology of organizational structures in process-oriented organizations to achieve strategic goals taking into account the specifics of companies in a dynamically changing environment.

To according the goal of the investigation is necessary to solve the following problems.

1. Explore contemporary approaches to management, identify trends in their development.

2. Research and study of concepts and of terminology of organizational design.
3. Classify and combine existing mechanisms for the construction of organizational structures.
4. Study of problems in organization management in a process-oriented organizations.
5. Develop a system of economic indicators to assess the quality of the organizational structure in a process-oriented organizations.

This research implies to find a kind of a universal mechanism of building organizational structures, the hierarchy of regulations in the process-oriented organizations, taking into account different characteristics, companies' goals and the changing external environment in Russia. All these will help the company maintain its competitiveness and successfully build a network and interact within it. This is important both from practical and theoretical point of view.

## **COMPARISON OF FUNCTIONAL AND PROCESS APPROACHES**

So, process approach become more and more popular in Russian companies, because this approach is focused, primarily, on the business processes, which perform the ultimate goals is to create products or services of value to internal or external customers. Because a structured approach have a lot of disadvantages:

- partition of technology on individual performance, as a rule, unrelated fragments that are executed by different structural elements of the organizational structure;
- the absence of a solid description of technology performance, at best, there is only fragmentary (at the level of structural elements), and that is not quite the actual documented technologies;
- no charge for the final result and control technology in general, as well as customer orientation (external or internal);
- lack of focus on external client and internal users of the interim results;
- high overhead costs;
- inefficiency of informational support, due to the presence of "patchy" automation of individual structural elements and unsuccessful attempts to implement enterprise information systems.

Therefore, the idea of the process approach, the mechanisms of developing organizational structures that correspond to the goals of the company and the external environment are becoming increasingly popular in the management community in Russian. The idea also allows to integrate the basic functions of the company in one whole.

Also, the quality of the organizational structure influences the development of business process and networks. Recognizing the importance of the investigations, it should be noted that the issues of building organizational structures for process-oriented organizations have not been adequately integrated consideration and development. Some problems have no single interpretation, and require justification and development of conceptual and methodological solutions to implement them. The existing diversity of approaches to solving this problem has not led to clarity of perception mechanism of the system of building organizational structures using a process approach, namely, such a mechanism is required for the management of organizations and management functions to achieve strategically significant result of the company.

The objective of the reorganizing project is to improve effectiveness and efficiency:

- Grow while keeping all clients (internal and external customers) satisfied with our overall service.
- Reduce the reaction time (for customers needs).
- Bring costs down whenever possible.
- Facilitate upcoming business expansion from new products, new clients, or integrating acquired businesses.
- Create a clear allocation of roles and responsibilities between and inside of the departments, functions and processes.

But implementation and use of process approach is not such ideal. Often, reorganizations are not the answer and fail for one (or more) of three reason:

- Structure isn't the root cause of poor performance
    - Many organizational factors – blurred roles, poor processes, lack of talent, a dysfunctional culture, and so on – can lead to unsatisfactory performance
  - New structures without new software limits results
    - If structure is the organization's hardware, then the roles, processes and so forth that allow people to work within and across the structure's boundaries are the organizational software
  - The cure is worse than the disease, because top management has overlooked decisions
    - Too many companies reorganize in ways that make decision making and execution more rather than less difficult
- Main line of is organizational structures and 'software' must work together to support decisions and using process approach.
- The approach to process redesign must follow some basic guidelines.

**Table 1: Comparison of Approaches**

<b>Usual approach</b>	<b>Effective approach</b>
Structure-led, people-led (design for personalities)	Decision-led, customers-led, money-led (design for outcome)
Complex	Simple
Focus on every function and redesign for 'excellence'	Focus on the critical issues
Over-emphasis on the hard elements of organization	Integrated approach to hard and soft issues

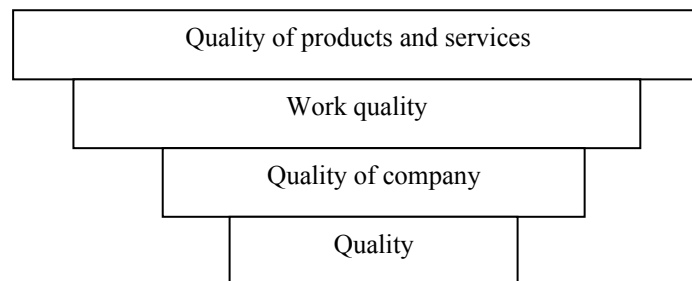
Structure should not be basic, but should be for critical issues, quality.

## DESIGNING OF MANAGEMENT STRUCTURES

Nowadays Russian companies pay much attention to quality in all its manifestations - the quality of labor, goods, services, etc. Since this is impossible without a long-term success in business. And of course the concept of quality applies to all types of activities: management processes, based on documented procedures, the conquest of markets on the basis of mutually beneficial partnerships with regular customers, new markets through the supply of competitive products.

For realizing that there is deferent approaches. But we try to formulate most universal and effective. The quality of management in the company is a basis of quality improvement in any direction.

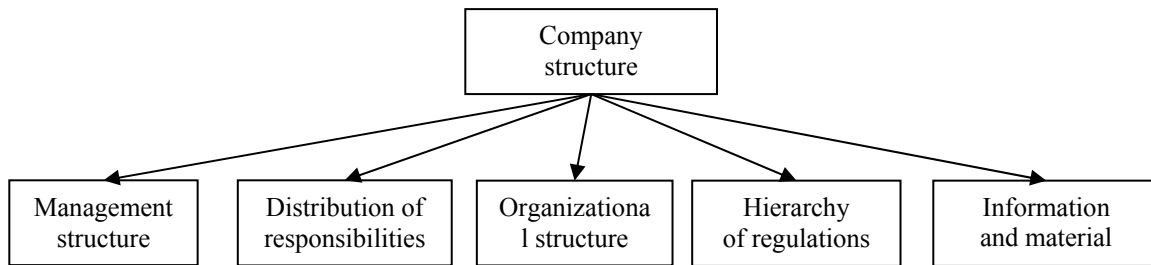
### Components of quality



At the top of the pyramid is TQM - comprehensive quality management, which involves a high quality y of all work to achieve the required product quality. The quality of the company includes a high organizational and technical level of production, appropriate working conditions. The quality of the work involves the validity of management decisions, the planning system. Of particular importance is the quality of work is directly related to the production output (quality control process, the timely detection of defects). Product quality is an immediate consequence of the quality of work.

So for realizing this company should reorganizing structure. Various aspects of the examination of the structure of the company.

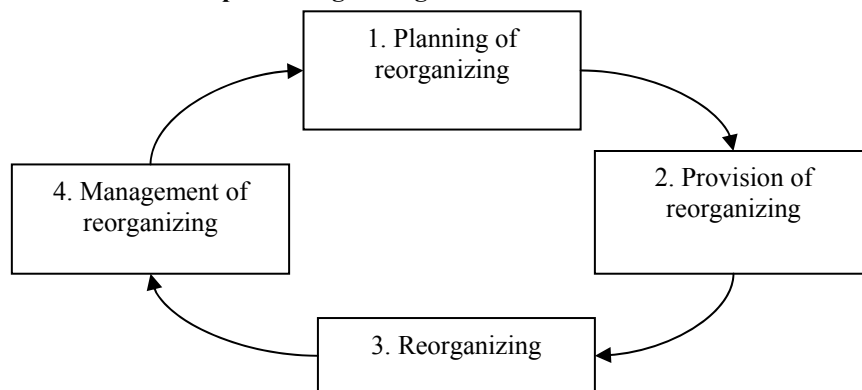
### Components of company structure



Building a model of the current and future business, as well as plan and program of transition from the first state in the second. Any modern enterprise is a complex system, its activities include the execution of tens of thousands of interdependent functions and operations.

Most effective scheme in reorganizing process is shown in Figure. Planning of reorganizing means setting goals for the reorganization, the definition of the necessary resources. Provision of reorganizing means realizing all the necessary preparatory aimed at providing confidence that the reorganizing will be made. Reorganizing as a process of changes in the allocation of responsibilities, information security, consolidation in the hierarchy of regulations. Management of reorganizing means constant renewal and updating of the above. And also actions and decisions to for increasing the effect of reorganizing.

### Steps of reorganizing



And also four main steps for each department:

1. Composition of list the key processes (no more 10):
  - Required to fulfil the Logistics Dept mission
  - With the 2-5 sub-processes necessary to complete the key process
  - Can be linked to BUs, suppliers, or customers
  - Needing improvement or not
2. Identify the required decisions
  - Needed for each process/sub-process
  - List all people currently involved in:
    - Providing inputs
    - Proposing a solution/recommendation
    - Taking the decision (whether they have the formal authority or not)
    - Agreeing to the decision
    - Performing the decision
  - Highlight the areas of confusion, overlaps, duplicated authorities.
3. New decision roles/accountabilities ('software')
  - Modify where necessary the decision-process rules
  - For each key process, designate people to be involved at each step of the decision

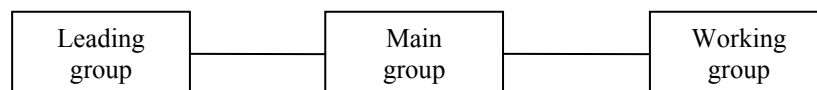
- Make sure there is only one responsible person for each process
- 4. Validate the change and adapt where relevant
- Confirm roles and responsibilities, between departments and other functions
- Test for people considerations

The object of the reorganization in the first place should be the management structure. The management structure includes all the goals, distributed among the various units, which provide a link between the coordination of individual actions to implement them. Therefore, it may be seen as the opposite side of the functioning of the characteristics (such as the implementation of structural relations management). Communication with the objectives of the company structure, function, process, mechanism of operation, human beings and their powers - evidence of its enormous influence on all aspects of the organization. It is therefore important to pay great attention to the principles and methods of formation, the choice of the type or combination of structures, to study trends in their construction and evaluation of their compliance with the goals and objectives being solved.

Clearly specify and distinguish between roles to build the right decision-making process.

1. Responsible person - make the decisions:
    - only this person responsible for each decision;
    - the right location in levels of the organisation structure and enough abilities, interest and controlled area.
  2. The expert, who recommends, evaluates and agrees:
    - can be multiple;
    - but should be assigned sparingly;
    - assigned only to those with valuable, relevant information which could potentially change the decision;
    - real expert in this field, has long been with the company;
    - breaks a deadlock.
  3. Direct performer:
    - can be multiple (particular person, the project team, department, etc);
    - assigned only to those with valuable, relevant information which could potentially change the decision.
- For realizing whole project of reorganization should be divided the general roles.

#### **Project roles**



Leading group:

- Sponsor of the project
- Made up of all appropriate senior managers
- Makes final decision on recommendation
- Time commitment: 2 or 3-hour meetings.

Main group:

- Project owner, to lead and drive the team.
- Project coordinator Time commitment: 2-3 days / week.
- Develops communication plan and guiding principles.
- Integrates the recommendations from the workgroups into one recommendation

Working group:

- Workgroups as required to address major issues.
- 4-6 members per workgroup from appropriate areas of the business to participate.
- Each workgroup chaired by a member of the core client team.
- Time commitment: 2 to 3-hour workshops.

## **CONCLUSION**

Thus, this research try to find a kind of a universal mechanism of building organizational structures, the hierarchy of regulations in the process-oriented organizations, taking into account different characteristics, companies' goals and the changing external environment in Russia. All these will help the company maintain its competitiveness and successfully build a network and interact within it. This is important both from practical and theoretical point of view.

Following tasks were set:

1. Explore contemporary approaches to management, identify trends in their development.
2. Research and study of concepts and of terminology of organizational design.
3. Classify and combine existing mechanisms for the construction of organizational structures.
4. Study of problems in organization management in a process-oriented organizations.
5. Develop a system of economic indicators to assess the quality of the organizational structure in a process-oriented organizations.

All but the last problem was solved. Thus, at this point is still relevant and in the future will be resolved.

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