

**GLOBAL BUSINESS AND TECHNOLOGY
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**EXCEEDING THE VISION: INNOVATE, INTEGRATE
AND MOTIVATE**

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Editors:

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

**GLOBAL BUSINESS AND
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**EIGHTEENTH ANNUAL
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Academicians, practitioners, and public policy makers at all levels throughout the world submitted original papers for conference presentation and for publication in this Readings Book. All competitive papers were refereed (subject to a peer review). The result of these efforts produced 219 empirical, conceptual and methodological papers involving all functional areas of business education with a special focus on international aspects. Of the 135 papers accepted for presentation at the conference, 72 papers are published in this Readings Book.

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SUSTAINABILITY MANAGEMENT OF THE GLOBAL PRODUCTION OF PLATINUM GROUP METALS (PGM) WITH REGARD TO HYDROGEN ECONOMY

J.F. Agwa-Ejon, J. Mabiza, C. Mbohwa
University of Johannesburg, South Africa

ABSTRACT

Hydrogen economy could be attained fast if it needed to rely only on the broad and available hydrogen feedstock comprising hydrocarbons, nuclear fission products, natural gases and carbon-free renewable resources, such as water. Hydrogen economy however has rated its objectives very high in terms of the ecology leg defining its sustainability legs threefold, (economic, social, and ecology). Technologically, hydrogen-economy idealists are striving to find out viable materials to sensibly bring down the cost to affordability of platinum-based fuel cell technology, the system which would bring to success the possible hydrogen economy. Fuel Cell System relies absolutely on platinum group metals (PGM). At the current stage of possible development of hydrogen economy, three key factors should be addressed and these are, the sustainability of the global PGM industry, the efficient production of hydrogen gas from renewable resources (water notably), and the cost cutting in the production of platinum electro-catalysts membranes. As regards the development and sustainability of hydrogen economy, concerns such as “mining cycle of PGM” or “oxymoronic sustainable mining of global PGM reserves” have been debated. Mining cycle in the modern mining industry, is defined as an overall process of PGM recovery from exploration and deposits discovery to evaluation through development to operation, and ending with rehabilitation. Mining cycle recurrently evolved cycle of deposits discovered and developed against the known resource prospected remaining which is a key issue surrounding PGM resource availability and depletion. PGM mining sustainability is a key concept debated for the development of hydrogen economy.

Keywords: Hydrogen Economy, Fuel cell technology, platinum group metals, sustainability, mining cycle of platinum metals.

INTRODUCTION

Interest in hydrogen as a fuel has recently prospered due to the concept identified as hydrogen economy. The main argument to this new concept of hydrogen economy is its prospect to resolve challenges facing the world currently. The major challenges are the climate change's series of environmental impacts and the need for security in clean and sustainable energy. The impacts of climate change due to CO₂-equivalent emissions have been very detrimental around the world and keeps rising due to the ever increasing demand for energy currently estimated at 1.9 trillion kilowatt-hours a day globally. (IEA, 2016). These two challenges require energy systems that are renewable, clean, highly efficient, and sustainable.

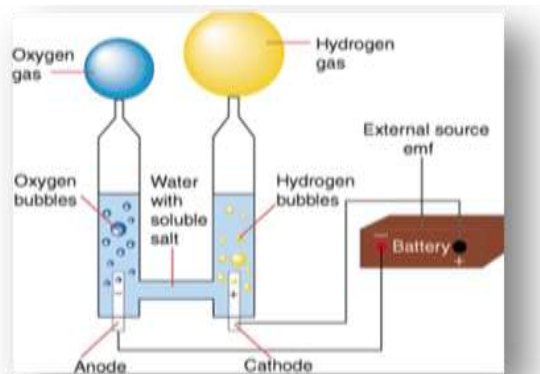
Hydrogen as a fuel and energy carrier

Time and again hydrogen has been seen as energy carrier and ever since, numerous endeavors were undertaken to validate it under this label by means of research (Penner, 2006). The earliest attempt for hydrogen to be used in machinery was developed as a hydrogen engine. In 1820 Reverend W. Cecil presented the work of his research before the Cambridge Philosophical Society in a paper titled “On the Application of Hydrogen Gas to Produce Moving Power in Machinery”. Later, after several attempts he developed hydrogen vacuum engine which was burning a hydrogen-air mixture (College on the desert, 2001). The validation of hydrogen as fuel

abides with its higher heating value (HHV) that exceeds the HHV of crude oil. Hydrogen is flammable, however it remains unnoticed since it is invisible and odorless. Hydrogen has the ability to generate more energy when combined with other chemical components.

Hydrogen therefore has a great comparative advantage as a relevant fuel for sustainability when looking at its abundant reserves in nature. The most abundant resource, carbon-free, and connected to hydrogen feedstock is water. The production process of hydrogen from water is well-known as water electrolysis as illustrated below in Figure 1. The electrolysis of water for hydrogen collection attracts important investments worldwide to improve its efficiency.

Figure 1: Hydrogen production from water.



Hydrogen is the simplest molecule, lightest, and most abundant natural and renewable element in the universe. Hydrogen accounts for 93% of the total number of atoms and 76% of the total mass of normal matter in the universe. On earth, hydrogen occurs mostly in combination with oxygen as water – which covers some 70% of the planet's surface. Free hydrogen accounts for a mere 0.00005% of the earth's atmosphere (Campbell, 2009). By its natural advantages, hydrogen is not seen just as a vital element for the living beings, but also as a clean energy source.

SUSTAINABILITY MANAGEMENT OF THE GLOBAL PRODUCTION OF PGMS WITH REGARD TO HYDROGEN ECONOMY

The hydrogen economy could be fast achieved through the emphasis on all its feedstock on earth which also comprises hydrocarbons or fossil-fuel reserves, nuclear fission products, natural gases, and fauna. The rating of hydrogen economy is however related to its ecology leg objective among the three components defining its sustainability. Furthermore, technologically, hydrogen-economy idealists are still striving to find out viable materials to sensibly reduce the cost of a fuel cell system. This fuel cell system is fed with hydrogen gas to generate power with zero carbon emission. The fuel cell production process still needs improvement given that it uses precious and expensive platinum metals. In order to bring about energy efficiency in the electro-activity of the chemical reaction scientists need to use Platinum metals since these are able the metals to withstand the acidic environment of the fuel cell system.

The sustainability of hydrogen economy is therefore linked to the sustainability of platinum metals which, are related to their natural reserves as well as the sustainability of their process of production given that it accounts for emissions as well. The current requirements for building the hydrogen economy, needs the following three key areas:

- Sustainability of the global PGMs mining industry;
- Efficiency of production of hydrogen from renewable resources;
- Cost cutting of the production of platinum catalysts membranes.

With regard to the long term supply and sustainability, concerns such as the mining cycle of PGMs or the oxymoronic sustainable mining of the global PGMs reserves have been discussed very strongly over the years (Mudd, 2009b).

The Mining Cycle

The mining cycle, is a modern expression used by the mining industry, to explain the extraction up to consumption which involves prospection, exploration, construction, operations, maintenance/rehabilitation, and retiring of a mining facility. Mining cycle can be identified as a ratio of recurrently evolving cycle of deposits discovered and developed against the known deposits prospected and known to be remaining; which highlights the issue surrounding resource availability and/or depletion (Mudd, 2009a).

The Oxymoronic Sustainable Mining of the Global PGM Reserves

Mining consists of extracting resources which are finite and non-renewable; hence mining is considered as unsustainable since its natural capital diminishes. An enigma however surrounding the mining industry is that current global mining activity stands larger than ever and produces minerals that are dwarfing rates of mines of past generations. There are evidences of some numerous mineral commodities that have shown growth in some known economic resources over recent decades in some countries, as the increase in demand has promoted exploration, technology and price. Moreover it is obvious that historical patterns of mineral resources and development cannot absolutely be expected to endure unchanged into the future. Then again it is acknowledged that the primary drawbacks encountered to mining in the future may vary from resource availability, social or governance issues in one region, to energy or water resources in another, or may as well be subjected to geographical global occurrences (Mudd, 2009b). The capacity to ensure and to sustain the mining industry will have to include available resources at former mining and milling sites. In this case the concept of sustainable mining can be brought back to first principles of balancing environmental potential, compliances, social and economic risks (Mudd, 2009b). The need to shift modern mining to a more sustainable framework had been debated the past decade. Deliberations around the approach to sustaining the mining activity are so far largely dependent on whether the view is from government, industry, or civic groups. In addition some of the concerns often raised embraces declining ore grades, available economic resources, economic parity and sharing of risks and benefits, environmental and social impacts during and after mining and the increasingly large scale of significant volumes of waste rock and overburden produced (Mudd, 2009b). The global sustainability mining is subjected to clarify substantive perspectives of the evolving trends on environmental burden per unit mineral produced, the short to long-term environmental and social impacts versus the larger scale of current mining benefits, as well as the analysis on whether mining can ever truly be a sustainable human endeavour (Mudd, 2009b).

HYDROGEN ECONOMY DEPENDENT OF THE POTENTIAL RESERVES OF THE GLOBAL PGMs

A possible hydrogen economy, through the sustainability of PGM-based fuel cell technology, is basically subjected to the potential of the natural capital of the World's PGMs. Leading PGMs producers are gradually raising a capital reserve for the global hydrogen fuel cell technology (HFCT) industry. As stated by Mudd (2009b), it is substantial to be aware of resource issues like ore grade declination, increase of more energy and water consumption and environmental issues which are possible constraints on future PGMs production. The rate of PGMs production growth may also be constrained by demand which is foreseen. South Africa, for instance, prepares to make reserves available to supply 25% of the global PGMs catalyst demand for the HFCT industry by 2020 (Mange, 2010). In the current stage of HFCT development, the share of the globally produced PGMs is as yet at an insignificant level for the HFCT industry as shown in Table 2. It is obvious that the 2020 target will bring about more efforts and pressure to the South African mining industry to increase the production with more environmental responsibility and more social responsibility to handle.

The global supply of PGMs (Table 1) is largely dominated by South Africa due to its large economic reserves in the stratiform deposits built with Precambrian mafic to ultramafic layered intrusions known as the

Bushveld Complex. South African PGMs reserves are estimated to be 71,000 tonnes whilst the global reserves are estimated to be 80,000 tonnes (Mudd and Glaister, 2010).

Table 1: PGMs production by country in 2007

Country	Production			Reserves ^b	Reserve base ^b
	t Pt	t Pd	t PGMs	t PGMs	t PGMs
South Africa	165.83	86.46	310.92	63,000	70,000
Russia	27.00	96.80	138.30	6200	6600
Canada	6.20	10.50	20.20	310	390
Zimbabwe	5.30	4.20	11.00	-	-
United States	3.86	12.80	-	900	2000
Columbia	1.40	-	-	-	-
Australia	~0.90 a	~0.73 a	-	-	-
World	212	219	509	71,000	80,000

a. Assuming Australia is credited with PGMs extracted from ores and concentrates exported to Japan.

b. They are broadly similar to reserves and resources as used in South Africa, Canada, Australia, and elsewhere. With t= tonne metric, Pt=platinum, Pd=palladium.

Sources: (Mudd and Glaister, 2010)

The recycling of pgms

Sustainability of PGMs will need to find feasible means of economic recovery of the precious metals used for diverse industrial purposes. As stated by Thomas (2009), important recovery sources of platinum would probably be coming from automotive catalytic converters in which platinum and iridium have been used as catalysts. The current global automotive industry accounts for 38% of the global platinum consumption together with palladium and iridium (Figure 4 & Table 2).

Automotive fuel cell might still require more than ten times the amount of platinum used in a current car catalytic converter. This also raised concerns whether recycling PGMs will sufficiently help to sustain fuel cell development (Master muffler, 2001). On the other hand, a realistic view of this issue is that fuel cell is a new technology and as such, it will not enter the global marketplace overnight, but rather gradually, over years (Thomas, 2009). Figure 2 below shows the curve of used and recycled platinum autocatalysts over the decades and reflexes the global proportional trends in the platinum autocatalysts recovery yet the potential available stock is not meet.. In a recent past autocatalysts consumed an average of 39% of the global produced platinum in a period of 3 years (Figure 4). A more effective recycling of platinum autocatalysts would help to improve the supply. In 2011 the gross demand for platinum was increased by 2% to close to 8.1 million ounces and platinum recycling rose by 7% upgraded to 6.48 million ounces with an observed market price of USD 1,364/ounce by the end of 2011 (Butler, 2012).

RECENT ENDEAVORS REDUCING PLATINUM LOADING INTO THE MEMBRANE ELECTRODES

PGMs are the only metals to withstand electrolytic acidic conditions when used in membrane electrodes. The uneven disparity of their global deposits, of which 96 percent is exclusively found only in four countries with a highly expensive refining process, promotes intensive research to cut down platinum load into membrane electrodes. Catalyst alloys composed of platinum and other metals have been envisaged.

Illustration of international Endeavours

Wang at al. (2012), a research team at the Energy Materials Centre at Cornell University (EMC²) had developed platinum-cobalt nanoparticles with a platinum enriched shell to enhance and optimise nanocatalyst performance and durability of catalytic activity for the oxygen reduction in fuel cell application. The observation of Pt-metal

disordered alloys instigated the development of a new class of Pt-Co nanocatalysts composed of ordered Pt₃Co intermetallic cores with a 2-3 atomic-layer-thick platinum shell. The material exhibited over 200% increase in mass activity and beyond 300% increase in specific activity when compared with the Pt₃Co alloy nanoparticles or Pt/C. The oxygen reduction reaction exhibited the highest mass activity among the Pt-Co systems under similar conditions. Stability tests showed a minimal loss of activity after 5000 potential cycles and the ordered core-shell structure was preserved virtually undamaged. According to Charnot (Green Car Congress, 2012) the new material could reduce five times the cost factor of the fuel cell membrane electrodes and provides a new path for catalyst performance optimization.

Figure 2: Platinum demand by use, 1975-2008

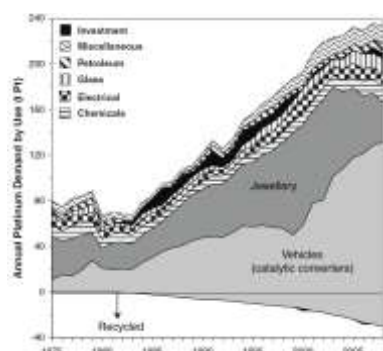


Figure 3: Platinum demand by Use & Recycling (, 000 Oz) – 2009 - 2011

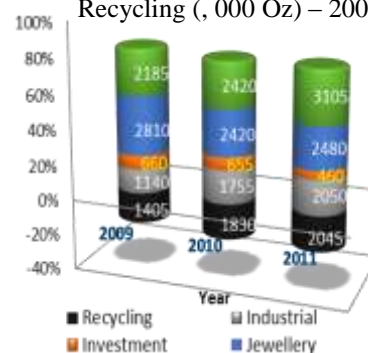
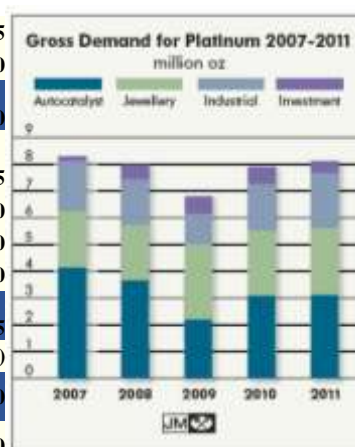


Table 2: Global demand for platinum

Source: (Mudd, 2009b)			
Russia	785	825	835
Others	605	590	790
Total Supply	6,025	6,050	6,480
Gross Demand			
Autocatalysts	2,185	3,075	3,105
Jewellery	2,810	2,420	2,480
Industrial	1,140	1,755	2,050
Investment	660	655	460
Total Gross Demand	6,795	7,905	8,095
Recycling	(1,405)	(1,830)	(2,045)
Total Net Demand	5,390	6,073	6,050
Movements in Stocks	635	(25)	430

Source: (Butler, 2012)

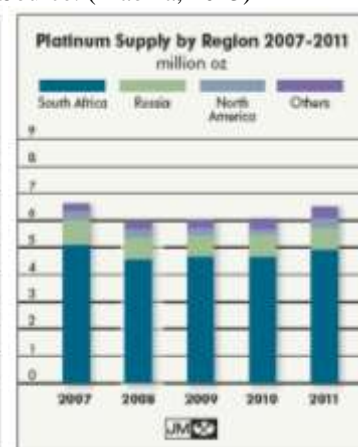
Figure 4: Gross Demand for Platinum



Source: (Butler, 2012)

Figure 5: Platinum Supply by Region 2007-2011

Source: (Mabiza, 2013)



Source: (Butler, 2012)

A team of researchers from University of Houston, Technical University of Berlin Germany, and Department of Energy's SLAC National Laboratory CA have developed a new material built with nanoparticles having a core made of a copper-platinum alloy and an outer shell of mainly platinum onto carbon supports. Once a cyclic alternating electric current is applied to the copper-platinum alloy, the copper departs from the outer surface region and gives a platinum-rich outer layer. The catalytic performance of the material is up to 0.49 amperes per milligram of platinum. The researchers believe that it should be possible to increase the catalytic activity of the material. The material brings hope to the U.S. Department of Energy's 2015 target. Such catalyst may give the advantage of a low cost competitiveness with regard to the amount of platinum involved. The material has been tested in working fuel cells and providing stable electrochemical activities that can be expected in real fuel cells today. It was further found that the way x-ray beams are scattered by copper-platinum

nanophase catalyst shows that the distance between the platinum atoms left on the surface is shorter than in pure platinum atoms. As much as a catalyst must be able to split up oxygen into ions and electrons, just as hydrogen, without binding too strongly the freed atoms, copper-platinum catalyst had shown the most weakly binding with the oxygen atoms making the new catalyst more efficient (Patel, 2010).

A different new type of catalyst material has been developed at the Massachusetts Institute of Technology to succeed water electrolysis processes at room temperatures with relatively low electric energy needed. Another advantage is that the material can split water using only 1 Volt rather than 1.6 volts in the case of more conventional methods. Given the working temperature range of the material, a solar system may be a primary energy source to adequately supply energy to the fuel cell system using this electro catalyst. A solar voltaic system can supply adequate energy during the day and promote the collection of amount of hydrogen which can be used at night to produce electric by fuel cell (Gache, 2008).

An iron-based catalyst developed by a group of researchers at General Motors has been experienced for PEM fuel cell, when carbon low-nanotube catalysts and nickel catalysts have been tested for alkaline fuel-cell. A General Motors team is looking at possibilities to develop alternative non-platinum catalysts nickel and cobalt based. In addition the research aimed at solving the problem of the stability of the core-shell structure (Patel, 2010).

South African Endeavors

A prototype of nanophase Pt electro catalysts composite electrode developed in South Africa by Petrik et al. (2008) had resulted in highly active Pt electro catalysts that can be incorporated into composite electrodes to produce hydrogen by water electrolysis. With high electro activity between 8.2 and 8.9 $\text{mA}^{-1}\text{cm}^{-2}$ at -1.5V slightly lower than 9.7 $\text{mA}^{-1}\text{cm}^{-2}$ of the industry standard Johnson Matthey, the developed Pt nanophase electrode had shown current densities of about 600 mAcm^{-2} higher than that achieved by the electrode synthesized with the commercial Johnson Matthey Pt/C catalyst, which attained a current density of 317 mAcm^{-2} under similar conditions.

The South African Anglo American Platinum has launched the prototype of a first fuel cell powered underground locomotive, which was developed in collaboration with the Vehicle projects, Trident South Africa, and battery electric. The bid to these innovative locomotives is starting to provide the company with an opportunity to mine platinum in a more economic, energy-secure and environmentally caring way. As fuel cells provide power 24-7, and because there is no need to change or recharge the battery, this will mean less downtime and increased productivity, an important advantage to business benefits as well (SAinfo reporter, 2012). The Anglo American Platinum had also acquired a 17.5% stake in Johnson Matthey, a global leading producer of platinum electrocatalysts. Furthermore, through the first investment in its Platinum Group Metals Development Fund (PGMD Fund), Angloplat together with US-based Alteryx Systems have announced a partnership with DST to establish a new company called Clean Energy Incorporated to market and distribute fuel cells in South Africa. This venture would be followed by local manufacturing of fuel cells for the sub-Saharan region by 2013. Both DST, through the Technology Innovation Agency, and the PGMD Fund would invest in the company and, along with Alteryx, would each receive an equity position in Clean Energy (Venter, 2010).

CONCLUSION

There is still a long way to go before the economical achievement in the development of hydrogen economy. The process still depends on some critical aspects centered on the fuel cell technology improvement. Other prerequisites which needs to be considered include politics, strategies, policies, efforts to put in PGMs exploitation and their recycling strategies, for improving the fuel cell technology. At the moment the production of Hydrogen energy solely depend on PGMs for its efficiency. Mining platinum metals can be sustained through technologically advanced and smart exploitation systems, however the cost effectiveness during the exploration, exploitation and beneficiation needs to be redressed. Of utmost importance is the recycling process of platinum metals with maximum recovery from diversified sectors and industries where they are used and damped. If successful within the sustainability and financial constraints, a well-developed hydrogen economy can significantly decrease strain on the global economy, cut down global emissions and improve the lifestyle of workers through enabling on-site generation of power with no constraints.

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THE PLIGHT OF THE STREET CHILDREN IN AN ERA OF HIGH LEVELS OF HIV/AIDS

Sunday Allen Eunice
Walter Sisulu University, South Africa

ABSTRACT

This paper examines the plight of the street youth in an era of HIV/AIDS in South Africa. Knowing whether or not, HIV/AIDS is a cause for concern among them as a basis of meeting their health concerns is vital. The study administered a Questionnaire to a 100 street youth aged 15 to 24 years. The data gathered was analysed and themes developed. Drawing from their response, HIV/AIDS was not a major cause for concern; lack of jobs and food was. Thus, targeting the street youth as priority by efforts to limit HIV/AIDS infection can be effective in reaching a neglected group.

Keywords: street youth, HIV/AIDS, sexual behaviors, HIV/AIDS knowledge, plight.

BACKGROUND INFORMATION

The street youths are among the high risk, insecure and vulnerable groups to various forms of abuses and diseases including HIV/AIDS. They are particularly exposed to HIV/AIDS (Tadesse et al, (2013) since they have diverged from societies' mainstream and have fallen through the safety net (Kusserow 1990). They generally live a nomadic lifestyle on the street looking for survival and recreation. Because of a variety of living arrangements and life histories it is difficult to know exactly how many they are.

Breakdown in family support systems, poverty, unemployment and the devastating impacts of HIV/AIDS put together have added a huge leap in the number of Street Children in South Africa. The Consortium for Street Children (CSC) estimated about 250,000 in South Africa. These children live and work on the streets and rubbish dumps of urban centers (Van Jaarsveld, et al, 2011). The harsh conditions expose them to HIV/AIDS. However, the nomadic lifestyles of street youth make it difficult to know exactly how many are infected with HIV or died of AIDS. Tadesse et al, (2013) revealed that worldwide, some attempts were made to test the street youth for HIV, and the available data indicated that their HIV sero-prevalence rates were 10-25 times higher than any other groups of youth in many Countries. Given that, with 6.8 million people living with HIV, South Africa has the highest number in the world (UNAIDS Factsheet 2015) there is no doubt that HIV/AIDS infection is wide spread among the street youth. Deriving from their views, the question, is it a cause for concern among them”?

HIV/AIDS epidemic a cause for worry among the street youth.

Studies have indicated that amidst the worries of the street youth, HIV/AIDS is ancillary. In a study conducted on the street youth of South Africa, 80 percent said that HIV/AIDS prevention had no part in their daily lives. Survival concerns such as getting food, clothes, sex, money, drugs and avoiding the police occupied their minds (Kruger and Richter, 2003). It is likely that most street youth lack sufficient knowledge about various aspects of HIV/AIDS.

Knowledge of the street youth about HIV/AIDS

The street youth lack adequate knowledge on HIV transmission. In a study conducted on the street youth in Congo, some respondents believed that HIV is transmitted through mosquito bite, sharing meals and through sorcery (Kayembe et al, 2008). Similarly, in a study conducted among street youth of South Africa, sharing the same toilet seat, kissing, sharing a cigarette, breathing the same air, drinking from the same a glass, touching someone with AIDS were among the stated modes of HIV transmission (Kruger and Richer, 2003). In Tanzania, many street youth believed that AIDS is caused by God's will or/and witch craft or violation of certain taboos, which can be cured by traditional medicine (Mshana et al, 2006).

Studies have shown that many people still do not understand that HIV infection can be asymptomatic. In a study conducted among street youth of South Africa, Kruger and Richter (2003) noted that $\frac{2}{3}$ of the youth believed healthy looking people could not have HIV/AIDS. For most, an HIV positive person could be identified through external appearance such as being thin, having sunken eyes, being weak, having pimples, having sores and itchy and losing hair (Kruger and Richter, 2003).

Regarding HIV/AIDS cure, studies show that the street youth believes in traditional and religious healing; and that conventional medicines and traditional healing remedies could be used concurrently as cure. In Pakistani, traditional and religious healing were evident in treatment for AIDS by those who believed AIDS can be treated (Abrar and Mujahid, 2010). Similarly, a study conducted in Alexandria Township, South Africa revealed that about 80 percent inhabitants seek for advice or treatment for AIDS from Sangomas regardless of whether they go to modern practitioners (Kruger and Richer, 2003). With such insufficient knowledge about HIV/AIDS, it is likely that the street youth would continue to engage in lifestyles that are risky.

Risky lifestyle factors

As the street youth get pre-occupied with meeting survival needs, the majority engage in risky sexual behaviors for material support or/and protection (Consortium, for street youth, 2009). However, others get violated. For example, in a survey conducted in Egypt, of approximately 400,000 street children, 50 percent stated that they had been exposed in some manner to rape (International Humana people to people, 2009). In addition such sexual practices are aggravated by substance abuse. In a study conducted in South Africa, Richter & Swart-Kruger (1993) revealed that 60 percent of the youth admitted to having sex while under the influence of substances (Van Rooyen, 2002). Given that South Africa is considered the epicentre of HIV/AIDS, and the street youth are considered as the 'hard to reach' group of people; this study explores their plight.

Problem Statement

The street youth of Mthatha semi-urban are highly vulnerable to infection, considering that HIV/AIDS programmes tend to target formal institutions such as schools, neglecting groups that lead peripatetic lifestyles such as the street youth (Kruger and Richter, 2003). In spite of this, not nearly enough research has been done to learn about the depth and diversity of the street experience including issues of HIV/AIDS directly from the perspectives of street children themselves. Therefore, in light of above background, the following research question was formulated: 'is HIV/AIDS are major cause for concern among the street youth of Mthatha semi-urban space?

The Aim of the study

The aim of this research was to explore the plight of the street youth of Mthatha in an era of high levels of HIV/AIDS. In this regard, it described their views on whether or not, HIV/AIDS is a major cause for concern among them; the research further examined whether or not, the street youth have sufficient knowledge about HIV/AIDS. This information helps to determine what or how the efforts to combat HIV/AIDS scourge can be channelled to the street youth. Ignoring this neglected group will thwart all the gains made in the prevention and management of HIV/AIDs especially in urban settings since their lives are intertwined with the public life.

Theoretical framework

The theory of planned behaviour guided the study. Developed by Ajzen, this theory is more accurately regarded as the theory of the proximal determinants of behaviour (Conner and Sparks, 1995:127). This theory is a substantially integrative and well corroborated model and is the only model which recognizes that people may not be under complete (perceived) control over their behaviour (Ajzen, 1988). Given that the lives of the street youth are largely at the mercy of what and who surrounds them rather than making individual choices, qualifies the theory of planned behavior as the relevant one. This is because it accounts for contextual and cultural factors in determining behavior.

Methods

This paper was conducted in Mthatha urban located in King Sabata Dalindyebo Municipality (KSD). Mthatha as a regional rural town services a locality characterized by significant structural problems that tend to impede rural communities from fully accessing services, resources, markets and information - (Mashiri, Mokonyama, Mpondo, Chakwizira and Mdunge, 2014). But for many people in KSD, Mthatha is viewed as offering higher order services and significant employment opportunities (Mashiri et al, 2014). Because of this, Mthatha becomes a point of hope for many young people seeking solutions. Thus Mthatha has an ever growing number of street children largely due to many factors such as poverty, HIV/AIDS, emergence and expansion of low income informal settlements. Therefore, Mthatha qualify as a suitable setting for research.

This paper thus draws from primary data. Through snowball sampling technique 10 street youth helped to identify the 90 others who shared similar characteristics such as the type of work they do and the place where they spend most of their time. Considering that the majority of the youth working on the street were males, 57.8% of the respondents were males, and 42.2% were females. They were all African Black aged 15-24. The study administered questionnaires consisting of both closed and opened ended questions for further probing. For the sake of gathering none verbal information, direct observation was employed. The researchers further took notes and tape recorded some of the conversations probed. Lastly, the information obtained was coded and analysed.

THE FINDINGS OF THE STUDY AND THE DISCUSSION

Is HIV/AIDS a major cause for concern?

The study revealed that fear of HIV/AIDS infection was not a major cause for concern. Of the 100 respondents, only 14.7% of the respondents mentioned the fear of HIV/AIDS. The rest of the respondents said that they either do worry about HIV/AIDS or it is not something they think about. They instead said that day to day major concerns were lack of jobs, food and shelter to ensure their survival. The street youth spend most of their time on shopping mall entrances waiting to carry the shoppers' commodities; in parking lots guarding cars as the owners leave for some errands; near dump stamps sitting or roaming about as they beg passers-by. The study further revealed that girls exchange sex for physical, emotional protection and material gains. This clearly indicates that the immediate survival concerns rather than HIV/AIDS infection take precedence. Similarly, studies done in some parts of sub Saharan Africa, women and girls exchange sex for money in order to meet their basic needs (Undie Chi-Chi and Benaya, 2006). Given that the street youth in the present study earn meagre income from such small jobs; it is without doubt that they worry more about meeting their immediate basic needs than HIV/AIDS infection. This finding suggests that street youth could have down played the importance of HIV/AIDS possibly because they lacked sufficient knowledge about the epidemic.

Knowledge and perceptions of HIV/AIDS among the street youth

The study revealed that the street youth knew the correct modes of HIV/AIDS transmission such as having unprotected sex with an infected person, transfusion of HIV infected blood, using unsterilized syringes/needles and from mother-to-child. They also identified use of condoms, abstinence from sexual acts and being faithful as effective preventive measures. This indicates that HIV/AIDS awareness programmes have somehow succeeded to convey HIV/AIDS messages. However the street youth also had misconceptions that HIV/AIDS is transmitted by angry ancestors to punish the living people for their sins; or/and transmitted through sharing utensils with the

People Living with HIV/AIDS (PLWHIV. This concurs with study done in Pakistani, whereby traditional and religious healing was evident in treatment for AIDS by those who believed AIDS can be treated (Abrar and Mujahid, 2010).

The street youth further believed that HIV/AIDS is a curse from heaven and from ancestors; and others believed that HIV/AIDS is witchcraft. Considering this, some of the street youth stated that HIV/AIDS can only be cured by traditional healers, and at times conventional health care professionals. This clearly indicates that the efforts to fight HIV/AIDS have not fully infiltrated the neglected street youth to convey correct information. This concurs with other earlier studies such as one conducted in Dessie. In this study levels of HIV/AIDS knowledge among the street youth were low; and common misconceptions about the nature, risk, transmission, and prevention of HIV indicated a lack of access to information (Tadele, 2000).

The study further revealed that, less than ½ of the respondents knew that taking a blood test is the only conclusive way to say with certainty that one is HIV positive or not. For over 46% of the participants, weight loss, vomiting, diarrhoea and casual sex are ways to conclude with certainty that a person is HIV positive. However, other illness such as dysentery, cholera and so on, can cause vomiting, weight loss, diarrhoea regardless of whether one has HIV/AIDS or not. This is an indication that HIV/AIDS awareness campaigns about the importance of taking an HIV test have not fully reached the neglected street youth. Similarly, in a study conducted among street youth of South Africa, Kruger and Richter (2003) noted that 2/3 of them believed healthy looking people could not have HIV/AIDS.

CONCLUSIONS AND RECOMMENDATIONS

Considering that the youth living and working on the streets of Mthatha had insufficient information about HIV/AIDS; and also did not view HIV/AIDS as a major cause for concern, yet their lifestyles highly expose them to infection, there is need for special attention.

To reintegrate the street youth especially those living on the street into main stream society, or at least meet their basic needs of food, jobs, and shelter so that they can be open to reproductive health promotion program. To infiltrate the networks of the street youth by HIV/AIDS awareness programmes to ensure that correct information about HIV/AIDS is transmitted and misconceptions cleared.

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TOWARDS A SUSTAINABLE BRAND LOYALTY: ATTITUDINAL LOYALTY PERSPECTIVE

Dominic Appiah, University of Plymouth, United Kingdom
Wilson Ozuem, University of Gloucestershire, United Kingdom
Kerry. E. Howell, University of Plymouth, United Kingdom

ABSTRACT

The core element in the marketing mix is the company's product as this presents the functional requirements customers seek on the market. Marketing managers are faced with the task of developing their products into brands to help prospective customers identify specific products that are uniquely established in their minds. Management of products and brands is a key factor in marketing. A strong and healthy brand is instrumental in creating sustainable competitive advantage, the transition to a relationship marketing paradigm places brand loyalty as a central indicator of customer relational strength. It is widely accepted that brand loyalty has traditionally been conceived as a behavioural construct relating to intentions towards repeat purchases. Considering the brand loyalty literature, this study examines both attitudinal and behavioural loyalty and establishes a sustainable brand loyal from attitudinal perspective.

Keywords: Brands, Brand Loyalty, Attitudinal Loyalty, Behavioural loyalty, Consumer Behaviour

INTRODUCTION

Despite the large number of studies on brand loyalty, much of the research over the past three decades investigates consumer loyalty from two perspectives: broadly there are two schools of thought underlining the definition of brand loyalty, that is behavioural loyalty and attitudinal loyalty (e.g., Bandyopadhyay & Martell, 2007; Dick & Basu, 1994; Ball, Coelho & Macha, 2004; Ringberg & Gupta, 2003). The first marketing studies perceived customer loyalty in a behavioural way, measuring the concept as behaviour involving the repeat purchase of a particular product or service (Hallowell, 1996; Homburg & Giering, 2001; Yi, 1990). Nam, Ekinci and Whyatt (2011) confirmed the above-mentioned perception by stating that loyalty has traditionally been conceived as a behavioural construct relating to intentions towards repeat purchase.

However this study considers attitudinal loyalty as a long-term and emotional commitment to a brand (Bennett & Rundle-Thiele, 2002; Shankar, Smith & Rangaswamy, 2003), which is why attitudinal loyalty is referred to as 'emotional loyalty' that is regarded as being 'much stronger and longer lasting' (Hofmeyr & Rice, 2000). This paper first reviews the literature on brand loyalty. Next is a discussion on brand switching and two main perspectives of brand switching. An evaluation of both behavioural and attitudinal loyalty is carried out to establish the latter as a more sustainable choice and finally this paper concludes with a discussion on the managerial implications.

THEORETICAL CONTEXT

Brand loyalty is a "deeply held commitment to rebuy or re-patronise a preferred product or service consistently in the future, causing repetitive same-brand or same-brand-set purchasing, despite situational influence and marketing efforts having the potential to cause switching behaviour" (Oliver 1999, p.34). Dimitriadis (2006) shares similar view by saying, it is widely accepted that satisfied consumers are less sensitive to price change, less influenced by competitors' attack and loyal to the firm longer than dissatisfied customers.

In line with all the above explanations, loyalty to a brand is expressed due to a positive attitude, which makes a consumer repeatedly demand goods or services of a particular brand or a limited number of brands within a suitably defined period of time. Consistent with this view Copeland (1923) shared the opinion that consumers may possess a strong attitude which may have a strong effect on their behaviour towards a particular brand; he refers to this phenomenon as brand insistence. He further described brand insistence in terms of recognition, preference and insistence.

Perspectives on Brand Switching

Switching occurs when a customer is motivated to review their available alternatives in a market place due to a change in competitive activity in the market place' (Seiders & Tigert, 1997). Similarly, Hogan and Armstrong (2001) posited that brand switching is about replacing an incumbent resource with a more valuable one to achieve competitive advantage. Sathish, Kumar, Naveen and Jeevanantham (2011) posit that brand switching is consumer behaviour where the behaviour of the consumer differs based on the satisfactory level of the consumer with the providers or companies. Switching behaviour can be enunciated as the process of being loyal to one service and switching to another service, due to dissatisfaction or any other problems. Even if a consumer is loyal to a particular brand, if the brand does not satisfy his/her needs, the consumers switch to a competitor brand. As noted earlier, consumer loyalty is defined as "the degree to which a Consumer exhibits repeat purchasing behaviour from a service provider, possesses a positive attitudinal disposition toward the provider, and considers using only this provider when a need for this service arises" (Gremler & Brown, 1996, p.6). Losing a consumer is a serious setback for the firm in terms of its present and future earnings. In addition to losing the benefits discussed above, the firm needs to invest resources in attracting new consumers to replace the ones it has lost (advertising, promotion, initial discounts). Peters (1987) shows that it can cost five times more to acquire a new customer than to retain an old one. Consequently, retaining the current customer base is much more attractive and viable than searching for new customers. There are different factors and determinants which affect consumers in switching from one product to another. Two of these main switching behaviours for the purpose of this study are elaborated below.

First, switching as functional utility maximization occurs when a customer is motivated to review their available alternatives in the market place due to a change in competitive activities in the market (Seiders & Tigerts, 1997). Economists view consumer choices as means to achieve maximization of functional utility (McFadden 1986). In addition, a common practice among marketing researchers is to model consumer brand switching as choices based on product attributes and marketing mix (Guadagni & Little 1983; Ozuem, Limb & Lancaster, 2016). However, according to the original text on multi attribute utility theory (Lancaster 1966), consumer utility includes not only a brand's functional attributes but also socio psychological attributes. Correspondingly, McFadden (1986, p. 284) contends that "it is necessary to incorporate psychometric data in choice models because these factors also shape the utility function". Surprisingly, it is not until recently that research on choice models has revived the need to incorporate softer, non-product related attributes, such as customers' attitudes and perceptions, into models of brand choice and brand switching (Swait & Erdem 2007). These researchers posit that these softer attributes also play an important role in predicting brand choice, and brand preference.

Secondly, brand switching occurs as social mobility, in line with the recent development in choice modelling, social identity theory suggests that brand switching also serves socio psychological purposes besides functional utility maximization (Rao, Davis & Ward 2000; Tajfel & Turner 1979). This theory posits that people derive their identity from their affiliations with social groups. They value such membership and distinguish themselves from those who did not share such affiliations, forming the in-group and the out-group. According to Lam, Ahearn, Hu, and Schillewaert (2010), when a social identity is threatened, that is, negatively perceived in-group, members will likely respond by resorting to three basic strategies: social mobility, social creativity, and social change. Social mobility refers to a person's attempt to leave or dissociate him or herself from the group, moving from a lower-status group to a higher status one is an example (ibid). Social creativity describes a person's attempt to "seek positive distinctiveness for the in-group by redefining or altering the elements of the comparative situation" (Tajfel & Turner 1979, p. 43). For example, a business school that does not compare favourably with other schools in overall evaluation may seek out specific dimensions of comparison that grant it superiority over these other schools (Elsbach & Kramer 1996).

Finally, social change refers to direct competition with the out-group to retrieve higher status. In the marketing context, social change can be initiated either by competitors or by customers who identify with a brand. Market disruptions that are externally caused by competitors (e.g., radically innovative brands) can be viewed as attempts to initiate social change between competitors to vie for customers' favour. When a radically new brand is introduced, some customers may perceive the new brand as having a more attractive identity than the incumbent's identity.

Brand Loyalty

Despite the large number of studies on brand loyalty, much of the research over the past three decades investigates consumer loyalty from two perspectives: broadly there are two schools of thought underlining the definition of brand loyalty, that is behavioural loyalty and attitudinal loyalty (e.g., Bandyopadhyay & Martell, 2007; Dick & Basu, 1994; Ball et al, 2004; Ringberg & Gupta, 2003). The first marketing studies perceived customer loyalty in a behavioural way, measuring the concept as behaviour involving the repeat purchase of a particular product or service, evaluated either by the sequence in which it is purchased, as a proportion of purchases, as an act of recommendation, as the scale of the relationship, its scope, or both, or as several of these criteria combined (Hallowell, 1996; Homburg & Giering, 2001; Yi, 1990). Nam et al, (2011) confirmed the above-mentioned perception by stating that loyalty has traditionally been conceived as a behavioural construct relating to intentions towards repeat purchase. In a nutshell, Nam et al (2011) refers to behavioural loyalty as the frequency of repeat purchase.

Kuusik and Varblane (2009) identify three sub-segmented reasons for behaviourally loyal customers: (i) forced to be loyal (e.g. monopoly or high exit costs); (ii) loyal due to inertia and (iii) functionally loyal. From a marketing perspective, it suggests that as long as there are no specific 'triggers' to compel behaviourally loyal customers to change providers, they will remain passively loyal (Roos, 1999). According to Liu, Wu and Hung (2007) even when presented with more attractive alternatives, consumers who have high inertia will be reluctant to change. Day (1969) criticised this one-dimensional view as behaviourally centred and therefore unable to distinguish true loyalty from 'spurious loyalty', since then many researchers have recognised the need for an attitudinal component to the behavioural one (Berne, Mugica & Yague, 2001; Dick & Basu, 1994; Jacoby & Kyner, 1973; Oliver, 1997). Similarly, Day's criticism above was emphasised by Uncles and Laurent (1997) as they posited that by classifying these behavioural observations as a form of loyalty, it overlooks customers who are emotionally attached to products and services and can lead to overestimations of a company's loyalty customer base, and the stability of their portfolio (Crouch, Perdue, Timmermans & Uysal, 2004). Significantly, Dick and Basu (1994) contend that a favourable attitude and repeat purchase was ideal to define loyalty, by viewing loyalty as an attitude-behaviour relationship in their framework

Attitudinal loyalty on the other hand can be defined as capturing emotional and cognitive components of brand loyalty (Kumar & Shah, 2004). Oliver (1999) aligns his description with this belief by defining loyalty as a deeply held commitment to rebuy or re-patronise preferred products or services consistently in future, despite situational influences and marketing efforts having the potential to cause switching behaviour. This type of loyalty represents a more long-term and emotional commitment to an organisation (Bennett & Rundle-Thiele, 2002; Shankar et al, 2003), which is why attitudinal loyalty is referred to as 'emotional loyalty' that is regarded as being much stronger and longer lasting (Hofmeyr & Rice, 2000; Ozuem, Thomas, & Lancaster, 2015) and has been compared with marriage (Albert & Merunka, 2013; Dwyer, Shurr & Oh, 1987). Drawing from the above, attitudinal loyalty is most preferred to behavioural loyalty (Day, 1969; Dick & Basu, 1994) for the following reasons. i) A behaviourally loyal customer may be spuriously loyal, that is, stay with a brand, an organization or service provider until a better alternative in the marketplace is available (Dick & Basu, 1994). Whiles attitudinally loyal customer, on the other hand, has some attachment or commitment to an organization, service or brand and is not easily swayed by a slightly more attractive alternative. ii) Attitudinal loyalty not only indicates higher repurchase intent, but also resistance to counter-persuasion, resistance to adverse expert opinion, willingness to pay a price premium, and willingness to recommend the service provider or brand to others.

<i>Relative Attitude</i>	<u>Repeat Patronage</u>	
	<i>High</i>	<i>Low</i>
<i>High</i>	<i>Loyalty</i>	<i>Latent Loyalty</i>

From the reasons established above, this study adopts attitudinal loyalty to a brand or service and defines brand loyalty as the consumer's intention to visit or willingness to recommend a particular brand irrespective of price change. The choice of attitudinal loyalty is emphasised by Shankar et al (2003) who viewed attitudinal loyalty as similar to affective or cognitive loyalty proposed by Oliver (1999) and represents a higher order or a long term commitment of a customer to an organisation or brand, which cannot be inferred by merely observing customer repeat purchase behaviour.

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

This study has substantial managerial implications. First, our approach to explore both attitudinal loyalty and behavioural loyalty offers more managerial insights than examining either type of loyalty independently. For example, this approach can demonstrate to brand managers that non-users of a brand, particularly those with a strong positive attitude towards the brand, may be an important target market for future consideration. Secondly, non-users may not buy a given brand for several reasons such as non-availability of the brand in their market, and/or lack of awareness of the brand. Brand managers should take cognizance of this potential demand and try to devise strategies to circumvent the problems that keep non-users from buying the desired brand. For example, they may offer free samples to the non-users to induce them to switch brands, and hopefully, retain most of them.

Also, attitudinal loyalty provide more insight about the possible reasons a customer demonstrates behavioural loyalty, for example, a customer may be driven by functional attributes, quality attributes or simply by price. Attitudinal loyalty measures will help brand managers understand (1) why and for what reasons, customers purchase their brands as well as those of their competitors, and (2) what are the strengths and vulnerabilities of their brands.

These insights will help managers plan their marketing programs more effectively, for example, if a manager finds that a majority of their customers have a low quality perception about their brand, they may consider several remedial strategies such as offering extended product warranty. If the customers are price-driven, they may offer price discounts (such as loyalty discount coupons, shelf price mark-downs etc.) and volume discounts (such as "buy one get the second at half price" deals and large-pack discounts).

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LINK BETWEEN LIFE SATISFACTION AND EMOTIONAL ATTACHMENT TO FACEBOOK AMONGST SOUTH AFRICAN GENERATION Y STUDENTS

Ayesha L. Bevan-Dye
North-West University, South Africa

ABSTRACT

The purpose of the study reported on in this paper was to determine South African Generation Y university students' level of life satisfaction, their engagement with Facebook in terms of number of Facebook friends and time spent on Facebook, and how these factors relate to their emotional attachment to Facebook. A self-administered questionnaire was distributed to a convenience sample of 357 university students at three South African university campuses. Data analysis included factor analysis, descriptive statistics, correlation analysis and linear regression analysis. The results suggest that the more satisfied with life Generation Y students are, and the more Facebook friends they have and time they spend on Facebook, the more emotionally attached they are to Facebook.

Keywords: Facebook, Life satisfaction, South Africa, Generation Y university students.

INTRODUCTION

Compared to previous generations, the Youth of today, labelled the Generation Y cohort (individuals born between 1986 and 2005) (Markert, 2004, p.21), have an ever increasing array of communication and recreational options. As a result of the development of the Web 2.0, one such option is interacting and communicating with others, including business organisations, online on social media sites (Allen, 2012, p.3). Social media, which includes social networking sites (SNSs), is fast becoming universal, with the number of social media users expected to rise from 2.1 billion in 2015 to 2.5 billion by 2018 (Pick, 2016).

The largest portion of social media and SNS users is made up of adult Generation Y individuals aged between 18 and 29 years (Pick, 2016; Duggen, 2015) who have a tertiary qualification or, at least, some tertiary education (Duggen, 2015). Having grown up in the digital age, members of this cohort make more use of social media, have a wider virtual social network and have a greater preference towards using social media to communicate others and with business organisations than members of previous generations (Pick, 2016; Barton, Fromm & Egan, 2012).

In terms of number of active users, the Facebook SNS was the largest virtual social platform globally in 2016 (Kemp, 2016; Statista, 2016a). SNS sites such as Facebook have significant marketing potential as platforms from which to reach and interact with target segments, especially if those target segments include members of the Generation Y cohort. Moreover, given that these online sites are virtual communities where individuals share information not only about themselves and their interests but also consumption-related information, it is essential that marketers gain insights into social networking behaviour (Schiffman, Kanuk & Wisenblit, 2010, p.283). At the foundational level, this would include understanding target segments' emotional attachment to or attitude towards certain SNSs and the factors that contribute to that attachment, given that

attitude towards specific media channels influences individuals' attitudes towards marketing communication through those channels (Ducoffe, 1996, p. 21). Chiu, Cheng, Huang and Chen (2013, p.542) opine that there is a positive relationship between subjective well-being and attitudinal loyalty towards Facebook; that is, happy people are more likely to actively participate in SNSs and are likely to feel a stronger attachment to such sites and vice versa. As such, this study focuses on determining the relationship between life satisfaction and South African Generation Y university students' emotional attachment to the Facebook SNS.

LITERATURE REVIEW

Boyd and Ellison (2008, p.211) define SNSs as “web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system”. These sites bridge space and time, allowing individuals from across the globe to communicate interactively with fellow users 24/7.

The first modern SNS that allowed users to create a profile and become friends with other users was SixDegrees, which was launched in 1997. SixDegrees was followed by several other SNSs such as Friendster in 2002, LinkedIn and MySpace in 2003, Facebook in 2004 and Twitter in 2006 (Digital Trends, 2016). Social media, including SNSs have proved to be very popular and it is estimated that of the world population of 7.395 billion in January 2016, 31 percent were active social media users (Kemp, 2016). However, not all SNSs have enjoyed the same popularity and longevity. For example, SixDegrees closed down in 2001, Friendster has abandoned social networking in favour of online gaming and MySpace, once the leading SNS, experienced a rapid decline in members and now is a niche SNS focused on musicians (Digital Trends, 2016).

One SNS that has flourished is Facebook with 1.65 billion monthly active users in the first quarter of 2016 (Statista, 2016b). Facebook, which launched at Harvard University in 2004 as a campus-oriented SNS, opened to the general public in 2006 (Digital Trends, 2016). There are several features that make Facebook feel like a real community and that have contributed to its popularity. The site is user-friendly and has an attractive interface that is simple enough to load quickly and across various types of digital devices, including smart mobile phones, feature mobile phones, desktop computers, laptops and tablets. It offers several options to share photographs, videos, feelings, links, location and news. Users can like, using a range of six emojis, comment on or share content posted by other users. The sheer size of the network coupled with its friend-finding search option makes it easy to contact both old and new friends. Features such as birthday reminders, interesting and entertaining applications, a strict ban on pornographic and inappropriate content as well as stringent privacy settings and regular upgrades have all contributed to the popularity and longevity of this SNS.

To get an idea of how popular Facebook is, daily, an estimated 4.75 billion pieces of content are shared, 4.5 billion likes generated, 300 million photos uploaded, and the like and share buttons are viewed across about 10 million websites. In addition, approximately five new profiles are created every second (Zephoria, 2016). Globally, users spend close to one hour on Facebook daily (D'Onfro, 2016) and, on average, adult Facebook users have 338 Facebook friends, with 27 percent of those aged between 18 and 29 years reporting having more than 500 Facebook friends (Smith, 2014). However, Smith (2016) reports that users have strong social ties to about only 28 percent of their Facebook friends.

From a marketing perspective, there are several considerations when selecting a marketing communication channel, including a target audience's attachment or attitudinal loyalty to that channel (Ducoffe, 1996, p.21), and the reach and frequency of exposure that the channel offers (Schiffman *et al.*, 2010:310). When considering an SNS as a marketing communication channel, it is also important to consider the likely longevity of the site, given the number of SNSs that started off as being popular but later closed. Chiu *et al.* (2013, p.542) contend that attitudinal loyalty towards an SNS influences the continued use of a site, and, hence, the longevity of that site, and that this attitudinal loyalty is influenced by the users' subjective well-being.

Subjective well-being includes the components of positive affect, negative affect and life satisfaction, and, whereas the first two relate to emotions, life satisfaction is a cognitive-judgement dimension (Diener, Emmons, Larsen & Griffin, 1985, p.71). Life satisfaction relates to a sense of contentment and happiness, which

are partly determined by an individual's social ties (Valenzuela, Park & Kee, 2009, p. 877). Intensity of Facebook usage relates to the number of Facebook friends a user has, the amount of time that user spends on Facebook per day and the extent to which that individual views Facebook as being central to his/her life; that is, the person's emotional attachment to or attitudinal loyalty towards Facebook (Valenzuela *et al.*, 2009, p. 886; Ellison, Steinfield & Ellison, 2007, p.1150).

In a study conducted among university students, Ellison *et al.* (2007, p.1157) found that attachment to Facebook had a statistically significant positive influence on subjective well-being. Similarly, another study among university students found a statistically significant relationship between attachment to Facebook and the subjective well-being dimension of life satisfaction (Valenzuela *et al.*, 2009, p. 889). Chui *et al.* (2013, p. 547) found that subjective well-being had a statistically significant positive influence on attitudinal loyalty towards Facebook, which, in turn, had a statistically significant positive influence on users' intentions to continue to use the site.

The purpose of the study reported in this paper was to determine South African Generation Y university students' level of life-satisfaction, their engagement with Facebook in terms of number of Facebook friends and time spent on Facebook and how these factors relate to their emotional attachment to Facebook.

RESEARCH METHODOLOGY

Participants

In this study, the descriptive research design was adhered to using the single cross-sectional approach. The population of interest for the study included students registered at a public South African higher education institution (HEI), aged between 18 and 24 years. The extent of the study was limited to HEI campuses located in the Gauteng province. Judgement sampling was applied to select the campuses of three HEIs so that the sample included students from a comprehensive university, a traditional university and a university of technology for the sampling frame. After which, 400 questionnaires were distributed by fieldworkers following the mall-intercept survey method to a convenience sample of students at the three campuses who agreed to take part in the study.

Of the 400 questionnaires handed out, 376 were returned. Of the 376 returned, 19 were discarded because they had missing values of 10 percent or more resulting in a sample size of 357 participants and a response rate of 89 percent. The sample included participants from each of South Africa's nine provinces and 11 official language groups, as well as participants from each of the seven age categories specified in the target population. The sample included more female than male respondents. Table 1 presents a description of the sample participants.

Table 1: Sample description

Age	Percent (%)	Gender	Percent (%)	Province	Percent (%)	Language	Percent (%)
18	9.9	Female	55.2	Eastern Cape	3.4	Afrikaans	3.4
19	28.5	Male	44.8	Free State	9.2	English	3.4
20	20.8			Gauteng	51.8	Ndebele	2.2
21	16.9			Kwazulu-Natal	3.9	Xhosa	9.8
22	14.4			Limpopo	17.1	Zulu	14.0
23	5.1			Mpumalanga	5.6	Northern Sotho	12.3
24	4.5			North West	8.1	Southern Sotho	26.9
				Northern Cape	0.3	Tswana	12.6
				Western Cape	0.6	Swati	4.2
						Venda	5.6
						Tsonga	5.6

Instrument

A survey self-administered questionnaire was used to gather the required data. Measurement scales from published studies were used to measure life satisfaction and emotional attachment to Facebook. Life satisfaction (five items) was measured using the scale developed and validated by Diener *et al.* (1985, p.72). Emotional attachment to Facebook (five items) was measured using the Facebook intensity scale developed by Ellison *et al.* (2007, p.1150). The original scale included six items; however, two of the items were almost identical replicas of each other – “Facebook is part of my daily activity” and “Facebook has become part of my daily routine” – and, as such, only the latter item was included in the scale. The questionnaire included a section requesting demographic information. This section also included two questions from the Ellison *et al.* (2007, p.1150) study relating to Facebook engagement, namely number of Facebook friends and average time spent on Facebook per day in the past week.

The items pertaining to life satisfaction and emotional attachment to Facebook were measured on a six-point Likert scale ranging from (1) strongly disagree to (6) strongly agree. Number of friends was measured using nine descriptors, namely (1) 10 or less, (2) 11 to 50, (3) 51 to 100, (4) 101 to 150, (5) 151 to 200, (6) 201 to 250, (7) 251 to 300, (8) 301 to 400 and (9) more than 300. Time spent on Facebook per day was measured using six descriptors, namely (1) less than 10 minutes, (2) 10 to 30 minutes, (3) 31 to 60 minutes, (4) 1 to 2 hours, (5) 2 to 3 hours and (6) more than 3 hours.

Ethical considerations

The questionnaire was submitted to the Ethics Committee of the Faculty of Economic Sciences, North-West University (Vaal Triangle Campus) for ethical clearance. Ethical clearance was received (Ethical Clearance Number: ECONIT-2015-011).

Furthermore, all responses were reported in aggregate and participation was voluntary. The cover letter of the questionnaire, in addition to providing an explanation of the purpose of the study, provided an assurance of confidentiality concerning the information provided by participants.

Data analysis

The captured data was analysed using the IBM Statistical Package for Social Sciences (SPSS), Version 23 for Windows. Data analysis procedures used included percentages, principle components analysis, internal-consistency reliability, descriptive statistics, Pearson’s Product-Moment correlation coefficient and linear regression. The level of statistical significance was set at $p < 0.05$ for both the correlation and regression analysis.

Results

A principle components analysis was carried out on the construct-related items in order to confirm the underlying factor structure. First, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett Test of Sphericity were performed in order to ascertain the factorability of the data. Values above 0.6 for the KMO test and a significant Bartlett’s Test of Sphericity value are advised (Pallant, 2010, p.192). The results of these two tests (KMO=0.851, Chi-square Bartlett test (1586.990) = df:45, $p=0.000<0.05$) were satisfactory.

Principle components analysis, using the varimax rotation was then performed on all construct-related items. In addition, Cronbach’s alpha values were computed to assess the internal-consistency reliability of the extracted values. The rotated factors from the rotated component matrix, together with the eigenvalues, percentage variance extracted and Cronbach alpha values of each of the extracted factors are presented in Table 2.

Table 2: Rotated component matrix

Items	Factor 1	Factor 2
In most ways, my life is close to ideal		0.624

The conditions of my life are excellent		0.717
I am satisfied with my life		0.811
So far, I have gotten the important things I want in life		0.695
If I could live my life over, I would change almost nothing		0.715
I am proud to tell people that I am on Facebook	0.717	
Facebook has become part of my daily activity	0.893	
I feel out of touch when I have not logged on to Facebook for a while	0.868	
I feel part of the Facebook community	0.875	
I would be sorry if Facebook shut down	0.832	
Eigenvalues	4.028	2.177
Percentage variance	40.280	21.766
Cronbach alpha values	0.899	0.762

Based on the literature, two factors were specified for extraction, which explained 62 percent of the total variance. Each of the two factors aligned well with the constructs specified from the literature. In addition, Cronbach alpha values above 0.70 were returned on both factors, thereby inferring good internal-consistency reliability (Hair, Black, Babin, & Anderson, 2010, p.125).

In terms of number of Facebook friends and average time spent on the site daily, while 36 percent of the sample reported having more than 400 friends and 35 percent reported spending between 10 to 30 minutes on Facebook per day, the average number of friends was approximately 250 and the average time per day was between 31 and 60 minutes.

The descriptive statistics were then calculated, followed by the construction of a correlation matrix. The category descriptors were used to compute the mean values for number of friends and time spent on Facebook. The means, standard deviations and Pearson's Product-Moment correlation coefficients are presented in Table 3.

Table 3: Descriptive statistics and correlation coefficients

Constructs	Means	Standard deviations	Friends	Time	Life satisfaction
Friends	6.40	2.54			
Time	3.05	1.65	*0.315		
Life satisfaction	4.29	0.98	0.079	*0.174	
Facebook attachment	4.04	1.47	*0.265	*0.507	*0.251

*Significant at the 0.05 level

With mean values above 3.5 on a six-point scale, the evidence in the sample suggests that Generation Y university students are satisfied with their lives (mean = 4.29) and have a strong emotional attachment to the Facebook social networking site (mean = 4.04). As is evident from Table 3, there was a statistically significant positive relationship between emotional attachment to Facebook and level of life satisfaction ($r = 0.251$, $p = 0.000 < 0.05$), number of Facebook friends ($r = 0.265$, $p = 0.000 < 0.05$) and time spent on Facebook ($r = 0.507$, $p = 0.000 < 0.05$). There was also a statistically significant positive relationship between time spent on Facebook and number of friends ($r = 0.315$, $p = 0.000 < 0.05$), as well as life satisfaction ($r = 0.174$, $p = 0.001 < 0.05$). Whilst there was no statistically significant association between number of friends and life satisfaction ($r = 0.079$, $p = 0.136 > 0.05$), the relationship was positive. This non-significant association between these two variables was not surprising given that it appears that many Facebook users appear to have strong social ties with only a limited percentage of their Facebook friends (Smith, 2016).

Thereafter, linear regression was conducted to determine the influence of number of Facebook friends, time spent on Facebook and life satisfaction on Generation Y students' emotional attachment to Facebook. The regression model summary and ANOVA results are reported in Table 4.

Table 4: Regression model summary and ANOVA results

	R	R²	Adjusted R²	F	p-value
Model 1	0.544	0.296	0.290	49.49	0.000

As shown in Table 4, the significant F-ratio ($p < 0.01$) suggests that the regression model predicts emotional attachment to Facebook. The R^2 value indicates that almost 30 percent of the variance in Generation Y students' emotional attachment to Facebook is explained by the three independent variables. However, as 70 percent of the variation is not explained by these three variables, clearly other factors also influence this cohort's attitudinal loyalty towards Facebook.

The next step was to evaluate the contribution of each antecedent to the prediction of emotional attachment to Facebook, as reported on in Table 5.

Table 5: Contribution of independent variables to predicting Facebook attachment

Independent variables	Standardised Beta coefficient	t-values	p-values
Friends	0.112	2.40	0.017
Time	0.443	9.30	0.000
Life satisfaction	0.165	3.65	0.000

The results reported in Table 5 suggest that time spent on Facebook ($\beta = 0.443$, $0.000 < 0.05$), life satisfaction ($\beta = 0.165$, $0.000 < 0.05$) and number of Facebook friends ($\beta = 0.112$, $0.017 < 0.05$) all have a statistically significant positive influence on Generation Y students' emotional attachment to Facebook. The largest beta coefficients were recorded on time and life satisfaction, which means that these two antecedents make the strongest contribution to explaining Generation Y students' emotional attachment to Facebook.

CONCLUSION

This study sought to determine South African Generation Y university students' level of life satisfaction, number of Facebook friends and average time spent on Facebook daily, and how these factors relate to their emotional attachment to or attitudinal loyalty towards the SNS.

The evidence in the sample suggests that South African Generation Y university students have a high level of life satisfaction and a strong emotional attachment to Facebook. On average, they have 250 Facebook friends and spend between 31 and 60 minutes per day on the site. There was a statistically significant positive association between their emotional attachment to Facebook and number of friends, time and life satisfaction. In particular, there appears to be a reciprocal relationship between time spent on Facebook, life satisfaction and emotional attachment to Facebook. Furthermore, number of Facebook friends, time spent on the site and life satisfaction were all found to be statistically significant positive predictors of emotional attachment to Facebook, with time and life satisfaction having the most influence. Even though all three variables are significant positive predictors of this cohort's attitudinal loyalty towards Facebook, the relatively low R^2 value suggests that other factors also have an influence on emotional attachment to this SNS. This suggests the need to engage in further research to uncover additional factors that influence this cohort's attitudinal loyalty to Facebook.

As with any study, this study had certain limitations that should be noted in interpreting the results. First, non-probability convenience sampling was used to select the study's participants, which limits the objective assessment of the findings. Secondly, a self-reporting questionnaire that relied on participants' recall abilities rather than actual observation was used to collect the required data. This may have resulted in slight over or under reporting of number of Facebook friends and time spent on the site.

In conclusion, in line with the reasoning of Chiu *et al.* (2013, p.542), it is the contention of this paper that Facebook will, for the foreseeable future, continue to be a popular SNS among this generational cohort. In

addition, given the sheer size of this social network, the average number of Facebook friends individual users report having and the typical amount of time users spend on this site daily, there is no doubt that as a marketing platform, this SNS offers significant reach and exposure to members of this cohort. The marketing implications of this are that organisations are advised to focus their social media efforts on the Facebook SNS when targeting the Generation Y cohort.

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SOUTH AFRICAN GENERATION Y STUDENTS' LINK-SHARING MOTIVES ON FACEBOOK

Ayesha L. Bevan-Dye
North-West University, South Africa

ABSTRACT

This paper reports on South African Generation Y university students' motives for sharing links on Facebook. A self-administered questionnaire was completed by a convenience sample of 311 students registered at four university campuses. The collected data were analysed by means of exploratory factor analysis, structural equation modelling, descriptive statistics and an independent samples t-test. The measurement model tested exhibited acceptable fit, reliability and construct validity. The results indicate that convenience is the primary motive for link-sharing behaviour, followed by the information-sharing motive. The evidence in the sample suggests that the third motive, passing time, is not an important driver of link-sharing behaviour on Facebook. Furthermore, there were no statistically significant differences in male and female participants' link-sharing motives.

Keywords: Facebook, link-sharing motives, South Africa, Generation Y university students.

INTRODUCTION

The Web 2.0, a term first coined by DiNucci (1999, p.32) and later popularized in 2004 by O'Reilly (2005), refers to the technological advancement from a static World Wide Web to one that facilitated greater collaboration, content sharing and interactivity and the creation of sites such as micro-blogs, forums, wikis and social networking sites (Allen, 2012, p.3). From a marketing perspective, social networking sites (SNSs) offer particular promise as an exciting platform for targeted marketing communications.

Of the SNSs in existence in 2016, Facebook was by far the largest, boasting some 1.65 billion monthly active users (Statista, 2016). A salient application of Facebook is that it allows members to upload content to their profile and easily share it with other Facebook users who are their friends on the site (Baek, Holton, Harp & Yaschur, 2011, p.2244). This, of course, has implications to marketers. By understanding what motives drive individuals to share content links on the site, marketers will be better placed to harness the reach of the site to encourage the sharing of marketing communications.

A significant percentage of the population of SNSs is composed of adult Generation Y members (Duggan & Brenner, 2013), especially those attending higher education institutions (HEIs) (Botha & Reyneke, 2013, p.164; Mehdizadeh, 2010, p.357; Special & Li-Barber, 2012, p.624). The Generation Y cohort refers to individuals born between 1986 and 2005 (Markert, 2004, p.21), with the HEI student portion of this cohort typically including people between the ages of 18 and 24 years (Special & Li-Barber, 2012, p.626). The focus of this study was on determining South African Generation Y students' link-sharing motives on Facebook.

LITERATURE REVIEW

On Facebook, sharing online content with a large group of individuals is as simple as having a Facebook account, uploading a URL link to the site in a status update and pressing the share button to share it with

Facebook friends (Baek *et al.*, 2011, p.2244). Once one of those ‘friends’ clicks the like or share button, or comments on that status, that link appears on each of that friend’s friends’ Facebook pages, rendering the link potentially viral (Bevan-Dye & Akpojivi, 2015, p.13). This practice of sharing news and content is particularly prevalent amongst the youth or members of the Generation Y cohort, who typically depend on their SNS contacts to keep them up to date and informed (Baresch, Knight, Harp & Yaschur, 2011, p.2). This suggests that SNSs like Facebook are an important tool for both gathering and sharing information, including product-related information.

Link-sharing on Facebook is goal-oriented and, as such, is motivated behaviour (Baek *et al.*, 2011, p.2244). Understanding what motives drive link-sharing behaviour is important in better understanding and harnessing the power of the Facebook platform for marketing purposes. This study focuses on three specific link-sharing motives – the information-sharing motive, the convenience motive and the passing time motive. The information-sharing motive relates to the drive to share links with others that is useful, entertaining, and newsworthy, and that reflects that individual’s special interests (Baek *et al.*, 2011, p.2245; Papacharissi, 2002, p.357). The convenience motive refers to the drive to share links as an easy (Baek *et al.*, 2011, p.2245) and cheap way of communicating and staying in touch with others (Sun, Rubin & Haridakis, 2008, p.418). The passing time motive is the drive to share links to alleviate boredom, pass time and because it is a popular and habitual behaviour (Baek *et al.*, 2011, p.2245).

The purpose of the study reported in this paper was to validate a Facebook link-sharing motives model amongst Generation Y university students in South Africa and to determine which of those motives are the primary drivers of link-sharing behaviour. In addition, the study sought to determine whether there are any gender differences in terms of this cohort’s link-sharing motives on Facebook. As such, the research questions addressed here were as follows: Is Facebook link-sharing motives a three-dimensional model comprising information sharing, convenience and passing time? Which are the primary Facebook link-sharing motives in terms of importance amongst Generation Y university students in South Africa? Do male and female Generation Y university students in South Africa differ in their Facebook link-sharing motives?

RESEARCH METHODOLOGY

Sampling method

The target population used in the study was defined as Generation Y students aged between 18 and 24 years, registered at a public South African higher HEI. The extent was limited to those HEI campuses situated in the Gauteng and North-West provinces. A non-probability judgement sample of four HEI campuses was selected for the sampling frame – two from a traditional university, one from a university of technology and one from a comprehensive university. Thereafter, employing the mall-intercept survey method and non-probability convenience sampling, fieldworkers distributed 400 questionnaires equally across the four campuses to students who agreed to participate in the study.

Research instrument

A self-administered survey questionnaire, which included a section requesting demographic data and a section containing scales from published studies, was used to collect the required data. The information sharing motive (five items), convenience motive (four items) and passing time motive (five items) were measured using scale items harvested from studies conducted by Papacharissi (2002, p.357), Sun *et al.* (2008, p.418), and Baek *et al.* (2011, p.2245). All scaled responses were measured on a six-point Likert-type scale ranging from strongly disagree (1) to strongly agree (6).

Data analysis

The captured data were analysed using the IBM Statistical Package for Social Sciences (SPSS) and Analysis of Moment Structures (AMOS), Version 23 programs. Data analysis included frequencies, exploratory factor

analysis, Pearson's Product-Moment correlation analysis, structural equation modelling using the maximum likelihood method, descriptive statistics and an independent samples t-test. The model fit indices used included the standardised root mean residual (SRMR), the normed fit index (NFI), the Tucker Lewis Index (TLI) and the comparative fit index (CFI). Good model fit is generally associated with NFI, TLI and CFI values of ≥ 0.90 and a SRMR value of ≤ 0.08 (Malhotra, 2010, p. 732-733). The statistical significance level was set at $p \leq 0.01$.

Results

Of the 400 questionnaires distributed, 311 usable questionnaires were returned, representing a response rate of 78 percent. Of these participants, 61 percent were female and 39 percent male. Participants from each of South Africa's nine provinces, as well as each of the seven age categories specified in the target population definition were represented in the sample. At 48 percent, most of the participants in the study were registered at the traditional university, followed by 40 percent from the university of technology and 11 percent from the comprehensive university. A description of the sample is outlined in Table 1.

Table 1: Sample description

Gender	Percent (%)	Province	Percent (%)	Age	Percent (%)	Institution	Percent (%)
Female	61.1	Eastern Cape	5.8	18	15.4	Technology	40.5
Male	38.9	Free State	7.4	19	32.8	Traditional	48.2
		Gauteng	51.1	20	21.5	Comprehensive	11.3
		Kwazulu-Natal	3.9	21	12.9		
		Limpopo	14.1	22	10.6		
		Mpumalanga	4.8	23	2.9		
		North West	9.6	24	3.9		
		Northern Cape	2.3				
		Western Cape	1.0				

Exploratory factor analysis was conducted to check for any cross-loading items. A Kaiser-Meyer-Olkin (KMO) value of 0.883 and a significant Bartlett's test of sphericity (chi square = 2633.035, 91 dfs, $p \leq 0.01$), indicated the sampling adequacy and factorability of the data (Field, 2009, p.659-660). Principle components analysis, using the promax rotation, was then performed on all construct-related items. In addition, the internal-consistency reliability of the extracted factors was assessed by computing the Cronbach alpha values. Table 2 presents the rotated factors, communalities, variance extracted and Cronbach alphas for the extracted factors.

Table 2: Rotated factors

Items	Factors			Communalities
	1	2	3	
1	0.860			0.765
2	0.867			0.764
3	0.818			0.754
4	0.801			0.654
5	0.716			0.651

Table 2: Rotated factors (continued...)

Items	Factors			Communalities
	1	2	3	
6			0.503	0.647
7			0.869	0.729
8			0.784	0.800
9			0.728	0.741
10		0.588		0.555
11		0.787		0.674
12		0.907		0.768
13		0.818		0.687
14		0.647		0.509
Percentage of variance	44.30	17.88	7.10	
Cronbach alpha	0.905	0.823	0.877	

In accordance with the literature, three factors were extracted that explained 69.26 percent of the variance. As is evident from Table 2, each of the items had loadings of above 0.50, with most being above 0.70. This suggests that the loadings are practically significant (Hair, Black, Babin, & Anderson, 2010, p.117) and, given the sample size of 311, also statistically significant at $p < 0.01$ (Stevens, 2002, p.394). In addition, each of the communalities were above 0.50, which indicates that a sufficient portion of each item's variance is accounted for by the factor solution (Hair, *et al.*, 2010, p.136). Furthermore, the Cronbach alpha values for each of the three factors exceeded 0.70, thereby indicating internal-consistency reliability (Field, 2009, p.674).

Collinearity diagnostics were then run using the case number as the dummy dependent variable in order to assess whether there was any evidence of multicollinearity between the three extracted factors. The returned tolerance values ranged between 0.470 and 0.870, which are above the cut-off level of 0.10 and the average variance inflation factor computed was 1.76, which is below the cut-off level of 10. This suggests that there are no serious multicollinearity concerns (Pallant, 2010, p.158).

Thereafter, a correlation matrix was constructed using Pearson's product-moment coefficient in order to ascertain the nomological validity of the proposed model. The correlation matrix is presented in Table 3.

Table 3: Correlation matrix		
	Information-sharing	Convenience
Information-sharing		
Convenience	0.706*	
Passing time	0.269*	0.364*
* $p < 0.01$		

A statistically significant correlation coefficient was returned for each of the pairs of latent factors proposed for inclusion in the link-sharing motives model, thereby suggesting nomological validity (Malhotra, 2010, p.321). Having established nomological validity and the unlikelihood of multicollinearity, structural equation modelling was carried out.

A three-factor measurement model was specified for confirmatory factor analysis that comprised the three latent factors of the information sharing motive (five indicators), the convenience motive (four indicators) and the passing time motive (five indicators). For model identification purposes, the first loading on each of the three latent factors was fixed at 1.0. This resulted in 105 distinct sample moments and 31 parameters to be estimated, which resulted in 74 degrees of freedom (df) based on an over-identified model and a chi-square value of 263.543, with a probability level equal to 0.000. Given that the measurement model included only three latent factors, each with three or more indicators (Hair *et al.*, 2010, p.662), the sample size of 311 participants was considered sufficient for conducting structural equation modelling.

The specified model was checked for any estimate concerns such as negative error variances and standardised loading estimates below -1.0 or above 1.0 (Kline, 2011, p.158). The reliability and construct validity of the model were evaluated by assessing the composite reliability (CR), correlation coefficients, average variance extracted (AVE), maximum shared squared variance (MSV) and average shared squared variance (ASV) values.

Table 3: Estimates for measurement model

Latent factors	Standardised loading estimates	Error variance estimates	CR	AVE	MSV	ASV
Information sharing	0.861	0.741	0.906	0.659	0.593	0.327
	0.854	0.729				
	0.844	0.712				
	0.730	0.533				
	0.762	0.581				
Convenience	0.749	0.561	0.833	0.504	0.135	0.098
	0.747	0.559				
	0.891	0.794				
	0.837	0.701				
Passing time	0.595	0.354	0.882	0.653	0.593	0.364
	0.722	0.521				
	0.835	0.698				
	0.792	0.628				
	0.568	0.323				
Correlations	F1↔F2: 0.247					
	F1↔F3: 0.770					
	F2↔F3: 0.367					

The information presented in Table 3 reflects that the measurement model had no problematic estimates and that the relationship between each indicator and their respective latent factor is statistically significant ($p < 0.01$). Composite reliability is reflected by CR values above 0.70. There is also evidence of convergent validity, with the CR values above 0.70, standardised loading estimates above 0.50 and AVE values above 0.50. Given that each of the AVE values exceeds each of the MSV values and each of the ASV values, there also appears to be discriminant validity (Fornell & Larcker, 1981:46). The next step was to assess the fit indices. A significant chi-square value was computed, which is indicative of poor model fit. However, this value is known to be vulnerable to sample size. In contrast, the other fit indices returned values indicative of acceptable model fit. These values included a SRMR of 0.069, a NFI of 0.902, a TLI of 0.910 and a CFI of 0.927. This suggests that product information-sharing behaviour on Facebook is a three-factor structure comprising information sharing, convenience and social norm.

Descriptive statistics were then computed in order to determine the primary Facebook link-sharing motives in terms of importance amongst Generation Y university students in South Africa. The means and standard deviations for the three latent factors are presented in Table 4.

Table 4: Link-sharing motives on Facebook

Link-sharing motives	Mean	Standard deviation	Rank
Information sharing	3.96	1.33	2
Convenience	4.15	1.45	1
Passing time	2.44	1.16	3

As shown in Table 4, the Generation Y students' most important motive for sharing links on Facebook is convenience (mean = 4.15), followed by the information-sharing motive (mean = 3.96). The evidence in the sample suggests that the passing time motive (mean = 2.44) is not an important driver of this cohort's link-sharing behaviour on Facebook.

In order to determine whether male and female Generation Y students differ concerning the motives that drive them to share links on Facebook, an independent samples t-test was conducted, and is reported in Table 5.

Table 5: Gender differences in Facebook link-sharing motives

Link-sharing motives	Mean		t-score	p-value
	Males	Females		
Information sharing	4.11	3.87	1.586	0.114
Convenience	4.21	4.10	0.645	0.520
Passing time	2.60	2.34	1.905	0.058

As is evident from Table 5, there are no statistically significant differences in link-sharing motives on Facebook between male and female Generation Y students. Despite these non-significant differences, males scored higher than females on each of the link-sharing motives, which may suggest that males in this cohort are slightly more inclined than females to share links on Facebook.

CONCLUSION

This study sought to validate a Facebook link-sharing motives model, rank the importance of South African Generation Y students' link-sharing motives and determine whether males and females of this cohort differ concerning these motives. The results of the study indicate that link-sharing motives is a three-factor model comprising the information-sharing motive, the convenience motive and the passing time motive. This model exhibits acceptable fit, reliability and construct reliability. The primary motive that drives Generation Y students to share links is the convenience of doing so afforded by the Facebook site. If Facebook is going to continue to attract revenue from marketing communication message on their site, they need to ensure that they maintain this functionality. For marketers seeking to add social networking media to their marketing communication strategy, this functionality makes Facebook an important advertising platform to target. The second most salient motive was the information-sharing motive. Items in this latent factor relate to sharing information that may be useful to other, entertaining to others, newsworthy and reflective of a person's special interests. Incorporating these elements into marketing communication messages is likely to encourage them to be shared with others. While the passing time motive was ranked last, it is necessary that marketers continue to monitor the salience of this motive as it contained items related to the popularity and subjective norm of sharing links. No statistically significant differences were found in Generation Y male and female' link-sharing motives on Facebook; however, there was a hint that males may be slightly more inclined than females to share links on the site.

An important caveat to this study is that non-probability convenience sampling was used to recruit participants and, therefore, care should be taken in interpreting the findings.

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SERVICE FAILURE AND RECOVERY STRATEGIES: THE MEDIATING EFFECTS OF SOCIAL MEDIA

Yllka Azemi, Cardiff Metropolitan University, UK
Wilson Ozuem, University of Gloucestershire, UK

ABSTRACT

The advent of Internet has transformed service failure and recovery strategy into a socially constructed experience, overcoming inherited features of brick-and-mortar environment. Social media no longer permits centralization of power to the provider, actualizing the ‘customer is the king’ proverb more than ever before. Services marketing scholars have provided explanation on offline failure and recovery strategy from multidisciplinary perspectives, yet limited theoretical insight exists on the phenomenon in context to omnidimensional nature of digital social platforms. This paper synthesizes extant empirical insight to accentuate theoretical concepts with implication to the practical optimization of social media as a mediator of recovery. The holistic socially constructed approach of failure-recovery phenomenon is recommended as means of understanding customers’ multiple realities, overcoming extant scholarly tendency to situate customers into a structured actuality.

Keywords: Service failure, recovery strategy, social media, customer’s recovery request, online word-of-mouth, customer’s satisfaction

INTRODUCTION

The term ‘service failure’ has grown in popularity used by both scholars and practitioners over the last two decades (Ozuem and Lancaster, 2014). Service failure has been examined in numerous research disciplines including production and management (Craighead, Karwan and Miller, 2004), business (Choi and Mattila, 2008), marketing (Sivakumar, Li and Dong, 2014), consumer behaviour (Argo, White and Dahl, 2006), and the service industry (Chuang, Cheng, Chang and Yang, 2012). Despite the uniqueness of these disciplines, if analyzed together, it is clear that service failure is common to a range of commercial settings and practical solutions must be attained to address them.

Scholars have examined service failure and recovery strategies across various industries. These include fashion (Luo et al. 2012; Ozuem and Lancaster, 2014), the airline industry (Bitner, Booms and Tetreault, 1990; Ringberg, Odekerken-Schroder and Christensen, 2007; Bonifield and Cole, 2008; Roggeveen, Tsiros and Grewal, 2012; Tshin et al. 2014), medical care (Singh, 1990), hospitality (Bitner, Booms and Tetreault, 1990; Smith, Bolton and Wagner, 1999; Smith and Bolton, 2002; Hess, Ganesan and Klein, 2003; Craighead, Karwan and Miller, 2004; Bonifield and Cole, 2008), grocery shopping (Singh, 1990), auto – motive repair (Singh, 1990; Craighead, Karwan and Miller, 2004), and financial industry (Singh, 1990; Maxham and Netemeyer, 2002; Chuang, Cheng, Chang and Yang, 2012). Based on the reach of the analysis, it can be argued that the latter industry is perhaps the least researched area. In marketing and digital marketing research, online service failures and recovery strategies in financial institutions are the most truncated and underdeveloped areas (e.g. Azemi and Ozuem, 2015; Ozuem et al., 2016).

CONTEXTUALISATION: SERVICE FAILURE

Service failure, as a term, can easily be conceptualised, and the definitions in the literature reflect a construct of meaning from common ground. Traced back to its early elucidation, Bell & Zemke (1987) stated that service failure ‘happens every time our experience of service falls painfully short of expectations’ (p. 32). They

suggested that mismanaging the ‘design and deployment of service with laser-like focus on the details’ (p. 32) shapes the fluctuating of expectations, that is, service breakdown, which can be identified with two distinct labels. First is ‘annoyance’ embodied by irritated customers facing a slight shortage on what they have expected (i.e., a minor service failure). Second is ‘victimisation’ personified by customers encountering a major failure (Bell & Zemke, 1987, p. 33).

Service recovery as a phenomenon has been prone to multiple realities for both academics and practitioners. One perspective in the extant literature articulates that if the provider chooses an adequate recovery strategy, the relationship with the customer will be strengthened. Conversely, minor failures can turn into paramount issues for the company (Dong, Evans & Zou, 2008). The complexity in choosing an appropriate service recovery is concomitant to the myopic understanding of customer realities and the processes by which they assign meaning to the recovery encounter. Crucial in this study is understanding ‘the moment of truth for the organization’ (Smith & Bolton, 2002, p. 5). Customers want to ‘receive’ recovery attributes that ‘match the type of failure they experience in amounts that are commensurate with the magnitude of the failure that occurs’ (Smith, Bolton & Wagner, 1999, p. 356). However, the scope of conceptualising what customers see as a ‘match state’ is still complex, and the optimal ‘moment of truth’ experience achieved mutually by both the provider and the customer is still subject to enquiry. The multidimensional nature of social media provides great opportunities for service failure recovery in general and conceptualization of customers’ requirements in particular (Barwise and Meehan, 2010; Azemi et al., 2015; Gregoire et al., 2015; Azemi and Ozuem, 2016). However, a growing consensus across academics and practitioners is that if inappropriate service recovery is provided, social media can cause immense risks to the marketer (Pang et al., 2014; Gruber et al., 2015). The risk is associated with the speed that customers’ complaint goes viral (Barwise and Meehan, 2010) and the lack of control that providers have over them (Kaplan and Haenlein, 2010).

SOCIAL MEDIA AND SERVICE RECOVERY

Social media no longer isolates the power to the provider alone, implying that the customer is the one to lead the provider-customer interaction (Barwise and Meehan, 2010). This situation has been significantly explained through the ‘United Breaks Guitars’ story (Kietzmann et al., 2011, p. 242). A customer whose guitar has been broken by United Airlines made the song ‘United Breaks Guitars’ as a revenge to the company, which has neglected the customer’s recovery request (Kietzmann et al., 2011, p. 242) that is, to pay back for the broken guitar. This song has been uploaded on YouTube and has been viewed by almost 15 million people (<https://www.youtube.com/watch?v=5YGc4zOqozo>). This number means people worldwide are aware that United Airlines fails to recover and that its customers experience the double deviation effect. This is an example of how ‘social media can turn a local event into a national or global story’ (Gruber et al., 2015, p. 170).

The literature emphasises on a persistent online customer-provider relationship that starts well before the service failure happens, rather than one that emerges with the occurrence of the incident (Hanna et al., 2011). Hanna et al. (2011) suggest that if a company communicates online repetitively, ‘social media enables both reach and engagement’ stances (p. 268). Hanna et al.’s (2011) study does not explain the benefits of prior relationship in context with recovery strategy. However, if ‘reach’ and ‘engagement’ notions are explained from the failure recovery perspective, the former would have referred to the peak where the provider knows what the customer recovery requirements are and the latter to the customer’s voluntary involvement into the recovery process. The literature on offline failure recovery has named customers’ voluntary involvement the co-creation recovery strategy (Dong et al., 2008). The concept of co-creation strategy has yet to receive attention by online recovery strategy scholars. However, the omnidimensional nature of social media provides great opportunities for online co-creation.

The literature on online service recovery has been specifically developed across nonfinancial recovery strategies, such as acknowledgement, apology, and explanation (Barwise and Meehan, 2010). Barwise and Meehan (2010) illustrate a successful application of the three aforementioned strategies through Procter & Gamble (P&G). A dissatisfied customer opened a Facebook account asking P&G to remove their diaper product from the market. This customer argued that the P&G diapers are harming babies’ skin, and shortly after, she received significant online support from other customers. P&G publicly apologised for what has happened, acknowledged that some babies might experience skin irritation, yet confirmed that its product does not damage

the skin. Such explanation was later reviled by the U.S. Consumer Product Safety Commission (see p. 82 for additional explanation on the case; Barwise and Meehan, 2010). Having been said that the explanation of P&G was in line with the Consumer Product Safety Commission, it is revealed the importance of providers' sincerity through the recovery process. It can be argued that any contradiction between the Consumer Product Safety Commission and P&G explanations would have generated additional customer dissatisfaction.

MANAGERIAL IMPLICATION AND CONCLUSION

Kaplan and Haenlein (2010) suggest five criteria that companies must meet to benefit from social media: (1) *be active*, (2) *be interesting*, (3) *be humble*, (4) *be unprofessional*, and (5) *be honest* (pp. 66-67). These criteria underline an informal yet a sincere and repetitive online provider-customer relationship. The explanations on criteria are isolated to the measurements of avoiding online failures. If these criteria are followed, the provider easily understands customers' way of thinking and their perception on the online failure. This means they provide a great recovery guidance. The literature on offline service failure and recovery strategy associates the 'limited understanding of customers' to the main indicator of unsuccessful recoveries (e.g., Ringberg et al., 2007). Following this line of thought, if the company uses social media properly, it is a step closer to overcoming the key recovery challenge. This is supported by Gruber et al.'s (2015) study, which examines the case of the president of University of Virginia, who has been asked by the board to resign. Gruber et al. (2015) explain how the board has made the decision to ask for resignation without informing other stakeholders of the University, and how in support of the president, numerous stakeholders have used Twitter as platform to communicate and make the issue transparent to all. This implies, that social media helps understanding of relative realities of others, and overcomes any tendency of one's insincere stance. This study perhaps regards the customer's debates on social media as the reasoning for optimum recovery decision choices.

Additionally, Gregoire et al. (2015) associate recovery-decision making to the customers' heterogeneity. They imply that customers differ across themselves and suggest that the timing of customers' engagement in online communication/complaint is associated with the individual service failure perception and recovery expectation and evaluation. This is in line with the ongoing debate of the literature on offline service failure and recovery strategy (Ringberg et al., 2007; Schoefer and Diamantopolous, 2011). The epistemological orientation, which undermines customers' individuality, overestimates the comfort of recovery-decision making that social media provides. Gregoire et al. (2015) recommend a typology with six types of customers complaining through social media: (1) directness, (2) boasting, (3) badmouthing, (4) tattling, (5) spite, and (6) feeding the vultures. The first two are attached to the customer's online word of mouth (WOM) after the service failure and the recovery paradox experience, respectively. The last four have grouped the customers' complaint after the double deviation encounter. These categories include anything between spreading negative WOM, complaining to a third party, and 'informally' assisting other companies to benefit from the failing company (see pp.175-178 for additional explanations).

The success of an online recovery strategy is greatly attributed to the provider's response speed (Pang et al., 2014). Essentially, engagement in conversation with the customer (Chaffey and Ellis-Chadwick, 2012) immediately after he/she uploads the complaint shortens the prerecovery phase. In terms of online recovery strategy, this perspective has yet to be empirically approached. However, practical examples of real-time conversation with customers have already proved satisfactory states (see Pang et al., 2014).

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STRATEGIC DECISIONS: NOT FOR THE LIGHT-HEARTED OR THE LIGHT-HEADED

Gordon Bowen, Regent's University, Great Britain
and Richard Bowen, Facebook, Inc.

ABSTRACT

The 2016 UK Referendum required the electorate to take an important strategic decision. To address strategic decisions effectively, flexibility and an understanding of the issues holistically are important characteristics. Issues that require strategic decision-making are challenging and should not be attempted without prerequisite knowledge and understanding. Hence, strategic decisions in firms are the sphere of influence of senior management and middle management (the latter at least having some input). Given this scenario, are referendums that are propagated on strategic decision-making appropriate for the whole electorate or are they the preserve of the lawmakers? The scope of referendums needs to be defined very carefully. Strategic decisions are converted to tactical decisions by building a context, and thus a consensus, via a cost-benefit analysis. Thus the aim of the paper is to add to the understanding of strategic decision-making in the political context, namely a referendum. The paper will use information in the public domain on the 2016 UK Referendum and evaluate it based on the academic literature on strategic decision-making and related areas.

Keywords: strategic decisions, characteristics of strategic decisions, UK Referendum 2016, uncertainty, unpredictable environments, unknowable environments, decision-making.

INTRODUCTION

Many decisions are deemed strategic, but what determines whether a decision should be classified as strategic? Cummings and Daellenbach (2009) reviewed 2,366 journal articles in Long Range Planning from 1966–2006, finding no certainty as to what constitutes a strategic decision. There is a danger that ‘strategic decisions’ could be a catch-all term for all decisions. Tactical decisions could be misrepresented as strategic decisions, thus conflating a tactical victory as a strategic victory. The 2016 Referendum in the United Kingdom on remaining in or leaving the EU would be classified as a strategic decision, because of its long-term implications for the UK. However, Scotland is posturing to leave and become independent, yet remain part of the EU. According to the article ‘Day of change turns rules upside down’ (BBC News), Scotland is thus applying tactical approaches to achieve a victory over a strategic decision. However, tactical successes do not always lead to strategic success. The war in Vietnam saw the US inflict collateral damage on the Viet Cong, but their success on the battlefield did not lead to a strategic win. Eventually, the US made the decision to withdraw, meaning that they accepted they could not achieve their strategic aim, and had lost the war (Karnow, 1991).

The paper’s aim is to add to the body of knowledge on how decisions are classified as strategic or non-strategic and to explore the consequences of getting the classification wrong. A further aim of the paper is to identify the “best” stakeholders to take strategic versus non-strategic decisions.

STRATEGIC DECISIONS

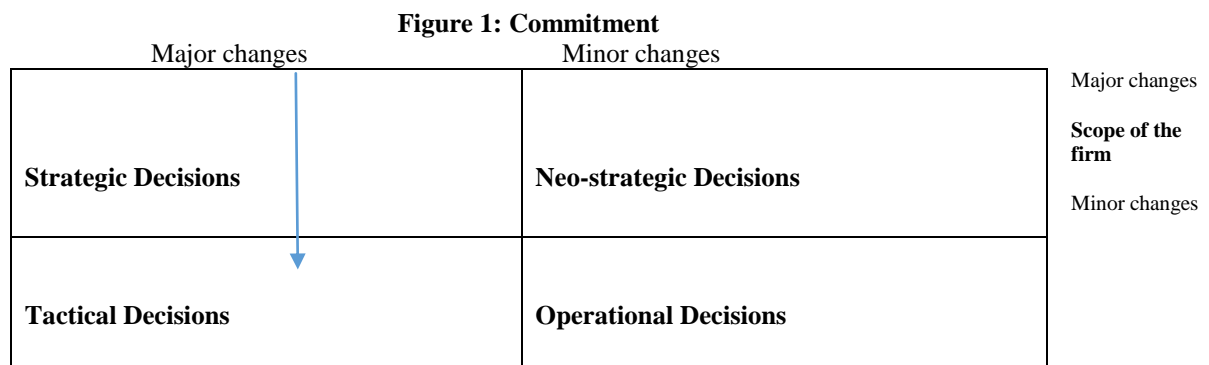
Strategic decision-making approaches have produced inconsistent results, and a combination of perspectives may be a better technique. This outcome could be the simplification of complex outcomes (Elbanna & Child, 2007). Several researchers have suggested that different techniques and perspectives should be applied to “solve” strategic decisions (Elbanna, 2006; Hough & White, 2003).

Strategic decisions influence other decisions that a firm makes – operational and tactical. Decisions of a strategic nature are challenging, because there are no “right” or “wrong” answers, and are difficult to comprehend without precedents. Firms are tempted to delay strategic decisions until the critical uncertainties are resolved (Shivakumar, 2014). There is no right or wrong answer to the 2016 Referendum in the UK, and there were no precedents to help the electorate to make a more informed decision. Attempts at minimising the uncertainties relating to the strategic decision included the Prime Minister negotiating with the EU to remove influences that would create uncertainties in the electorate. The Remain side did not sufficiently resolve these uncertainties to ensure victory in the 2016 Referendum, according to the article ‘EU referendum: Scotland backs Remain as UK votes Leave’ (BBC News, 2016).

The degree of commitment is linked to the reversibility of the strategic decision. Some strategic decisions are costly to reverse and others are less costly. Decisions that are low in commitment are non-strategic, and are reversible. The idea of commitment to the strategy is a consistent influence on performance (Shivakumar, 2014). The scope of the firm refers to choices on products, services, markets and activities (Grant, 2013). The Prime Minister defined the scope of the Referendum, and it is costly to row back. The strategic decision-making process was irreversible, and there was commitment to the process. Non-strategic decisions such as tactical or operational decisions demand less commitment to the strategy. However, commitment to the strategy needs to be tempered by adapting a flexible approach, because outsiders are likely to have different perspectives. Flexibility appears to be more important than commitment to the strategy (Bharami & Evans, 2011; Doz & Kosonen, 2008; Raynor, 2007). Strategic decisions require flexibility both during the strategic decision-making process and after an outcome has been achieved. If you are bound to a particular outcome, i.e. there is commitment, and flexibility is not possible, then a negative outcome is likely for the strategic decision.

TYPES OF DECISIONS

The literature identifies four types of decisions, namely strategic, neo-strategic, tactical and operational (Shivakumar, 2014).



Source: Adapted Shivakumar (2014)

Strategic decisions (Figure 1) are heavily influenced by commitment and are influential on the strategy of the firm (Rotemberg & Saloner, 1994; Ghemawat, 1991). Shivakumar (2014) and Mintzberg & Quinn (1987) suggest that strategic decisions have long-term consequences, and influence the overall direction of the organisation. They should be viable in uncertain, unknowable and unpredictable environments. Strategic decisions relate to important actions, resources committed and precedents already set (Mintzberg, Raisinghani & Theoret, 1976). The view that strategic decisions are the territory of senior management is not totally borne out from the literature. Research shows that middle managers can influence strategic decisions, because of their explicit and tacit knowledge (Shivakumar, 2014; Shi, Markoczy & Dess, 2009; Wooldridge, Schmid & Floyd, 2008). Managers at the mid-level understand the firm’s capabilities and performance better than other levels of the organisation, which is a significant contributor to strategic decision-making. Middle managers’ knowledge is important in planning and implementation (Shivakumar, 2014). Strategic decisions require specialist knowledge or skills to contribute to the decision-making process. Managers below mid-level are unlikely to make significant contribution to strategic decision-making because a holistic ability to envisage the issues or adopt different

perspectives is necessary, and they lack sufficient concentration of specialist input to achieve this. This does imply that only individuals that understand the issues will be able to make a significant contribution to the strategic decision-making process. If we look at this in the context of a firm, then strategic decisions are not appropriate for low-level managers or employees. Since the UK Referendum 2016 requires strategic decision-making, it is inappropriate to open it to the whole electorate, but it is not possible to partition the electorate. Consequently, the only body that has the specialist knowledge and understanding of the intricacies of the issues are the lawmakers, i.e. in the UK Parliament. The decision process would be vetted and the necessary checks and balances applied. This could not be achieved in a plebiscite.

Neo-strategic decisions (Figure 1) alter the scope of the firm, but do not alter the commitment. They entail the ability to expand the scope of the firm without committing to specific resources and capabilities (Shivakumar, 2014). Senior management should not only consider strategic decisions that require strategic commitment (Bharami & Evans, 2011; Doz & Kosonen, 2008; Raynor, 2007; Lawler III & Worley, 2006; Volberda, 1998). Start-ups can enter mature markets without a great deal of commitment, because tools of production once only available to large firms are now available to SMEs. Online firms such as Bing, Google and Yahoo have reduced search costs. There is a greater desire to customise manufactured products. The implication of these changes is that start-ups and SMEs can operate differently. They can be virtual, have few employees, use informal networks, be loosely organised, and change their goals and strategy rapidly and timely (Shivakumar, 2014). Firms must be nimble, future-looking and proactive to operate neo-strategic decisions. Consequently, governments would find neo-strategies challenging to initiate and develop.

Tactical decisions (Figure 1) significantly alter the level of commitment, but not the scope of the firm. A high degree of commitment is not sufficient to classify a decision strategic. The context of the decision is important – a long-term contract with an IT firm is a tactical decision, but outsourcing a part of the business, such as HR, is a strategic decision (Shivakumar, 2014). Tactical decisions capture and create value, such as the launching of an advertising campaign to focus on brand, quality and value. However, to manage an advertising campaign requires many tactical decisions. Tactical decisions are challenging, because they are needed to address a “tough” problem. Stress and being under pressure are characteristics associated with tactical decisions. Apple’s requirement to replace the screen on the iPhone in 2007, because of the ease with which the screen could be scratched, is an example of a tactical problem. The screen was replaced with a scratch-resistant one. The logistics to produce the replacement in China, and to guarantee the quality, were tactical decisions (Shivakumar, 2014; Kahneman & Klein, 2009).

Turning to referendums, can they ever be classed as tactical decisions? According to the article ‘EU referendum: Scotland backs Remain as UK votes Leave’ Scotland voted in the 2016 UK referendum to remain (62% to remain in the EU and 55% to remain in the UK), and thus continue to be part of the European Union (EU) (BBC News, 2016). According to the article ‘Ewing: EU “sympathetic” over Scotland’ the SNP are threatening to call a referendum to leave the UK so that Scotland becomes independent and remains in the EU (BBC News, 2016). If Scotland votes to be independent then this could be classed as a tactical decision, because it would be in the context of the result of the 2016 UK Referendum. The decision would take place in an uncertain environment, but it is not unknowable, because of the turbulence Scotland has experienced as a result of the overall result to leave. Remaining in the EU appears to be a safer bet at least economically. Before the EU Referendum Scotland voted to remain in the UK, which therefore does not change their long-term position. It is easier to gain a positive result from this type of referendum question than to take a strategic decision. Converting a strategic decision to a tactical decision would make a referendum more winnable. This will require building a context, being open, and identifying the pros and the cons of the debate. Essentially, a cost-benefit analysis would be a suitable tool to give an even-handed approach.

Operational decisions (Figure 1) do not significantly alter the level of commitment or scope of the firm. These types of decisions are to do with routine problems and administration. Operational decisions are concerned with target setting, measurement, monitoring performance, and the creation of management incentive. It would be unusual for operational decisions to be confused with strategic decisions. A poor operational decision is unlikely to have detrimental consequences (Shivakumar, 2014). Firms that are rated highly for operational-related activities are more productive, efficient and profitable, have higher growth, and survive longer (Bloom et al., 2012). Firms that are behind due to poor operational performance do not realise they are laggards, and often suffer from a problem of *perception*. Surprisingly, many firms are not aware of modern management techniques such as lean manufacturing and human resource management. Laggards suffer from a lack of *inspiration*; they know they are behind, but do not know what to do (Bloom et al., 2013; Gibbons & Henderson, 2013).

IMPLICATIONS TO MANAGEMENT

The solving of strategic decisions in a firm should not present as much of a challenge as putting a strategic decision to a referendum. Typically in a firm stakeholders (senior management and middle managers) involved in the strategic decision-making process are aware and knowledgeable of the issues. They have a holistic perspective (on the scope of the firm and capabilities), and thus debate and argument on the pros and cons of the strategic decision would be evident. This does not preclude that disagreements will probably take place. There is not a greater need to convert a strategic decision to a tactical decision in a firm. Putting a strategic decision to a referendum is a game of chance with high stakes (as the previous Prime Minister, Mr Cameron knows). To reduce the probability of failure, and thus chance, a process to build context around the strategic decision is one approach. This is the equivalent of building a narrative, but a balanced one. Both sides of the argument should be detailed, so that a cost-benefit analysis is undertaken. This helps in perceiving the strategic decision-making process to be balanced and fair, but it does not mean there will not be opposing sides. Care must be taken that the cost-benefit analysis is not skewed to favour one side. When the context is created openly there is a better chance of commitment and openness in the referendum debate. Strategic decisions that have not been contextualised should be avoided. A case in point is the potential vote on Scottish independence in a new referendum following the result of the EU Referendum, which is less of a strategic problem and moves towards the area of a tactical decision. The context is in place and the pros and cons are evident, but will depend on voters' perspectives. There is less emphasis on the unknowable (the consequence of leaving is developing, so a context is forming), but uncertainty will still weigh on the decision.

FUTURE RESEARCH

The conversion of a strategic decision to a tactical one requires changing the context of the decision. When should the context be shared, before a referendum or during it? What are the challenges in converting a strategic decision into a tactical decision? If strategic decisions and tactical decisions are on a continuum, at what point does a strategic decision become a tactical decision, which is dependent on the degree of contextual building? Is there an optimal level of context to change from a strategic to a tactical decision?

CONCLUSION

Referendums can give unexpected results, and politicians want to minimise such an event. By their very nature referendums require a strategic decision, which will have long-term consequences. Moving strategic decisions in the direction of tactical decisions maintains commitment, but reduces the unknowable and uncertainty in the context of the decision. One approach to build a context is the use of a cost-benefit analysis that is open and not prejudiced, which will require agreement from the opposing sides. There is thus less risk that there is insufficient information to make a decision. When there is a perception of insufficient information a multi-stage decision is converted to a single-stage decision as it is easier to focus and reach a decision on (Bowen & Bowen, 2016).

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CORPORATE GOVERNANCE CODES OF GOOD PRACTICES IN THE WORLD AND IN POLAND

Piotr Bula and Janusz Teczke
Cracow University of Economics, Poland

ABSTRACT

Corporate governance is one of the three pillars of the risk management system in an enterprise. It includes monitoring and ensuring functions realised by the supervision bodies, performed to the benefit of shareholders and stakeholders. It allows for optimisation of the risk management process. In structural terms, the risk management process runs on a multi-party basis and comprises actions taken by the supervising bodies & the audit committees, by the management bodies, by the individual functions as well as by the internal and external auditors. This article is a review of selected code solutions in the field of governance of an enterprise, applied in the world and in Poland. It is a part of the monograph entitled Risk Management System in an Enterprise as an Element of Corporate Governance.

Keywords: corporate governance, codes of good practices, risk management

INTRODUCTION

Apart from legal regulations resulting from the legislation of individual countries or originating from corporate governance traditions that are deep-rooted in individual countries, the basic corporate governance issues are also governed by the so-called soft corporate law, the source of which are the codes or standards of good practices. The notion of the corporate governance standards relates to international codifications and to national codifications. Generally speaking, their significance consists in determination of widely accepted corporate behaviours. At the same time, the international codifications provide the universal models while the national codifications either constitute a formula for the transfer of these solutions to the ground of the country-specific solutions, with consideration of particular economic, legal, political, historical, social and cultural conditions (Thlon, 2011, p.14), or are original solutions, developed on the basis of own experience.

THE OECD GUIDELINES

The OECD *Principles of Corporate Governance* were developed in 1999 as general guidelines in the field of assessment and improvement of the regulations relating to corporate governance. They have become the benchmark of good corporate governance for governments, regulators, investors, corporations, shareholders and stakeholders all over the world (also the Polish solutions in the field of corporate governance good practices refer to the OECD Principles). They have also been accepted by the Financial Stability Forum as one of Twelve Key Standards for Sound Financial Systems. Promotion of the principles of good corporate governance is aimed at improvement of management effectiveness, support of ethical attitudes in business as well as promotion of transparency and responsibility of corporate structures and bodies. The document, adopted in 1999, was revised in 2004 as a result of extensive consultations with participation of world-class experts as well as in cooperation with the World Bank and the International Monetary Fund. It contains a set of universal, non-binding standards and good practices relating to corporate governance, which may be tailored to the specific conditions in individual countries and regions, together with the guidelines for their implementation. The document focuses on publicly traded companies but it may also be useful for other participants of the economic life (in 2005, the OECD developed the document *Guidelines on Corporate Governance of State-Owned Enterprises* relating to entities with ownership share of the state. In its original version, it is applicable to state-owned enterprises. In the Polish version of the principles, the translation ‘*przedsiębiorstwa publiczne*’ (i.e. public enterprises), understood as state-owned enterprises and commercial law companies with exclusive or partial share of the State Treasury,

in which the State Treasury is obliged to perform the functions connected with the corporate governance, has been adopted). It is emphasised therein that: good corporate governance should properly stimulate the board of the company and the management to achieve the objectives, the realisation of which is in the interest of the company and its shareholders, as well as should facilitate effective tracking of results, thus supporting more efficient use of resources by companies. Functioning of an effective corporate governance system either in individual companies or in the entire economy contributes to gaining confidence, which is a significant factor ensuring efficient operation of the market economy (Source: <http://www.oecd.org/daf/ca/corporategovernanceprinciples/34656740.pdf>, 2015) [*own translation*]. The document consists of two parts. The first one presents the principles relating to the main areas (ensuring the basis for an effective corporate governance framework, the rights and equitable treatment of shareholders and key ownership functions, the role of stakeholders, disclosure and transparency and the responsibilities of the board) as well as the recommendations supporting them. The second part contains remarks to the principles. Within the formulated principles and recommendations, mainly the following elements are stressed:

- separation of the scope of duties of various supervisory, regulatory and executive authorities,
- protection of the rights of shareholders as well as equitable treatment of all shareholders, including also minority and foreign ones,
- respecting the rights of stakeholders in creation of economic value and development of enterprises,
- access to information relating to important affairs of the company, including its financial situation, results, capital ownership structure and governance,
- monitoring of the quality of company management, including reliability of accounting and reporting system, internal control system and in particular risk monitoring, financial and operating control as well as compliance with the standards and provisions being in force.

THE ANGLO-SAXON AND THE GERMAN SOLUTIONS

While discussing the national codifications, the Anglo-Saxon and the German solutions, being - as it has already been mentioned - the most often exposed ones should be referred to.

In the Anglo-Saxon models, the American and the British solutions as the leading ones and at the same time as the ones that affect the regulations implemented in other countries in a relatively strong way should be noted. The American corporate governance good practices are in their substantial part based on external regulations, the source of which are the anti-monopoly law standards and other legal acts relating to corporate governance, being deep-rooted in the legal system. It is mainly the Public Company Accounting Reform and Investor Protection Act (Sarbanes-Oxley Act - SOX), adopted by the United States Congress in 2002. They are also the regulations of the US Securities and Exchange Commission (SEC) and of the stock exchanges (New York Stock Exchange and Nasdaq Stock Market), which have determined new organisational requirements for governance of companies and requirements for communication with stakeholders. In the American solutions (see: Bishop, Hydoski, 2010, pp. 172-175), special weight is attached to:

- ensuring quantitative prevalence of independent directors in the boards of companies,
- tightening of independence criteria,
- separation of the function of the president of the board and of the CEO,
- appointment of the members of the audit committees and management remuneration committees solely from among independent directors,
- separate meetings of independent members of the board,
- implementation of the code of business ethics, binding all directors, managers and employees.

The Act obliges the audit committees to implement the procedures for whistleblower complaints, allows for appointment of independent experts as well as imposes the obligation to select and coordinate cooperation with an external auditor on the audit committees. On the other hand, the companies are obliged to ensure sufficient resources and funds for performance of the functions of the audit committees by these committees. Also the role of non-governmental organisations and associations (e.g. the American Law Institute), which are the entities initiating the changes and moderating the discourse in the field of functioning of corporate governance, is active. Also dynamisation of actions of institutional and individual investors, establishing

cooperation in the field of assessment of the functioning of companies, may be observed. At least actions of the Council of International Investors or guidelines of the CalPERS (California Public Employees' Retirement System) pension fund for corporate governance from 1993 may be presented as an example here. The fund also started publishing its own ranking of companies assessed in terms of effectiveness of operation and in 2007 published its own set of good practices - the Core Principles of Accountable Corporate Governance. Creation of the platforms of this type allows the investors to exercise stronger pressure on authorities of companies as well as to formulate expectations relating to improvement of results and quality of management and also to form governance rules.

The British solutions refer to the recommendations contained in the Cadbury report from 1992, in the Greenbury report from 1995 and in the Hampel report from 1998. The document entitled: The Combined Code of Corporate Governance, published in 1998, constituted their synthesis and continuation. At the beginning of the first decade of the 21st century, the British corporate governance solutions were further evolving as a result of implementation of the conclusions contained in the next reports and guidelines: the Turnbull report (1999, internal control), the Myners report (2001, on the role of institutional investors), the Tyson report (2003), the Higgs report (2003, on independent members) and the Smith guidelines (2003, on audit committees), known as the Guidance of Audit Committees or as the Smith Guidance, as well as the Walker recommendations (2009, taken into consideration in the UK Stewardship Code adopted by the Financial Reporting Council in 2010, modified subsequently in 2012). In September 2010, also the new version of the corporate governance code for the British companies, contained in the document: The UK Corporate Governance Code, developed by the Financial Reporting Council, was published. Special weight is attached to:

- principles for appointment, composition and competences of the board of directors,
- separation of the scope of responsibility of the president of the board of directors and of the CEO,
- appointment and composition of nomination committees, audit committees and remuneration committees, functioning within the board of directors,
- independence of the members of the committees of the board, while the composition of the audit committee should include at least two independent members of the board,
- responsibility of the board of directors for financial reporting of the company as well as for functioning of internal control and risk management systems, supervision over functioning of internal audit as well as over cooperation with an external auditor,
- communication with shareholders,
- protection of interests of minority shareholders,
- transparency of functioning of companies,
- relations with institutional investors.

The German corporate governance good practices were determined in the document: German Corporate Governance Kodex of 2002. This document was prepared on the basis of the works of Baums governmental commission. The document was modified many times (ten times by the end of 2014). Currently, the German Corporate Governance Code (*Deutscher Corporate Governance Kodex*) is in force in the version from September 2014. Despite the fact that in its essence, it realises the idea of self-regulation, the obligation to file a declaration on its use on the basis of the 'comply or explain' formula has been implemented in the German legal system. It is based on three types of records: provisions (being a reference to legal regulations being in force), recommendations (being guidelines of good practices, the application of which takes place according to the 'comply or explain' principle) and proposals (being recommendations, the application of which is completely voluntary) (Herdan et al., 2009, pp. 19-20). The code consists of seven parts (Foreword, Shareholders and the General Meeting, Cooperation between Management Board and Supervisory Board, Management Board, Supervisory Board, Transparency, Reporting and Audit of the Annual Financial Statements) and of the Appendix. In the German solutions, special attention is put to:

- appointment, composition and scope of responsibility of supervisory boards,
- establishment of specialised committees within activity of the supervisory board (audit committees, nomination committees and other committees, depending on the needs of the entity, e.g. financial statement committees, board member employment committees, market and credit risk assessment committees, mediation committees),
- primacy of the long-term interest of the company in striving for satisfaction of stakeholders' expectations,

- avoidance of conflicts of interests and transactions of members of supervisory boards and members of management boards of companies performed on their own account,
- principles for remuneration of corporate bodies,
- communication of significant information on the situation of the company,
- principle of equitable treatment of all shareholders (Borowiecki et al., 2005, pp. 157 et seq.).

The German code stresses in particular the monitoring function of the audit committee in the field of financial reporting process, effectiveness of internal control, risk management and internal audit systems as well as external audit (audit of the annual financial statement, with special consideration of independence of the auditor, additional services of the auditor, supervision over the revision process, price of financial revision services and compliance, unless a separate committee of the board - the compliance committee - has been established for this purpose). It is emphasised that the chair of the audit committee must possess specialist knowledge on and experience in accounting principles and internal control. At the same time, he/she should be an independent member, while this function may not be performed by a person who in the period of the preceding two years was a member of the management board of the enterprise, of the supervisory board of which he/she is a member (http://www.dcgk.de//files/dcgk/usercontent/en/download/code/E_CorpGov_2014_amendments.pdf, 2014, p. 10). Provisions relating to functioning of audit committees were also included in the Commercial Code amended in Germany in 2009.

POLISH EXPERIENCES IN CODES OF GOOD PRACTICES

The first Polish experience in corporate governance codes of good practices dates back to 2001. Then, the document: *Dobre praktyki w spółkach publicznych 2002* (Good Practices in Public Companies 2002) (the so-called *Kodeks Warszawski* - the Warsaw Code), implemented for use as of 2002, was developed upon the initiative of the Good Practice Committee functioning at the Warsaw Stock Exchange. At the same time, the Polish Corporate Governance Forum at the Gdansk Institute for Market Economics developed the document: *Kodeks nadzoru korporacyjnego dla spółek publicznych* (Corporate Governance Code for Public Companies) (the so-called *Kodeks Gdański* - the Gdansk Code). The document: *Dobre praktyki w spółkach publicznych 2002* was adopted by the majority of companies listed on the Warsaw Stock Exchange. As a result of the trends for tightening of the corporate governance rules observed in the world at the beginning of the century, the ground of which were the financial scandals disclosed in several leading world economies, which uncovered the weakness of the previous corporate governance solutions, also the good practices adopted in Poland were amended by implementing the document: *Dobre praktyki w spółkach publicznych 2005* (Good Practices in Public Companies 2005). They were in force to 2007, when another change in this field, initiated by the Warsaw Stock Exchange, took place. At that time, the Warsaw Stock Exchange enacted the document entitled: *Dobre praktyki spółek notowanych na GPW 2008* (Best Practice for WSE Listed Companies 2008). They refer to the traditions of the Polish corporate governance movement pioneered by the Good Practice Committee and by the Gdansk Institute for Market Economics. Introducing this document, the Warsaw Stock Exchange accepted the obligation to implement a mechanism allowing for verification of application of good practices by companies listed on the Warsaw Stock Exchange (within the 'comply or explain' principle) as well as to promote the solutions introduced by the document (awarding companies applying good practices). The document: *Dobre praktyki spółek notowanych na GPW 2008* was amended several times in 2010, 2011 and 2012. (The document: *Dobre praktyki spółek notowanych na GPW* was modified on the basis of the following resolutions of the Exchange Supervisory Board: Resolution No. 12/1170/2007 of the Exchange Supervisory Board of 4 July 2007, Resolution No. 17/1249/2010 of the Exchange Supervisory Board of 19 May 2010, Resolution No. 15/1282/2011 of the Exchange Supervisory Board of 31 August 2011, Resolution No. 19/1307/2012 of the Exchange Supervisory Board of 21 November 2012). The amendments and modifications of good practices considered both the world corporate governance trends and implementation of hard regulations relating to corporate governance, established in Poland, including regulations relating to the audit committee. In several aspects, they relate to the European regulations (Commission Recommendation No. 2004/913/EC of 14 December 2004 fostering an appropriate regime for the remuneration of directors of listed companies, Official Journal of the EU No. L 385 of 29 December 2004, Commission Recommendation No. 2005/162/EC of 15 February 2005 on the role of non-executive or supervisory directors of listed companies and on the committees of the (supervisory) board, Official Journal of the EU No. L 52 of 25 February 2005, and

Commission Recommendation No. 2009/385/EC of 30 April 2009 complementing Recommendations 2004/903/EC and 2005/162/EC as regards the regime for the remuneration of directors of listed companies, Official Journal of the EU No. L 120 of 15 May 2009).

According to the message contained in the preamble of the document: ‘good practices, a set of corporate governance rules and principles determining the standards for shaping relations of listed enterprises with their market environment, may be an important instrument enhancing market competitiveness. They may also be a carrier of innovative approach to the problems of the stock exchange market and thus build its international attractiveness’ (*Dobre praktyki spółek notowanych na GPW*, www.gpw.pl, in the wording resulting from Resolution No. 19/1307/2012 of the Supervisory Board of the Warsaw Stock Exchange of 21 November 2012) [own translation]. The document is divided into four parts; the first part constitutes a set of recommendations as regards good practices of listed companies while three other parts relate to individual bodies of companies: to management board, to supervisory boards and to shareholders. A good practice of management boards is *inter alia* publishing - independently from other information required by legal regulations - the annual report on activity of the Supervisory Board, including the work of its committees, together with assessment of the internal control system and of the system of management of risk that is significant for the company, provided by the board (*Dobre praktyki spółek notowanych na GPW*, part II, section 1, point 6, www.gpw.pl), as well as information on the content of the rule relating to changing the entity authorised to audit the financial statements, being in force in the company, or information on lack of such a rule (*Dobre praktyki spółek notowanych na GPW*, part II, section 1, point 14, www.gpw.pl). Following the good practice rules, supervisory boards should *inter alia* once a year prepare a brief assessment of the situation of the company, including assessment of the internal control system and of the system of management of risk that is significant for the company, as well as present it to the ordinary shareholders’ meeting (*Dobre praktyki spółek notowanych na GPW*, part III, section 1, point 1, www.gpw.pl).

In 2013, the Warsaw Stock Exchange established the Corporate Governance Consultation Committee consisting of representatives of institutions and organisations of the capital market as well as of persons with knowledge on and experience in corporate governance. The objective of the works of the Committee was to identify the areas and directions of changes of good practices (http://www.corp-gov.gpw.pl/lad_corp.asp, 2015). In the middle of December 2014, public consultations relating amendment of the document, which was aimed at bringing the solutions applied in Poland closer to the more mature markets, also as regards the regulations covered by Commission Recommendation No. 2014/208/EU of 9 April 2014 on the quality of corporate governance reporting (‘comply or explain’) (Commission Recommendation No. 2014/208/EU of 9 April 2014 on the quality of corporate governance reporting (‘comply or explain’), Official Journal of the EU No. L 109/43 of 12 April 2014), were commenced.

The new regulations were implemented by the Resolution of the Exchange Supervisory Board (Resolution No. 26/1413/2015 of the Exchange Supervisory Board of 13 October 2015) and entered into force on 1 January 2016. At the same time, the expert manual clarifying the individual recommendations and principles was developed (www.gpw.pl, 2016).

In the update of the good practices, development or specification of the previously applicable principles relating to the following elements was proposed (see: www.gpw.pl):

- new thematic breakdown (including the following chapters: Disclosure Policy, Investor Communications; Management Board, Supervisory Board; Internal Systems and Functions; General Meeting, Shareholder Relations; Conflict of Interest, Related Party Transactions; Remuneration) and organisation of the set,
- issues relating to general meetings - *inter alia* encouragement of shareholders to engage in the affairs of the company, in particular through participation in the general meeting, putting greater emphasis on facilitation of participation of shareholders in the general meeting, alleviation of the requirements for organisation of electronic general meetings, elaboration of the principles relating to on-line live transmission of the meeting, principles for convention of the general meeting and break ordering as well as other issues that are important for shareholders (e.g. presence of the press at the general meeting, posting the audio or video report on the held meeting as well as questions of shareholders and answers given by the company on the website),

- issues connected with quality and transparency of companies - *inter alia* expansion of the scope of information published by companies on the website, including introduction of an obligation to publish the statement presenting the current state of application of corporate governance principles by the company, separation of a chapter devoted to conflicts of interests and related party transactions as well as specification of the issues relating to remuneration policy,
- introduction of a separate chapter devoted to organisation and functioning of internal systems and functions, including internal control system, risk management system and internal audit function of the company, giving greater importance to these systems in the management of the enterprise (*inter alia* through implementation of the obligation of the company to maintain effective internal control and risk management system as well as internal audit function, inclusion of the persons responsible for risk management and internal audit function in the composition of the management board or their direct subordination to the management board, with simultaneous provision for the possibility of their direct reporting to the supervisory board or the audit committee),
- formulation of new principles relating to tasks and scope of responsibility of management boards of companies,
- enhancement of emphasis on the role of the supervisory board as the body supervising *inter alia* performance of tasks by the management board, financial situation of the company, achievement of strategic objectives, quality and reliability of financial information and also as a body performing periodical assessment of specific aspects of activity of the company, including annual assessment of corporate governance application,
- putting more attention to the issues of diversity of management boards and supervisory bodies of listed companies.

The proposed changes clearly concentrated the corporate governance practices on activation of shareholders and expansion of the role of the supervisory bodies in monitoring of the functioning of enterprises. They also gave greater importance to the internal audit function and to the structures responsible for management of the risk of the enterprise.

Also the Polish Financial Supervision Authority (KNF) proposed some solutions in the form of the code of good practices, introducing the document: *Zasady Ładu Korporacyjnego dla Instytucji Nadzorowanych* (Principles of Corporate Governance for Supervised Institutions) in July 2014. The principles for shaping internal and external relations of supervised institutions, including relations with shareholders and clients, organisation and functioning of internal supervision, key internal systems and functions as well as statutory bodies and the principles of their interaction are determined therein. The document, referring to the requirement of top quality as well as professionalism and respecting ethical values in functioning of the entities supervised by the Polish Financial Supervision Authority, is broken down into several chapters: Organisation and Organisational Structure, Relation with Supervised Institution's Shareholders, Management Body, Supervisory body, Remuneration Policy, Communication Policy, Promotional Activities and Client Relations, Key Internal Systems and Functions, Execution of Rights Resulting from Assets Acquired at Client's Risk. In the introduction to the document, we may read: 'strengthening the role of internal supervision contributes to increasing efficiency and transparency of the operations of a supervised institution and maintaining its security. Successful implementation of the strategic goals adopted by a supervised entity requires adoption of organisational structure with the right internal control, audit and risk management systems. The remuneration policy, constituting an important element of development and security of the functioning of a supervised institution, should be implemented with active participation of the General Meeting. The communication policy should serve to build proper relations, especially through facilitating access to information for both clients and shareholders. The system of detecting irregularities or states threatening the safety of the functioning of a supervised institution should involve all employees of the supervised institution. A supervised institution should demonstrate care for protection of the rights and development of employees in order to build the value and reputation of the supervised institution' (*Zasady Ładu Korporacyjnego dla Instytucji Nadzorowanych*, Polish Financial Supervision Authority, http://www.knf.gov.pl/Images/Zasady_ladu_korporacyjnego_22-07-2014_tcm75-38575.pdf, 2015, pp. 3–4) [official translation]. Consideration of such a wide range of issues, being right in terms of direction as it relates to the special type of public trust institutions supervised by the Polish Financial Supervision Authority, undoubtedly orders the requirements and expectations set to these institutions both by the regulators and by the clients (implementation of the principles caused a lot of controversies, especially among

the practitioners, which generally related to the too widely drafted framework of the regulations, to exceeding the customary definition of corporate governance, to the legal doubts as regards some regulations as well as to the lack of compatibility of some solutions with the regulations applicable to listed companies) (See more: Nartowski, 2014).

In practice, from the point of view of the so-called soft principles of corporate governance in the entire national system, it would be advisable if all market participant could rely on pretty universal principles included in one framework document, aligned at least in the overlapping part. The great number of regulations in this field does not support the clarity of the entire system.

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ANALYSING THE IMPORTANCE OF CROSS-CULTURAL COMMUNICATION IN THE TOURISM EDUCATION FIELD

Alba Caicedo and Karla Moran
University of Guayaquil, Ecuador

ABSTRACT

In Latin America, traditional education systems are evolving to improve access to global trends; as a consequence, tourism undergraduates need also to enhance the teaching-learning relationship. The aim of this study was to determinate the level of cross-cultural communication competency of tourism undergraduates to support their performance in tourism management. A survey of 198 students was sampled in the University of Guayaquil, Ecuador. Findings identified voids in tourism education concerning cross-cultural competence. Half of the students lack knowledge in this field, in other cases, students understand only a few areas of cross-cultural communication. Conclusions remark the importance of the linkage between cross-cultural communication and management in the tourism education field.

Keywords: cross-cultural communication, education, management, tourism.

INTRODUCTION

Education has been immersed worldwide as core of diverse studies during the last decades. On one hand, European research has improved the methodology of teaching and learning, i.e.: competence based degree programmes (see, e.g. TUNING, 2008) and modes of learning and teaching in higher education (see, e.g. European Union, 2014). On the other hand, in Latin American countries, many changes in educational systems have been developed, recovered in writing such as: educational assessment systems in Latin America (Ferrer, 2006) and regional overview: Latin America and the Caribbean (UNESCO, 2009). Therefore, global trends in education are taking presence more frequently nowadays.

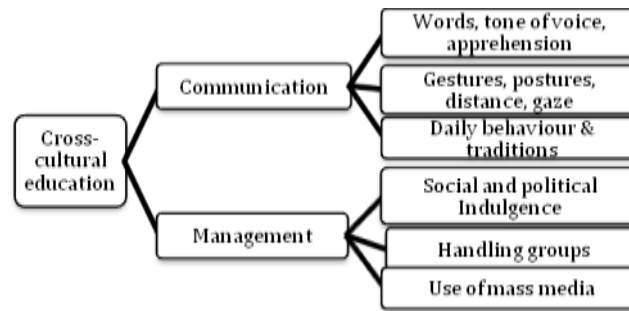
Is Ecuador training its population towards tourism? Since 2013, a new strategy in the market is emerging in Ecuador: to change the productive matrix, and face the goals of the Ecuadorian Plan for Good Living. That is why it is important for each population to look for new methods in industries. Tourism is a potentially important socioeconomic activity in this field. In consequence, education for tourism has been increasing during the last decade. The academic offer has grown in the whole country, thousands of students have become interested in this field and new enterprises have been created; nevertheless, there are improvements to be achieved in tourism education, such as huge challenges that new professionals have to face in their workplace daily. One of those obstacles is to satisfy the deficiencies of cross-cultural management competences in tourist servers, basically in communication that has been neglecting curricula of tourism careers.

Along with almost the whole of Latin America, cross-cultural communication, the competence that provides the understanding between tourists and agent servers, has no distinctive importance in Ecuadorian tourism education. Scholars and even graduates are not well prepared in this field, systems have not provided the tools to face general attitudes and behaviours of foreign people; whereby a research question for this study emerged: *What are the important aspects to consider in cross-cultural communication training for Ecuadorian tourism students?*

This research tries to determine the gap in cross-cultural communication in Ecuadorian tourism

education, whereby as a main aim to analyse the components of cross-cultural communication in the undergraduates of tourism to enhance their training. The University of Guayaquil as a large academic market evaluated these characteristics in undergraduates. To support the theoretical discussion, diverse theories have converged in this study, and their dimensions converge in three main approaches: cross-cultural management, cross-cultural communication, and cross-cultural tourism education, Fig.1 includes the variable of the study. The study starts with a theoretical review; subsequently the empirical methods of surveys and interviews are used. Conclusions are provided at the end of the study with managerial implications, limitations of the study, and suggestions for future research.

Fig. 1: Variables of cross cultural education



LITERATURE REVIEW

Cross-cultural management (CCM)

A word where different complex components converge is culture. There are two classical definitions to be named in this study: Culture for Herskovits (1955) is everything that human beings do, in that context, anthropology is immersed. Keesing in 1974 gives a better-detailed meaning, saying that as a system of competence it is different among individuals and encloses factors in human beings like beliefs, ethics, and religion, furthermore, it is shaped by the ways the human brain acquires, organizes and processes information; it is in general, all the ways of behaving in front of others. All those particular aspects are enclosed in anthropological studies, as Edgar & Sedgwick (2008) refer, cultural studies is understood as sociology, history, ethnography and literary analysis.

A significant global trend that is included in the management is the knowledge and understanding of cultures. In allusion to cultural aspects, they influence humans' behaviour but they are adjustable. Over the premise "different cultures see the world quite differently" but "we are humans, all the same underneath" Maznevski, M (2012) refers to the facilities of adapting our behaviour according to context. Nowadays managers need to work in multiple contexts and different teams, thus educational approaches that prepare them for these challenges are required. Therefore, Earley & Peterson (2004) refers to negotiations requiring a qualified manager in today's diverse cultural environment. According to Adler (2008), the definition of cross cultural management refers to: "The behaviour of people in organizations around the world and show people how to work in organizations with employees and client populations from many different cultures." The importance of this concept in the tourism educational field lies in the interaction between visitors from different parts and different cultures around the world, and the hosting tourism server, where misunderstandings can arise due to different cultural backgrounds.

In this context, it is pertinent within the framework of this study to introduce one important pattern and source of understanding cultures: Hofstede's Dimensions, model of national culture. In 1980, Geert Hofstede developed a 5-dimensional model, through which the cultural pattern of society can be identified. His thesis is based on recognizing behaviours, which contribute to the intercultural communication of people. The guidelines of Hofstede are the following: Power distance, Individualism – Collectivism, Feminine – Masculinity,

Uncertainly avoidance and Long and short term orientation. In 2010 he considered it appropriate to include a sixth dimension: Indulgence – Restraint. This scheme has been used not only in psychology but also in the areas of management, communication and education.

Societies need training concerning those areas because global business is increasing. Szkudlarek, Mcnett, Romani, and Lane (2013) have reviewed the role of cross-cultural management in business curricula; they have considered the supporting theoretical frameworks and expectations in the educational field. In the cited study, leading cross-cultural management educators were interviewed with the consideration of 8 aspects: role of CCM in business curricula, challenges in training, learning environment and future of CCM in education. Findings revealed the importance of teaching students when culture does and does not matter. Backgrounds and previous experiences of interveners are also involved in business. There are two essential elements in management, such as within communication a transmitter and receiver are required. In that context, “Effective leadership is at the intersection of the leader, the followers and the broader context” (Szkudlarek, Mcnett, Romani and Lane, 2013). A good relationship between those aspects assures commerce and trade. As a result, CCM in international management is part of the education, but it is essential to understand how and when culture matters avoiding overemphasizing cultural explanations.

Alternatively, other proposal ideas have importance, such as: “involving expectations of active participation helps in creating an engaged learning environment” (Osland, 2012). In general, interviewees agree that experiential exercises, role-playing, Intercultural Effectiveness Scale (IES), the Multicultural Personality Questionnaire and others have been useful in the cross-cultural management education but not enough. Another important analysis in the field of cross-cultural management education was made in 2013. It reviewed the actual teaching and learning methods and focused on the situated cultural learning approach (Zhu & Bargiela-Chiappini, 2013). These authors evaluated the emic (culture-specific component) and etic (culture-general) and proposed an ethnography of communication-based curriculum. They alleged that the etic approach has minimized the importance of emic knowledge, thus their proposal combines two definitions: Situated learning is learning about activity, context and culture (Lave & Wenger, 1991), and ethnography of communication is an approach to the study of communication and the analysis of situated communicative practices (Hymes, 1974). Furthermore, those dimensions use different data collection in research. The Etic approach employs surveys to compare culture as a result of functionalist logic, whereas the emic approach relies on ethnographic immersion and observation (Morris, Leung, Ames & Lickel, 1999).

In conclusion cross-cultural management education demands two defined aspects. On the one hand, it requires enhancing attitudes, cognitions and behaviours, thus combining frameworks and paradoxes to engage cultural sensemaking. On the other hand, three areas must be reviewed: the subject matter of CCM, backgrounds and expectations of the audience, and the role of the instructor (Zhu & Bargiela-Chiappini, 2013). Thus cross-cultural management training goes beyond a regular instruction.

Based on the previous discussion, social and political indulgence, handling groups and use of mass media were considered as variables of cross-cultural management for current research, resulting in the emerging hypothesis:

H₁: Undergraduate students have insufficient knowledge of cross-cultural management (CCM).

Cross-cultural communication (CCC)

In order to properly have communication, several aspects are considered as well as language. Nowadays, students are worried about learning a foreign language with some cultural details, or in another definition, admitting the importance of intercultural competence (Dirba 2003, Ellis 2005, Kim & Hall 2002).

Different areas converge in the definition of these terms. Cross-cultural communication, as a branch of cross-cultural management, includes the fields of cultural studies, anthropology, psychology and communication; thus to understand the complexity of this expression, it is necessary at first to briefly introduce the relationship between the meaning of culture and communication.

Concerning culture from the communicational aspect, it involves people’s interaction. Hall (1983) says

culture is also communication, and communication is culture, that is to say culture encloses ways of communicating. Actually, both definitions are completely associated because the human being is involved. Context comprises physical, social, historical, psychological and cultural situations, whereby, it is one of the most important supports in communication. For that Jürgen Habermas says that the perfect speech situation is impossible to achieve although considering the context of communicating with others could be more efficient (Verderber, Verderber & Sellnow, 2012). Indeed, communication as a daily practice of the human being has seven principles: Communication has purpose, communication is continuous, communication messages vary in conscious thought, communication is relational, communication is guided by culture, communication has ethical implications, and communication is learned (Littlejohn & Foss, 2007).

One simple example of CCC refers to habitual practice such as maintaining a conversation, which involves constant feedback between interlocutors. In fact, in many countries, the process of communicating a message frequently is interrupted by the receiver as a rooted custom, which leads to frustration of the transmitter who is not used to this practice, and the message ceases. Furthermore, this ingenious practice could be considered insulting for some cultures, therefore, the communication process fails.

For understanding the CCC theory, dimensions must be defined. According to Samovar, Porter, & McDaniel (2007) the relevant components to students of intercultural communication are: (a) perception, (b) patterns of cognition, (c) verbal behaviours, (d) non-verbal behaviours, and the influence of context. In that framework Spitzberg (2000) defines communication competence as the appropriate and effective impression of communicative behaviour, in a given situation. Verderber, Verderber & Sellnow (2010) also add motivation, skills, credibility, social ease and manage communication apprehension as scope of this competence.

In addition, according to Gupta (2003), CCC considers “themes like culture, religion, economics, politics, art, philosophy, trade and commerce, etc”, theory over which this research establishes its framework, because tourism development means worldwide negotiation, negotiation is business and global business includes cross-cultural communication. On the other hand, cross cultural communication is the communication of people from different nationalities (Gudykunst, 2003), and takes place when individuals influenced by different cultural communities negotiate shared meanings in interaction (Ting-Toomey, 1999). Other authors include contexts in the term: the inter-ethnic, inter-religious, inter-regional communication and also different sexual orientations (Martin and Nakayama 2007, Samovar and Porter 2004). As a result, UN Mission, UNESCO and Cross Cultural Communication Conference have also executed some endeavours in the field of cross-cultural communication, such as reports and papers, and they are continuously writing about this field.

In reference to the aforementioned theories, cross-cultural communication for this research comprises: words, tone of voice, apprehension, gestures, postures, distance, gaze, daily behaviours and traditions; whereby the following hypothesis arose as H₂: Undergraduate students have deficient awareness of cross-cultural communication (CCC).

Cross-cultural tourism education

Different factors are also noteworthy for future tourism servers to understand, i.e. Hofstede's patterns mention individualism and collectivism, which are used to describe a social philosophy that cultures adopt. Individualism emphasizes the importance of the individual; whereas, collectivism remarks the importance of the group, rather than the individual. Their contribution to tourism education states the different postures with systematic beliefs that contrast completely in tourists, as well as social customs or religious beliefs that forbid or restrict discussion of a particular practice or topic due to the taboo context they may imply.

In the pedagogical field, Contini (2012) says that cross-cultural education, as an approach of learning, reaches the inner culture of people. Intercultural education is a means to develop the ability to have dialogue with people of other countries and respect their values and fundamental rights. He also marked migration movements as a resource of educating citizens with a huge view of the multi-ethnic society in the world. From another point of view, Suneetha and Sundaravalli (2016) indicate the main goal of teaching cross-cultural communication is “the development of capacity of multidisciplinary handling of communication, through the development of the historical and thematic global vision”.

Ang, Van Dyne & Koh (2006) denote the prominence of cross-culture for business education as training for future effective global managers. Supporting the statement in words of Lent, Paixão, Silva & Leitão (2010), who show that the preparation of undergraduates in this field could result in motivated and culturally competent workers in the globalized environment.

In fact, there are numerous systems referring to CCM and CCC education. Kolb & Kolb (2005) introduced an experiential learning theory and the concept of learning spaces; meanwhile Ang and Van Dyne in 2003 provided first suggestions of cultural intelligent (CQ) meaning, adding cognitive modules to include metacognition, motivational and behavioural components; based on those findings further studies have overcome i.e. Livermore with his publication "Leading with Cultural Intelligence". As well, MacNab (2012) remarks CQ educators as mentors of supplying necessary capacities for cultural interaction and examined a 7-step process to effectively teach CQ focus on the meta-cognitive and behavioral aspects as a result of long-term training. Consequently, Ramsey & Lorenz (2016) analysed the impact of cross-cultural management education on three aspects: cultural intelligence, student satisfaction and commitment, whereby they mentioned an inadequate current cross-cultural training, because it has been based heavily on cognition, forgetting metacognitive dimension; additionally, tutors have generalized approaches of supposing a resilient relation between national cultural values and people's behaviors; and finally, individual needs of training have been careless.

The importance of the cross-cultural tourism education field refers to the diversity of nationalities that involve travel. Some findings concerning the necessity of intercultural competence for tourism students were obtained in the Latvian market by Luka, Vinklere & Vaidesvarans, in 2010. The research studied the needs of tourism employers and tourism students, to improve the curriculum. It remarked that higher education must coach versatile, creative and knowledgeable specialists, considering different nations. Results refer the importance of understanding the work and having knowledge of: communication psychology, personnel management, abilities to communicate with clients, language skills, teamwork, positive attitude and creativity.

To sum up, servers in tourism must learn to develop cross-cultural communication, which means to be tolerant to the cultural diversity exposed by visitors, to comprise difference without falling into damaging stereotypes, and generate an environment of comprehension and understanding in the improvement of tourism activities. CCM and CCC goes hand in hand with the educational background of a tourism server, in accordance for this study was hypothesized as H₃: Tourism education requires cross-cultural management and cross-cultural communication.

METHODOLOGY

Through a cross-sectional prospective research design, the application of diversified techniques was needed for this study. The methodology used for the research project contained the application of quantitative and qualitative methods as a combined strategy (Creswell & Plano Clark, 2007), through the study of the subject and achieving stages of the research, in pursuit of reaching extensive and optimal information that allows the generation of a pragmatic paradigm. The study tried to analyse the components of cross-cultural communication in tourism undergraduates to enhance their training. As a result, inquiries and interviews under the analytic and synthetic method were employed to consider the interrelation of variables of the study. Likewise, the qualitative method reviewed trends of behaviour and operating mechanisms for effective cross-cultural communication learning, through the application of guided interviews to professors of the tourism major.

There are 674 students in the Tourism and Hospitality Bachelor's major, of which 409 were considered as a population to take a probability conglomerate sample for the surveys of the study, and who have been regular students of the major for two years.

As a consequence, 198 students of the more advanced semesters, were asked to score their knowledge in a 6-point Likert scale from 1-6 (1= "I don't have any knowledge" and 6= "I have complete knowledge about that topic"). The studied aspects were described in 25 items that make up the six aspects of the variable analyses, including: Asp. 1 = foreign greeting words, tone of voice, apprehension (0,838); Asp. 2 = gestures, postures, distance, gaze (0,774); Asp. 3 = daily behaviours, religion, traditions (0,781); Asp. 4 = social and political

indulgence (0,809); Asp. 5 = groups management (0,729); and Asp. 6 = use of mass media (0,653). Cronbach's Alpha was applied to determine the reliability of the used scale (0,963) and KMO Bartlett's Test to validate the

Table 2: Consolidated interview answers

Variables	Opinions
1. Need of cross cultural knowledge for tourism students	<ul style="list-style-type: none"> • Generate intellectual, social and geopolitical level to the professional in tourism • Give ideas on how to face different situations with tourists • Educate to respect beliefs and thoughts of others • Allow the interchange of students in the world • Cultural knowledge and usefulness for commercial purposes
2. Involvement in cultural misunderstandings with tourists	<ul style="list-style-type: none"> • With Japanese because of time, greeting and proposed schedule. • Opportune customer service and respect to different cultures have avoided misunderstandings
3. Important aspect of cross cultural communication	<ul style="list-style-type: none"> • Avoid the use of gestures, body expression, voice tone • To know meaning of different words • To observe the attitude of the receptor in the communication process
4. Methodologies to teach strategies of cross cultural communication to the students	<ul style="list-style-type: none"> • Direct interplay with groups to develop empathy • Videos concerning the importance of effective communication with tourists • Role-playing and simulations in lab • To tell stories and experiences about cross-cultural management • Pictographic symbols with object and ideas • Promote reading about regions and cultural aspects

survey (0,942); all analysis was prepared through Statistics software.

In order to support the study, some experts were also consulted. 5 professors, who have worked in the tourism area, were interviewed. (See table 1) Questions touched the following aspects: Need of cross-cultural knowledge for tourism students, involvement in cultural misunderstandings with tourists, important aspects of cross-cultural communication, methodologies to teach strategies of cross-cultural communication to the students and development of abilities in cross-cultural communication during undergraduate studies.

RESULTS

Interviews were completed with the aforementioned lecturers, obtaining significant points of view about 5 basic variables that converge in this study; they are expressed in Table 2. Surveys were applied to undergraduate tourism students and results are displayed within Asp. 1, Asp. 2, Asp. 3, Asp. 4, Asp. 5 & Asp. 6.

Asp. 1 covered to diagnose the awareness of greetings in foreign languages, use of appropriate tone of voice, use of regional words, apprehension of the receiver. Sometimes, to greet foreign people could be as difficult as speaking a foreign language. Only 2% of the students expressed to have good knowledge of greetings according to cultures of the world and 8.1% could greet in many languages. Half of the students (58%) indicated little understanding of greeting standards and foreign greetings. In language, words have denotation and connotation. Denotation refers to the literal meaning of a word. In contrast, connotation refers to a feeling or an idea that a word could invoke to its literal meaning (Chandler, 2007). In this context, students were asked about their knowledge in the superstition that connotation words could have in some cultures. Results remarked a majority of incomprehension on the matter (39.9%) and revealed that only a slight 0.5% of students have an exhaustive comprehension of words with offensive connotation for divergent cultures. The ignorance on the taboo subject could represent a major threat when handling diverse tourist groups. According to undergraduates, 37.9% have none and 30.8% a minor understanding of words that are considered taboo in different cultures. In

general, results implied that students do not really know how to greet foreign people, effective use of language or conversational tone according to big culture differences.

Asp. 2 involves scoring knowledge in the use of gestures, postures, distance and gaze, which are included in the daily life communication process. 54.1% of undergraduates refer to a mid-level knowledge in gestures and postures; and a low level in distance between transmitter and receiver (62,2%). Diction, elocution, and other communication resources are also important in the communication process, mainly when communicating with different language speakers. Ecuadorian culture teaches that one must “look a person in the eye” as a sign of respect when speaking to someone. Nonetheless, this practice could be interpreted as offensive in some cultures. Just 1% of students claimed to be aware of cultures that consider it disrespectful to be looked at. Another important aspect of communication includes the tone of voice. 49% of undergraduates declared to have minor understanding on this topic, while 28.8% stated no knowledge. Overall students responded with having most difficulty in contact with European and Asian tourists, due to the fact that they don’t have the same body expressions as Americans.

Asp. 3 comprises daily behaviors including religion, attitudes for meals, and greeting standards. Religion, as an important and sensitive subject, is also included in cross-cultural understanding. 58,1% of the students indicated that they have some knowledge, although not enough, about this topic. As a result, answers referred specific ignorance in eastern religions and interaction protocols. Behavioural norms worldwide contain different features according to Hofstede’s theory. 41.4% of students expressed a lack of knowledge about those significant distinctions, and not being able to distinguish attitudes or emotional behaviour of people according to their cultural background. Meal times are another differing topic in the cross-cultural communication globe. 2% of students said they are prepared to receive different groups of people at a table without trouble. Almost half of those surveyed (42%) stated they do not really know cultural behaviour at meal times.

Asp. 4 refers to social and political indulgence. Findings revealed students do not have extensive discernment on tolerance level of constant interruption during conversation. In fact, 3% of the students declared to dominate judgment on the matter, whereas 31.3% declared not to, and the rest implied to have little comprehension. Humour is often used as a tool to create social acceptance. However, being comical or amusing is a relative concept and is expressed through different approaches between cultures. 60% of students showed a lack of deep understanding on tolerance level of humour each culture demonstrates. When asked about topics of discussion, most students manifested to be aware that some topics create an atmosphere of tension due to the fact that they are not considered appropriate for discussion in some cultures. Nonetheless, 36.9% of them do not have the knowledge on which specific topics are involved within this concept. Due to globalization, awareness of political changes is accessible in seconds. Most people enjoy discussing differences in political trends and their impact on societies. Students claimed they fail to know political trends in societies around the globe. Only 0.5% of them declared to have a deep understanding in this field. As expressed, social features can vary depending on religious belief, tradition, age, philosophy, nationality, ethnicity, sexual orientation, artistic influence and other factors and students do not have enough expertise about them.

Asp. 5 discusses about handling groups. Efficiently managing groups of people with different cultural backgrounds requires specific skills. 55.1% of students reported to have little understanding of the skills needed, although 31.8% declared not having these skills or any understanding of the topic for that matter. Bonding activities aids in managing groups, integrating people from diverse cultures in a pleasant environment, and providing unity, regardless of cultural differences. Undergraduates understand the role of integration activities and agree on how valuable they are. Nevertheless, only 1.5% of students said they master integration activities as opposed to 27.3% who reported not to master them. Regarding individualism and collectivism, the majority of students (37.9%) declared not to understand these doctrines or their influence on peoples’ mindset. According to social and cultural background, negotiation strategies must change in order to be efficient and to reach the desired result. Some cultures focus on speeding up the process to reach the goal. Others focus on the process to establish a solid relationship. 30.3% of students revealed they do not possess discernment on the topic at the moment of negotiating with people from different nationalities. As a result, students have a low awareness of those traits although mastering integration activities can ensure a successful experience when leading a group.

Asp. 6 examines aspects of the use of mass media. When communicating, people don’t think about the components involved in the process, beginning with the intention of communicating and ending with the

interpretation of the message by the receiver. The latter is tightly associated with the reception communication style the receiver uses. Students said they hardly take into account whether receivers are kinaesthetic, visual or auditory, 32.8% of them stated not having any knowledge on the topic. Only 3.5% assured to have a deep understanding. When tourists visit new places, there is specific information they value to possess. Satisfaction levels rise when tourist servers provide information that is required. 20.2% of students said they do not know which information tourists valued and required. Whereas, just 4.5% assure to master this information, the rest declared to have some understanding of the topic. When questioned, students stated not to dominate communication resources with foreign visitors. 22.2% of students said they have no idea what media is preferred by tourists according to nationalities, only 2% mentioned to know about that significant use towards foreign population. In general, deficiencies are numerically visible in the diagnosis of this aspect.

Concerning the hypotheses of the study to be examined: *The awareness of cross-cultural communication in tourism undergraduate is related to their cross-cultural management*; it was proved using the Pearson Correlation, and results showed that correlation between cross-cultural communication and cross-cultural management in students was 0.848 and significant in the level 0.000, which means there is a good correlation (84,84%) between CCC and CCM. Findings are shown in table III.

Table 3: Correlation between cross-cultural communication and cross-cultural management

	CCC	CCM
N Valid	198	198
Missing	0	0
Std. Error of Mean	,06145	,07306
Median	2,4167	2,3806
IC 95% inf	2,30	2,24
IC 95% sup	2,42	2,38

Value of P (0,000) ; R of Pearson 0,848452.

With reference to H₁: *Undergraduate students have insufficient knowledge of cross-cultural management (CCM)*, the mean value of 2,445 considering 0,061448 as a Standard Error, Student's T Distribution was applied, obtaining as a result a P=0,000 which means students do not have high levels of CCC awareness

About H₂: *Undergraduate students have deficient awareness of cross-cultural communication (CCC)*, the mean value was 2,4455 considering a Standard Error of 0,073056; Student's T Distribution was also enforced, with a probability of error of 0% (P=0,000) that CCM is deficient in students.

Finally, using methodological triangulation H₃: Tourism education required CCM and CCC, were validated as significant because professors' answers and students' suggestions mentioned the need to enhance their CCC and CCM awareness in their tourism training.

The intended audience of this report included tourism servers and other behavioural scientists involved in research areas, though not completely related with the central problem in this cross-cultural research. The current research also provided a theoretical analysis of cross-cultural communication linked to education and tourism, which could be useful for further studies.

CONCLUSION

In conclusion, misunderstandings with tourists are frequently presented in spaces where the difference in language is not the only matter to be solved. In that field, empathizing is a basic and relevant aspect of the cross-cultural communication. The main defaults of teaching this practical theory are to forget simple but significant aspects of Hofstede's dimensions: power distance, indulgence, individualism, masculinity, uncertainty, avoidance, and long term orientation, which are immersed in the daily communication process with tourists.

An opportunity for undergraduate students is to recognize their deficiencies for their future field of work, where tourists are the main element of the productive chain. The value of this research is to add an important approach in the training of future professionals in tourism, because a huge majority of students do not have experience abroad at the time of beginning their professional life, thus they have not faced the difficulty of cultural differences. Language is not the only unknown side for students, there are also gaps in behavioural aspects such as distance, gaze, gestures, postures, voice tone; and knowledge of cultural traditions such as rituals, religion, political stance, and use of mass media.

The managerial implications of the study go toward the noteworthy role of professors for tourism undergraduates. Teaching cross-cultural communication must not be the only responsibility of one seminar or lecture, but being included as a transverse axis. Instruction in this topic could be done through videos, role-plays and pictographic symbols, about culture of regions. The use of ICT and reading is even more useful as a strategy in order to further the inner knowledge of background, behaviour and management of foreign tourists. Some of these schemes have been applied in several European educational institutions in the world, and they have gotten worthy results.

The use of technology could be worthy in teaching cross-cultural communication due to the capacity of adaptability to the needs of each individual, and to the fact students are very familiar with the use of it. From choosing their own schedule, selecting the device of preference, to practice or check extra content, are just a few of the advantages. The interaction makes the students feel more engaged to study this way.

Further studies could be applied based on this analysis, considering the current limitation of the population being undergraduate students in the last two periods of their university studies where they have not learned cross-cultural communication as part of their curriculum and have not yet travelled to a foreign country or have experience in the tourism area.

In a nutshell, it is recommended that teachers with social subjects include cross-cultural communication components in their classes and encourage tourism students to use autonomous e-learning in order to master their knowledge in cross-cultural fields.

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REVISITING EXPECTATIONS ABOUT THE FUTURE OF WORK: A FIFTY YEAR PERSPECTIVE

Guy C. Callender
Curtin University, Australia

ABSTRACT

For many countries, the period since the end of World War II has been a long period of growth punctuated by occasional recessions which usually gave way to recovery. The period of stagflation in the early seventies resulted in the apparent decline of Keynesian economics and the rise of market economics, lower tax regimes and, eventually, the emergence of new models of public management, especially financial management, and people management. This economic self assurance seemingly came to an end in many countries when the so-called Global Financial Crisis (GFC) occurred in 2007-2008. Recovery has been slow and uncertain and the buoyancy of earlier years has not re-emerged. Behind this very simplified version of events were many questions: social change, technological change, regional warfare, declining manufacturing, the rise of China and India, and climate change, to name just a few. In this paper, the author focuses upon the social issues associated with the impact of technological change, both past and future, and their implications for the future of work. This paper is the first stage of a larger analysis.

Keywords: Working life, change, resistance to change, predicting the future.

INTRODUCTION

Is it just a populist perception or is it a reality that most people expect to have a job? Is the creation of jobs a core function of government? One country has just completed a federal election where the winning party used the tagline "jobs and growth" throughout the election campaign. The tagline failed to produce a decisive victory.

Thomas Friedman (2016, p. 9) has recently suggested that the US government could engage in a "national infrastructure rebuild to deal with some of the nation's shameful deferred maintenance of roads, bridges, airports and rails and its inadequate bandwidth, and create some more blue-collar jobs that would stimulate growth". The incoming British Prime Minister has pledged (among many things) to move away from austerity-based economic policy and "avoid impossibly deep cuts to public services" (Lewis, 2016, p 8). Airbus, the major European aircraft manufacturer has decided to reduce its production of A380 super jumbo jets and increase its production of its smaller aircraft so that "impacts on employment will be mitigated" (Clark, 2016, p. 14).

These three examples are just a sample of the job-focused reporting taken from one recent issue of the *International New York Times*, but it is a recurring theme. The positive and negative news on jobs is treated as a major story by newspapers and politicians, emphasised by headlines such as "Quashing worries that the job growth is flagging, ... The official unemployment rate did rise to 4.9 percent, from 4.7 percent, but that was largely because more Americans rejoined the work force. And average hourly earnings ticked up again, continuing a pattern of rising wages that brought the yearly gain to 2.6 percent" (Cohen, 2016, p. 7). These comments underscore the dilemma facing many societies: work is a core value, preserving jobs is a complex task, and measurement of the changes are confusing.

Is a job central to life? As a workaholic since my early twenties, I would have to emphatically say "yes", but there is plenty of evidence to back up that view. It is apparent that working life aspirations are fostered by the presence of work and depression and disengagement are a consequence of unemployment and under-employment. The centrality of work is also influenced by parental employment and generational job prospects.

There is also evidence that rising unemployment or under-employment can be associated with rising social and political instability (Court, 1958; McNeil, 1963, Canterbury, 2001).

A FIFTY YEAR RETROSPECTIVE ON WORKING LIFE

At the risk of being guilty of presenting unadulterated nostalgia, this section of the paper provides a brief pre-working life picture of work through the eyes of a child and teenager. The world of the 1950s was far less physically comfortable than today. Amusements were the responsibility of the individual with supplements provided by radio, newspapers and books. From the age of eight, the Library was almost a daily visit to read adventure stories and more serious topics, such as books on history, exploration and technological developments, especially aviation.

As children we were allowed to roam the neighbourhood as long as we were home by dinner time. So most of our wandering occurred at weekends and between the close of school and nightfall. But my elder brother and I also went wandering in the early hours of daylight where even in a city of 1.863 million people (ABS, 2011), it was so quiet our ears tingled! At 0500 there was no traffic on the main road some 300 yards from our home. The traffic did not start until about 0630. The ceaseless activity of main roads was something for the future.

Visits to shops were usually functional. We needed food, clothing, fuel or some practical item. Our diet was typically Kellogg's Corn Flakes with added sugar and toast for breakfast accompanied by full cream milk (delivered to the door each day), butter, and jam. Lunch was usually a home made sandwich with Vegemite and cheese (usually a Kraft processed cheese product). Vegemite is an Australian-only product which is a by-product of beer production and was manufactured for many years by Kraft Foods. Dinner was typically meat with three vegetables such as potatoes, peas, beans, carrots or brussel sprouts. In my family the vegetables were usually quickly cooked in a pressure cooker and meat was grilled. The BBQ was some years ahead. Dinner was usually followed by dessert, usually custard and tinned fruit and on occasion, ice cream.

The reason for this narrative, is to introduce the organizational issues that were related to life in the mid-1950s. Life was comparatively bland, tempered by constant fears of nuclear wars created by the Cold War then taking firm hold. There were never discussions about the world of work because the family mapped out the future (or so my parents felt). School would be followed by university and a life in the legal profession and a long career (they were correct about the long career, but not in one profession and not the legal profession).

So, with such a simple diet, supplemented with fresh fruit, trips to the shops were directly matched to the items on the shopping list. Meat from the butcher, groceries from the grocer, newspapers from the newspaper store, ice cream from the drug store (milk bar), the shoe repairer for shoe repairs and household fittings from the hardware store. The purpose defined the destination rather than, as now, the destination often defines the purchases. Window shopping might occur for a new radio or a television set, but mostly shopping had a distinct purpose and there were few alternatives to choose from.

In 1955 we shopped with a grocer at the top of our street, Mr McConnell. We always addressed him personally to make our purchases, even though his minions would usually assemble the purchases which Mr McConnell placed in a bag and then collected the cash. The shoe shop nearby had about seven cobblers. The milk bar (drug store) further down the street had two staff, all family members. The butcher in the same row of shops had six or seven butchers and apprentices that a shopper could see but there were probably more behind the scenes. The hardware store had numerous employees and they could supply any item of hardware from a single screw to an electric drill (then a very rare item).

But in 1956, about half a mile from Mr McConnell's grocer shop, the G & G Supermarket opened. It was at least ten times the size of Mr McConnell's shop and it had few staff. You collected a trolley as you came in the turnstile and selected your groceries and took them to a check out, where the sales assistant bagged the items and collected your money. In the United Kingdom, a dispute over the question of when ownership of the goods passed in a supermarket became the focus of a celebrated law case: *Pharmaceutical Society of Great Britain v Boots Cash Chemists* (1953). The G & G Supermarket was the shape of the future but we did not realise that

then. Mr McConnell closed his store in about 1960, along with the shoe repairer. The hardware store (Swans Hardware) lingered until about 1975 and so did the butcher.

But the critical issue was that I enjoyed the personal relations that were developed in all of these stores and failed to really come to terms with the impersonal nature of most supermarkets, though I worked for one in the summer of 1964. But then I was about to start on an adventure with university (not so good to start with) and the business of banking. The interpersonal relations issue was a constant theme. For example, in Mr McConnell's shop one addressed Mr McConnell directly and spoke quietly to other customers while we patiently waited our turn. There was plenty of activity in the store to keep us amused and we usually greeted other customers as they arrived. That practice has disappeared in my country, replacing patient waiting with queues where one can only look at the back of the head of the person in front. The personal custom still remains in regional France, where, upon entering a store it is good manners to address staff and other customers with the greeting "Bonjour, Messieurs et Madames". That does not happen supermarkets.

In the banking business that I was about to join in 1967, the term "personal equation" was widely used to describe the positive characteristics of customers and other staff. Honesty and integrity were highly valued in both groups. The Bank fired staff for the most minor financial indiscretion, saying that in its experience, small thefts always led to bigger thefts, so no dishonesty was condoned for a moment. Past history was regarded as a positive way of measuring customer integrity and lending focused on past savings performance, potential and motivation to repay a debt to the bank, and the "personal equation" (Anonymous, 1967).

The notion of the "personal equation" and personal relationships have been casualties of computerisation and the growth of the supermarket. Relationships in the workplace have also been affected by policies that have transformed workers into units of labour, effectively de-personalising the workplace so that organization restructures can occur without too much anxiety on the part of managers. Yet strangely enough some of the new trends, Facebook, Uber and AirBnB, have worked hard on the connection between friends and acquaintances in way that the business world has seemingly largely forgotten. AirBnB insists that the accommodation provider and guest not only talk to each other, but also assess each other's performance (as a provider and a guest).

Nevertheless, I joined the banking industry in 1967 and remained in it for twelve years. It was at a time when "most people reported banking as the occupation they had just left". We were cannon fodder in a world that was rapidly moving from almost 100 per cent clerical support to almost 100 per cent computerized transactions. So I learnt banking the old fashioned way and then found myself projected into the head office of that same bank and a range of different roles culminating in being an auditor in an IT environment – a pioneering role at the time.

It was the first time this bank had undertaken audits "through" the computer and it was regarded as an *avant garde* activity. At that time, many banks had not yet addressed the issue, so we wrote our own audit programs and, with the help of a very senior manager who reported directly to the Board, began to test transactions from the time a customer lodged a payment or drew a check, through the clerical and IT processes and then to customer accounts (we started with the bank's general ledger and then moving to customers). It was fascinating but challenging work.

Frankly, I knew what I was doing from a technical sense having just graduated as a CPA, but I didn't understand the organizational context, so I went back to university to help me pick apart the working environment that I was grappling with. That's when I met the characters that follow – Higgins (1973), Hunt (1972), Maccoby (1976), Kahn and Weiner (1972) and Schon (1971), to name just a few. In the following section, these people are the centrepieces of my thinking about the future of work in 1978 and become the foundation of the last section of the paper.

PERCEPTIONS OF THE FUTURE OF WORK: A 1970s VIEW

When George Orwell published *Nineteen Eighty-Four* in 1949, it contained images of the future that many shunned at the time. However today, the proliferation of CCTV alone, suggests that a version of "big brother", an

omnipresence with the ability to observe almost all our behavior, is a reality (Packard, 1964), not just the possibility that Orwell envisaged. Furthermore, the typical acceleration of technology during World War II began to be felt in the business arena. Banks, insurance and engineering companies (and defence organizations, though they are beyond the scope of this paper) were early adopters. These businesses had massive transaction and calculation loads that were well suited to electronic calculation and banks and insurers were very happy to apply this technology to their transaction-heavy roles in an otherwise simple transactional environments. The investment in technology was substantial.

By the 1960s, viable forms of electronic computers were reaching these large business organisations which used computers to expand their ability to process greater volumes of transactions without significantly increasing labour costs. Some large investors in computer technology also sold their "surplus" capacity to other users with similar needs. For example, the bank I worked for initially used its computer power during the night, but sold daytime space to an airline for processing tickets. It suited both parties at the time, until on-line, real-time usage arrived and the mix of users changed again. There was a fascinating organizational culture change, when IT or EDP (Electronic Data Processing) as it was then known came into large organizations.

One of the immediate outcomes was that the organization effectively split into two organizations, the IT staff and managers and the bank's traditional staff and managers. The IT staff worked different hours and under different rules to the rest of the organization. Dress requirements were also noticeably different. Bank officers, regardless of rank and status, dressed conservatively. For many years only women had to wear a uniform though that was relaxed after the equal pay for equal work rules came into effect (1972), and men were expected to wear business attire including a collar and tie. But the IT staff of the time could wear pretty much what they wished and they worked around the clock. The culture of the two parts of the organization increasingly split. One bank, for example, eventually gave up this apparent struggle and outsourced its IT and then bought a part share in their IT supplier.

But there were also other organizational complications. Some senior managers insisted on maintaining paper records because they did not trust the memory and storage systems in their mainframe computers. Throughout the banking profession there were concerns about job security because while the mainframe computers permitted a much wider range of banking products, most of these products were heavily dependent on IT and not labour intensive.

A visible sign of technology's penetration of work was the advent of reliable Automatic Teller Machines which gradually moved banking from very limited public access (often just 30 hours per week) to 168 hours per week (24/7 in current parlance). Job content and career structures also changed. A comprehensive description of the early impact of IT in the banking industry can be found in Mumford and Banks (1967), which tracked the career-limiting effects of IT in that industry and, often, the destruction of the clerical skills inherent in banking jobs.

Also, the new cadre of senior managers being developed to lead the organization in the years ahead were already discussing ways of reducing labour costs by increasing the range of applications: credit cards, store cards, Automatic Telling Machines (ATMs), on-line transaction (without the aid of the World Wide Web), all suddenly became practical outcomes of the new technology. And it is here that an earlier work of Orwell comes into play.

Animal Farm (Orwell, 1945) was ostensibly a satire on the Soviet Union and its post-revolution developments. However, Orwell picked up a theme that links neatly to the issue of the value of working life and the possibility that western society shows many examples of the Orwellian slogan "all men (sic) are born equal but some are more equal than others", a theme that will emerge later in this paper.

By the beginning of the 1980s miniaturization of computing power (Lewis, 1983) emerged with the Personal Computers (PCs) and typewriters suddenly became passé (along with the typing pool in most but not all businesses and government offices. Some smart businesses have realised that while the typing pool may be sexist and apparently anachronistic, they have found that skilled keyboard operators are much more cost efficient than "hunt and peck" untrained managers).

These developments have a well documented history. What is not well recorded is the wave of differing outlooks such changes evoked at the time. As an adult college student, some of the influential thinkers of the times were Michael Maccoby (1976), Donald Schon (1971), Kahn and Weiner (1972), Toffler (1970), and Gurth Higgins (1973). I suspect all of these authors are also passé now, yet they each contributed to the expectations about the coming future in significant ways. I would like to quote my thoughts of their work at the time (Yes, I put aside these papers just over 38 years ago in the hope that one day I could reflect on their themes and the outcomes that have followed) and the optimism and pessimism they both reflected. So first let us look back nearly forty fascinating years and my reflections on their thoughts at that time, all painstakingly typed on my portable typewriter and later on my Osborne 1 portable computer (Callender, 1978):

My notes show that my initial reaction to Higgin's (1973) idea of the "post material society " was negative. It seemed inconceivable that in a world of such glaring inequality (indeed in our own society, be it the UK, USA or Australia) that it was realistic to consider mankind being able to broadly consider itself in a state of "post-materialism". Another factor complicating the approaches to "post-materialism" is man's (sic) reaction to change- the "dynamic conservatism" (Schon, 1971) that tends to make men (sic) actively resist change for the sake of avoiding change itself rather than the effects change will bring. This form of conservatism may be growing in the face of major technical changes now beginning to make their presence felt.

Also capable of interfering with the realisation of the "post-material society" is aggression. In the Middle East, in Africa's centre and "Deep South", in Europe and South-East Asia, now exist tensions capable of immediately involving major world powers in a calamitous and perhaps, final conflict. The possibility of a total war is pretty hard to guess about; we continue to skate on the brink, with acceptance of the risk a normal part of our lives, no doubt because the effect of a nuclear war is beyond our realistic conception.

And finally, to the part of "unselfishness/selfishness" on the part of the developed nations that will permit the acceptance of a lesser standard of living to both preserve resources and allow a better sharing of those a resources and their end products. Here is a need expressed in varying ways by other writers who have considered mankind's approach to their future:

Donald Schon (1971) sees a need for man (sic) to shake off his inherently "dynamic conservatism" so that he (sic) can develop a "learning approach" to the future that will allow him and his institutions to adapt to changes demanded by the environment without inducing instability;

Kahn and Weiner (1972) look towards a future in which society learns to be "self-correcting and self-adjusting";

Hunt (1972) reflects that in the years ahead "even the members (of organisations) themselves will be the antecedents of change"; and

Higgins (1973) suggests a change in attitude towards less selfishness demands a "religious stance" (pp. 3-4).

Maccoby (1976) was in a different class. His focus was on the way in which senior executives rose to the top of their organizations, and he foresaw the emergence of the leadership team, comprising a leader and his/her support team that would move from organization to organization as the leader worked her/his way to the top of yet another organization. Unlike Maccoby's peers that are discussed in this paper, his view of the future has been borne out by events and his model is almost regarded as typical. So what happened to the rest of expectations of the future of work in society?

OUTCOMES OF THE 1970s VIEWS ON THE FUTURE OF WORK.

When we look at the past fifty years and the anticipated behavior of wealthy states, it is clear that I was wrong, and so were my academic heroes. Orwell (1945, 1949) was more prescient, or realistic, than us all. And he comes from an earlier era. Orwell foresaw both the disregard of inequity in workplaces and society at large, and the spread of seemingly tight control of societies (except when it comes to guerrilla warfare, a topic also beyond

the scope of this paper).

Higgins (1973) suggested that "our culture specifically excludes the feminine qualities ... gentleness, sharing, caring, loving, etc" (p. 122). He claimed these characteristics could be built into our social institutions, as corollaries of "acquisitiveness and competition" and notes (Higgins, 1973) that "we won't be able to turn off our belief in productivity and our habits of work, the Old Adam [Smith], ... the 'wasted' time would kill us" (p. 123). In this regard, Higgins has been correct, at least in the case of wealthy nations.

Indeed, we have not gone well since Higgins and his cohort wrote their thoughts? What is our scorecard? In some respects the evidence supports Higgins' views about our acquisitive nature, but the ascension of the feminine characteristics that Higgins hoped for does not seem to have occurred. Instead extreme politics and religious views have come to dominate many countries in the wake of the events of 11 September 2001 and in many countries governments are bogged down by an unwillingness to find collective solutions. If anything, the gulf between rich and poor in many societies has also grown, to the disadvantage of many lower-income families and young people.

In summary, the feminine qualities have taken a backward step and the Orwellian inequality showcased in *Animal Farm* has grown. We have also remained very tightly focused on productivity. As Radia (2016) notes, "online connectivity and digital communities mean that customers and software on which businesses are built can be reached easily and cheaply ... Corporates have been left floundering and are finally paying the price for decades worth of underinvestment in ...innovation and product development" (p. 9).

Schon's (1971) dream of the rise of the learning society and the decline of "dynamic conservatism" has not materialised. Stalemate politics in many democracies, despite the wealth of information available to inform political decision making, hint loudly at the failure of individuals and institutions to break away from the strictures of past dogma. Positions are held on principles rather than evidence.

The recent Brexit vote in the United Kingdom has demonstrated the formidable forces of conservatism (Lewis, 2016). Radia's (2016) criticism of "corporates" underscores the lack of change demonstrated by large organizations. Kahn and Weiner (1972) and Hunt (1972), if they are still with us, would be similarly disappointed with the apparent failure of wealthy societies to balance working life and more equitable social structures. Rather the extremes of politics, religion and careers have moved to centre stage. Corporate policy in most instances favours profit maximization and stringent, frequent reporting requirements which militates against long term strategic decision making and favors short-term "good news" reporting.

Mr McConnell, who knew most of his customers would be shocked at the growth of self-serve, point-of-sale terminals in so many stores today. These terminals (and some stores now only have these terminals) mean that customers can now engage in the shopping process without speaking to another human being. The shopping process has shifted from a socially structured event of fifty years ago, to an impersonal transaction.

The social activity is now achieved by the visit to the shopping mall or shopping centre, not the bit that produces jobs and income: the sale. It can be no surprise that many retailers struggle to retain customers and customer loyalty. Customer communication is seemingly much more satisfying via Facebook, Twitter, email or SMS. At least friends respond to Facebook entries!

Personally (and this is the nostalgic bit), I lament the loss of personal contact in retailing and in many workplaces where increasingly major personal matters are dealt with by emails. But I find myself reacting very positively to the growth of new business models such as Uber (taxi service) and AirBnB (accommodation) which not only offer a more flexible product (freed from dynamic conservatism) and preserve, indeed encourage, customer-seller relations in an increasingly socially detached world.

CONCLUSIONS AND IMPLICATIONS

With the failure of the predicted models of a socially structured world that would have preserved a suitable environment for working life, what is likely to be the future of work? Frankly, I believe we will just struggle on,

facing many crises created by our fascination with productivity, our distain for sharing and our rigid acceptance of the continuing supremacy of "dynamic conservatism". In some countries this may lead to extreme social dislocation and in others just mild discomfort for those in powerful positions who can simply look the other way.

For organization managers the outcomes are complex. The current central question seems to be: will the latest technologies evident in the retail industry and many service industries lead to widespread unemployment or greater under-employment? Will new industries emerge that can counteract this possibility? Will job-sharing increase employment opportunities (White, 2016)? Will on-line retailing mean the end of the shopping mall and organized shopping as a social event, to be replaced with individuals simply ordering from their personal computer? What are the implications of higher unemployment, should this emerge? What are the social consequences of having not only older societies, but also those with less purchasing power than their parents. Exploration of these topics represent the principle limitations of this research to date.

Finally, it needs to be said that it was not only Orwell who possessed a prescient view of the future. The poet Matthew Arnold, also possessed a bleak view of the future, with his famous lines, first published in 1867:

*And we are here as on a darkling plain ,
Swept with confused alarms of struggle and flight,
Where ignorant armies clash by night.*

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XENOPHOBIA AND HUMAN RIGHTS: STRENGTHENING THE SPIRIT OF “UBUNTU” GLOBALLY

Elizabeth Chinomona
Vaal University of Technology, South Africa

ABSTRACT

Xenophobia is an area of research that has not received a lot of attention especially on the experiences and emotions of African immigrant entrepreneurs residing in metropolitan cities, Gauteng province in particular. This research will add a new dimension to the debate on xenophobia and a significant contribution to the limited body of available literature on the phenomenon of xenophobia as experienced by African immigrant entrepreneurs. An exploratory, qualitative approach was adopted using semi-structured in-depth interviews and a focus group. Therefore, the findings of this empirical study are expected to have to provide fruitful implications across all stakeholders in South Africa's institutions and institutions worldwide to put more emphasis on eradication of xenophobic tendencies through human rights preaching and punishing severely those who are involved in xenophobia. This research therefore submits that education, fighting for human rights and awareness against xenophobia and its implications is necessary not only in South Africa but the whole world. Spirit of Ubuntu should be encouraged at all costs for peace to prevail in the South African environment and globally.

Keywords: Immigrant Entrepreneurs, Johannesburg, Xenophobia, Human Rights, Ubuntu

INTRODUCTION

Xenophobia has become a major issue of social debate in South Africa and abroad. This is due to the most recent April 2015 xenophobic attacks on foreigners, especially African immigrant entrepreneurs residing in South Africa. This research explored on xenophobia as a serious challenge hampering African immigrant entrepreneurs in Johannesburg, South Africa. In today's post modern era, immigrant entrepreneurship is important because of the value it adds, the innovations it creates, the wealth it produces and the additional employment it creates. Moreover, there is general agreement that entrepreneurship builds strong economies, provides employment and presents choices, while generating more opportunities (Timmons & Spinelli, 2007; Co, Groenewald, Mitchell, Nayager, Van Zyl & Visser, 2006. Sallaff (2002) argues that entrepreneurship is a strong tool for immigrants' economic and social integration and is a means by which immigrants without education or technical skills can escape poverty. By acknowledging the role that immigrant entrepreneurs play in the economic development of their host nations, it may be argued that xenophobia is a critical challenge for African immigrant entrepreneurs. Xenophobia is defined in the Concise Oxford Dictionary as a “morbid dislike of foreigners” (Crush & Pendleton, 2007).

This paper will focus on South Africa as an example where xenophobia is rampant but it is important to note that xenophobia is common worldwide though in other countries like Zimbabwe, United States of America and Britain its effects is minimal.

PROBLEM STATEMENT

Xenophobia is experienced throughout the world. Thus, it can be viewed as “deep dislike of foreigners” (Landau & Jacobsen, 2004). Based on Landau and Jacobsen (2004) definition, xenophobia exists within South Africa's own population groups and is against human rights principles. Newmarch (2002) argues that most immigrants struggle to find work in Johannesburg and the city is seen to have a high level of xenophobia. In spite of having educational qualifications and experience, finding work for immigrants is very difficult and they are grossly

exploited. Frustrated in their goals of integrating into the host society, immigrants turn to entrepreneurship, sometimes targeting the protected niche in the ethnic enclaves (Salaff, 2002). Therefore, this motivates many of them into necessity-based entrepreneurship. Researchers and immigrants themselves say immigrants frequently become entrepreneurs because they have already taken big risks by moving thousands of miles from home (Thurm, 1999). As a result, they create employment for themselves and sometimes for unemployed South Africans. Xenophobia hampers the business operations of African immigrant entrepreneurs. The purpose of this research is to comprehensively understand the experiences and emotions of Africa immigrant entrepreneurs in Johannesburg, South Africa.

Research Questions

The research questions addressed for this research study are as follows:

- **Research Question (1):** Why is xenophobia so detrimental to the development of any country, South Africa in particular?
- **Research Question (2):** Is the government doing enough in terms of strengthening the spirit of *ubuntu*?
- **Research Question (3):** To what extent does human rights assist in protecting immigrants from xenophobia?

Objectives of the Study

The objective of this study is to achieve the following:

- To document xenophobic experiences of African Immigrant entrepreneurs in Johannesburg so that appropriate action may be taken to ameliorate their situation.
- To investigate if Human Rights in South Africa is helping in eradicating xenophobia.
- To make recommendations to the Government of South Africa on what policies should be put forward to prevent xenophobia from happening again with the aid of the spirit of *ubuntu*.

LITERATURE REVIEW

In order to present a well-rounded picture in relation with the title of the research, this paper will review literature on what an immigrant entrepreneur is, what immigrant entrepreneurship is as well as elucidating the xenophobia challenge and the spirit of *Ubuntu* in Africa.

Johannesburg

As neighboring countries experienced political turmoil, more and more people crossed the borders in search of a better life and many refugees settled in and around the city of Johannesburg. Johannesburg is a city of hope and a promise of new beginnings for many immigrants. This study will aim to gather information that can be applied in the development of African immigrant entrepreneurs in Johannesburg, South Africa. Below is the geographical map of Johannesburg in South Africa.

Immigrant Entrepreneurship

Tengeh, Ballard and Slabbert (2011) define immigrant entrepreneurship as entrepreneurial activities carried by immigrants just after arriving in their host country, either through personal initiative or social networks. According to Fatoki and Patswawairi (2012) and Dalhammar (2004) describes immigrant entrepreneurship as the process by which an immigrant establishes a business in a host country (or country of settlement) which is not the immigrant's country of origin. Chrysostome (2010) argues the term immigrant entrepreneurship was a homogeneous concept that referred to one type of immigrant entrepreneur who establishes a business venture as the only way to survive in the host country, but today it is heterogeneous and refers to different types of immigrant entrepreneurs. Immigrant entrepreneurship associates the new arrivals with their co-ethnic community in their new country of residence (Chand & Ghorbani, 2011). From the authors' elucidations of immigrant

entrepreneurship it can be noted that immigrant entrepreneurship refers to personal commercial undertakings by immigrants as soon as they have arrived in a host country.

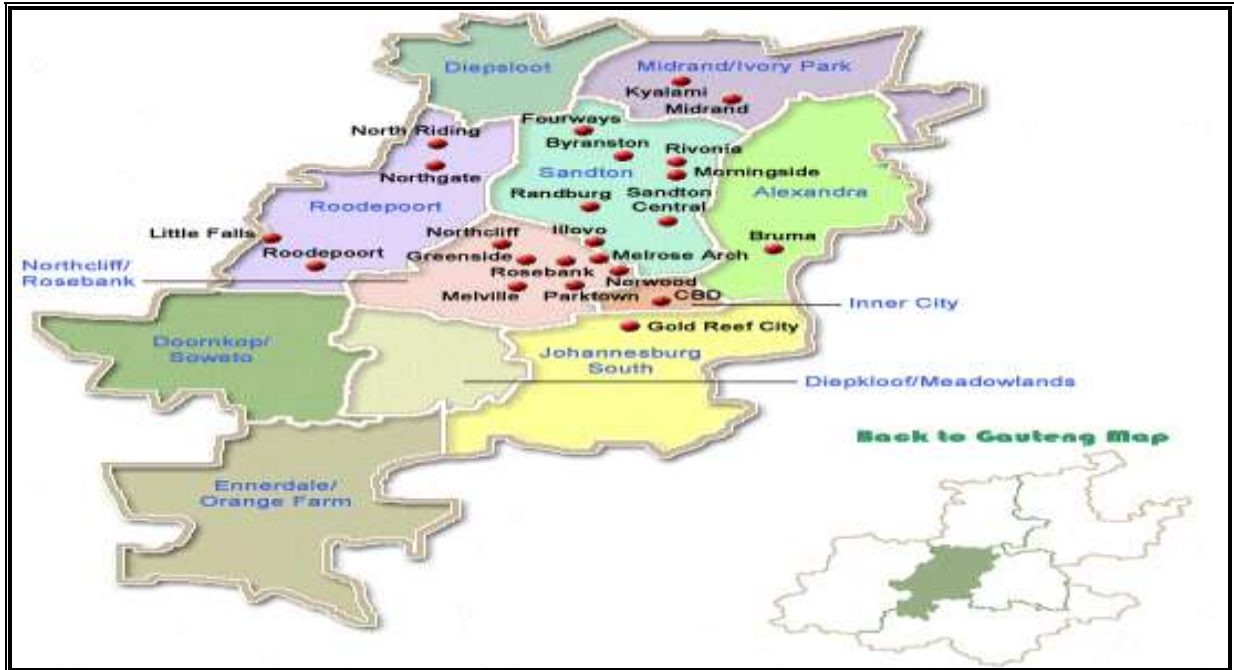


Figure 1.1 Map of Johannesburg: Source: [http:// www.sleeping-out.co.za/Johannesburg-Map.asp](http://www.sleeping-out.co.za/Johannesburg-Map.asp). Assessed date- 25 April 2015

Xenophobia

Crush and Ramachandran (2009:5) explain that xenophobia is derived from the Greek words “xenos” and “phobos” which mean “strange or foreign” and “phobia” respectively. The term is typically used to describe a fear or dislike of foreigners or of people significantly different from oneself, usually in the context of visibly differentiated minorities (Shinsana, 2008). Crowther (1995) defines the concept of xenophobia as “an intense dislike or fear of strangers or people from other countries. It is more broadly defined in the Dictionary of Psychology (1978) as “a fear of strangers”. Khosa and Kalitani (2014) explains that Xenophobia is widespread in the townships, where immigrants are referred to as “*kwerekwere*” a disparaging word for African immigrant. The causes of xenophobia in South Africa include jealousy, stealing South African women, accepting below minimum wages and stealing jobs. For example:

Jealousy: According to Khosa and Kalatanyi (2014) Sylvanus Dixon, a community organizer from Sierra Leone, spoke to the BBC about the causes of xenophobia in his adopted homeland of South Africa. Dixon claimed that fear and jealousy related to employment and income were to blame. “*South Africans see foreigners with businesses and they don’t know how they got their money*”, he said. “*That’s where the jealousy is coming from. That’s when the fear becomes xenophobia*” A study conducted in a Port Elizabeth township revealed that jealousy was one of the main reasons for xenophobic violence there. In the Walmer Township, xenophobic violence usually takes place when attackers are jealous of the foreigners’ business success (Khosa & Kalatanyi, 2014).

Ubuntu

“I am because we are; and since we are, therefore, I am”, this is the familiar aphorism expressing a traditional African ethic known as *Ubuntu* (Mbiti, 1990). In South African culture, the origins of *Ubuntu* can be traced back to the traditional indigenous societies living in the Transkei and Ciskei regions and the word itself originates from the Nguni language family, which comprises of Zulu, Xhosa, Swati as well as Ndebele, four of

the numerous South African languages (Poovan, 2005). *Ubuntu* is defined as the essence of being fully human, that is, African humanism, a philosophy, an ethic and as a worldview (Gade, 2011, Ngunjiri, 2010).

Oppenheim (2012) explains that the word *Ubuntu* comes from the Xhosa/Zulu culture, the community into which Nelson Mandela was born, and has been summarized in the phrase, “*Umntu ngumuntu ngabantu*” in the Nguni language of Xhosa, Zulu, or Ndebele. The concept of this phrase can be translated to mean, “A person is a person through other persons,” or “I am because we are” (Oppenheim, 2012). Chaplin (2006) concurs with Mangaliso (2010) when he says *Ubuntu* is an African word for a universal concept that places the good of the community above self-interest.

Ubuntu refers to the communal responsibility of sustaining life, it refers to people and the collective respect for human dignity. “The cardinal spirit of *Ubuntu* is expressed in Xhosa, one of South Africa’s eleven official languages, as “*Umntu ngumuntu ngabanye abantu*” understood in English as “People are people through other people and I am human because I belong to the human community and I view and treat others accordingly” Mangaliso (2010). From the authors’ elucidations on the concept of *Ubuntu* it can be seen that having Ubuntu means striving to show respect to others and to be honest and trustworthy.

Human Rights

Human rights are also called natural rights. Since the adoption of the United Nations Universal Declaration of Human Rights (UDHR) in 1948, the rhetoric human rights has become almost universal and has been elevated to political correctness where the denial of them taints the innocent philosophical skeptic (Knowes, 2003:133). In actual sense the extent of global human rights violations has gradually begun to cast doubts as to whether the rhetoric of human rights remains simply an empty and abstract moral ideology (Keet, 2009, 2010). Du Plessis (2000:387) adds that two justices, Mokgoro and Madala went further than this and solemnised a marriage of Western and African human rights values with reference to *Ubuntu*. Here human rights and Ubuntu are linked together as working telephone wires that work hand in hand.

Brown (2004) and Du Plessis (2000) are clearly uncomfortable with the persistent tendency to treat human rights as purely moral and thereby de-politicise them. Du Plessis (2000) dislikes the way in which the constitutional court adopts an a-political denying the fact that they in fact interfering politically and consequently result in the sense of actual distribution of power. Du Toit (2014) agrees with Ignatieff (2001) in that human rights are used as instruments to stop unmerited suffering, gross physical cruelty, torture, beatings, killings, rape and assault. This same sentiments happened here in South Africa in April this year in which foreign black residents were killed and assaulted, cries for human rights were heard locally and globally.

METHODOLOGY

This study employed a qualitative research methodology to examine the xenophobic attacks experienced by foreigners in the Gauteng province. Furthermore, field researches investigated the views and opinions of entrepreneurs directly and indirectly by means of interviews and observations. There is also some findings from literature (Bradley, 2007). The study adopted data triangulation approach. Data triangulation refers to the use of multiple sources of data. Multiple and independent sources of evidence, including observations, interviews and document exploitation (Wilson 2010). The researcher used convenience sampling which is a non-probability sampling technique to select the respondents. The researcher interviewed fifteen (15) entrepreneurs in the Gauteng province, whose businesses are registered according to the laws and regulations of South Africa. The samples were five from Roodepoort, five from Vanderbijlpark and five from Vereeniging.

Finally, the researcher had an opportunity to observe employees who work in different entrepreneurial activities like food processing, garment making, furniture manufacturing and import and export of goods. The researcher observed that foreigners work in fear in xenophobic attacks to the point of putting someone at the door to check what is happening in the surrounding environment. Again memos were developed from the notes taken and used to augment the data collected by means of interviews, informal conversations and documented material. Data collection and analysis were simultaneous. Analyzing data involved categorizing and triangulating

the evidence from the multiple perspectives. Based on the field notes, problems were identified and the solutions were deduced.

Focus Group

The study conducted a focus group of 8 entrepreneurs consisting of 4 men and 4 women in Vanderbijlpark only. The results of the interviews and focus group shows that foreigners are living in fear in South Africa. They feel one day they might end up dead or their businesses destroyed. The results shows that there is need to have the spirit of *Ubuntu* among Africans and these xenophobic attacks are not only prevalent in South Africa but in every African country like Zimbabwe and Malawi though here the magnitude is high because foreigners are so many. Having a spirit of *Ubuntu* is the only way because it starts with a change of oneself in beliefs and values. Change from within produces greater and effective results.

IMPLICATIONS OF THE STUDY

The current study is an attempt to undertake a research in an often most neglected context but yet an important sector of the South African businesses. Therefore, the findings of this empirical study are expected to have to provide fruitful implications across all stakeholders in South Africa to put more emphasis on eradication of xenophobic tendencies and punish severely those who are involved in xenophobia. Xenophobia tarnishes the image of the country both locally and internationally. South Africa has to put stringent measures to put a stop to xenophobia since the media will use it to destroy its image. A lot of businesses in South Africa are foreign owned so eradicating xenophobia would mean an economic boom and rising of the Gross Domestic Product (GDP). Foreigners would enjoy working and establishing their businesses without fear and this would benefit not only the foreigners but also locals because most of the people employed in these businesses are locals who understand the culture and speak the local language. Other countries can also learn from this since each and every country has foreigners with businesses and the foreigners need to be treated with respect and love because they are very beneficial to the countries where they establish their businesses economically and socially.

This study therefore submits that education and awareness against xenophobia and its implications is necessary not only in South Africa but the whole of the world. Formulation of policies is needed as a matter of urgency to protect foreign students and workers especially in institutions of higher learning where most students and staff are foreigners. Most institutions in South Africa have demonstrated and campaigned against xenophobia to protect their foreign students and staff especially Vaal University of Technology. Vaal University of Technology has foreign students and lectures from all over the world which include France, Gabon, Cameroon, Zimbabwe, Angola and Botswana. Spirit of *Ubuntu* should be encouraged at all costs for peace to prevail in the South Africa and the whole of Africa. God created us in his own image in a fearfully and immaculate manner. We have the same God which means as human beings the blood is just the same. Human rights principles should be implemented and put in action worldwide. Human rights should not be discarded because it is still ethical to protect human beings, as well as some effective power in human rights that could be strengthened and offer viable social and political alternatives if clearer accounts of human rights are offered which protects people from fatal circumstances.

LIMITATIONS AND FUTURE RESEARCH

In spite of the contribution of this study, it has its limitations which provide avenues for future researchers. First and most significantly, the present research is conducted from the foreign entrepreneurs in Gauteng province only who have been affected by xenophobia or experienced xenophobic tendencies. Perhaps if data collection is expanded to include other provinces like, the Eastern Cape, Free State, KwaZulu-Natal, Limpopo, Mpumalanga, Northern Cape and North West, the results could have been different or more robust.

There is also the problem of common method bias because qualitative research was purely used in this study. It was going to be more robust if the study included both qualitative and quantitative methods. The study was done in South Africa only but doing the research in other African countries or even developed countries like

Britain and United States of American could be so interesting and different results obtained could added new contributions in research. There is also need to constantly re-examine whether current interpretations of human rights are really what we want them to be in order to prevent and correct human suffering, misery and wrongs. All in all, these suggested future avenues of study stand to immensely contribute new knowledge to the existing body of xenophobic literature, a context that happens to be less researched by some researchers in Africa because it's a more sensitive issue.

CONCLUSION

In Africa and even developed countries, xenophobia has become an issue though it's mainly visible in South Africa because it has many immigrants from all over Africa and other continents like Asia. Strong measures should be put in place for peace to prevail because it's damaging the international and local image of South Africa. Xenophobia is against humanity, against the spirit of *Ubuntu* and tarnishes the image of the country. God created us the same in his own image so we should treat each other with respect and dignity not killing each other unnecessarily.

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MODELLING THE INFLUENCE OF QUALITY OF WORK LIFE, EXPECTATIONS TOWARDS WORK, PERCEPTION OF WORK LIFE ON COMMITMENT TO LONG-TERM CAREER OF EMPLOYEES IN GAUTENG PROVINCE, SOUTH AFRICA

Elizabeth Chinomona
Vaal University of Technology, South Africa

ABSTRACT

Businesses are getting better, bigger, more integrated and more complex in this era. The recognition of the influence and importance of quality of work life can be beneficial to employees and employers in a business. If an employee's expectation are met, they have a clear and concise perception toward their work contributing to long-term career. The principle of this study is to demonstrate the influence of quality of work life, expectations towards work and perception of work on commitment to long-term career on the employees in the Gauteng province of South Africa. A quantitative research design was utilized and a sample of 250 employees in managerial and non-managerial employees was used. The study uses smart PLS to analyze the data. The findings of this study showed the acceptance of all the hypotheses that there is a significant influence of quality of work life, expectations towards work and perception of work life on commitment to long-term career.

Keywords: Quality of work life, Expectations towards work, Perception of work life, Commitment to long term career, Affective Events Theory

INTRODUCTION

The aspects of long term career of employees within an organisation remains an important factor regarding the success of any business in this twenty-first century. Currently, some of the factors shaping the world of work and its situated nature include global shifts in the economy, mandatory retirement changes, the growing number of immigrant or older or migrant workers, the offshoring of work from one country to another and the discourses about future work possibilities (for example the demise of manufacturing in the western world, unemployment as a common phenomenon and the emergence and acceptance of service work or knowledge work as the norm). All of these are changing the occupational salience or valuing of goal directed activities within a community or society (Urbanowski, 2012:17).

The contributions of this study to commitment to long term career is that it develops a theoretical model that examines the relationships of workplace spirituality, expectations towards work and quality of work life as fundamental predictors to commitment to long term career within the different business environments. The remainder of the paper is presented as follows: A problem statement is constructed, the theoretical model is developed after which demonstrates the relationships and hypotheses of the variables. This will be followed by the methodology, data analysis and conclusions of the study. Lastly the study will present the limitations and recommendations for future research.

PROBLEM STATEMENT

Provided the importance of long term commitment to career by employees, more information into its factors affecting long term career and its consequences are needed to help organizations improve their level of retaining employees. Srikanth and Israel (2012) states that individuals who are rated low on career commitment will be unproductive in the organization. Lapalme, Tremblay and Simard (2009) indicates that organizational restructuring places increased pressure on employees and causes loyal workers to question their commitment to the organization.

Few studies have focused on a more detailed model identifying the influence of antecedents such as workplace spirituality, expectations towards work and quality of work life on commitment to long term career. Researchers such as (Lapalme *et al.*, 2009) focused on supervisor support, organizational support and psychological distress as antecedents to commitment to career. Other researchers such as Poon (2013), Ferreira, Basson and Coetzee (2010), Srikanth and Israel (2012) have studied these variables in different context.

LITERATURE REVIEW

This paper reviewed literature on the Affective events theory, quality of work life, expectations towards work, perception of work life and commitment to long term career.

Affective Events Theory (AET)

Is a model developed by organizational psychologists to explain how emotions and events influence job performance and job commitment (Thompson & Phaua, 2012:276). The model explains the linkages between employees' internal influences and their reactions to incidents that occur in their work environment that affect their performance, organizational commitment and job satisfaction. The theory proposes that affective work behaviors are explained by employee moods and emotions, while cognitive-based behaviors are the best predictors of job satisfaction (Wegge, Van Dick, Fisher, West & Dawson, 2006). The theory proposes that positive-inducing as well as negative-inducing emotional incidents at work that are distinguishable and have a significant psychological impact upon workers' job satisfaction. This results in long lasting internal and external affective reactions exhibited through job performance, job satisfaction and organizational commitment (Wegg *et al.*, 2006). Regarding affective events theory to the recent study, the study accepts that due to the imbalance of employee retention and retirements within an organization, workplace spirituality, expectations towards work and quality of work life forms part of affective events and emotions encountered by employees which ultimately leads to commitment to long term careers.

Workplace Spirituality

Workplace spirituality or spirituality in the workplace is about the recognition that meaningful work and sense of community are essential for the spiritual growth of employees (Duchon & Plowman, 2005). Spirituality in the workplace is about individuals and organizations seeing work as a spiritual path, as an opportunity to grow and to contribute to society in a meaningful way. The spirituality view is that work is not just meant to be interesting or challenging, but that it is about things such as searching for deeper meaning and purpose, living one's dream, expressing one's inner life needs by seeking meaningful work, and contributing to others (Ashmos & Duchon, 2000). Economic activities reflect the will, experiences and emotions of people and thus reveal human nature and moral content. With the formation of a knowledge-based economy and the acceleration of material satisfactions due to technological advancements at the end of the 20th century, many people began to exhibit spiritual emptiness, moral abnormalities, twisted social values, greed and all kinds of crimes because of the imbalance between their material and spiritual lives (Chen & Sheng, 2013)

Expectations towards Work

Shaw (2013) states that workers today can expect more periods of intermittent work disruption and disengagement as part of their employment trajectory due to the unpredictability of and unstable global

economies. Unemployment is not new, however what is new is the anticipation of unemployment as an expected part of work life and the rise in the numbers of people from all employment sectors that will experience unemployment. Many workers have not previously approached employment with the view of considering and anticipating the need to plan for intermittent or prolonged periods of work disruption. In turn, more people will likely use or rely on unemployment types of benefits during their working years. Shaw (2013) has identified five predominant themes to expectations towards work in the new generation which are work/life balance, good pay and benefits, opportunities for advancement, meaningful work experiences, nurturing work environment. Generation Y have reportedly seen their parents work long hours, only to fall victim to corporate downsizing, frequent layoffs and high divorce rates. As a result, they have become wary of being put in the same position, and choose “making a life” over “making a living” (Zhang, Straub & Kusyk, 2007).

Quality of Work Life

Torlak, Tiltay, Ozkara and Dogan (2014) describes quality of work as related to employees feeling good. Satisfaction of an individual's needs at their workplace comprises the quality of work life. An individual's necessity set involves respect, self-fulfillment, information, aesthetics, health and security requirements, economic and domestic needs. Quality of work life has become an umbrella term for severity of activities which differentiates individuals and working conditions (Ganguly, 2010). Quality of work life is seen as a basic tool which enhances working conditions from an employee's perspective and provides a great organizational productivity (Permarupan, Al-Mamun & Saufi, 2013: 269). It refers to the employee's satisfaction with working life and it is seen as a subjective phenomenon which is influenced by employee's perceptions of working conditions (Lee, Dai, Park & McCreary, 2013)

Commitment to Long Term Career

Srikanth and Israel (2012) defines career commitment as one's attitude towards one's profession or vocation. Career Commitment is characterized by strong sense of identification, persuasion, development and active involvement in individual career goals. In other words, it is commitment to one's career goals. Career commitment or occupational commitment has also been conceptualized in three approaches (Meyer, Allen & Smith, 2007). The first deals with affective commitment to an individual's career based on strong desire to remain in the same profession. The second is concerned with normative commitment with a sense of obligation to remain in the chosen profession and the third with continuance commitment which is concerned with high costs associated with leaving the occupation. Therefore the following hypotheses are postulated:

H1: There is a positive relationship between workplace spirituality and commitment to long term career.

H2: There is a positive relationship between expectations towards work and commitment to long term career

H3: There is a positive relationship between quality of life and commitment to long term career.

MEASUREMENT INSTRUMENTS

Research scales were designed on the basis of previous work. Proper modifications were made in order to fit the current research context and purpose. Expectations towards work was measured using four-item scales adapted from Shaw (2013). Perception of work life' used a three-item scale measure; all were adapted from Luthans (2005). Quality of work life used a three-item scale measure; all were adapted Rathamani and Ramchandra (2013). Commitment to long term career was measured using a three-item scale, from Sanchez-Vidal, Cegarra-Leiva and Cegarra-Navarro (2012). All were measured on a five-point Likert-type scale that was anchored by 1 (strongly disagree) to 5 (strongly agree) in order to express the degree of agreement.

PATH MODELING RESULTS

After confirming the reliability and validity of the measurement instruments, the study proceeded to test the proposed hypotheses. In total there are three hypotheses that are tested. In the path model, Expectation towards Work (EW), Perception of Work Life (QL) and Quality of Work Life (QW) are the predictor variables. Commitment to Long-Term Career (CC) are the sole outcome/dependent variable. Figure 1, below provides the proposed hypotheses and the respective path coefficients. The same results of the path coefficients are tabulated in Table 2 depicting the Item to Total correlations, Average variance extracted (AVE), Composite Reliability (CR) and Factor Loadings.

Path Model Results and Factor Loadings

Below is Figure 1, indicating the path modelling results and as well as the item loadings for the research constructs. On the measurement instruments for Expectations towards work 1 of them was deleted which is EW3 due to the fact that the factor loadings were below 0.5 which is the recommended threshold. Also on Perception of work life, QL3 was deleted and on Commitment to long term career, CC3 was deleted because the factor loadings were below the cut-off point which is 0.5.

Table 2, below present the research constructs, Cronbach alpha test, Composite reliability (CR), Average variance extracted (AVE) and item loadings. The lowest item to total loading is CC 2 with 0.449 and the highest is CC 1 with 0.911. On Factor loadings the lowest is 0.450 and the highest is 0.984. It is important to note that 0.449 and 0.450 are below the threshold which is 0.500 but if we round off to the nearest whole number they will all become fairly acceptable which is exactly 0.500. This shows that the measurement instruments are valid. The lowest Cronbach alpha is 0.602 and the highest is 0.789 which shows that the constructs are very reliable and are explaining more than 60% of the variance

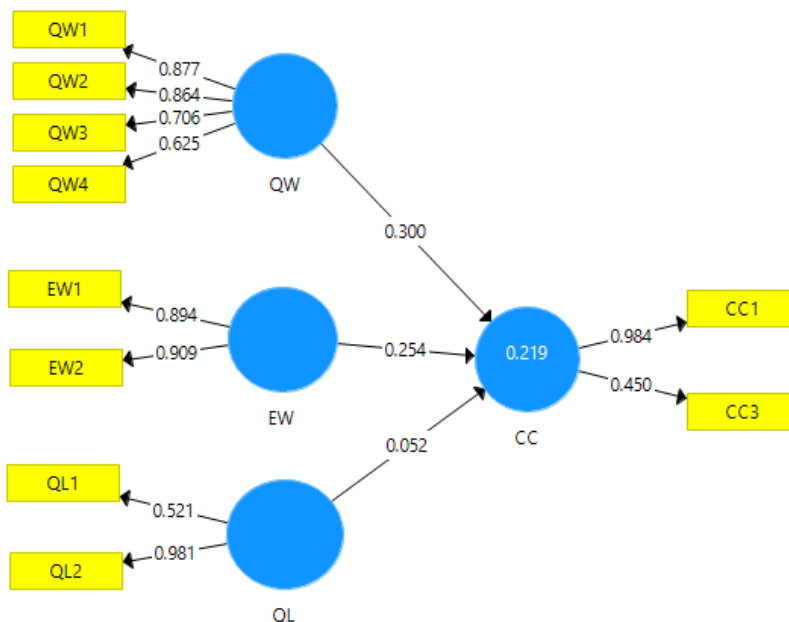


Figure 1: Path Modeling and Factor Loading Results

EW=Expectation towards Work; QL= Perception of Work Life; QW=Quality of Work Life; CC=Commitment to Long-Term Career

Table 2: Measurement Accuracy Assessment and Descriptive Statistics

Research constructs	Descriptive statistics*		Cronbach's test		C.R.	AVE	Item Loadings
	Mean	SD	Item-total	α Value			
Quality of work life (QW)							
QW 1	3.09	1.300	0.813	0.789	0.788	0.697	0.877
QW 2			0.839				0.864
QW 3			0.689				0.706
QW 4			0.606				0.625
Expectations towards work (EW)							
EW 1	2.10	1.173	0.856	0.700	0.700	0.652	0.894
EW 2			0.899				0.909
Perception of work life (QL)							
QL 1	2.01	1.070	0.501	0.602	0.602	0.504	0.521
QL 2			0.802				0.891
Commitment to long-term career (CC)							
CC 1	3.05	1.002	0.911	0.653	0.654	0.500	0.984
CC 2			0.449				0.450

EW=Expectation towards Work; QL= Perception of Work Life; QW=Quality of Work Life; CC=Commitment to Long-Term Career

Table 3: Inter-Construct Correlation Matrix

Variables	QW	EW	QL	CC
QW	0.590			
EW	0.599	0.599		
QL	0.520	0.562	0.579	
CC	0.460	0.533	0.458	0.575

EW=Expectation towards Work; QL= Perception of Work Life; QW=Quality of Work Life; CC=Commitment to Long-Term Career

Inter-construct Correlation Matrix

One of the methods used to check on the discriminant validity of the research constructs was the evaluation of whether the correlations among latent constructs were less than 0.60. A correlation value between constructs of less than 0.60 is recommended in the empirical literature to confirm the existence of discriminant validity (Nunnally and Bernstein, 1994). As can be seen all the correlations are below the acceptable level of 0.60. The diagonal values in bold are the Shared Variances (SV) for the respective research constructs. The Shared Variance is expected to be greater than the correlation coefficients of the corresponding research constructs. Drawing from Table 2, above, the results further confirm the existence of discriminant validity.

Table 4: Results of Structural Equation Model Analysis

Path	Hypot hesis	Path coefficients (β)	T- Statistics	Decision on Hypotheses
Quality of work life (QW) \rightarrow Commitment to long-term career (CC)	H1	0.300 ^a	6.979	Accept/ Significant
Expectations towards work (EW) \rightarrow Commitment to long-term career (CC)	H2	0.254 ^a	5.610	Accept/ Significant
Perception of work life (QL) \rightarrow Commitment to long-term career (CC)	H3	0.052 ^a	3.143	Accept/ Significant

^aSignificance Level $p < .10$; ^bSignificance Level $p < .05$; ^cSignificance Level $p < .01$.

Table 4, above present the four hypothesized relationships, path coefficients, the t-statistics and the decision criteria. The value of the t-statistic will indicate whether the relationship is significant or not. A significant relationship is expected to have a t-statistics that is above 2. Drawing from the results provided in Table 4, four of the hypothesized relationships (H1, H2 & H3) are significant.

RESEARCH FINDINGS AND DISCUSSIONS

Hypothesis One (H1): Quality of work life (QW) \rightarrow Commitment to long-term career (CC)

It can be observed in Figure 1 and Table 4 that H1 (Quality of work life (QW) \rightarrow Commitment to long-term career (CC)) is supported by the hypothesis result (0.300) and is significant at t-statistics 6.979. The strength of the relationship is indicated by a path coefficient of 0.300. This implies that Quality of work life directly influence commitment to long-term career in a positive significant way. The better the level of quality of work life the higher the level of commitment to long-term career.

Hypothesis Two (H2): Expectations towards work (EW) \rightarrow Commitment to long-term career (CC)

Figure 1 and Table 4 above, indicate that H2 (Expectations towards work (EW) \rightarrow Commitment to long-term career (CC)) is supported by the hypothesis finding (0.254) and is significant at t-statistics 5.610. Again, the strength of the association is indicated by a path coefficient of 0.254. This implies that expectations towards work (EW) is positively related to commitment to long-term career (CC) in a significant way. Thus higher levels of expectations towards work will lead to higher levels of commitment to long-term career

Hypothesis Three (H3): Perception of work life (QL) \rightarrow Commitment to long-term career (CC)

It is depicted in Figure 1 and Table 4 that H3 (Perception of work life (QL) \rightarrow Commitment to long-term career (CC)) is supported significantly. The t-statistics is 3.143. The strength of the relationship is indicated by the path coefficient of 0.052. This finding suggests that perception of work life has a direct positive effect on commitment to long-term career. So the more effective the perception of work life, the more the commitment to long-term career.

IMPLICATIONS OF THE STUDY

Overall, an examination of the research findings, indicate that Quality of work life (QW) \rightarrow Commitment to long-term career (CC) has the strongest influence on each other (0.300) when compared to other research constructs. Expectations towards work (0.254) and perception of work life (0.052) follows having impact on commitment to long-term career. These findings have practical implications to investment managers in the financial sector. Drawing from the results, the findings indicate that managers for companies in the Gauteng province ought to put more focus on strategies that enhance quality of work life because it is likely to yield the desired higher commitment to long-term career when compared to other research constructs.

LIMITATIONS AND FUTURE RESEARCH DIRECTION

A number of limitations were observed during this research. First, the study was restricted to four factors only; namely expectation towards work, perception of work life, quality of work life and commitment to long-term career. Future research could also include factors such as workplace spirituality, ethical climate and organizational citizenship behaviors. Second, the results are based on a small sample of 250 respondents, which makes it difficult to generalize the results to other contexts. Future studies could make use of amplified sample sizes in order to get more representative views. Since this study used a quantitative approach, future studies could also use a mixed method approach so that in depth views of employees in the Gauteng province of South Africa can also be captured.

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

The study has both theoretical and managerial implications. Theoretically, this study makes a noteworthy progression in human resource theory by methodically examining the interplay between expectation towards work, perception of work life, quality of work life and commitment to long-term career. In this manner, the study is an important contributor to the existing literature on this subject. The study also underwrites a new direction in the research on human resources by opening up a discussion on the importance of organizational behavior practices in the development and improvement of commitment in developing countries such as South Africa.

On the practical front, as expectation towards work, perception of work life and quality of work life were exerted as having positive influence on commitment to long-term career, improvements in each of these three factors could stimulate higher commitment to long-term career in companies in the Gauteng province of South Africa. Quality of work life can be improved by, among other things giving employees empowerment and responsibility in the duties of the work that they do. In addition, perception of work life could be improved by implementing equity rules, regulations and remuneration. To increase expectation towards work managers should implement policies that are favourable to everyone not just to a few individuals. To increase commitment to long term career workers should be treated as individuals not machines without blood. They should be given things like vacation holidays and special leave days.

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IMPACT OF TYPE OF EXPORT FINANCE ON FIRMS' EXPORT PROFITABILITY: A STUDY OF INDUSTRIAL CLUSTERS IN GUJARAT, INDIA

Pawan Kumar Chugan and Shivangi Singh
Institute of Management, Nirma University, India

ABSTRACT

Financing resources play a significant role in escalating export ventures particularly of MSMEs (Micro, Small and Medium Enterprises) which face a stiff competition from the larger firms. Finance is essential not only for successful operation of current activities of the firm but also aids in expanding those activities to grow the firms' business. There are several financing resources available at a firm's disposal viz. its own retained profits, commercial loans from banks, loans from specialised development institutions and funding agencies, etc. This study attempts to analyse the impact of specific financing resources used by MSME exporters on their export profitability. It is concluded that the funds sourced from commercial banks had a significant impact on firm's export performance followed by profits ploughed back into export operations. The effect of development finance sources from institutions such as EXIM bank, SIDBI, IFCI, etc., was, however, not very significant.

Keywords: Financing Resources, Export Profitability, Export Finance; Micro, Small and Medium Enterprises.

INTRODUCTION

Exporting is a vital business activity that plays an important role in expanding the business activities of the firms, thereby enabling them to achieve sustainable competitive advantages. In India over the past two decades, the rate of exporting has substantially escalated owing to the recent spur in industrial sector and the various reforms been undertaken to encourage the export units. Export firms in their venture to successfully enter and expand in the global markets, need sufficient funds at easy terms. Here, the role of export financing resources becomes crucial, as there always exist limitations in a firm's way for access to easy credit, especially the MSMEs (Micro, Small and Medium Enterprises). In this regard, this study attempts to analyse the impact of specific sources of finance on firms' export performance by investigating empirically the sample MSME exporters' preferred mode of financing their export operations and linking it with their export profitability.

LITERATURE REVIEW

Finance is the element that helps in the creation of new businesses and expansion of the existing ones thereby allowing them to take advantage of opportunities to grow, employ local labour and support the government through the payment of income taxes. In this direction, the efficient use of financial instruments, such as loans, is key to the success of every business. Financial support is considered a fundamental resource for exporting. MSMEs on account of the emergence and prevalence of ingenious non-price competitive techniques encountered by exporters in various countries to enlarge their share of world markets (Ram and Garg, 2013). Hence, financial resources are considered one of the most important elements for research on MSMEs resources and strategies (Borch, Huse and Senneseth, 1999).

For exporters, finance is all the more crucial as exporting involves selling and shipping in overseas markets, therefore, it takes longer to get paid. Extra time and energy is required to make sure that buyers are reliable and creditworthy. Also, foreign buyers - just like domestic buyers - prefer to delay payment until they receive and resell the goods. Due diligence and careful financial management can make the difference between

profit and loss in each transaction. Exporters require financing resources for many reasons: for the working capital through trade credit, to run their export business, to manufacture or acquire goods to fill an order, and to reduce their cash cycle, anticipating revenues after shipping goods, as firms often sell on credit and have to wait to obtain payments at maturity (Kawas 1997). As per Zahra et al (2000) it is important to understand how MSMEs access the financial capital, particularly exporting MSMEs. As for them it is very important because entering international markets requires substantial finance resources.

According to OECD (2006) inadequate access to external finance is an essential barrier faced by SMEs in many countries, especially by exporter firms. As per OECD, the capacity to internationalise is often dependent on the accessible financing, especially for new exporters, because owners' personal finances are usually limited. Also, MSMEs are in general more informational opaque than larger firms, due to the differences in asymmetric information, therefore, these types of enterprises rely more on banks and trade credits for financing (Bartholdy and Mateus, 2008). Therefore, it is important to understand how MSMEs acquire the financial capital, particularly exporting units. Beck et al. (2008) argue that firms with larger financing needs are more probable to rely on different sources of external finance. Study examined financing source as the proportion of investment financed by external sources: bank debt (includes financing from domestic as well as foreign banks), equity, leasing, supplier credit, development banks (including finance from both development and public sector banks), or informal sources. Riding et al. (2012) too examined different sources of financing: external financing, external equity capital, external debt capital and trade credit, to reveal that growth-oriented exporter enterprises are more likely to apply for financial capital.

Berger and Udell (1998) stated that firms' growth cycle influences its sources of finance. Considering small firms with high growth, venture capital, trade credit, short and intermediate-term financial institution loans are the most typical sources of finance used. Taking medium-sized firms and large firms in account, public equity, commercial paper, medium term notes and public debt are more often used. Cavusgil (1984) and Tannous (1997) too show that financial needs depending on which stage is exporting firms. In early stages, financial export activities more at risk, for example the higher risk of payment from foreign buyers and the lack of international experience, and therefore, they seek venture capital rather traditional financing. On the other hand, in committed/advanced stages, export activities require large investments in working capital and, usually, bank loans are the major sources of credit of MSMEs. Moreover: since payment from firms in other countries involves aspects of uncertainty much higher than those faced by local firms, credit risk becomes more of a hindrance. That is why, since the financial crisis of 2008, firms have begun using trade finance instruments to mitigate the risk inherent to exports. IMF (International Monetary Fund) refers to the importance of letter of credit (letters of credit are used primarily in international trade for large transactions between a supplier in one country and a customer in another), export credit insurance, trade-related lending, trade credit and the products promoted by multilateral development banks (MDBs).

This study deals with two major constructs: 'Firm's Export Performance' and 'Export Financing Resources'. This section describes briefly the theoretical underpinning of the two as mentioned in the previous literature in this field. Firm's export performance can be defined as - "the extent to which a firm's objectives (both economic and strategic) for exporting a product into a foreign market are achieved through the planning and execution of export strategy" (Cavusgil and Zou, 1994). Researchers have largely focused their attention on three major export performance dimensions which incorporate important management areas. The first is the financial performance of the exporting activity which includes the use of such indicators like export sales, export sales growth, and export profitability (Madsen, 1987; Shoham, 1998; Chugan, 1993, 1997, 1998), etc. The second dimension is based on capturing the strategic outcome of exporting (Singh and Chugan, 2013, 2013a, 2013b). The key idea of this method is that firms often have a set of strategic goals in exporting which they desire to fulfil using various capabilities and resources available at their disposal (Cavusgil and Zou, 1994). The third is the use of perceptual dimension measuring the satisfaction derived from exporting. The logic behind this is that satisfaction with export operations is a strong indication of management's booming spell in exporting (Cavusgil and Zou, 1994). The present study adopts 'Perceived Export Profitability' (the ratio of net profits to total sales in the financial statement of exporting firms) measured subjectively on a five-point scale, as the measure of firm's export performance.

The second construct, 'Export Financing' refers to the firms' resource that enables them to compete effectively in overseas markets. For instance, at the pre-shipment stage, financing facilitates the purchase or

production of goods, while at the post-shipment stage; financing is required as overseas buyers generally pay on a deferred basis (Ling-yee and Ogunmokun, 2001). Sufficient export finance also helps in building production capacity of the firms and creating economies of scale that makes the exporter compete effectively on price factors against competitors (Katsikeas, 1994). Similarly, finance also aids in employing sufficient staff in specialized export functions and utilizing modern technology and equipments that further enables the exporter to effectively compete on the non-price factors as well, against rivals in global markets (Piercy et al, 1998).

FINANCING RESOURCE TYPES

Export financing resources relate to specific resources available to exporting firms which allow them to be efficient in foreign markets. This study treats export finance as a construct composed of three modes of financing resources - Self-financing, Money market financing and Development Institutions financing. '*Self-financing*' forms the funds sourced from company's savings through retained earnings. Thus, retained earnings are used as a proxy for self-financing. Retained earnings are the portion of net income or net profit, taken from the income statement, that is not paid out as fixed or variable costs. These earnings are reinvested in the company or used for some specific purpose by the company. The Pecking Order Theory (Myers and Majluf 1984) underscores the importance of the internal sourcing of financing and emphasized that the firms first prefer internal sources of financing, then external debt and new equity as a last resort. However, bearing in mind that exporting firms have growth strategies, one could expect the need for more external equity capital (Zahra, Ireland and Hitt, 2000).

'*Money market financing*' constitutes all short-term loans and advances granted to the exporter for exporting activities by the commercial banks. These advances are basically categorised into pre-shipment and post-shipment finance. 'Pre-shipment Credit' means any loan or advance granted or any other credit provided by a bank to an exporter for financing the purchase, processing, manufacturing or packing of goods prior to shipment. 'Post-shipment Credit' means any loan or advance granted or any other credit provided by an institution to an exporter of goods from India from the date of extending credit after shipment of goods to the date of realisation of export proceeds.

'*Development Institutions financing*' is a reflection of all sort of medium and long term export loans and other export facilities provided by specialized institutions. such as. the Export-Import Bank (EXIM), Industrial Finance Corporation of India (IFCI), Small Industries Development Bank of India (SIDBI), etc. available to the exporters. While commercial banks traditionally meet the short-term working capital requirements of the exporters for pre and post-shipment activities, development finance institutions (DFIs) on the other hand cater mostly to the medium and long-term financing requirements and also provide support and assistance to MSMEs to identify opportunities for technology transfer, joint ventures, new project exports, acquiring new technologies and to understand new market with quality and competitiveness.

RESEARCH MODEL

The model used in the study can be stated as:

$$Y = f(x) \text{ -----(1)}$$

Where,

Y= Export Performance, and

x = Export Finance (a construct comprising of finance sourced from retained earnings, money market – i.e. commercial banks and development banks).

Explaining further it can be written as:

$$Y = f(x1, x2, x3) \text{ -----(2)}$$

Where,

Y = Export Profitability (gains from exporting activities of the firm)

x1 = Self-financing - this is proxy by firm's profit plough back i.e. retained earnings

x2 = Money Market financing - short-term loans and advances secured from commercial banks i.e. pre-shipment and post-shipment finance

x3 = Development Institution financing - comprising of medium and long term loans/facilities benefited from the specialized institutions

On the basis of the above discussion, the following hypotheses are constructed:

H1. Firm's export profitability is positively related to the amount of Self-financing resource used ($H_a: \beta_{x1} > 0$).

H2. Firm's export profitability is positively related to the amount of Money Market financing resource used ($H_a: \beta_{x2} > 0$).

H3. Firm's export profitability is positively related to the amount of Development Institution financing resource used ($H_a: \beta_{x3} > 0$).

RESEARCH METHODOLOGY

Data have been collected from MSME exporting units operating in Gujarat, India. The firms composed of three industry types: pharmaceuticals, ceramics, and brassware sectors. Data were extracted from the individuals responsible for key international marketing activities in the firm, namely the export manager (In case of MSMEs owner only mostly managed the export operations). The sample size included 113 firms, comprising of 41 pharmaceuticals units, 33 ceramics units, and 39 brassware units as given in Table-1.

Table.1. Characteristics of firms in the sample

	N (%) [#]	N (%) ^{##}	N (%) ^{###}
Firm Size (Investment in plant and machinery)			
1. Micro (less than 25 Lakh rupees)	18(44)	14 (42)	17 (44)
2. Small (more than 25 Lakh but does not exceed 2 crore rupees)	11 (27)	8 (24)	14 (36)
3. Medium (more than 2crore but does not exceed 5 crore rupees)	12 (29)	11 (34)	8 (20)
Years of International Operation			
1. Less than 1year	8 (19.5)	6 (18)	7 (18)
2. 2-5 years	20 (49)	8 (24)	12 (31)
3. 6-10 years	9 (22)	9 (27)	15 (38)
4. 10 and more years	4 (9.5)	10 (31)	5 (13)
Number of countries operated in			
1. One country	14 (34)	10 (31)	15 (38)
2. Two-three countries	12 (29)	11 (34)	10 (26)
3. Four-Six countries	8 (20)	9 (27)	9 (23)
4. Six and more countries	7 (17)	3 (8)	5 (13)

where [#]stands for pharmaceutical sector, ^{##}stands for ceramics sector and ^{###}stands for brassware sector

Data Analysis

The Cronbach's Alpha reliability coefficients for all variables used were above 0.70 establishing the reliability of scales (Nunnally, 1988) (See Table 2). Table 3 shows the regression results of the forms of finance on export profitability expressed as:

$$Y(X) = \beta_{x1} X1 + \beta_{x2} X2 + \beta_{x3} X3 \text{ -----(3)}$$

Where:

Y(X) = Export Profitability

$\beta_{x1} - \beta_{x3}$ = standardized coefficients of the respective independent variables

X1 = retained earnings

X2 = commercial bank loans and advances

X3 = development institutions financing

Table.2. Operationalization of Variables

Variables [Adapted from Aworemi, Oyedokun, and Odeyemi, 2011]	Internal Reliability
Export Profitability(Y): Net profits to total sales in the financial statement of exporting firms	0.80

Retained Earnings (X1): Self-financing via using the funds sourced from company's savings	0.75
Commercial bank loans and advances (X2): Money market financing including all short-term loans and advances granted to the exporter for pre- and post-shipment purposes by the commercial banks	0.81
Export Development Finance (X3): Development Institutions' financing	0.72

Note: Internal reliability measured by Cronbach's Alpha; export profitability measured at five-point scale anchored by "much below expectations" and "much above expectations"; usage of specific financing resources measured at five point scales anchored by "highly used" and "least used".

Table.3. Multiple Regression Analysis Results

Independent Variables Sources of Finance	Dependent Variable		
	Export Profitability		
	β (t-value) [#]	β (t-value) ^{##}	β (t-value) ^{###}
1. retained earnings (X1)	0.412 ^{***} (5.011)	0.321 ^{**} (4.031)	0.313 ^{**} (3.009)
2. commercial bank loans and advances (X2)	0.646 ^{***} (6.587)	0.502 ^{***} (4.077)	0.776 ^{***} (6.551)
3. development institutions' financing (X3)	0.101 (1.392)	0.110 (1.506)	0.211 (1.772)
R ²	0.51	0.44	0.47
Adjusted R ²	0.49	0.41	0.43
F	89.116	68.346	70.443
Significance (F)	0.000	0.001	0.000

* p < 0.05; ** p < 0.01; and *** p < 0.001; where [#] stands for pharmaceutical sector, ^{##} stands for ceramics sector and ^{###} stands for brassware sector

DISCUSSION

The study analysed the impact of finance resource type on the export profitability of sample firms. Comparing all the three sectors, the results unanimously reveals that the highest impact on export profitability of the firms is caused due to the commercial bank loans and advances followed by the firms' own retained earnings while development institutions' financing contributed the least towards it. The results corroborated Nwakoby (2004) finding that - "commercial banks constitute the major source of private sector funding ... they enhance credit delivery, mobilization of funds to encourage investments by private sector and areas of investment opportunities are made available to investors" (As cited in Aworemi, Oyedokun, and Odeyemi, 2011). Similar point was also made by Sanusi (2004) - "those banks and other financial institutions are providers of liquidity and payment services and constitute an important link between the industry and the financial sectors."

The relatively low contribution of funds sourced via profits ploughed back (retained earnings) may be attributed to the fact that - "when profits of corporate increases, the propensity is to increase employees' emoluments and besides declaring high dividend payments rather than increase in investments" (Obadan and Odutola, 2001, as cited in Aworemi et al, 2011). The contribution of retained earnings in this sample was however, only marginally low as compared to commercial bank loans and advances. The reason of such outcome could be that MSMEs mostly re-invest a significant portion of their retained earnings after deducting the other expenses and emoluments.

Also, the results show that development institutions' financing does not have a significant impact on export performance of the sample firms. This may be due to the fact that in Indian context, the focus of many such institutions was earlier on established sectors and larger firms; however, lately the government has announced schemes dedicated to catering MSME exporters these specialized financial helps via promoting Memorandum of Cooperation between Ministry of Commerce and Industry and MSMEs Chamber of India. The main objectives of this partnership include: setting up of new pioneering/pilot projects aimed at exports,

provision of equipment and machinery for the projects aimed at exports, facility for quality improvement of export products, funding related to the exchange of trade delegations, etc.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Some research limitations need to be acknowledged. Firstly, the relatively smaller sample size due to which the results should be generalized with precaution. Secondly, the study is restricted to a single region and particular industry types which could limit the external validity of the model. Thirdly, the model adopts cross-sectional research design hence; it reflects the situation at a single point of time when the study was undertaken.

Looking at the directions for future research, majority of the studies reviewed involved samples drawn from single industrial sectors. As a result, it might be interesting for future researchers to focus on multiple industries and compare the findings. Furthermore, researchers could consider adopting a longitudinal design which might help with the development of Pecking Order-theory in export financing by evaluating the long-term effect of the functional relationships between export performance and sources of finance.

POLICY IMPLICATIONS

As the highest impact on MSMEs' export profitability depends upon the availability of finances from the commercial banks when compared to the other modes of export finances, it is suggested that the such bank finances for the pre-shipment and post-shipment exports may be made available to the exporters at more liberal terms with easy documentation so as to make them more competitive. At the same time, there is a need to create more awareness amongst the MSMEs about the long-term benefits of the availability of development finances from the development financial institutions because these funds are not availed by them due to low levels of the awareness. Managers from the MSMEs, should also make efforts to avail medium and long-term development finances from the development financial institutions to make their enterprises more profitable and competitive.

CONCLUSION

It is concluded that the impact of funds sourced from commercial banks have a major influence on firms' export performance. This may be attributed to the facts that commercial banks in India are readily more accessible in terms of proximity with the location of the firms and the types of personal services provided by these banks (as a strategy to outwit their competitors) are attractive to the customers (exporters in this case). This implies that exporting units prefer commercial banks' loans as their first choice of financing export finance. Hence, more of such banks have come up especially in the private sector to cater to the financing needs of export units.

The effect of retained earnings of the firms' export operations was also found to be significant attributable to the fact that the smaller firms consider retained earnings a usually safe investment option. These retained earnings form the basis for future investments by MSMEs. They are comparatively less risky and easy to use. However, from the business policy perspective, it is generally seen that when profits of firms' increase, the tendency is to increase employees' emoluments and declare high dividend payments rather than re-investing in larger proportions. As result, firms intend to borrow more from external source of finance in their advanced stages of operation. The effect of export development finance on export performance, however, was not significant. It could be due to the reason that the awareness levels amongst MSMEs regarding the availability of financing from such institutions was relatively low in comparison to larger firms. Nevertheless, the government is now taking adequate measures to increase the awareness of EXIM Bank and other such development finance institutions amongst MSMEs. These banks constitute an imperative channel of economic growth and also act as an instrument for strengthening the competitive position of local businesses globally.

Note: Authors' similar study for Chemical Sector (Chugan and Singh 2014a), was presented at Conference - NICOM 2014. Therefore, a few relevant references included here are taken from the authors' earlier study for which the permission has been taken from the Nirma University. Based on the suggestions from the participants

of the conference, in this study, 3 sectors namely Pharmaceuticals, Ceramics and Brassware are analyzed to find the impact of the type of export finance on export profitability in a comparative framework of these three sectors.

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A FUZZY AHP-TOPSIS MODEL FOR MEASURING INNOVATIVE CAPACITY OF SMALL AND MEDIUM ENTERPRISES

**José Eduardo de Oliveira Trindade, Maria Fatima Ludovico de Almeida
and Reinaldo Castro Souza , Pontifical Catholic University of Rio de
Janeiro, Brazil**

ABSTRACT

The adoption of good practices of innovation management has taken a fundamental role in the growth and progress of small and medium enterprises (SMEs), propitiating new sources of competitive advantages in comparison with their competitors. Since there are many opportunities to investigate innovative capacity in the milieu of SMEs, this paper aims at developing an integrated multiple criteria decision-making (MCDM) model that supports measuring SMEs' innovative capacity. The effectiveness of the proposed model was demonstrated by an empirical study covering 15 SMEs located in Brazil. As a conclusion, it can be said that the Fuzzy AHP-TOPSIS model has fulfilled expectations and assumptions of this research by providing a more efficient, and systematic decision support tool for managers to evaluate the innovative capacity of SMEs, regardless of the business sector in which they operate. Besides, the results could reveal the major adverse factors undermining innovative capacity and were particularly useful for managers by providing recommendations and practical actions associated with those factors.

Keywords: Innovative capacity measurement; small and medium enterprises; Fuzzy AHP; Fuzzy TOPSIS.

INTRODUCTION

Over the last decades, studies have demonstrated that innovation is a key factor for improving the competitive position of firms. Their innovative capacity significantly influences competitiveness, which is based on unique skills and abilities. Innovative capacity for achieving a higher competitiveness means offering less costly products and services of better quality compared to those delivered by competitors. Therefore, the measurement of innovative capacity has been one of the major concerns of academics, corporate managers and policy makers. Particularly, in the context of small and medium enterprises (SMEs), the adoption of good practices of innovation management has taken a fundamental role in the growth and progress of these firms, generating new sources of competitive advantages concerning their competitors. Since there are many opportunities to investigate innovative capacity in the milieu of SMEs, this paper aims at developing an integrated multiple criteria decision-making (MCDM) model that supports measuring SMEs' innovative capacity. In this context, this paper addresses the following research questions: Which criteria are relevant for measuring the innovative capacity of SMEs? What can multiple criteria decision-making (MCDM) methods facilitate the weighting of these criteria? What are the most suitable approaches to improve decision-making processes regarding the innovative capacity of SMEs? Measuring innovative capability and innovation management activities at the firm-level is a difficult task in function of the complexity of the processes involved and also because of the effort needed to define the variables to be measured. (Chiesa, Coughlan, & Voss, 1996; Crossan & Apaydin, 2010; Arundel & Hollanders, 2006; Armbruster *et al.*, 2008). In recent years several academic studies have attempted to overcome the challenge to measure the innovative capability of firms. They focused on processes and practices instead of resources (inputs) or new products/processes

(outputs) (e.g. Chiesa *et al.*, 2008; Yam *et al.*, 2004; Guan *et al.*, 2006; Koc & Ceylan, 2007; Wang *et al.*, 2008; Boly *et al.*, 2014).

We assume the multidimensionality of innovation management as a result of complex interactions of R&D management, business models improvement, new products launching, and protection of intellectual assets. The application of a fuzzy integrated MDCM model for measuring the innovative capacity of SMEs is justified by the existence of qualitative and imprecise information that can be represented by fuzzy variables and linguistic minorities. Empirical studies have shown that in real situations when the performance ratings are vague and imprecise, a fuzzy MDCM model can be the preferred solution (Taylan *et al.*, 2016; Patil & Kant, 2014; Vinodh *et al.*, 2014; Choudhary & Shankar, 2012; Wittstruck & Teuteberg, 2012; Torfi *et al.*, 2010; Sun, 2010).

This article is structured as follows: firstly, we conceptualize innovative capacity and briefly review the approaches for measuring innovative capacity, with special attention to SMEs. Based on a literature review on MCDM methods, we confirmed the opportunity to investigate an integrated MCDM for measuring the innovative capability of these firms in a fuzzy environment. In section 3, we describe the research methodology in six stages. In Sections 4 and 5, we introduce the Fuzzy AHP-TOPSIS model and validate it using an empirical study covering 15 SMEs located in Brazil. Finally, in Section 6 we synthesize the concluding remarks and point out implications for future work.

THEORETICAL BACKGROUND

The theoretical background encompasses the following themes: (i) innovative capacity measurement, with particular attention to SMEs; (ii) MCDM methods; and (iii) fuzzy sets and fuzzy logic.

Innovative Capacity Measurement

The innovation capability measurement is a field of study that has been attracting interest from scholars, consulting firms and practitioners. Among recent relevant works on this subject, we can mention Guan *et al.* (2006); Wang *et al.* (2008); Yam *et al.* (2004); Forsman (2011); Zawislak *et al.* (2012); Doroodian *et al.* (2014); and Boly *et al.* (2014).

Despite these significant advances, there is still no consensus on the concept of innovative capability. For the purpose of this research, we adopted the OECD's conceptualization as follows:

“The propensity of a firm to innovate depends, of course, on the technological opportunities it faces. In addition, firms differ in their ability to recognize and exploit technological opportunities. In order to innovate, a firm must figure out what these opportunities are, set up a relevant strategy, and have the capabilities to transform these inputs into a real innovation – and do so faster than its competitors. But it would be misleading to stop there. Many technological opportunities do not just arise on their own but are devised by firms in order to fulfill some strategic goal. Innovative capacity consists of a set of factors, which the firm either has or has not, and ways of combining these factors efficiently” (OECD, 1997, p.22).

Previous research in the field of innovation capability measurement have shown that most of the proposed approaches for assessing and measuring the innovative capability of firms are based on multi-criteria decision-making methods (MCDM) (Arundel & Hollanders, 2006; Armbruster *et al.*, 2008; Chiesa *et al.*, 2008; Yam *et al.*, 2004; Guan *et al.*, 2006; Koc & Ceylan, 2007; Wang *et al.*, 2008; Galvez *et al.*, 2013; Doroodian *et al.*, 2014; and Boly *et al.*, 2014). Focusing on French SMEs, Boly *et al.* (2014, p. 609) point out that the multiple factors influencing the innovative capacity are common to most of the SMEs analyzed. The main difference resides in the method used for assessing and measuring their innovative capacity. From this perspective, MCDM methods have been widely applied to these studies, but since a single method is not sufficient to answer the research question, there exists a need to apply an integrated approach to solving this problem.

Multiple-criteria Decision Making (MCDM) Methods

A systematic literature search was performed on peer-reviewed articles that were published between January 2000 and July 2016, by using the following keywords "multiple criteria decision-making", "MCDM", "multi-criteria decision-making", with Boolean operator OR. It revealed that several researchers have attempted to integrate MCDM methods for different applications (Vinodh *et al.*, 2014; Taylan *et al.*, 2016; Choudhary & Shankar, 2012; Wittstruck & Teuteberg, 2012, as examples). In general, empirical studies on MCDM have shown that in real situations when the evaluation ratings are vague and imprecise fuzzy MCDM models can be the preferred solution (Yang *et al.*, 2015; Patil and Kant, 2014; Choudhary & Shankar, 2012; Torfi *et al.*, 2010; Sun, 2010). Particularly, for measuring the innovative capability of SMEs, vagueness exists in determining how each criterion impacts the attributes for evaluating SME's innovative capacity associated with the level of perceived effectiveness of the adopted good practices (Qu, 2010; Sepulveda *et al.*, 2010; Forsman, 2011; Enjolras *et al.*, 2014; Sepulveda & Vasquez, 2014; Boly *et al.*, 2014; Ekuobase & Olutayo, 2015). However, the usage of integrated fuzzy MCDM models focusing measurement of the innovative capacity of firms is found to be scant (Ran and Wang, 2015; Lin *et al.*, 2013; Zhu and Lei, 2012; Kong *et al.*, 2008; and Wang *et al.*, 2008). To deal with vagueness and uncertainty associated with this problem, fuzzy based methods are being used in the present study.

Fuzzy Sets and Fuzzy Logic

The concepts of fuzzy sets and fuzzy logic were introduced by Lotfi Zadeh in the 1960's and 1970's decades. Since then, fuzzy logic has been used in several applications. According to Zadeh (1965; 1973), when the complexity of the system increases, the ability of human beings to describe the system behavior decreases. He argues that complex problems cannot be translated into numbers but rather into labels of fuzzy sets.

For Yager (1977), the applicability of fuzzy sets stems from the fact that objectives can be represented in both ways – too vague or fuzzy goals or precisely defined objectives. Also, fuzzy sets allow dealing with goals that are very subjective. Still, according to Yager (1977), it is important to emphasize that fuzzy sets do not eliminate the subjectivity, which is a real human phenomenon, but the decision maker becomes aware of the subjectivity involved. Fuzzy sets allow decision-makers to deal with a subjective phenomenon and satisfactorily manage the decision situation.

Mardani *et al.* (2015) reviewed a total of 403 papers about fuzzy MCDM methods that were published from 1994 to 2014 in more than 150 peer reviewed journals. Again, fuzzy MCDM models focusing measurement of the innovative capability of firms were not included in their review. From the perspective of developing an integrated MCDM model for measuring SMEs' innovative capacity in a fuzzy environment, we will focus on two fuzzy MCDM – the fuzzy analytical hierarchical process (FAHP) and the fuzzy technique for order preference by similarity to ideal solution (FTOPSIS).

The fuzzy analytical hierarchical process (FAHP) is an extension of the original AHP method created by Saaty (1980). It combines AHP method with fuzzy set theory to solve fuzzy hierarchical problems (Taylan *et al.*, 2016; Yang *et al.*, 2015; Ekuobase & Olutayo, 2015; Vinodh *et al.*, 2014; Patil & Kant, 2014; Zhu & Lei, 2012). Ekuobase & Olutayo (2015) claim that decision makers feel more confident to give interval judgments rather than single numeric values. So, in their opinion, the fuzzy AHP method is capable of capturing a human's assessment of vagueness when complex multi-attribute decision-making problems are considered.

The steps in FAHP are summarized as follows: (i) building the evaluation hierarchy system for evaluating the alternatives considering the various criteria and sub-criteria involved; (ii) pairwise fuzzy comparison matrices using 'triangular fuzzy numbers' (TFN); (iii) consistency check of results from the pairwise comparison matrices; (iv) the weight for each criterion and sub-criterion is determined. Weighting is done by normalizing the matrices; (v) the 'best non-fuzzy performance' (BNP) value for each weight is determined; and (vi) the criteria and sub-criteria are ranked based on the BNP values. The criterion having larger BNP value is considered to have a greater impact when compared with another criterion.

The second method – FTOPSIS – is a ranking multi-criteria decision-making tool that emerges as an alternative to the ranking step of AHP method (Torfi *et al.*, 2010; Cheng & Lin, 2012). The original TOPSIS was developed by Hwang and Yoon (1981) and is based on the concept that the chosen alternative should have the

shortest distance from the positive ideal solution (PIS) and the farthest from the negative ideal solution (NIS). The FTOPSIS method variant can be summarized as follows: (i) obtain the weighting of criteria from fuzzy AHP. The results of fuzzy AHP contain the weights of each criterion and sub-criterion under consideration; (ii) create fuzzy evaluation matrices. A set of fuzzy linguistic terms are employed for the calculation of the outcomes; (iii) normalize fuzzy decision matrices; (iv) determine the fuzzy positive ideal and fuzzy negative ideal reference points. Fuzzy positive ideal solution (FPIS) and fuzzy negative ideal solution (FNIS) are defined by the area compensation technique; (v) identify the distance from FPIS (d+) and FNIS (d-); (vi) determine the relative closeness to the ideal value and rank alternatives accordingly.

RESEARCH METHODOLOGY

The research methodology follows a procedural framework of analysis based on Wittstruck and Teuteberg (2012) to provide an underlying structure and an approved course of action (Table 1).

Table 1: Research methodology framework

Phase	Stage	Research question	Section
Motivation (Why?)	Problem definition.	Why should we develop the model?	Section 1
Conceptualization and development (What and How?)	State of research on central themes and identification of research gaps and unsolved problems in the field of measurement of innovative capacity of SMEs.	Which MCDM methods are applied for measuring the innovative capacity of SMEs? What are their limitations? What criteria are proposed in the literature for measuring the innovative capacity of SMEs?	Section 2
	Definition of the research methodology.	How could the model be developed and validated?	Section 3
	Development of the integrated fuzzy AHP-TOPSIS model.	Which methods should be combined to overcome limitations of current research on the measurement of the innovative capacity of SMEs?	Section 4
Validation (How effective is the proposed model?)	Design of the empirical study.	How are empirical studies designed to validate criteria concerning measurement and evaluation of the innovative capacity of firms?	Section 5
	Empirical results and discussion of the managerial and policy implications of the model and the study covering 15 Brazilian SMEs.	Could the results of the empirical study demonstrate the effectiveness of the proposed model? Which are the managerial and policy implications of this research?	

Source: Based on Wittstruck & Teuteberg (2012).

The following research methods were selected to address the questions posed in Table 1: first, a literature review covered the main sources of peer-reviewed scientific articles, such as Scopus; Web of Science; and Science Direct. Additionally, Google Scholar was accessed to complement the search results. The analysis of current state of research on central themes – innovative capacity measurement and fuzzy MCDM methods – led to the identification of research gaps and unsolved problems in the field of measurement of the innovative capacity of SMEs. Second, formal modeling was used to develop an integrated fuzzy multi-criteria decision-making approach for measuring the innovative capacity of SMEs. Third, an empirical study covering 15 SMEs located in Brazil was carried out to integrate SMEs' managers and specialists' experiences, to validate the model, and to detect opportunities and limitations of the proposed model.

THE FUZZY-AHP-TOPSIS MODEL FOR MEASURING INNOVATIVE CAPACITY OF SMES

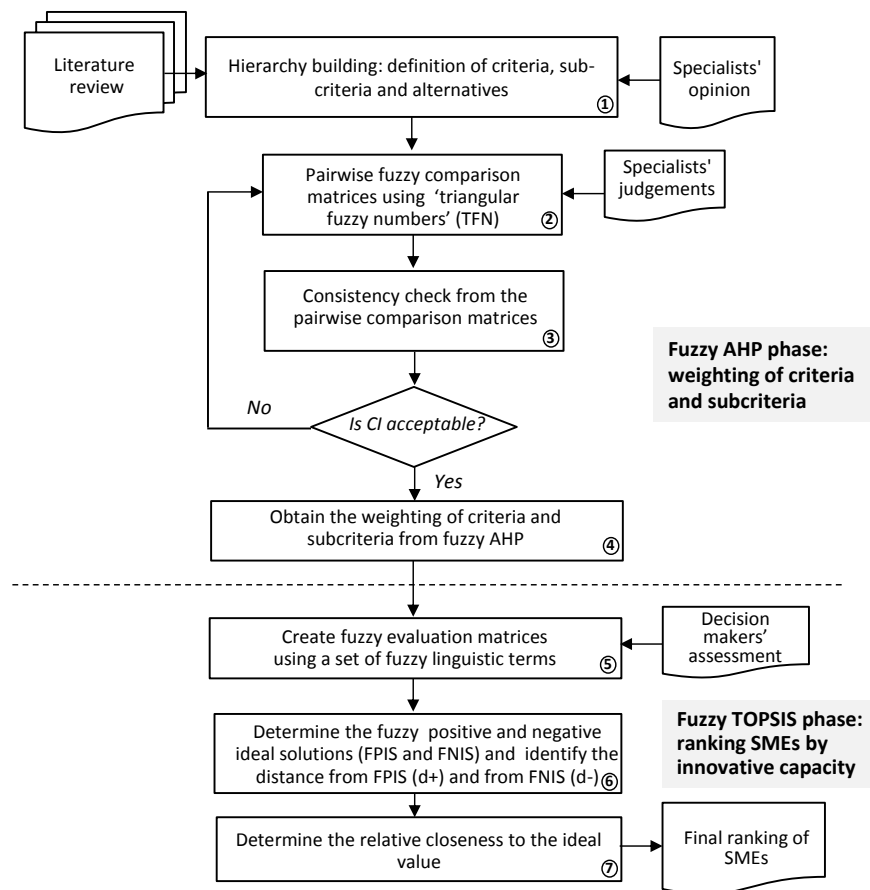
This section introduces the fuzzy AHP-TOPSIS model proposed for measuring the innovative capacity of SMEs. Figure 1 shows the flow chart of the model in two phases: (i) in the first phase, the fuzzy AHP method is used for weighting criteria and sub-criteria concerning assessment of the innovative capacity of SMEs; (ii) in the second, the fuzzy TOPSIS is employed for ranking SMEs by their innovative capacity. Further, this model was validated by an empirical study covering 15 SMEs located in Brazil. Due to space limitations, we will not be

able to give a comprehensive description of each phase. Detailed descriptions of fuzzy AHP and fuzzy TOPSIS are already published and can be found in Torfi *et al.* (2010).

MODEL VALIDATION

To demonstrate the effectiveness of the proposed model, we develop an empirical study covering 15 SMEs located in Brazil. These firms joined the third cycle of an Innovation Management Program supported by the Brazilian Innovation Agency (FINEP), a federal institution subordinated to the Ministry of Science, Technology and Innovation (MCTI). This Program provides access to locally based, high-quality technology information and related services, helping firms to exploit their innovative potential and to create, protect, and manage their intellectual assets. For this research, we selected one of the projects of this Program – NAGI-PUC-Rio, which has been coordinated by the Pontifical Catholic University of Rio de Janeiro.

Figure 1: Flow chart of the integrated fuzzy AHP-TOPSIS model for measuring innovative capacity of SMEs



Data Collection and Analysis

For data collection, we designed a survey instrument with 42 questions, corresponding to a set of good practices for innovation management, which were selected from the literature (Boly *et al.*, 2014; Enjolras *et al.*, 2014; Rejeb *et al.*, 2008; Sepulveda & Vasquez, 2014; and Doroodian *et al.*, 2014). These practices were grouped around three dimensions (criteria), and nine themes (sub-criteria), as shown in Table 2.

Table 2: Structure of the survey instrument

Dimension	Theme	Good practices for innovation management
C1 - Governance and Organization	c11 - Leadership and Culture	P1 to P9
	c12 - Strategy	P10 to P14
	c13 - Structure	P15 to P18
C2 - People	c21 - Human Capital	P19 to P21
	c22 - Organizational Competencies	P22 to P26
	c23 - External Relationships and Cooperation	P27 to P29
C3 - Processes	c31 - R,D&I management	P30 to P35
	c32 - Organizational Learning and Continuous Improvement	P36 to P39
	c33 - Intellectual Capital Protection and Economic Appropriation of the RD&I Efforts	P40 to P42
3 criteria	9 sub-criteria	42 good practices

The survey instrument was pre-tested by a small group of specialists in innovation management, and the process yielded a document that was judged to exhibit high content validity. The data collection was carried out in two stages: (i) self-assessment of the maturity level concerning the adoption of 42 innovation management practices; and (ii) interviews with leaders of the 15 enterprises, seeking more information about critical points identified in the first step. Also, through interviews, they could confirm or revise their early positioning during the self-assessment. For the first step (self-assessment), the survey instrument was distributed among the enterprises through email, and they have been asked to rate the maturity level concerning the adoption of each of the 42 good practices on a scale of 1 to 5. The inferior score being "1" (very low) and the superior score being "5" (very high). Total of 15 questionnaires with 100% response rate were used for data analysis. During the analysis phase, the data were consolidated and evaluated by using the fuzzy AHP-TOPSIS model. The individual steps from the fuzzy AHP matrices and the weighted vectors to the final ranking of SMEs (using fuzzy TOPSIS) were implemented in R Data Analysis Package and Matlab® to test to what extent the model can be integrated into the available standard software.

Empirical Results

Step 1: Hierarchy building: definition of criteria, sub-criteria, and alternatives

The problem was formulated as the fulfillment of three criteria (corresponding to innovative capacity dimensions); and nine sub-criteria (referred to themes associated with these dimensions, as described in Table 5). Hence, let 'C' be the set of criteria for measuring the innovative capacity of SMEs, then the criteria set can be established as follows: $C = \{C1, C2, C3\}$. In turn, the sub-criteria set for 'C1' can be defined as follows: $C1 = \{c11, c12, c13, \dots, c1n\}$. The scale used to capture the linguistic imprecision in a pairwise comparison of criteria and sub-criteria was the fuzzified Saaty's 9-point scale, by adopting 'triangular fuzzy numbers' (TFN).

Step 2: Pairwise fuzzy comparison matrices using 'triangular fuzzy numbers' (TFN)

A pairwise fuzzy comparison matrix \tilde{A} was built according to the judgments of specialists in innovation management, according to Eq. (1).

$$\tilde{A} = \begin{bmatrix} \tilde{1}_{11} & \tilde{a}_{12} & \dots & \tilde{a}_{1n} \\ \tilde{a}_{21} & \tilde{1}_{22} & \dots & \tilde{a}_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ \tilde{a}_{n1} & \tilde{a}_{n2} & \dots & \tilde{1}_{nn} \end{bmatrix} \quad (1)$$

Whereas $\tilde{a}_{ij} = (1,1,1)$, if i equals to j and \tilde{a}_{ij} assumes the fuzzified Saaty's 9-point scale (by adopting 'triangular fuzzy numbers'), or their inverse values, when i is not equal to j . Converses values are computed from the rating given, where \tilde{A}_{ij} is the matrix of values pointed to the relationship pairwise, then \tilde{A}_{ji} equals $1 / \tilde{A}_{ji}$. For this empirical study, we built in total four fuzzy comparison matrices: one for criteria e three more for the respective sub-criteria, as shown in Figure 2.

Step 3: Consistency check from the pairwise comparison matrices

One benefit of fuzzy AHP is that the consistency of the matrices can be tested during the judgment process. According to Patil & Kant (2012), when the crisp comparison matrix A is consistent, it means that the fuzzy comparison matrix \tilde{A} is also consistent. The Consistency Ratio (CR) is used to estimate the consistency of pairwise comparisons, and can be calculated by (2):

$$CR = \frac{CI}{RI}, \text{ where the Consistency Index is } CI = \frac{\lambda_{max} - n}{n-1}, \text{ then } \lambda_{max} \text{ is the largest eigenvalue} \quad (2)$$

and the Random Consistency Index (*RI*) is shown below, being *n* the matrix size.

Size <i>n</i>	1	2	3	4	5	6	7	8
RI	0	0	0.52	0.89	1.11	1.25	1.35	1.40

In general, when $CR \leq 0.10$, the consistency is accepted. If the *CI* is not accepted, it is necessary to review the judgements by specialists. In this empirical study all four matrices showed good and accepted consistency indexes, validating the method FAHP for weighting the criteria and sub-criteria (Table 3).

Table 3: Consistency Ratio (CR) for criteria and sub-criteria

Criteria and sub-criteria	Consistency Ratio (CR)	Status $CR \leq 0.1$
Criteria (C1, C2, C3)	0.0176	OK. Consistent.
‘Governance and Organization’ sub-criteria (c11, c12, c13)	0.0516	OK. Consistent.
‘People’ sub-criteria (c21, c22, c23)	0.0516	OK. Consistent.
‘Processes’ sub-criteria (c31, c32, c33)	0.0209	OK. Consistent.

Figure 2: Pairwise fuzzy comparison matrices using ‘triangular fuzzy numbers’ (TFN)

	Governance and Organization	People	Processes
Governance and Organization	(1,1,1)	(2,3,4)	(5,6,7)
People	(1/4,1/3,1/2)	(1,1,1)	(2,3,4)
Processes	(1/7,1/6,1/5)	(1/4,1/3,1/2)	(1,1,1)

Matrix 1: Fuzzy Comparison Matrix for Criteria

	c11	c12	c13
c11	(1,1,1)	(1,2,3)	(5,6,7)
c12	(1/3,1/2,1)	(1,1,1)	(5,6,7)
c13	(1/7,1/6,1/5)	(1/7,1/6,1/5)	(1,1,1)

Matrix 2: Fuzzy Comparison Matrix for Criterion ‘Governance and Organization’

	c21	c22	c23
c21	(1,1,1)	(4,5,6)	(1/3,1/2,1)
c22	(1/6,1/5,1/4)	(1,1,1)	(1/6,1/5,1/4)
c23	(1,2,3)	(4,5,6)	(1,1,1)

Matrix 3: Fuzzy Comparison Matrix for Criterion ‘People’

	c31	c32	c33
c31	(1,1,1)	(1/3,1/2,1)	(6,7,8)
c32	(1,2,3)	(1,1,1)	(8,8,9)
c33	(1/6,1/7,1/6)	(1/6,1/5,1/4)	(1,1,1)

Matrix 4: Fuzzy Comparison Matrix for Criterion ‘Processes’

Step 4: Obtain the weighting of criteria and sub-criteria from fuzzy AHP

The weights, commonly called priority vectors (*W*), can be expressed by $\tilde{W}^T = (\tilde{w}_1^T, \tilde{w}_2^T, \dots, \tilde{w}_n^T)$. They were calculated as geometric mean of each row of the pairwise comparison matrices as proposed by Krejčí *et al.* (2016) and implemented in Fuzzy AHP package of R-Project created by Čaha & Drázná (2016). The output of this program provided the fuzzy vector normalized weights (Table 4). Furtherly, to consider the weights of the criteria and sub-criteria, we calculated an ‘Overall Fuzzy Weight’ for each sub-criteria by (3), as shown in Table 5.

Table 4: The normalized fuzzy weights of criteria and sub-criteria from fuzzy AHP

Reference	Fuzzy weights of criteria (C1, C2, C3)	Fuzzy weights of sub-criteria		
		Governance and Organization (c11, c12, c13)	People (c21, c22, c13)	Processes (c31, c32, c33)
W1	(0.5695; 0.6548; 0.7153)	(0.4353; 0.5675; 0.6491)	(0.2706; 0.3522; 0.4844)	(0.2785; 0.3458; 0.4706)

W2	(0.187; 0.2499; 0.3331)	(0.279;0.3575;0.4869)	(0.0724;0.0887;0.1111)	(0.4706;0.5969;0.6631)
W3	(0.0754;0.0953;0.1283)	(0.0627;0.0751;0.0909)	(0.4232;0.5591;0.6442)	(0.0519;0.0572;0.0672)

Table 5: Overall fuzzy weights for sub-criteria

Criteria	Support	Fuzzy weights of criteria (C1, C2, C3)	Sub-criteria	Fuzzy weights of sub-criteria (c11, c12... c33)	Overall weights of sub-criteria (c11, c12... c33)
Governance and Organization (C1)	Minimal	0.5695	Leadership and culture (c11)	0.4353	0.2479
	Modal	0.6548		0.5675	0.3716
	Maximal	0.7153		0.6491	0.4643
	Minimal	0.5695	Strategy (c12)	0.2790	0.1589
	Modal	0.6548		0.3575	0.2341
	Maximal	0.7153		0.4869	0.3483
	Minimal	0.5695	Structure (c13)	0.0627	0.0357
	Modal	0.6548		0.0751	0.0492
	Maximal	0.7153		0.0909	0.0650
People (C2)	Minimal	0.1870	Human capital (c21)	0.2706	0.0506
	Modal	0.2499		0.3522	0.0880
	Maximal	0.3331		0.4844	0.1614
	Minimal	0.1870	Organizational competences (c22)	0.0724	0.0135
	Modal	0.2499		0.0887	0.0222
	Maximal	0.3331		0.1111	0.0370
	Minimal	0.1870	External relationships and cooperation (c23)	0.4232	0.0791
	Modal	0.2499		0.5591	0.1397
	Maximal	0.3331		0.6442	0.2146
Processes (C3)	Minimal	0.0754	RD&I management (c31)	0.2785	0.0210
	Modal	0.0953		0.3458	0.0330
	Maximal	0.1283		0.4706	0.0604
	Minimal	0.0754	Organizational learning and continuous improvement (c32)	0.4706	0.0355
	Modal	0.0953		0.5969	0.0569
	Maximal	0.1283		0.6631	0.0851
	Minimal	0.0754	Intellectual capital protection and economic appropriation of the R D&I efforts (c33)	0.0519	0.0039
	Modal	0.0953		0.0572	0.0055
	Maximal	0.1283		0.0672	0.0086

The following results correspond to the validation of the second phase of the model. The fuzzy TOPSIS method was employed for ranking SMEs by their innovative capacity.

Step 5: Create fuzzy evaluation matrices using a set of fuzzy linguistic terms

Fuzzy evaluation matrices were created by using fuzzy numerical linguistic terms generated from the decision makers' assessment. They have been asked to rate the maturity level concerning the adoption of each of the 42 good practices on a scale of 1 to 5. The inferior score being "1" (Very Low) and the superior score being "5" (Very High). Table 6 shows the triangular fuzzy terms generated for the pairwise fuzzy comparison.

Table 6: Triangular fuzzy terms for the pairwise fuzzy comparison

Maturity level linguistic terms	Numerical value	Fuzzy numerical value
Very Low (VL)	1	(0;1;2)
Low (L)	2	(1;2;3)

Average (A)	3	(2;3;4)
High (H)	4	(3;4;5)
Very High (VH)	5	(4;5;6)

The fuzzy decision matrices \tilde{D} were constructed by (3), as follows:

$$\tilde{D} = \begin{matrix} E_1 \\ E_2 \\ \vdots \\ E_m \end{matrix} \begin{bmatrix} \tilde{x}_{11} & \tilde{x}_{12} & \dots & \tilde{x}_{1n} \\ \tilde{x}_{21} & \tilde{x}_{22} & \dots & \tilde{x}_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ \tilde{x}_{m1} & \tilde{x}_{m2} & \dots & \tilde{x}_{mn} \end{bmatrix}, i = 1, 2, \dots, m; j = 1, 2, \dots, n \quad (3)$$

Furtherly, normalized fuzzy decision matrices \tilde{R}_{ij} were generated by using a linear normalization to convert the scales, as shown bellow (4):

$$\tilde{R}_{ij} = [\tilde{r}_{ij}]_{m \times n}, i = 1, 2, \dots, m; j = 1, 2, \dots, n.$$

Where $\tilde{r}_{ij} = (\tilde{r}_{ij}^l, \tilde{r}_{ij}^m, \tilde{r}_{ij}^u) = \left(\frac{x_{ij}}{c_j^+}, \frac{x_{ij}}{c_j^+}, \frac{x_{ij}}{c_j^+} \right), i = 1, 2, \dots, m \quad (4)$

$$c_j^+ = \max_i c_{ij}^{m,u}$$

$$c_j^- = \min_i c_{ij}^{l}$$

The c_j^+ is the maximum value of c_j^+ for each sub-criteria, used when the values are in medium (m) and upper (u) position in fuzzy number, and the c_j^- is the minimum value of c_j^+ are used in the lower (l) value of the fuzzy number.

Once the normalized fuzzy matrices were built, the weights found by Fuzzy-AHP (Table 5) were applied and assigned to new matrix \tilde{V} (5).

$$\tilde{V} = [\tilde{v}_{ij}]_{m \times n}, i = 1, 2, \dots, m; j = 1, 2, \dots, n,$$

where $\tilde{v}_{ij} = (\tilde{v}_{ij}^l, \tilde{v}_{ij}^m, \tilde{v}_{ij}^u) = w_j \otimes \tilde{r}_{ij} = (w_j^l \tilde{r}_{ij}^l, w_j^m \tilde{r}_{ij}^m, w_j^u \tilde{r}_{ij}^u) \quad (5)$

Step 6: Determining the fuzzy positive and negative ideal solutions (FPIS and FNIS) and identify the distance from FPIS (d^+) and FNIS (d^-)

In this step, we calculated the Euclidian distance, considering the normalized fuzzy weighted values yielded from step 5. Additionally, the fuzzy positive-ideal solution (FPIS) and fuzzy negative-ideal solution (FNIS) could also be determined. Two new matrices denoted by V^+ and V^- were calculated according to the Euclidean distance to the ideal fuzzy positive solution (FPIS), \tilde{v}_j^+ , and the ideal fuzzy negative solution (FNIS), \tilde{v}_j^- , respectively (6).

$$\tilde{V}^+ = d(\tilde{v}_{ij}, \tilde{v}_j^+), \text{ where } \tilde{v}_j^+ = (\max\{\tilde{v}_{ij}^l\}, \max\{\tilde{v}_{ij}^m\}, \max\{\tilde{v}_{ij}^u\}), j = 1, 2, \dots, n \quad (6)$$

$$\tilde{V}^- = d(\tilde{v}_{ij}, \tilde{v}_j^-), \text{ where } \tilde{v}_j^- = (\min\{\tilde{v}_{ij}^l\}, \min\{\tilde{v}_{ij}^m\}, \min\{\tilde{v}_{ij}^u\}), j = 1, 2, \dots, n$$

Finally, the Euclidean distances were summed and two vectors D^+ and D^- were established by (7).

$$D^+ = \sum_{j=1}^n d(\tilde{v}_{ij}, \tilde{v}_j^+), i = 1, 2, \dots, m \text{ and } D^- = \sum_{j=1}^n d(\tilde{v}_{ij}, \tilde{v}_j^-), i = 1, 2, \dots, m \quad (7)$$

Steps 7 and 8: Determine the relative closeness to the ideal value and final ranking of SMEs by innovative capacity

The Closeness Coefficient (CC_i) is a relative closeness to the fuzzy positive and negative ideal solution, and can be calculate by (8):

$$CC_i = \frac{D_i^-}{D_i^- + D_i^+} \quad (8)$$

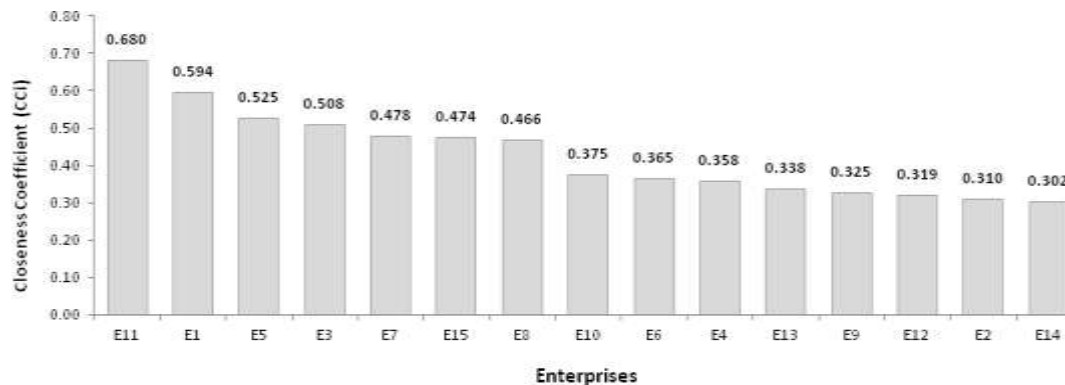
From the resulting Closeness Coefficients and considering the same basis for all SMEs E_i , a final ranking of SMEs by their innovative capacity was achieved. The relative closeness to the ideal value and final ranking of SMEs are presented in Table 7.

Table 7: Distances, Closeness Coefficients (CCi) and final ranking of the SMEs participating from NAGI-PUC-Rio

Enterprises	Distances		CCi		Final ranking		
	D^-	D^+	Score	Position	Ranking	CCi	Enterprises
E1	0.8094	0.5542	0.5936	2	1	0.6798	E11
E2	0.4203	0.9352	0.3100	14	2	0.5936	E1
E3	0.6887	0.6674	0.5079	4	3	0.5251	E5
E4	0.4693	0.8400	0.3584	10	4	0.5079	E3
E5	0.6670	0.6033	0.5251	3	5	0.4775	E7
E6	0.4828	0.8385	0.3654	9	6	0.4736	E15
E7	0.6083	0.6656	0.4775	5	7	0.4661	E8
E8	0.5905	0.6764	0.4661	7	8	0.3753	E10
E9	0.4316	0.8964	0.3250	12	9	0.3654	E6
E10	0.4849	0.8071	0.3753	8	10	0.3584	E4
E11	1.0351	0.4876	0.6798	1	11	0.3378	E13
E12	0.4352	0.9283	0.3192	13	12	0.3250	E9
E13	0.4850	0.9508	0.3378	11	13	0.3192	E12
E14	0.4376	1.0117	0.3019	15	14	0.3100	E2
E15	0.5962	0.6626	0.4736	6	15	0.3019	E14

The highest Closeness Coefficients (CCi) indicates that enterprise 11 (0.6798) and enterprise 1 (0.5936) are closer to the ideal solution than the remaining SMEs. And also, the worst result is from enterprise 14, with CCi 0.3019. This result means that it is farther away from the ideal than the others (Figure 3).

Figure 3: Final ranking of the SMEs participating from NAGI-PUC-Rio



MANAGERIAL AND POLICY IMPLICATIONS

This empirical study aims to contribute to the field of innovative capacity measurement, focusing on 15 Brazilian SMEs, which participated in a government-sponsored program (NAGI-PUC-Rio). From a theoretical and methodological perspective, the study offers and validates a conceptual model for measuring innovative capacity based on the fuzzy AHP and fuzzy TOPSIS methods. It provides a framework for academicians and researchers to identify and manage the factors that are of significance for enhancing the current innovative capacity of firms, by combining these factors efficiently. Since this is a research area with many opportunities to be explored, especially in the context of Brazil and other emerging countries, the findings from this study are expected to be also very useful for management practitioners and policy makers.

Following are the managerial implications of this study:

- Assuming the multidimensionality of innovation management as a result of complex interactions of R&D management, business models improvement, new products launching, and protection of intellectual

assets, this study offers a multi-level hierarchical structure of criteria and sub-criteria for practitioners as a research instrument that can be used for future studies and assessments;

- The hybrid method enables SMEs' managers to identify their firm's innovation capabilities in a systematic and systemic mode, thereby providing managers with relevant information for defining action plans towards the development and deployment of the firm's innovative capacities (C1, C2 and C3). Besides, the application of the proposed fuzzy AHP-TOPSIS model can reveal the major adverse factors undermining innovative capacities that deserve priority action;
- Among the three criteria, the capacity in 'Governance and Organization' (C1) is the most important criterion because it has the highest importance weight. A firm's organizational structure and governance can directly affect the efficiency of innovation management. As a matter of fact, a greater degree of governance may improve the planning and implementation of innovation strategies. However, capacity in 'Processes' (C3) should be recognized because of the organizational knowledge embedded in RD&I procedures; the organizational learning and continuous improvement of innovation management; and also the intellectual capital protection and economic appropriation of the RD&I efforts;
- This study is particularly important to identify strategic preferences of SMEs regarding a set of 42 good practices selected from the literature. It also provides the SMEs' managers with a guide for improvement the alignment of these choices with their innovation strategies.

Additionally, apart from academic and managerial implications, the proposed fuzzy AHP-TOPSIS also constitutes a methodological tool for the resolution of empirical problems faced by public managers responsible for the formulation, revision and implementation of CT&I policies, since it can be used for monitoring and evaluating outputs and impacts of RD&I programs under conditions of uncertainty.

CONCLUDING REMARKS

In this paper, an attempt was made to demonstrate in practice the benefits of adopting a fuzzy AHP-TOPSIS approach to measuring the innovative capacity of a group of 15 SMEs in Brazil. The main result of this research is to present a methodological perspective that considers the fuzzy AHP-TOPSIS as an alternative to the multiple criteria decision-making (MCDM) methods largely used for evaluating the innovative capacity of firms in general, and SMEs in particular.

As a conclusion, it can be said that the fuzzy AHP-TOPSIS model has fulfilled expectations and assumptions of this research by providing a more effective, and systematic decision support tool for decision makers to evaluate the innovative capacity of SMEs, regardless of the business sector in which they operate. The empirical study supports the claim that hybrid fuzzy MCDA models provide an important methodological approach for tackling the focused problem. In future, other techniques like ANP, DEA, ELECTRE, GRA, PROMETHEE, VIKOR combined with fuzzy set theory could be explored for measuring the innovative capacity of firms in uncertainty. The comparison of the results obtained from integrated techniques will help managers, academicians and policy makers to better understanding the criteria and sub-criteria involved in measuring innovative capacity, as well choosing the best methods to do that.

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FINANCING MECHANISMS FOR INNOVATION IN MICRO, SMALL AND MEDIUM ENTERPRISES IN BRAZIL

Gabriela Teixeira Lopes de Paula and Maria Angela Campelo de Melo
IAG/PUC, Brazil

ABSTRACT

This work aims to analyze the main mechanisms for financing innovation in micro, small and medium enterprises – MSMEs in Brazil. With this aim, the core credit supports available to these enterprises were identified, focusing on the action of two governmental institutions: the Financier of Studies and Projects (Financiadora de Estudos e Projetos – Finep) and the Brazilian Development Bank (Banco Nacional de Desenvolvimento Econômico e Social – BNDES). The results show that many small businesses are unaware of the availability of credit programs to innovation or have difficulty in accessing these resources. The research also points to the lack of articulation among the main actors of the innovation system in Brazil, as well as to the need for a better integration of the existing financial instruments, in order to ensure the efficient use of public resources.

Keywords: Innovation, innovation financing, small business, government support to innovation

INTRODUCTION

Small businesses play an important role in economic environment, due either to their capacity for employment generation or to the significant number of establishments geographically distributed. However, in order to survive, these companies face a number of obstacles; among them, uncertainties associated with the creation of new businesses as well as those inherent to the innovation process, involving technical risks in developing new products and market risks. In addition, small enterprises, in special the new ones, have little access to credit, since they do not have resources or real guarantees to offer when resorting to traditional credit system (Salles-Filho & Albergoni, 2006).

For a long time, it was believed that only large companies, with research centers and systematic spending on research and development - R&D could innovate, due to the high costs and risks involved in this activity. However, from the 1980s, it was found that a significant portion of the innovations was originated in small businesses, thus increasing the interest on the theme (Botelho, 1999).

In the knowledge society, investments in R&D are essential for generating innovation, and consequently, the competitiveness of organizations. Due to the complexity of the business environment, with rapid change and interdependence of organizations, small businesses are realizing that they need to incorporate innovation in their products and processes to ensure their survival and success. Innovation is a source of competitive advantage, by enabling the company to deliver superior value to its customers and stakeholders.

The investment characteristics of innovation, as long-term maturity, uncertainty and risk, indicate the need to create appropriate mechanisms for financing innovation (Melo, 1994). In this sense, the government support innovation contributes to the achievement of satisfactory investment levels in R&D (Pacheco, 2003).

Innovation, therefore, plays a key role for the competitiveness of small businesses, given their limited human, financial and technological capacity, and government support is important for innovation financing in these companies. This work aims to analyze the main public policies for support innovation, in special, the mechanisms for financing innovation in micro, small and medium enterprises – MSMEs in Brazil.

METHODOLOGY

This study was based on bibliographical and documentary research as well as on the results of the Pesquisa de Inovação – PINTEC (Brazilian Innovation Survey), coordinated by the Instituto Brasileiro de Geografia e Estatística – IBGE (Brazilian Institute of Geography and Statistics), which aims to offer inputs to create indicators of innovation activities in Brazilian companies.

For the analysis of PINTEC data on the innovation process in MSMEs Brazilian companies, the following aspects were considered: type of innovation implemented; spending on innovation activities; establishment of cooperative relations; government support; and major difficulties and obstacles faced by companies.

With this aim, the core credit supports available to these enterprises were identified, focusing on the action of the Financier of Studies and Projects (*Financiadora de Estudos e Projetos – Finep*) and of the Brazilian Development Bank (*Banco Nacional de Desenvolvimento Econômico e Social – BNDES*), federal government institutions that promote social and economic development.

In addition, this work explores how innovative process in Brazilian companies occurs, discussing the relationship between the main actors of the Brazilian Innovation System and the adequacy of existing instruments for support innovation.

INNOVATION SUPPORT IN BRAZIL

Innovation policies for micro, small and medium businesses can promote economic growth and increase competitiveness. However, the heterogeneity of this category of companies, which includes from firms in traditional sectors to firms in intensive sectors (La Rovere, 2001) hinders the implementation of these policies.

In Brazil, innovation policies have suffered major reforms from the late 1990s, particularly with the establishment of the Sectorial Funds, responsible for funding innovative activities in the country strategic sectors, and the introduction of the Brazilian Innovation Law (Law nº 10.973/2004) and the Law nº 11.196/2005, known as ‘*Good Law*’. The Innovation Law was created to expand the knowledge generated in universities and research centers to support the productive sector, while the Law nº 11.196/2005 grants tax incentives to companies that invest in research and development of technological innovation. The main characteristic of these changes of the regulatory framework was, therefore, to recognize as a promoter of technological development not only universities and research institutes, but also the productive sector.

However, although Brazil is considered one of the most generous countries in relation to mechanisms to support innovation available (Araújo, 2012), it appears that these instruments are still incomplete to provide a favorable environment for innovative process. This is due mainly to the uncertainty involved in the interpretation of regulatory processes (Melo, 2009), generating a high degree of legal uncertainty.

The credit instruments to research investments, development and innovation are granted mainly by two governmental institutions, Finep and BNDES, which offer these modalities of support to innovation in companies: reimbursable financing, non-reimbursable financing and investments. These procedures may be used alone or combined manner (FINEP, 2016; BNDES, 2016).

Finep is a public company under the Ministry of Science, Technology, Innovation and Communication. It is a federal agency, which promotes innovation and technological development, participating in all stages of the innovation process (FINEP, 2016; Moraes, 2008). BNDES is a public company under the Ministry of

Development, Industry and Foreign Trade. Founded in 1952, the Bank is currently the main long-term public financing agency in Brazil (BNDES, 2016).

In recent years, FINEP and BNDES have been developing several programs to promote innovation and increase the competitiveness of Brazilian companies. One of these programs is Inova (*Plano Inova Empresa*), a company innovation plan operated by BNDES, FINEP and other institutions, which aims to "promote innovation support projects in various sectors considered strategic by the Federal Government" (BNDES, 2016).

In addition, these two institutions have developed specific instruments to support the innovation of micro, small and medium enterprises in Brazil. Among these instruments, it is important to highlight the Innovative MSME (*MPME Inovadora*), managed by BNDES, and Tecnova, managed by FINEP. The former program "finances the necessary investments for the introduction of innovations in the market" (BNDES, 2016) and the latter supports, through non-reimburse resources, micro and small enterprises in research, development and technological innovation.

According to Puga (2002), the MSME support policies vary according to the perception of each country about the role of these companies and depending on economic conditions. The author analyzed the financial support to MSMEs experience in Spain, Japan and Mexico, highlighting the programs and initiatives implemented in these countries that could be exploited in Brazil, as shown in Table 1.

Table 1 – MSME Support Programs in Spain, Japan and Mexico

Country	Objectives of the MSME support policies	Characteristics of financial programs implemented
Spain	Generation of employment and income	- Participative Loans Program; - Creation of asset securitization funds; - System of reciprocal guarantees.
Japan	Business creation and promotion of innovation	- Different conditions for creation of new businesses; - Incentives to Cooperatives
Mexico	Integration of MSMEs to large enterprises, as part of an import substitution strategy	- Providers Development Program of The Nacional Financiera – Nafin

Source: Based on Puga (2002).

In addition, the author emphasizes the providers' development program implemented in Mexico, which program aims at including MSMEs in the production chain of the country by means of simplified procedures for granting credit for the supply of products or services to a large company or government institution.

ANALYSIS

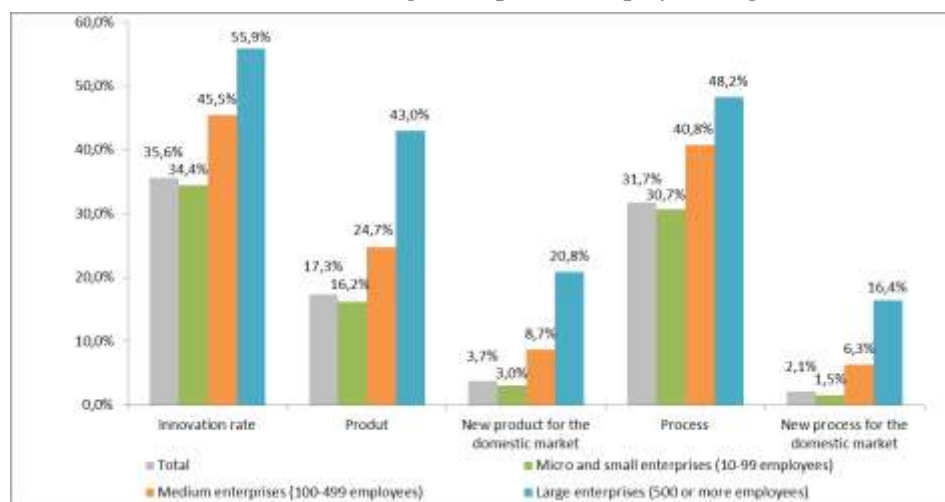
According to Araújo (2012), the gap between supply and demand of innovation policies, in Brazil, may be increasing. For the author, the formulation of innovation policies in Brazil generally lacks previous studies that provide the basis for state intervention. Moreover, he notes that innovation support programs are "systematically launched without prior assessment of their needs, demands, objectives and interactions with existing programs" (Araújo, 2012, p. 17).

Corder (2006) observes that Brazilian companies hold few R&D activities, limited to incremental improvements in products and processes, registering very rare patents. She concludes that companies do not take advantage of intensive knowledge available in obtaining benefits for production and for economic and social development.

Analyzing data from PINTEC 2011, it can be seen that there is a positive correlation between the rate of innovation and the size (persons employed range) of industrial enterprises, as shown in Graph 1. It can be observed that in Brazil there is predominance in all sizes of companies of process innovation, differently from

the findings of Bessant and Tidd (2009), for whom small businesses are more likely to innovate in product than processes.

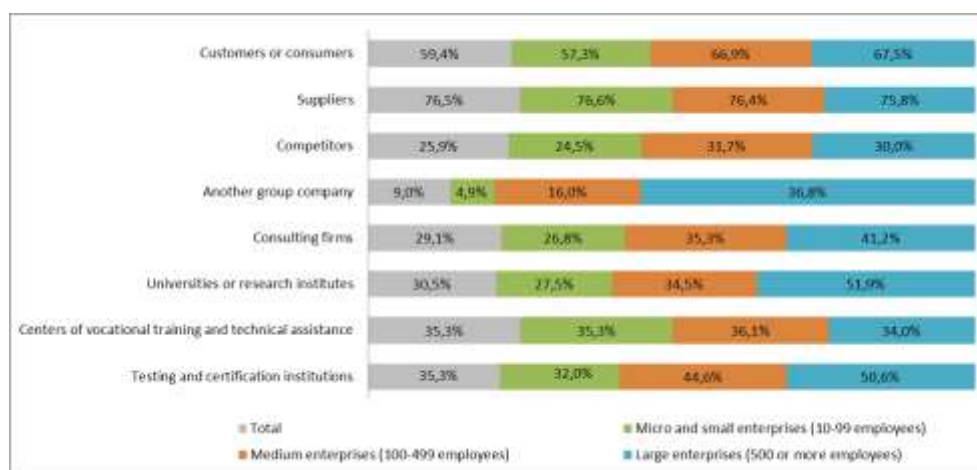
Graph 1 - Share of industrial companies that have implemented product innovations or process, for activities, according to the persons employed range.



Source: Prepared from data PINTEC 2011

Although large companies are responsible for the majority of total spending on innovative activities, the innovative effort (Spending on innovation / Net Sales Revenue) made by small businesses is more significant. According PINTEC 2011, the innovative effort of MSMEs (up to 499 employees) reached 3.39%, while that of large companies was 2.20%.

Graph 2 - Importance given to partners of cooperation by industrial companies that have implemented product or process innovations in the period 2009-2011, by company size



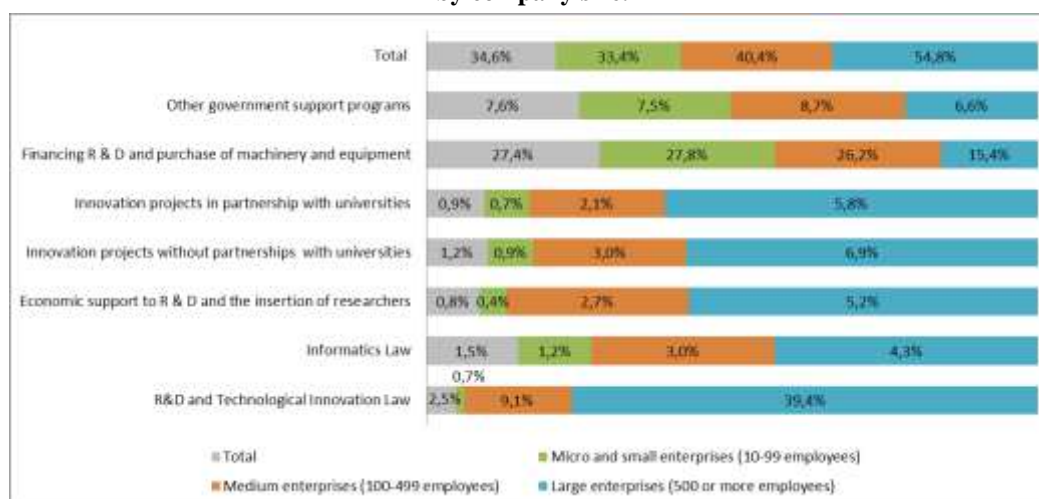
Source: Prepared from data PINTEC 2011

The establishment of cooperative relations with universities and research centers is considered less important for micro and small enterprises (27.5%) and medium enterprises (34.5%) compared to large companies (51.9%), as can be seen in Graph 2. Since small businesses are more flexible, they can better exploit the positive externalities obtained with the proximity to research centers of large companies and universities (Acs & Audretsch, 1994). For these companies, the formation of cooperation networks becomes even more relevant due their limited financial and human resources.

As can be seen in PINTEC 2011, the proportion of participation in government programs grows with the size of the company. In 2011, this proportion was 33.4% of companies with between 10 and 99 employees, 40.4% of those with between 100 and 499 employees and 54.8% of those with more than 499 employees. It should be noted that in the period 2009 to 2011 compared to the period from 2006 to 2008, an increase of about 50% in small businesses that reported having used at least one instrument of government support.

The same survey shows that while large companies have significant participation in all forms of government funding, small businesses received government support mainly for R&D funding and the acquisition of machinery and equipment. Only 0.7% of innovative micro and small industrial companies said they used the incentive of the Law 11.196/05 (Graph 3).

Graph 3 - Innovative industrial companies that used government programs, from 2009 to 2011, by company size.



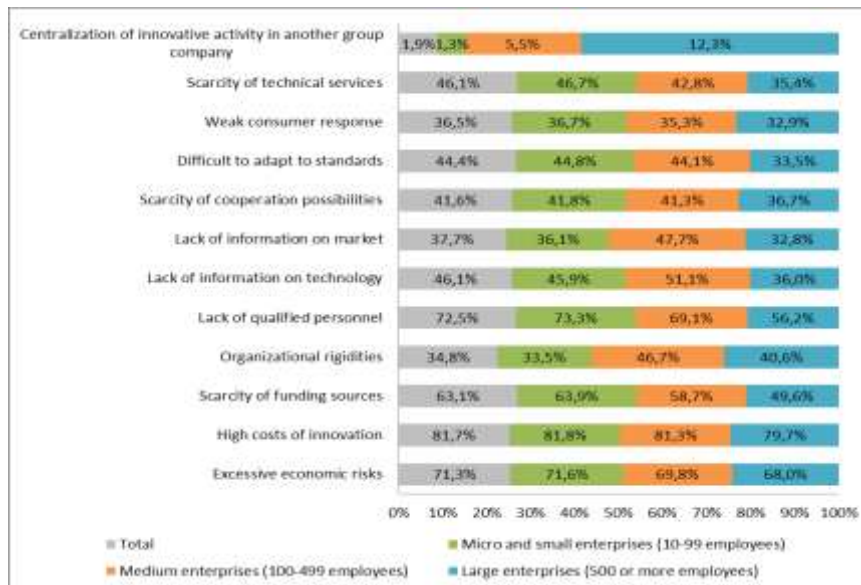
Source: PINTEC 2011

Note that the perception of scarcity of funding sources is higher in micro and small enterprises (63.9%) and medium enterprises (58.7%) than in large companies (49.6%), as can be seen in Graph 4. This may indicate that many small businesses are unaware of the existence of credit programs available, or even the limited scope of these programs.

In this sense, Pacheco and Almeida (2013) find that some obstacles reported by the companies are related to the difficulty of access to public resources to support innovation. The authors point out that this is due to lack of information on the sources of funding and the costs involved with this type of operation, while recognizing that these costs are being reduced significantly.

It is important to note that in 2011, for the first time, the survey pointed out the lack of qualified personnel, a factor of a technical nature (not strictly economic) among the two major problems faced by innovative companies. Moreover, this obstacle is more emphasized by micro and small enterprises (73.3%) and medium enterprises (69.1%) than by large companies (56.2%), which are able to attract more qualified employees by offering better salaries. This result can serve as input for the formulation of specific governmental programs to meet the need for qualified personnel for this segment.

Graph 4 –Importance given by innovative industrial companies to the obstacles to innovation, by size of company.



Source: Prepared from data PINTEC-2011.

Innovative industrial companies: product or process innovations implemented.

Innovation system actors' articulation in Brazil

CGEE and ANPEI assessment of new instruments to support innovation implemented in Brazil in the past decade detects a predominance of isolated activities among the innovation supporting institutions. If they were part of a broader, coordinated strategy, these mechanisms "could strengthen the capacity of action of the institutions involved and increase the impact of public policies" (CGEE / ANPEI, 2009, p.98).

However, the study notes that the instruments to support innovation are relatively new and the funding agencies as well as the companies still find themselves in the beginning of a learning process, not only in relation to the operation of these instruments, but in terms of important strategic definitions. These definitions include the use of different instruments in an integrated and coordinated way, the incorporation of government informational support in the decision-making process of companies and the degree of audacity of its programs in the area of technological development, among others.

Lastres, Arroio and Lemos (2003, p. 8) observed that the lack of coordinated policy development involves discontinuous support initiatives and inadequacy of instruments to support small businesses. As pointed out by the authors, the literature shows that the support mechanisms generally are structured to large companies in an attempt to frame the MSMEs to traditional systems of promotion and funding. The authors conclude that it is necessary to "change the culture in the formulation environment and operation of policies aimed at effectively change the development paradigm and financing in order to adapt it to the profile of MSEs and not the contrary".

Morais (2008, p. 96) points out the need for articulation of Finep economic subsidy instrument with the lines of the BNDES investment credit, "providing more efficiency to the use of public resources and avoiding overlapping of financial support from both institutions to the same companies and the same innovation projects".

CONCLUSION

It is important to consider that, despite significant advances in public innovations policies in recent years, Brazilian companies still have a low rate of innovation, limited to implementing improvements, mostly incremental in its processes. Furthermore, given that the small business cooperation with other organizations, universities and research centers is rather insignificant, the degree of uncertain associated with the innovation process is high.

The study indicates that policies and innovation support programs should not be implemented without planning and continuous monitoring of the programs, in order to make the instruments appropriate to business needs. On the other hand, it is necessary that companies realize the importance of implementing innovation in their business, and make the necessary efforts to identify the available funding mechanisms.

Regarding the innovation process in small companies, it appears that although large companies are responsible for most of the expenditure on innovation activities, the innovative effort of small businesses is relatively more significant. This indicator reinforces the need to develop public policies that take into account the reality of these companies.

The results show that many small businesses are unaware of the existence of credit programs available to innovation or have difficulty in accessing these resources. The research also points to the lack of articulation among the main actors of the innovation system in Brazil, as well as to the need for a better integration of the various financial instruments available, in order to ensure the efficient use of public resources.

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ASSESSING THE EFFECTIVENESS OF GENERAL ANTI-AVOIDANCE TAX RULES IN AUSTRALIA AND THE UNITED KINGDOM

Ken Devos
Monash University, Australia

ABSTRACT

As austerity measures become a common global feature pressure is on governments and revenue authorities to improve their tax take by tackling tax evasion and avoidance. In response, one strategy that has been adopted by some Organization for Economic Cooperative Development (OECD) countries has been to introduce or enhance their own general anti-avoidance legislation. This paper specifically examines the recent amendments to and implementation of both the Australian and British General Anti-Avoidance rules (GAARs) and subjects them to specific assessment criteria which assist in gauging their overall effectiveness. While comparative elements and features are noted, the analysis finds that these particular GAARs will generally strengthen the position of their respective revenue authorities to tackle tax avoidance in future years.

Key Words: General Anti-avoidance rules, assessment, Australian, British, and OECD.

INTRODUCTION

The international tax environment is changing rapidly (James, 1999). The increased sophistication of tax planners in identifying and exploiting legal arbitrage opportunities, which often exist due to the loopholes in the rules of international taxation, provides Multi-National Enterprises (MNEs) with opportunities to greatly minimise their tax burden. Companies cannot and do not expect to voluntarily pay taxes over and above the amounts imposed by law (Freedman, 2003). However, the debate over tax evasion and avoidance has reached the highest political levels (Saint-Aman and Russo, 2013) and has become an issue on the agenda of several Organisation for Economic Cooperative Development (OECD) countries. Businesses employ tax minimization/avoidance strategies as part of their obligation to their shareholders to maximise profits. However, this practice raises concerns in relation to the fairness and integrity of tax systems. Although the corporate planning strategies may be technically legal, the overall effect is to erode the corporate tax base of many countries in a manner which is not intended by domestic policy OECD (2013).

Overall this paper aims to explore whether the current Australian and British general anti-avoidance/abuse rules (GAAR)'s have the potential to effectively combat tax avoidance and illegal tax evasion, albeit that this actually remains to be tested. The rationale for choosing these two common law jurisdictions was based on their recent amendments and introduction after much debate and speculation within their respective countries. The paper initially provides a brief overview of the 2013 Australian legislative GAAR amendments and the application of specific assessment criteria to those amendments. This is followed by a brief overview of the 2013 British legislative GAAR and the application of specific assessment criteria to the new GAAR. The paper proceeds to outline some comparative elements and features and concludes by providing some tax policy implications.

BRIEF OVERVIEW OF THE 2013 AUSTRALIAN LEGISLATIVE GAAR AMENDMENTS

It is noted that a thorough examination of the definition of a ‘scheme’ under s177A and the ‘dominate purpose test’ under s177D of the *ITAA 1936* is beyond the scope of this paper. Nevertheless, the sections will be cross-referenced where appropriate in the analysis of s177C. The purpose and function of section 177C is to define the kind of tax outcomes that a participant in the scheme must have had the purpose of securing for the taxpayer, and which must have been secured in connection with the scheme, if Part IVA is to apply. The original s177C “tax benefits” has been retained in the new legislation and s177C (1) states that,

A tax benefit or tax outcome in connection with the scheme shall be read as reference to:

- an amount not being included in assessable income;
- a deduction being allowed;
- a capital loss being incurred;
- a foreign income tax offset being allowed and
- no liability to pay withholding tax.

In order to reach a conclusion that one of the specified outcomes has been secured, and to quantify it, it is necessary to compare the tax consequences of the scheme in question with the tax consequences that either would have arisen, or might reasonably be expected to have arisen, if the scheme had not been entered into or carried out. This involves a comparison with an alternative postulate. A tax consequence of a scheme or of an alternative postulate is relevant if it arises in connection with the scheme or with the alternative postulate. However, the inquiry is not confined to the immediate tax consequences of the steps that comprise the scheme or the alternative postulate. This was identified in the *Futuris* case (PWC, 2012).

Nevertheless, taxpayers have been able to avoid the finding of a tax benefit by establishing that they would have ‘done nothing’ as the alternative. Consequently, the 2013 Amendments focused on removing the former ‘unrestrained enquiry’ and replaced it with a set of defined parameters on how to determine whether an alternative postulate is a ‘reasonable alternative for comparison’ (PWC, 2012).

The bases for identifying tax benefits are now specifically outlined in s177CB. Specifically in approaching a conclusion as to the alternative postulate in s177CB (4) the amendments require having particular regard to;

- the substance of the scheme; and
- any result or consequence that would have been achieved by the taxpayer as a result of the scheme (other than the Australian income tax results); but
- disregard any Australian income tax result that would have been achieved by the alternative postulate (whether for a taxpayer or any other person) (PWC, 2012).

These amendments mean that an alternative course of events would now require that the commercial and economic outcomes as a result of the scheme would match those outcomes from the alternative postulate. Consequently, the conduct could now be compared with regards to the non-tax outcomes they achieve. The amendments further exclude any consideration of the associated Australian tax results when determining the reasonableness of the alternative postulate and whether a tax benefit has arisen. This latter exclusion is likely to prevent a similar outcome to the *RCI Pty Ltd v FCT (2011)* from occurring in the future (PWC, 2012).

Further structural changes regarding the design of Part IVA have made the dominant purpose test the critical part. Previously where Part IVA required separate enquiries of the establishment of a scheme that had the dominant purpose of achieving a tax benefit, this now becomes a single enquiry as of 2013. Nevertheless, the reforms are not intended to alter the existing framework regarding reaching an objective conclusion on the dominant purpose of the parties. The narrow focus of amendments were confirmed as the government did not propose to change the core operation of the “Purpose test” in Part IVA which is the key determinant as to whether the Part applies (Slater, 2013).

It should also be noted that other minor textual changes to s 177D and s 177F were justified by now making s 177D the dominant purpose enquiry the starting point. The reordering of s 177D –time and place of where the scheme is implemented are now relocated to subsections (4) and (5) and these words relocated to sub (3). These changes do not vary the effect of the words of the section. Arguably the amendments do not change the position under s 177F (Cooper and Russell, 2013).

APPLICATION OF KEY ASSESSMENT CRITERIA TO AUSTRALIAN GAAR AMENDMENTS

Increasing legitimacy

It should be initially acknowledged that there are many commentators in Australia who opposed the 2013 GAAR amendments and advocate that they came about not because of a deficiency in the legislation but rather a deficiency in case selection by the Commissioner (Richards, 2013). As the Commissioner had lost the cases on the factual findings of the courts rather than a defect in the statute and on losing the policy argument it was then a case of implementation and damage control (Cooper and Russell, 2013). The ATO may also have been influenced by the amount of money when selecting its cases considering the sums involved in *AXA* and *Futuris*.

Despite the rationale for the 2013 GAAR amendments, the issue is whether the GAAR as amended will be applied transparently, independently and objectively. The elimination of the “do nothing alternative” raises the possibility of much irrationality being introduced in order to explain what the taxpayer is stipulated to have done absent the “scheme”. Elimination of the “do nothing” alternative postulate is likely to cause the most concern for corporate groups endeavoring to restructure their activities in a commercially optimal manner.

First s 177CB(4)(a)(ii) will require taxpayers to assume to have taken some action that would have achieved the same business benefits. Second 177CB(4)(b) will stop the taxpayer factoring in a ‘do nothing’ but rather employing an alternative which makes it worse off. Consequently, the methodological objectivity of the GAAR has been compromised by s 177CB(4) which requires taxpayers to posit unrealistic, non-objective and fanciful assumptions which bear no relationship to the real world (Cooper and Russell, 2013).

The fact that both a scheme in s 177A and now the implication of a tax benefit in s 177CB contains few constraints and none in most circumstances, suggests that the focus going forward will be on the dominant purpose test in s 177D which will need to do the work to see if the GAAR will apply. Arguably this is what was always intended from the inception of the GAAR and was the construction of the section in the framework period that was unseated by the decisions in recent cases (Wardell and Johnson, 2014).

Supports current legislative principles and objectives

As indicated previously the GAAR amendments are expected to foster legislative principles and objectives such as certainty, simplicity and efficiency. This will be supported by the courts who will need to make sense of the new GAAR and are obliged to give some meaning to the legislative enactment (Cavanaugh, 2013). The judiciary should begin its interpretation by considering the text of the new law and the language employed which will be the surest guide to legislative intention. How much the judiciary rely on relevant intrinsic materials which house concepts of “annihilation” and “reconstruction” remains to be seen.

Where s 177D applies regard must be had to both the form and substance of the scheme. If after all matters under s 177D (2) are considered and the GAAR does not apply no further warrant remains for elevating substance over form. Therefore where the GAAR does not apply there is a need to respect form over substance. Although the GAAR is expected to remain operative as an integrated whole with the emphasis on the dominant purpose test in s 177D, relegating the tax benefit s 177C to the status of a mere subsidiary question within the GAAR will certainly not make the task of identifying the tax benefit any less of a requirement (Bloom, 2015).

Indeed, the policy intent of the amendments seem to look for an alternative postulate that would achieve substantially the same non-tax results for the taxpayer as the actual transaction but without the tax mischief which the Commissioner sets out to negate by invoking the GAAR. The “particular substance of the scheme” is likely to be limited and directed to fiscal ends and “particular regard” to it may distract from the real issue as to whether the alternative postulate is reasonable. Consequently, s177CB(4)(a) is essentially an unnecessary amendment if the true substance of the scheme produces a reduction in the incidence of tax then it will yield a tax benefit without para (a) it also opens up other lines of arguments to taxpayers which were not there

previously. It is only in very rare cases where the discrete step or sequence of steps serves no other purpose other than reduce the incidence of tax that s177CB(4)(b) has a decisive operation. Effectively taxpayers are put on notice and decide whether the tax consequences are so erroneous that the transaction should not be adopted (Slater, 2013). Consequently, the reasoning and the amendment to insert s 177CB(2) reveals a fundamental misapprehension of the design of the GAAR given that it is an unnecessary amendment already covered by s 177C(1) and arguably therefore fails to add anything (Slater, 2013).

The new s177CB(3) is intended to be an exclusion of the construction which confines the alternative postulate to a single counterfactual objectively identified as the most reliable prediction. Although a wider scope suggests that the Commissioner should be entitled to and bound by a choice of tax benefit where there are several reasonable expectations, based on the observations in the *RCI* case. Qualifying that premise, regarding alternative postulates-there is really only one. There is only one reasonable expectation or prediction which is sufficiently reliable for it to be reasonable. See *FCT v Peabody* where the court indicated:

‘A reasonable expectation requires more than a possibility. It involves a prediction as to the events that would have taken place if the relevant scheme had not been entered into or carried out and the prediction must be sufficiently reliable for it to be regarded as reasonable.’ (Slater, 2013)

However, the reasonableness of the Commissioners counterfactual is not as critical as whether the court has the evidence to show what would have or might reasonably be expected to have occurred if the scheme had not been entered into (Slater, 2013).

BRIEF OVERVIEW OF THE 2013 BRITISH LEGISLATIVE GAAR

The *Finance Act 2013 Part 5 s 206* introduced a GAAR which applied only to arrangements entered into from when the Finance Act was passed (i.e. it is not retrospective). The wide nature of the UK test is considered to be balanced by the fact that it is also necessary to show that the tax advantages arising from the tax arrangements are “abusive”. At this point, the UK legislation uses a completely unique “double reasonableness” test as follows:

Tax arrangements are “abusive” if they are arrangements the entering into or carrying out of which cannot “reasonably” be regarded as a “reasonable” course of action in relation to the relevant tax provisions, having regard to all the circumstances including:

- (a) whether the substantive results of the arrangements are consistent with any principles on which those provisions are based (whether express or implied) and the policy objectives of those provisions,*
- (b) whether the means of achieving those results involves one or more contrived or abnormal steps, and*
- (c) whether the arrangements are intended to exploit any shortcomings in those provisions.*

This reads in a somewhat cumbersome way, it must be admitted, but after considerable discussion the double reasonableness test ensures that the judgement is not one of pure statutory interpretation. The test looks at a range of additional factors but it is always rooted in reasonableness and includes guidance on the considerations to be taken into account, including the principles and objectives of the underlying legislative provisions and any shortcomings in them (Freedman, 2012).

The UK GAAR then goes on to list non-exhaustive examples of possible indicators of abusiveness. Each of the following is an example of something which might indicate that tax arrangements are abusive:

- (a) the arrangements result in an amount of income, profits or gains for tax purposes that is significantly less than the amount for economic purposes,*
- (b) the arrangements result in deductions or losses of an amount for tax purposes that is significantly greater than the amount for economic purposes, and*
- (c) the arrangements result in a claim for the repayment or crediting of tax (including foreign tax) that has not been, and is unlikely to be, paid, but in each case only if it is reasonable to assume that such a result was not the anticipated result when the relevant tax provisions were enacted.*

The tests in the UK GAAR are all objective, and the burden of proof is squarely on the UK revenue authority to show that the tax arrangements are abusive. This is also considered to be an important safeguard against overactive use of the GAAR.

Therefore, the UK GAAR differs from the Australian general anti-avoidance rules as it is not a broad spectrum rather it is only intended to deter taxpayers from the most abusive and contrived schemes, which leaves clear grounds for tax planning to continue. Consequently, other targeted anti-avoidance rules still continue to operate. For the GAAR to apply taxpayers must have the main purpose of a tax arrangement that is 'abusive'. There is no statutory definition of "abusive" itself but it is considered to be where there is no reasonable course of action. The double reasonableness test ensures that only 'contrived and artificial' arrangements are caught. It is also noted that while the GAAR applies to most main direct taxes it does not apply to the Value Added Tax (VAT) (PWC, 2012).

As a taxpayer self-assesses the potential GAAR application the Advisory Panel can act as a safeguard to provide an independent view as to whether arrangements are reasonable. If the HMRC wants to invoke the GAAR the case will be referred to an Advisory Panel of 3 members who form an opinion as to whether the arrangements entered into are a reasonable course of action but will not indicate whether or not the GAAR should apply (PWC, 2012). It is for the HMRC to take the Panels opinion into account but it is not binding. The HMRC must also follow very strict procedural requirements if they are to apply the GAAR. These include; reviewing potential GAAR cases in both the HMRC's anti-avoidance group and appointing designated officers in case of a challenge (PWC, 2012).

Consistency with the policies and principles are particularly important in determining whether or not the arrangement is abusive. Shortcomings in the legislation are where unanticipated consequences could arise maybe in the drafting of the law. Some indicators of abuse are where the tax and economic consequences are different but more useful are arrangements that are not abusive which are in line with 'established practices' and HMRC has accepted these practices (PWC, 2012).

Guidance notes form part of the legislation and are central to understanding the interpretation and application of the GAAR. Of the five parts Part A to C deal with the purpose and Aims of the GAAR Part D the application of the GAAR to other circumstances and Part E with procedural matters. The guidance notes have been approved by an independent advisory panel and must be considered by a court in any litigation (PWC, 2012).

APPLICATION OF THE KEY ASSESSMENT CRITERIA TO THE BRITISH GAAR

Increasing legitimacy

The legal position in the UK prior to 2013 consisted of no statutory GAAR, no general abuse law doctrine and no clear judicial anti-avoidance doctrine (Freedman, 2013). The history of tax avoidance cases in the UK courts is a checkered one. Principles have been developed then qualified and possibly dashed to the ground. For example see the *Barklay* and *Mercantile* cases (Freedman, 2004).

Consequently, due to pressure from business and government, the increasing media interest, the global financial crisis and concerns about an increasing tax gap, not to mention the rise of civil society (NGO) interest in taxation and other corporate social responsibility pressures, the Coalition Agreement in 2010 included a review of a GAAR (Freedman, 2004). The government commissioned the Aaronson Report in 2011 which proposed a 'moderate rule targeted at abusive arrangements, but would not apply to reasonable tax planning,' therefore not a broad spectrum anti-avoidance rule.

The response to the Aaronson Report was mixed, but more positive than the reaction to the idea of a GAAR in 1998 when the issue was last agitated. Reasons for the re-emergence of the debate was that the current state of the UK case law was unclear – and that it has been further muddled as the UK tax code has become even

longer and more complex than it was in 1998. In particular a very large number of unallowable purpose tests or targeted anti-avoidance rules (TAARS) have been added to the legislation with no safeguards for the taxpayer. Artificial schemes continued to be sold notwithstanding the Disclosure of Tax Avoidance Schemes (DTAS) legislation being introduced. Subsequently, the public reaction to tax avoidance at a time of austerity was eventually picked up by politicians (Freedman, 2004).

The Report recommendation of a narrow GAAR aimed at the most “egregious” schemes proposed that an Advisory Panel develop guidance on the GAAR and its application. The Report proposed a GAAR that is about improved process and it suggested ways to constrain and control the use of discretions by Her Majesty’s Revenue Commission (HMRC) and by the courts (a discretion which exists under current legislation without such safeguards) (Freedman, 2004). The onus rests with the HMRC to show that the tax arrangements are abusive and that the counteraction of the tax advantages arising from the arrangements is just and reasonable. It was envisaged that while the GAAR may not result in the removal of specific anti-avoidance legislation it should slow down the production of new specific provisions and TAARS – eventually leading to simplification of the tax laws (Freedman, 2004).

Ultimately it was suggested that a general anti-avoidance principle would provide the overlay needed to give legitimacy to judicial development and offer a framework in which the uncertainty inherent in any system capable of tackling tax avoidance could be fairly managed (Freedman, 2004). In this regard it was considered that the attractiveness of the UK jurisdiction to do business was best achieved through a narrow GAAR so that responsible tax planning could be carried out but contrived and artificial schemes would be targeted. Arguably while GAARs introduce purpose tests and concepts of tax avoidance and tax benefits where interpretation may be difficult, at least when there are contained in a statute the concepts are legitimately introduced and the development of them may proceed (Freedman, 2004).

Supports current legislative principles and objectives

The well-established principles in UK tax law of *Ramsey* and the *Duke of Westminster* are still very relevant for the UK GAAR. While the GAAR may arguably go beyond the *Ramsay* Principle that is beyond purposive construction based on a realistic view of the facts *Ramsey* would still be supported. As indicated by Lord Nicholls in *MacNiven v Westmoreland Investments limited* (2001) UKHL 6 at 8

“Ramsay did not introduce a new legal principle... The need to consider a document or transaction in its proper context and the need to adopt a purposive approach when construing taxation legislation are principles of general application” (Bloom, 2015).

The Ramsay principle which looked at a transaction forming part of the pre-ordained circular or self -cancelling transaction was undertaken for no commercial purpose other than obtaining a tax advantage in question (Bloom, 2015). The problem that may be uncounted as illustrated by the *Ramsay* case law is where the principles and policy objectives of particular provisions are difficult to discern. It would be in the absence of clear policy and principles that judicial disagreements and difficulties could arise.

In this regard there is a strong reliance on the concept of “abuse” which is at the core of the GAAR legislation in s 207(2)-(6) *Finance Act 2013* and further reference to such in the Guidance Notes at (para B8.3). This reference indicates where the HMRC regards arrangements which seek some tax advantage would not be prevented by the GAAR in those situations it does not inhibit the HMRC’s right to challenge such cases relying on where appropriate other parts of the tax code applied in accordance with legal principles developed by the courts” (Bloom, 2015). This leaves open the possibility of the English courts applying *Ramsay* and *Furniss* and adopting an approach favoured by the High court in *John* to catch tax avoidance schemes which are outside of the GAAR. Consequently, the UK GAAR is potentially wider and will become more active as years go on and have the full force if the revenue becomes threatened in any major way (Bloom, 2015).

Previously prior to the GAAR if a transaction fell outside of the specific anti-avoidance rules (SAARs) directed at an area of activity concerned it would not be struck down as an avoidance transaction and courts have been reluctant to adopt a role of tax policeman. The co-existence of both SAARs and a judicial GAAR had

apparently been deficient in tackling tax avoidance schemes in the government's view. However, a statutory GAAR does not necessarily provide more clarity than a judicial GAAR due to its' inherit 'catch all' objective but the perceived advantage is that the elected law makers, not the judges, determine the policy intent. This was the aim of the British statutory GAAR despite previous judicial guidance (Cashmere, 2008).

In fact the use of background statements from Parliament about the rationale of the legislation would give guidance to the courts in going beyond the wording of the legislation but always within the legislation rationale. It provides the courts with a legitimate framework to work out parliaments intentions. The advantage for the revenue authority is improved voluntary compliance of the majority of taxpayers leaving them free to tackle the extreme cases (Freedman, 2004).

In this regard the new British GAAR had followed established tax principles and policies. Further Braithwaite (2002), Freedman (2004) and others indicated that complexity could be reduced by reducing volume but by also producing a framework for managing tax avoidance. There is much jurisprudence Freedman (2004) on the meaning of statutory principles vs rules. Braithwaite however, looking for common ground in the literature defined rules as specific prescriptions whereas principles are unspecific or vague prescriptions. In this context the legislative principle would be a method of sign posting; a parliamentary intention that it was its intention that certain types of gaps in rule making should be filled by judicial decisions based on the principles laid out. Gap filling principles have also been found in some European tax systems, for example in Solar Roach (2004) in Spain.

COMPARATIVE ELEMENTS AND FEATURES OF THE SELECTED GAARS

Clearly the criteria of legitimacy was highly questionable in the Australian situation. There was a strong suggestion that the GAAR amendments clouded objectivity and were not required. This was completely the opposite in the British situation where the new GAAR was seen as a major breakthrough and clearly the government had a mandate to deliver it. In this regard the narrow GAAR which supported responsible tax planning and targeted artificial schemes was commended. The criteria of supporting current legislative principles and objectives appears to be lacking in the Australian case. It was suggested that relegating tax benefit s 177C to a mere subsidiary question within the GAAR does not make the task of identifying the tax benefit any easier. Likewise further amendments to s 177CB (4)(a) and s177CB (2) appear to be unnecessary and are at odds with the principles of certainty and simplicity. However, the UK legislation appears to have followed established tax principles and policy objectives. By providing background statements indicating Parliaments rationale for the legislation it gives guidance to the courts based on the law makers' policy intent.

CONCLUSION AND TAX POLICY IMPLICATIONS

The analysis finds that where the UK GAAR had passed on the key criteria the Australian GAAR amendments had failed, with regards to legitimacy and support of legislative principles and objectives. Overall, both GAARs generally appear to have strengthened the capacity of their respective revenue authorities to tackle tax avoidance and evasion. This is mainly due to the new and amended legislation resulting in a greater degree of uncertainty until case law and administrative practice can clarify and redefine the application of those GAARs. It is also noted that some tax authorities have even encouraged this uncertainty to potentially dissuade abusive transactions in some cases refusing to provide examples to taxpayers of where the GAAR may apply (Clifford Chance, 2013). Some tax policy implications also emerge from this examination of the selected GAARs. Specifically, these new GAAR amendments and provisions may prevent the courts from feeling obliged to take matters into their own hands and reach decisions which stretch the meaning of the legislation. Unlike judicial decisions, a legislative provision can clearly go beyond statutory construction and can apply principles set out by the legislature. Consequently, the modified law within a GAAR will work best where there are also stated principles behind the legislation. In this way a GAAR should encourage and not deter good legislative drafting (Freedman, 2004). Overall the effectiveness of the reforms in balancing the competing priorities would depend on how the legislation is administered. Qualifying that premise, it is acknowledged that the new and amended respective GAARs are not meant to be the only tool for fundamental tax reform but rather should be viewed as

an improvement to the general tax avoidance legislation which forms part of any modern tax system. These legislative changes will not reform underlying faults in both domestic and international tax system design and will fail to operate effectively if the policy underlying the legislation is unclear or poor (Freedman, 2004). The ability of national anti-avoidance rules to generate revenue and change the behaviour of MNEs by acting as a sufficient deterrent continues to be queried and challenged (Ting, 2015). Consequently, it is argued that while the introduction and amendments to the British, and Australian GAARs seek to be part of the solution to tax avoidance, it will take an on-going coordinated international response to be able to tackle tax avoidance effectively into the future.

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CREATING AND MANAGING OF BUSINESS STRATEGIES TO ENHANCE BRAND AWARENESS FOR SME's, IN THE HANDICRAFTS SECTOR IN LAOS

Andries J Du Plessis, Somchay Indavong, Leon De Wet Fourie and Nitin Seth, Unitec Institute of Technology, New Zealand

ABSTRACT

This research project is aimed to investigate how brand management is exercised in SMEs in Laos in the handicrafts sector and to identify obstacles in building a successful brand for the SMEs. The study further aims to determine what the potential brand strategy is that should be applied by the Laos SMEs in practice. To accomplish the purpose and objectives a semi-structured interview as a data collection method for a qualitative research approach was employed. A total of 10 participants (the owners or managers of the SMEs) were interviewed in Laos. The study found that SMEs create their brand identity through the vision and values of business owners; uniqueness and quality of the products and the country of origin are key aspects for building and developing brand identity; SMEs still face difficulties when creating, developing and managing their brands due to finances and a lack of human resources. As a result, six branding guidelines are confirmed, and recommendations for SME entrepreneurs. Conclusions and recommendations form the last sections.

Keywords: Business strategy, Small and Medium Enterprises, LAOS economic system

INTRODUCTION

In today's competitive business environment, organisations always put their greatest effort to influence consumers into purchasing their products and services. In doing so, the organisations have to differentiate themselves from other brands and competitors; especially they need to convince the consumers that their products and services provide more values than other organisations. Keller (2013) illustrates that it is more difficult to persuade customers with traditional ways of communications than it used to be due to the vast number of available sources. Customers are finding it easy to consult and collect relevant information from advanced technology tools and media (Kotler & Keller, 2012)

According to the American Marketing Association (2014) and Ferrell and Harline (2014), a brand is described as a 'name, term, design, symbol, or any other feature that identifies one manufacturer's product or service as distinct from those of other sellers'. Nevertheless, several practicing managers refer to a brand as more than creating a name, logo and symbol for a product, as the value of the brand is mainly related to creating a substantial amount of awareness, prominence and reputation in a marketplace.

In Southeast Asian Nations including Laos or Lao PDR, SMEs in the region employ approximately 75-90 percent of the domestic workforce. They have strategic roles to play in the development of the private sector, employment creation and support to large enterprises (Tambunan, 2009). Salze-Lozac'h, Winijkulchai, and Wong (2014) argue that SMEs not merely play significant roles in employment generation, revenue creation and domestic investment, but they also have the capacity to innovate and develop new products that would continue to stimulate economic growth. Bihler (2014) demonstrates that apart from the large companies in the mining and hydropower in Laos, currently SMEs are the key contributors to the average annual 8% GDP growth rate.

Gundala and Khawaja (2014) underline that the owners and managers of SMEs have a direct connection with the company brand. They frequently represent personification and identity of the brand and communicate the brand both internally and externally (Krake, 2005). Thus, in order to create and develop a successful brand, owners or managers should have a clear vision and direction. They need to build a strong brand to be able to effectively compete locally and internationally (Lassen, Kunde, & Gioia, 2008). This attempt could enhance business performance and achieve a long-term growth in a market.

Branding and brand management is even more important for SMEs, particularly in the least-developed country such as Laos. It is assumed that if SMEs have dynamics and effective practices of brand management, the expansion of customers and markets, the growth and development of their businesses could increase in speed. It is also expected that the results of this study would bring practical and useful guidance for SMEs in Laos to achieve long-term success and sustainable growth in the marketplace. In essence, creating brand awareness and a strong brand brings a significant element for organisations as it increases values, profitability and competitive strength of the businesses.

PROBLEM STATEMENT

There is a need for additional research to investigate and determine the dynamics and potential practices emphasizing the development and management of brands in SMEs in Laos. In particular, it is imperative to study how SMEs manage their brands and the most effective approach to deal with the difficulties of brand management. It is expected that brand management processes would bring a key strength for SMEs in Laos to enhance values and profitability of the businesses. This also suggests which practices and activities of related government policy makers and private sectors should be considered to cope with problems in creating brand awareness for the SMEs in order to achieve a long-term success and sustainable growth in both regional and international markets. In this regard, a business problem is identified as how can SMEs effectively develop practices of brand management in creating brand awareness, particularly in the handicrafts sector in Laos? The main research question to be addressed in this study is: **“What practical strategy of brand development should be applied by SMEs in Laos?”** In order to achieve the objectives and definitively answer the main research question, the following sub-questions to be answered are:

- 1) How do SMEs in the handicrafts sector in Laos create their brand identity?
- 2) What are the perspectives of entrepreneurs or managers of the Lao handicraft enterprises for enhancing brand management?
- 3) How is brand management currently implemented in SMEs particularly in the handicrafts businesses in Laos?
- 4) Which difficulties do SMEs in Laos confront when managing and developing their brands?
- 5) What practices of brand management could be employed for the Lao SMEs?

OBJECTIVES OF THIS STUDY

The main objectives of this research project are to investigate how brand management is exercised in SMEs in the handicrafts sector in Laos and to identify obstacles and inhibitors to building a successful brand for the SMEs. In addition, this research aims to find out what the potential brand strategy is that should be applied by the Lao SMEs in practice through the developing of a conceptual model of building and managing the brand for the SMEs. The objectives can be summarised as follows:

- a) To investigate how the handicraft SMEs create their brand identity locally and internationally.
- b) To examine the understanding of SMEs' entrepreneurs, in the handicrafts sector of brand management.
- c) To assess how brand management is currently implemented in the handicrafts sector in Laos.
- d) To determine the relevant difficulties encountered by SMEs in the handicraft businesses in Laos when managing and developing the brand.
- e) To explore the practices of brand management which are most amenable to the handicraft SMEs in Laos.

METHODOLOGY

Background

It is widely recognised that brands clearly offer significant benefits to both consumers and firms. Companies that can win and survive in the twenty-first century will be those whose marketers or managers successfully create and manage brand equity (Keller, 2013). As a result, due to the benefits of branding, the concept of brand equity, brand building and brand management have been researched extensively and increasingly in an attempt to find effective ways to enhance products and services' brands and then to increase profitability of companies.

This research study was conducted based on interpretivism (phenomenology) as a research paradigm. This is essentially inductive and refers to the qualitative approach. The approach is concerned with in-depth understanding of people experiences and the ways that individuals react under particular situations (Bryman, 2012). With regard to positivism, it generally refers to quantitative methods, and it is basically deductive and concerned with logic and arithmetic (O'Gorman & MacIntosh, 2014). Interpretivism emphasises investigating social phenomena with an expectation to obtaining interpretative understanding, while positivism concentrates on measuring social phenomena. Collis and Hussey (2013) highlight that interpretivists adopt various methods that look for describing, translating and then acquiring the terms of meaning, not the frequency of certain happening phenomena.

Sample selection

The sample size for this research is determined as a purposive sampling. The purposive sampling relies on the judgement of the researcher associated with the goals of the research project and target organisation focused to study (Tracy, 2013). Purposive, or judgmental sampling, is a sampling strategy that is suitable for researchers who would like to select a specialised population and a particular case to conduct research. Based on the purposive sampling, the researchers select potential participants based on the purpose of the research and tasks and positions of participants in other words, the potential participants would hold positions as key people who have essential roles in making decisions regarding implementation of their businesses and marketing activities. Participants (an owner and / or a manager) were from each handicraft enterprise and there were a total of 10 participants that were expected to be selected to conduct semi-structured interviews for this research.

Data collection

Semi-structured interviews as a data collection method were employed to implement for this research study. Collis and Hussey (2013) identify the main advantage of semi-structured interviews is that it allows researchers to narrow down some topics or issues that they would like to ask target people. The interviews were carried out in the Lao language and also voice recorded and then transcribed into English by the researchers. The duration of the interviews was approximately 45 minutes to 1 hour. The names of their companies and the participants were anonymous in this research to minimize harm and keep confidential the information they provided.

Semi-structured interviews

Through a means and characteristic of semi-structured interviews, researchers have a list of specific inquiries or issues that need to be answered (Ng & Coakes, 2013). If the answers are not clear or the interviewees do not understand some inquiries, additional questions can be raised to interviewees in order to probe for in-depth information and to explore the why and how of their decision making, not only what, where and when (Collis and Hussey, 2013). The advantages of the approach of semi-structured interviews comprise an ability to address more specific issues and inquiries. Responses are often easier to interpret than other qualitative methods. Face-to-face interviews were conducted during July 2014 in Vientiane Capital, Laos. Each interview took place at the venue of each participative handicraft company. In order to make the data collection appropriate for this study and according to the method of semi-structured interviews, a list of interview questions was carefully designed and categorised based on each objective of the research before the potential participants were interviewed.

LITERATURE REVIEW

Background

The definition of small and medium-sized enterprises (SMEs) varies from nation to nation in terms of the amount of employees and value of sales and assets. A case in point of SMEs in New Zealand, SMEs are a significant part of the New Zealand economy, they account for 97.2 percent of all companies in the country, amounting 455,907 from 469, 118 companies in total with less than 20 employees per SME (Ministry of Business Innovation and Employment, 2013). In Thailand for instance, the SMEs are defined relating to a number of employees in a variety of industry sectors. The industry sectors include manufacturing, retailing, service and wholesaling.

Regarding SMEs in Laos, according to the Laos Prime Minister's Office (2004), SMEs are classified into two size categories as small and medium enterprises. Small firms are identified as those having an average number of employees not more than 19 people and total assets not exceeding two hundred and fifty million Kip (approximately US\$31,000) or annual income not over four hundred million Kip (approximately US\$49,000). Medium-sized enterprises are those that have an average number of employees not over 99 people and assets in total not exceeding one billion two hundred million Kip (approximately US\$148,000) or an annual revenue not more than one billion Kip (approximately US\$124,000). Southiseng and Walsh (2010) demonstrate that the Laos economy is formed from only 5% percent of large companies, 16% medium-sized enterprises, 58% small enterprises and 21% micro enterprises. SME development plays a crucial role in national economic growth.

As for Southeast Asian Nations, including Lao PDR, SMEs are the vast majority of the total businesses in Laos (Salze-Lozac'h et al., 2014). SMEs employ approximately 75-90 percent of the domestic workforce. They play a strategic role in the development of the private sector and support to large enterprises such as being the sub-contractors to large exporting companies (OECD Development Centre, 2014; Tambunan, 2009; United Nations, 2012). Thus, recognising the considerable advantages that SMEs bring to the country's development and several obstacles that SMEs still confront, the government of Laos has attempted to deal with the relevant difficulties and enhance SMEs' performance by identifying the key aspects and implementing activities for SMEs' development. In this regard, according to the Laos Prime Minister's Office (2004) and Tambunan (2009), the Lao government issued the decree on the SMEs' promotion and development which is comprised of the six main aims as to:

- Improve the regulatory environment.
- Enhance the competitiveness of business establishments.
- Expand domestic and international access.
- Improve access to finance.
- Encourage the development of business organisations.
- Enhance entrepreneurial attitudes and characteristics within society.

The important roles of the brand in SMEs

De Chernatory et al. (2011) demonstrate that brands are one of the most valuable assets of firms. A successful brand represents a name, symbol and design, and some combination of those elements recognizing a company's products as possessing a competitive edge and sustainable growth. Having a successful brand can increase profitability by adding values to the products and companies that entice and influence consumers to purchase. This enables companies to develop products for new markets (Du Plessis, 2015; Ferrell & Harline, 2014). Besides, Grant (2014) illustrate that a brand is a crucial element of reputational assets of a company. Especially, the values and the essential role of having a well-known brand is reflected in the price premium given that customers are not reluctant to buy branded products more than unknown brands (Grant, 2014; Keller, 2013). Kapferer (2012) and Keller (2013) underline that brands clearly offer considerable benefits and values to both consumers and companies.

Table 1: The significant functions of the brand for the consumers and manufacturers

The functions of the brand for the consumers	The functions of the brand for the manufacturers
Identification of product	Means of identification to simplify tracing

Risk reducer	Means of legally protecting unique characteristics
Practicality and search cost reducer	Indication of high quality performance
Promise, bond with manufacturer of product	Permanence, bonding and familiarity relationship
Guarantee and signal of quality	Source of competitive edge
Continuity and satisfaction	Source of revenues and returns

Source: Developed by the authors based on the research and adapted from Keller (2013)

Brands also definitely offer considerable advantages and valuable functions to companies or manufacturers. Brands provide a means of identification to simplify product handling and a means of legally protecting unique features or aspects of products (Keller, 2013). A brand can be protected through registered trademarks, copyrights and designs. These intellectual property rights guarantee that the company can safely invest in the brand and obtain benefits of a valuable asset (Kotler & Keller, 2012).

The role of management towards branding

The managers do not precisely recognise what and how much goes into the process of branding (Gronlund, 2013). Hence, creating a distinct, compelling and strong brand are becoming more challenging issues for the managers. It is suggested that they should create and develop a framework associated with brand building that represents the identity of the company. In the funnel model of Krake (2005), it underlines that the owners or managers play a vital role in determining and administrating the internal structure of their organisations and this reflects on how much attention they provide to brand management. Particularly, the entrepreneurs or business directors can assign other managers and employees with clear responsibilities or specific tasks. Importantly, they should set explicit objectives and make organisations aware of the significant role of brand management. It is also required that the owners can create and develop a competitive brand through learning from a set of guidelines and considering brand building as long-term process that needs consistent, continuous communication to succeed. Based on the discussion of this section, it sheds light on sub-questions (2) and (3) – discussed later in this paper.

Brand building in SMEs

With regard to the concept of branding and brand management (sub research question 1, 2 and 3), SMEs have been overlooked, although SMEs are from a great majority of overall companies. Krake (2005) and Centeno, Hart, and Dinnie (2013) criticize that even though brands have been studied extensively, literature and articles are mainly focused on the brands of large firm's brands rather than on SMEs. In spite of the fact that SMEs have key differences in brand building in comparison with larger organisations, some academics suggest that brand building in SMEs may perhaps develop in a similar approach to the context of the large organisations. The ways large companies utilise to build their brands might also work for brand building in SMEs (Abimbola & Vallaster, 2007; Centeno et al., 2013). Brand owner or managers instill some of their personality manners into their brands. Such personalities are essential during the process of brand building as this could encourage the enterprises to develop an effective brand strategy and brand identity, and then to increase brand values.

Brand management

This section sheds light on research sub-question (2) and (3) from the literature which is concerned with the key elements to implement and enhance brand management. Since branding and the business environment are significantly changing, the brand management of an organisation needs to be taken with adequate instruments, processes and frameworks (Fisher & Vallaster, 2010). Keller (2013) highlights that the process of strategic brand management is significantly concerned with the design and implementation of relevant marketing programs to build, measure and manage brand equity. The primary purpose of branding is to enhance sales and increase customer awareness and loyalty; an organisation has to initially focus on building a favourable image with customers and a positive customer experience. Concerning the sources of brand equity, customer-based brand equity exists when customers have a high level of awareness and hold some favourable view of a brand, and unique brand associations in their memory.

Brand awareness

It entails the performance of brand recognition and brand recall. Brand recognition is referred to as the ability of customers to recognise the brand which has previously been seen, while brand recall means the ability of customers to recall the brand from their memory when given the product category or the customers require a similar kind of product. Establishing brand awareness means increasing the familiarity of the brand through repeated experiences. The more customers experience a brand through seeing and hearing it, the more possibly they are to record the brand in their memory. In other words, individuals consider brand awareness as the core asset of brand equity, given that brand awareness has a great influence on customers' decision making (Keller, 2013).

Strategies to enhance brand awareness

Building a positive brand image acquires marketing programs connecting to strong, favourable and unique associations to the brand in individuals' memory. The meaning of customer-based brand equity is commonly related to the source of brand associations and the way they are created. Strategies can be formed in various ways to register in the mind of customers, in particular from personal direct experience, online surfing, information from relevant commercial publicity, word of mouth and assumptions that customers make about the brand itself (Keller, 2013). The more deeply customers consider regarding product information and relate it to existing brand knowledge, the resulting brand associations will be more strengthened.

Recently strategies and processes behind marketing programs to enhance brand awareness have changed dramatically and significantly compared to the last few years because companies have to tackle considerable issues and changes in the external marketing environments. Enormous shifts in the economic, technological and competitive environments have forced business owners or managers to fundamentally change the way they develop marketing programs and to embrace new tactics or approaches. Some of the changes include rapid technological developments, growth of interactive and mobile marketing alternatives, greater customer empowerment and increased competition (Keller, 2013). Communication strategies, channel strategies, pricing strategies and other marketing activities can all enhance brand awareness.

Table 2 below mainly compares brand identity, brand equity and brand strategies and refers to internal structure as well as marketing programmes.

Table 2: Comparison of brand building and brand management in large organisations and SMEs

Activity	Large organisations	SMEs
Brand identity	Visionary management Systematic procedure based on extensive market research, filling a gap in the market	Visionary individual (The entrepreneur) Intuitive process based on the personality and values
Brand equity	Associations derived from customer research and connected with customer needs and products and features	Associations fabricated from the personality and values of the entrepreneur, customer needs and product features
Brand strategies	A variety and large number of strategies are being utilised locally and internationally, with the aim of maximizing market coverage and overlaps Corporate branding is part of overall brand strategy development	A limited number of strategies are being employed Collaborative strategies and corporate branding not common utilised
Internal organisational structure	Brand tasks spread over many departments and functions	Brand responsibilities held by the entrepreneur and the entrepreneurial team

Marketing programs	A broad range of highly visible and integrated mix programs	<p>The main focus is on the product. A wide diversity of innovative and more or less integrated actions depending on the enterprise</p> <p>Look for low cost ways that would reduce the impact.</p> <p>Internationally, minimum national requirements should be met and local adaptations are left to horizontal partners</p>
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Source: Compiled by the researchers based on Spence and Essoussi (2010)

ANALYSIS OF THE RESULTS

Since there were a total of 10 participants from 10 handicraft enterprises in Laos involved in this research study, code letters and numbers of H1, H2, H3, H4, H5, H6, H7, H8, H9 and H10 were used to represent the 10 participants or interviewees. The participants' names and the names of their enterprises are anonymous in this research study to avoid personal identification and to ensure that there is no harm to any of the participants and their businesses. In order to answer the research questions, the interview questions were carefully designed from general to specific questions, and also based on the theoretical background and each research objective.

Objectives achieved

a) How do SMEs in the handicrafts sector in Laos create their brand identity?

Brand identity and brand image are important means for the creation of brand equity and development of the brand. In the SMEs in Laos, the visions and values of the business owner or entrepreneur are the primary source of brand associations employed to develop core brand identity. Uniqueness and quality of the product is the key aspect to build brand identity and develop brand equity in order to gain competitive advantage. This aspect is also essentially recognized as the key factor that differentiate a SME from other competitors and brands.

b) What are the perspectives of entrepreneurs or managers of the Lao handicraft enterprises for enhancing brand management?

In the SMEs in Laos, brand management is mainly concerned with advertisement activities due to a limitation of brand knowledge. One interesting point emerging from this study is that brand management could be also related to presenting of traditional production skills and sustaining of the unique product design. Quality is one important brand association to be used for the creation of a strong brand image.

c) How is brand management currently implemented in SMEs particularly in the handicrafts businesses in Laos?

Laos SMEs create brand equity through connecting the brand name with the country name in order to develop the common concept of the existing brand. They utilise the country of origin image to influence brand awareness and enhance brand values. They heavily rely on word-of-mouth to create brand awareness and brand image. Additionally, since they perceive brand management as mainly concerned with general advertisements such as through the company's brochure and magazines, it can be said that their business activities are lacking in special attention and adequate execution of branding and brand management.

d) Which difficulties do SMEs in Laos confront when managing and developing their brands?

In the SMEs in Laos, a scarcity of budget and a limitation of human resources are the main barriers when developing and managing their brand. In addition to branding difficulties, the business owners or managers may pay less attention to brand management and brand development activities due to a lack of understanding of the important role of branding and brand management.

e) What practices of brand management could be employed for the Lao SMEs?

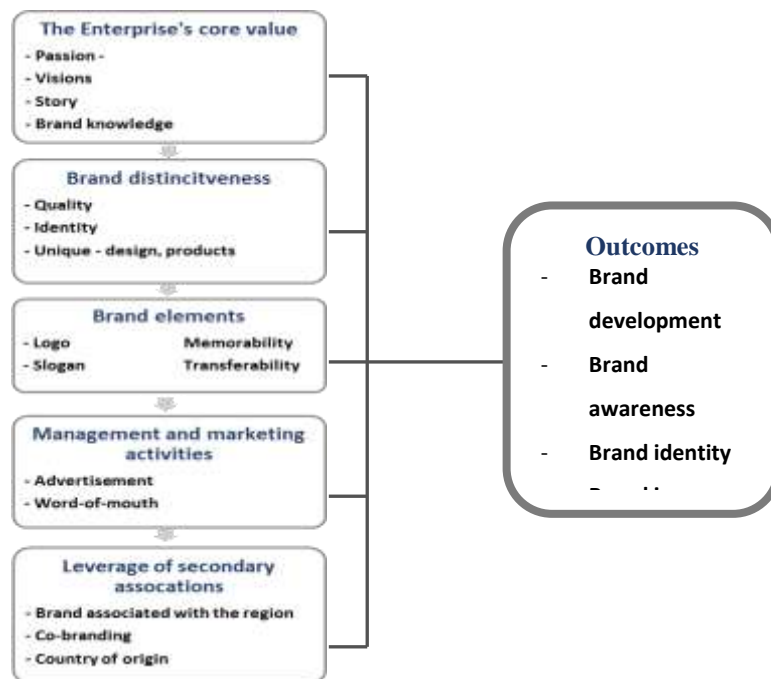
The six potential branding guidelines include focusing on building one or two strong brands, employing an integrated brand element that fully support both brand awareness and brand image, leveraging and broadening the secondary brand associations, holding consistency in the policies and communications of the enterprise, having a clear relationship between the characteristics of the entrepreneur with the brand and concentrating on creating the unique design and quality of the product.

Sub-research questions answered from this study

1. How do SMEs in the handicrafts sector in Laos create their brand identity?

the SMEs in Laos create their brand identity through the visions and values of the entrepreneurs or business owners. Furthermore, uniqueness and quality of the products and the country of origin are the key aspects to build and develop brand identity and brand equity. (See the Figure 1 below).

Figure 1: A model of the creation of brand identity and brand image of the SMEs in Laos



Source: Developed by the author and adapted from Keller (2013)

2. What are the perspectives of entrepreneurs or managers of the Lao handicraft enterprises for enhancing brand management?

Almost all of them consider that brand management is only about advertising activities such as brochures and magazines. Brand management activities comprised of other aspects and are more complex than advertisements. The majority of the entrepreneurs and managers do not have knowledge with regard to branding and brand management. An interesting point is that brand management can also be related to the presenting of traditional production skills, protecting the company reputation and producers, and sustaining of

the unique product design; maintaining the product quality is one important brand association be used for the creation of a strong brand image.

3. *How is brand management currently implemented in SMEs particularly in handicrafts businesses in Laos?*

The SMEs in Laos create brand management and equity through connecting the brand name with the country name in order to develop the common concept of the existing brand. In other words, they utilise the country of origin image to influence brand awareness and enhance brand values. In terms of promoting the company brand through relevant activities, they heavily rely on word-of-mouth to create brand awareness and brand image. Since they perceive brand management tasks as mainly concerned with general advertisements such as through the company's brochure and magazines, it can therefore be deduced that their business activities lack special attention and adequate execution of branding and brand management.

4. *Which difficulties do SMEs in Laos confront when managing and developing their brands?*

The main reasons SMEs hamper their brand development and management are a scarcity of budget, a lack of staff and a limitation of marketing activities. In particular, budget constraints restrict their enterprises from investing towards developing and managing their brands. In addition to branding difficulties, and due to a lack of understanding of the important role of branding and brand management, the business owners or managers may pay less attention to brand management and brand development activities.

5. *What practices of brand management could be employed for the Lao SMEs?*

One new guideline relating to building the unique design and quality of the product, could be added to the models of Krake (2005) and Keller (2013) where they propose eight branding guidelines, because it was frequently cited by the enterprises studied as having significant relevance to their business operations. As a result, these changes led to the creation of the new conceptual model of the potential guidelines for managing and developing the brand of the SMEs in Laos as depicted in Figure 2, as follows:

Figure 2: A conceptual model of branding guidelines or practices for managing and developing the brand of the SMEs in Laos.



MANAGERIAL IMPLICATIONS

The study results suggest that the entrepreneurs or business owners play a crucial role in the SMEs in Laos and exert significant influence on the internal structure and culture of their enterprises. They demonstrate different skills that are fundamental in the creation and development of the brand. Nevertheless, a majority of the SME entrepreneurs or owners in Laos still pay little attention to brand development and brand management in their daily tasks and business activities. They underestimate and do not clearly understand the significant role of brand management.

Although the owners and managers incorporated a personalized management style and had some experiences within this business sector, they still need to develop their branding knowledge, skills and competencies as these will likely have an influence on their brand building and business development activities. Another important implication is that a number of SMEs fail and are reluctant to fully invest in most business activities comprising advertisements, training and information technology. Perhaps, this is because SMEs often encounter inadequate financial support and human resources, and they do not have branding knowledge and do not precisely understand the important role of branding and brand management.

SMEs in the handicrafts sector in Laos are distinct from large organisations or even other business sectors. Their business processes and products which are referred to as craft, unique and handmade items, have their own particular characteristics and abilities to grow in a market. Thus, in order to develop their brand and be able to compete in a competitive market, the product might be promoted and developed through presenting its uniqueness and storyline.

RECOMMENDATIONS TO BUSINESS OWNERS, MANAGERS AND ENTREPRENEURS IN LAOS

- Business owners, entrepreneurs or managers should take the lead in brand management.
- Business owners, entrepreneurs or managers should locate relevant brand management tasks in their business activities.
- The business owners or managers should be encouraged to have an increase of delegation of branding decisions, cultivate enthusiasm and incorporate entire activities of the enterprise when managing and developing the brand.
- Social media should be used as it is deemed as a place where customers actively engage and share about their experiences with other individuals.
- The entrepreneurs or business managers should make use of the role of online environment tools including the company website and social networking sites.
- The entrepreneurs and managers can create and promote a storyline for a product. This practice would be a feasible way to develop the product brand and increase the value of the product.
- For branding strategies, entrepreneurs or business owners should investigate branding practices and strategies available and assess which ones would be most suitable for their enterprises and target markets.

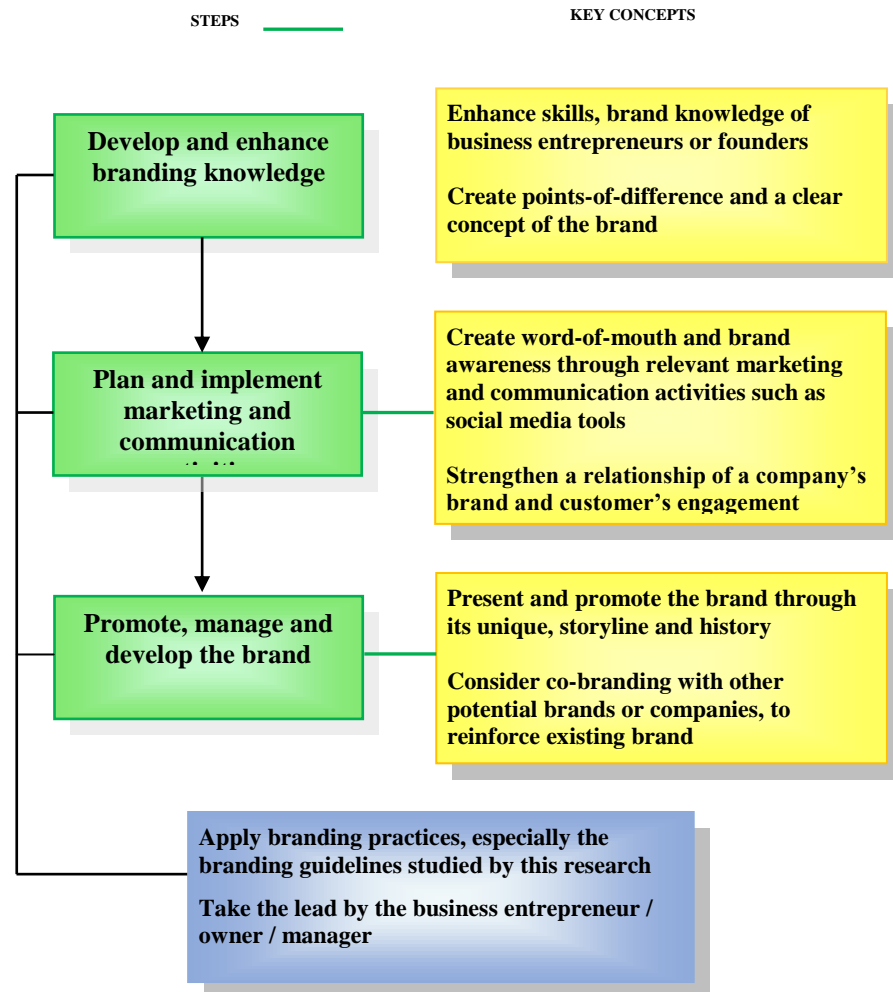
As a result, based on the conclusions, implications and recommendations mentioned above, this research develops a conceptual framework for creating a strong brand for SMEs in Laos as depicted in Figure 3 below.

CONCLUSION

This study highlights and provides suggestions that the entrepreneurs or business owners play a crucial role in the SMEs and exert significant influence on the internal structure and culture of an enterprise. The entrepreneurs need to develop their branding knowledge, skills and competencies as these aspects will likely have an influence on their brand building and development activities. The business owners or managers should be encouraged to

have an increase in the delegation of branding decisions and incorporate the entire activities of the enterprise when managing and developing the brand. In this regard, the notion of enhancing brand knowledge of entrepreneurs would be placed at the first stage of the framework for creating a strong brand, as depicted in Figure 3.

Figure 3: A conceptual framework of the process for creating a strong brand, managing and enhancing brand awareness for SMEs in Laos



Source: Developed by the authors

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THE PERCEPTION AND PREPARATION IN TERMS OF RISK MANAGEMENT OF SMEs OWNERS IN LAOS TOWARD THE JOINING OF ASEAN ECONOMIC COMMUNITY (AEC)

Andries J Du Plessis, Kounjairthong Insiri, Leon De Wet Fourie and Daniel Mangalaraj, Unitec Institute of Technology, New Zealand

ABSTRACT

The purpose of this research is to understand how the Laos SMEs perception of the AEC affects their risk management. The examining of their knowledge about SMEs and the AEC are implemented. The research analyses their current risk management approach in relation to business strategy, finance, and workforce issues in an attempt to find out their readiness to overcome the challenges of the AEC. To accomplish the aim and objectives, semi-structured interviews in the qualitative approach were executed to collect data from 12 SME owners who voluntarily participated in the interviews. According to the findings, a small number of Lao SMEs have risk management in their business strategy. Their degree of risk management is low. Laos firms focus on daily operations without concern and being prepared for the upcoming risk of the AEC even though they are aware of the risks. Regarding their business strategy, finance, and workforce it appears that business owners lack proper knowledge that is specific to these fields. As a result, five adapted models are formulated to be used as guidelines to strengthen Laos SMEs strategic business plans to prepare for risk management.

Keywords: Business strategy, Small and Medium Enterprises, LAOS economic system

INTRODUCTION

Since the New Economic Mechanism (NEM) in 1986, Laos PDR has reformed the whole economy by shifting from a centralized system to a market-oriented economy. This new form of planned economy is also called the "open door" policy. Thus, the purpose is to open and promote the country to the global market and attract Foreign Direct Investment (FDI). As a result, the changes have brought about the face of movement for the economic development of Laos as never before (Lao National Chamber of Commerce and Industry, 2010). Laos is known as one of the poorest countries in South-East Asia where the country is a landlocked agrarian economy. In 2012, the Doing Business Indicator List ranked Laos as 120 of 183 countries. therefore, there is a huge challenge to Laos in order to transform and develop the country from a fundamental agriculture baseline to business and trading investment (Pomfret, 2013). In this assent, it seems as if Laos is still far away to step up and shine on the world-class stage.

According to the prevailing laws of the Laos PDR, Small and Medium Enterprises (SMEs) are legally registered and operated as independent enterprise units and considered as the most important sector in the Laos economic system. From the national statistic, SMEs occupy 99.98 percent of all businesses operating in Laos, and they produce 83 percent in the employment rate which totally contributes 6 to 9 percent of GDP in all sectors. Based on the Steering Committee on the Economic Census 2006, SMEs in Laos can be divided into three sectors, which are product production, trade and services. The total number of SMEs registered in Laos is 126,913 enterprises in which 64.5 percent are trade, 19 percent is in product manufacturing and 16.5 percent in the service sector (Laos National Chamber of Commerce and Industry, 2010; The ASEAN Secretariat, 2011). Toward the remarkable integration of the ASEAN region, Laos has developed the National SME Development Plan 2011-2015 which aims to promote and develop related SMEs policies and formulate the final decrees and

strategies (The ASEAN Secretariat, 2011). The World Bank Group indicates that there is less than 20 percent of SMEs in Laos that have benefitted from long-term credit (The World Bank Group, 2014). The development status of SMEs in ASEAN is more than 97 percent of operating SMEs in Laos. The Laos SMEs would encounter difficulties in terms of growth and competition over the SMEs in ASEAN (GIZ, 2014b).

From all the aforementioned scenarios, the challenges to SMEs in Laos would be more tensed as Laos was joining the ASEAN Economic Community (AEC) in December, 2015. The SMEs owners in Laos still have a vague perception about the benefits and drawbacks of the AEC. As a result, the preparation for these changes would be slow and inadequate to meet the deadline because of the lack of risk management and precise understanding of those problems.

PROBLEM STATEMENT

This research is important to Laos SMEs to understand the concept of AEC and trade unions. By understanding this concept, Laos SMEs would have better comprehension on what the advantages and consequences are of joining the union. From this point of view, Laos SMEs would be able to discover the channel enhancing their business as well as preparing for the risks which rely on these suggestions and recommendations in this research. Despite the fact that there is only a small number of existing quantitative research on SMEs that especially focuses on AEC in Laos, this research aims to explore the risk management of SMEs in Laos as well as their understanding of the concept of the AEC toward advantages and consequences. In this regard, the conceptual problem is identified as how does Lao SME owners concentrate on the changes happening in the industries of Laos.

In order to address the research problem and achieve the aim, the main research question that needs to be answered is **“How does the Lao SMEs owners’ perception on AEC affect their risk management strategy and approach in the four sectors namely restaurants, hotels, tourist agencies and handicrafts?”**

To achieve the stated objectives and address the main research question, the sub-questions are as follows:

1. What are the Lao SMEs owners’ perspectives on the understanding of the SMEs?
2. What are the Lao SMEs owners’ perspectives on the understanding of the AEC?
3. What are the risk management approaches that the SMEs owners in Lao have used currently?
4. How did the risk management strategy of the SMEs owners in Laos change after they were aware of joining AEC, in particular, to business strategy, financial, and workforce issues?

AIM AND OBJECTIVES OF THIS STUDY

The aim of this research is to explore the SMEs owners’ perception in Laos during the transition into AEC and then find out how they prepared their business to meet the challenges for the risk management. In preparation of the risk management, specifically in the three main areas (strategic business, financial, and workforce issues) that moderate their business to sustain their competitiveness. However, in order to achieve those aims, the key objectives of this research project are as follows:

1. To demonstrate the understanding of Lao SME owners toward their SMEs.
2. To explore the perception in terms of understanding of threats that SMEs in Laos have on the AEC.
3. To find out the risk management approaches that SMEs in Laos have prepared before entering the AEC.
4. To determine the factors that formulate the relationship between their perception and risk management preparation.
5. To articulate the need of assistance from the perspective of the SMEs owners in Laos
6. To study the Lao SMEs owners’ characteristics toward the anticipated changes of the transition period when Laos is entering the AEC.

METHODOLOGY

Background

Methodology is a selecting mechanism to ensure that each research is conducted effectively and appropriately (Collis & Hussey, 2013). In this, the steps include the approaches engaging the study process, data collection and analysis methods. Collis and Hussey (2013) argue that the method and methodology are related but different. From their point of view, a method is the way of utilization of the methodology by using the knowledge structure or discipline coming from the methodology. In contrast, method is the field of practice, which means a technique or process about how the research is conducted. Research method is the concrete implementation process whereas research methodology is about background information on philosophy and science.

Saunders, Lewis, and Thornhill (2012) point out that the first process in the research design is to select the right research paradigm in order to further the next step of creating a blue print of the research. A research paradigm can be imaged as a research structure framework that portrays the direction of the research. According to Collis and Hussey (2013), positivism and interpretivism are the two main and most famous used paradigms in the research field. From those two, which one will be applied is imperatively based on the consistency and matching between philosophical assumption and the purpose of the research outputs. Positivism refers to quantitative methods, which are fundamentally deductive in nature, logic and arithmetic. Regarding this method, experiment and observation are the process to test in an attempt to understand the reality of how people perceive and react onto social phenomena.

In contrast, interpretivism enhances the belief that there is no fixed objective in social reality because everything is subjective and formed under the perception that people have on a certain phenomenon (Collis & Hussey, 2013). Normally, interpretivism is to investigate and sort out reasons to solve a particular problem or unclear opportunities of phenomena by interpreting people's perception and then comparing to the hypotheses. Therefore, from all advantages and specific characteristics of interpretivism that correspond with our purpose, this research will be structured under the interpretivism approach. By following this approach, the researchers would be able to explore the new phenomena of the AEC in the Lao context that heavily relies on Lao SMEs owners' perceptions and reactions. In practice, the researchers would be able to have in-depth interviews, and unearth high-quality information from the respondents' point of view.

Sample selection

Critically acknowledging both advantages and disadvantages of the quantitative and qualitative approaches, the researchers select the qualitative method in this project; the advantages of the qualitative approach are more suitable in the Lao context as it allows the project to select the right people and gain accurate data. Given that this research needs to find out the reaction and behaviour from only Lao business owners who are aware of entering the AEC, this purposive sampling is essential for the selection process before starting data collection. The researchers sent the project information sheet and organisation consent form to the Department of Small and Medium Enterprises Promotion (DOSMEP) under the Ministry of Industry and Commerce in Laos (This was to give authorization to the researchers to conduct the data collection in any of the SMEs in Laos). After that the researchers requested the DOSMEP to provide an information sheet that covers the four SMEs sub-sectors in which the researchers could formulate a sampling frame. From this sampling frame, the 16 participants were randomly selected and contacted (12 as eligible participants and 4 as substitutes). In this sense, the samples which are the SMEs owners confidentially participated and engaged in the research project as they felt confident about the processes that went through the public administrator such as DOSMEP.

Data collection

This research utilizes semi-structured interviews as to collect data for the analysis. Rabionet (2011) asserts that the semi-structured interview is a fruitful technique that could narrow down the topics and issues simultaneously while interacting conversation with people. Throughout the process, the researchers could overcome inquiry issues that needed to be answered by extending, elaborating and redefining conversation (Bryman & Bell, 2011; Ng & Coakes, 2013). These are to make clear the questions for interviewees whereas the unclear answers also get clarification from build-on to the questions.

The face-to-face interviews were held in the period of July to August, 2014 in the Vientiane capital of Laos. In terms of location and time to conduct the research project, the researchers scheduled the time based on

the convenience and availability of the respondents. This was to avoid any effect happening to their business. When the location was agreed, the interviews were taken in Lao language, then transcribed into English by one researcher. The researcher used a voice recorder during the conversation of approximate 40 minutes to one hour, depending on each interview.

Interviews

The interview questions in this research were crucially developed. This is to ensure the quality of up-coming data as well as divert from biased or leading questions. Regarding SMEs in Laos, the main person taking decisions and direction of a business are the owners or general managers because these people are the motivators who monitor and plan a business. Therefore, this research aimed to interview 12 Lao SME owners. There was the pre-test interviewing of the questions with three SME owners in Laos that the one researcher knows. This was to make sure that the interview questions are clear, appropriate and easy to understand. During the interviews, memoing is the step of recording and writing a note as to reflect the ideas about categories of coding that may not yet fully fulfil the quality to answer the question (James, 2014). In this way, the researchers can use this memoing to re-recognize and roll back to observation time of the interview again. As a result, the information of coding can be more elaborated and the answer to the questions would be more accurate.

LITERATURE REVIEW

Background

In every economy, Small and Medium-sized Enterprises (SMEs) are the most predominant factor contributing to social and economic development as they are the main moderators of capital in job creation and innovation. SMEs are a heterogeneous group which constitutes various firms that are innovative, dynamic and growth oriented (Saad & Idris, 2014). Besides, this heterogeneous is driven by different needs and objectives such as lifestyles or excitement of entrepreneurs to start up new businesses (James, 2014). In SMEs, once they employ more than 10 people; appropriate management and structure are essential.

SMEs in ASEAN and Laos

SMEs in ASEAN have offered career development and opportunities for women and youth to participate (The ASEAN Secretariat, 2011). Remarkably recognizing the importance of SMEs among ASEAN leaders, and their fostering and acknowledgement have been emphasized in order to lift up capacity building domestically and regionally (Asian Development Bank Institute, 2015). In Laos, statistics show that 99.98 percent of businesses in Laos are made up of SMEs and they account for 83 percent of employment in the country which contributes between 6 to 9 percent of GDP in all sectors (Lao National Chamber of Commerce and Industry, 2010). The definition of SMEs in Lao PDR is indicated in the table below:

Table 3: Lao SMEs

Category	Average Annual No. of employees	Total Assets in Kip	Annual Turnover in Kip
Small	≤19	≤250 million	≤400 million
Medium	≤99	≤1.2 billion	≤1 billion
Kip is Lao current, 1USD = 8000 Kip			
The decree further classifies SMEs by sector or sub-sector as follows: SMEs operating in the production of goods SMEs operating in the trade sector SMEs operating in the service sector			

Source: Asian Development Bank (2010)

From the Mekong Institute (2012), SMEs in Laos operate by family lines and in hierarchy. This implies that typical methods are employed in running business in Laos, and they are not fit and not able to deal with internationalized markets, especially in this coming AEC. With the coming integration of AEC, Laos would have the potential to access new markets both regional and international. However, in an exchange with this liberation, the country may face regional economic competition and market traps if the businesses are not conscious of their benefits (GIZ, 2014a). Laos is not yet ready to integrate into AEC as the SMEs still scale their sufficiency over their budget, labourers as well as management abilities.

Trade Union: AEC

In December 1997, The Association of Southeast Asian Nations was constituted to envisage a stable, prosperous and competitive regional economic zone. The agreements on these purposes are a free flow of goods, investment, capital and services. This is to develop economic equitably, reduce the poverty and socioeconomic gap disparities by 2020 (Das, 2012). In particular, the ASEAN Economic Community (AEC) is one pillar of the four ASEAN integration components as to idealize the ASEAN bloc and merge 10 markets among the members into a single one. In light of this ASEAN bloc, the key element is to harmonize every custom's procedure into a single-point recognition of entry and exit in order to lowering barriers for the flow of goods. This concept of one 'single window' resembles the format of the EU's single market that employs a digital origin document and a single custom's certificate to exchange goods among the union members (Nuthall, 2015).

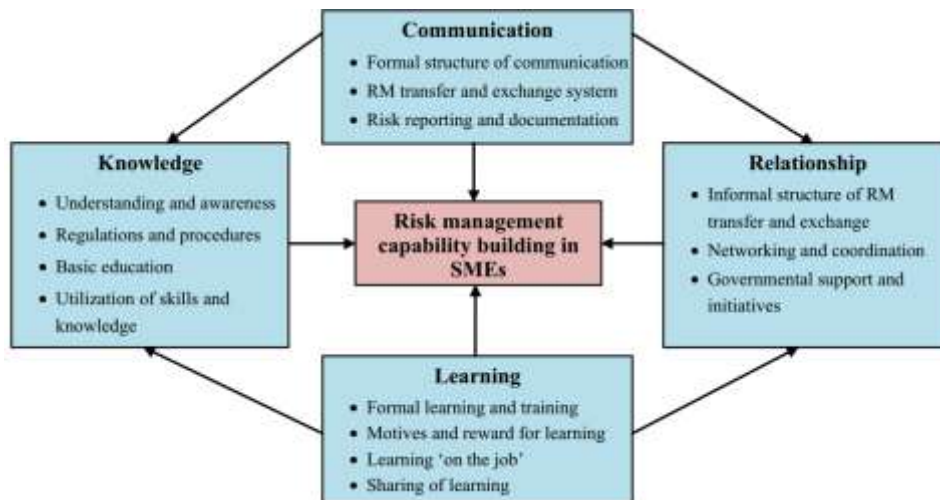
According to Petri, Plummer, and Zhai (2012) if the concept of AEC succeeded, the AEC would be considered as the biggest community effort attempted in the developing nations as 600 million people will have one market in which the goods, labour and services as well as capital and Foreign Direct Investment (FDI) can be moved freely. If the AEC was functioned, the exports in ASEAN would rise 42.6 percent while the imports would expand by 35.4 percent (Saad & Idris, 2014). There are some common negative views among economists regarding trade unions. Their touch on the ongoing issue indicates that a regional grouping of more and less-developed economies, such as inside the AEC, the roles will be dominated by the formers (such as Singapore, Thailand and Malaysia) while the poorer countries (Cambodia, Laos, Myanmar and Vietnam) will be exploited and become economically dependent (Southeast Asian Economic Outlook, 2013). The more developed countries in AEC such as Singapore, Thailand and Malaysia would have more power in the region where as the less-developed countries will be weaker. This problem of whether the "Development Divide" between older and newer members is shrinking or widening has been argued over the past decades (Pomfret, 2013).

In order to gain benefits and also to divert from problems of the trade union namely the AEC, the business in Laos, especially in the SMEs sector should have been aware and been able to form pre-plans in an attempt to solve the challenges in advance. Hence, the meaning of this research is to explore this phenomenon as how to accommodate SMEs in Laos as well as international assistance to have better comprehension over the problems in the Lao context and then be able to prepare their risk management approaches, in particular, to the business strategy, financial, and workforce issues.

Risk management

Risk management is the consideration to determine the maximum acceptable level from overall risks in order to sort out the most effective approaches engaging in a proposed activity. In this process, risk assessment techniques are applied in an attempt to formulate strategy and ameliorate risk to an acceptable level (Abotsi, Dake, & Agyepong, 2014). In relation to The ASEAN Secretariat (2011), to help SMEs out of sensitive fluctuations in the business cycle, the above-average risk based on lending and short-term debt should be minimized by injecting capital. Golić, (2014) mentions that generally a SME is one person or one owner dominated. The owner or manager will mostly be the only person making the decision. In this assent, their characteristic and capacity are limited such as education, weak management, knowledge of technologies, market information, credit and access to banking loans.

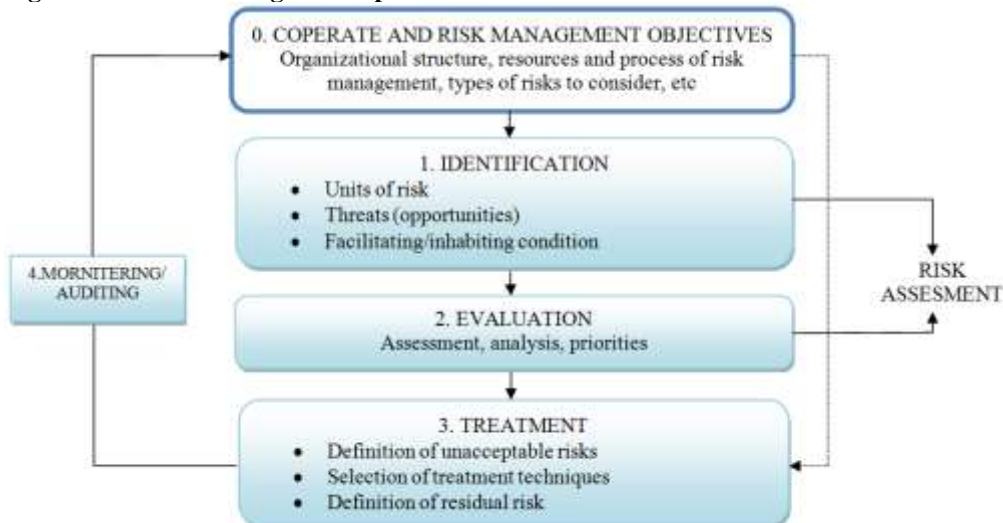
Figure 1: Four moderators



Source: Gao, Sung, and Zhang (2013)

According to Henschel (2009), the reaction toward risk by organisations and firms are classified into four types which are reactor, defender, prospector and analyser. The dividend dimensions to these four types are based on their strategy-structure, business planning, performance measurement, risk management process, risk management organisation and project risk management. A risk management capacity building in SMEs is introduced by Gao, Sung, and Zhang (2013), with the model relating to four moderators which include communication, relationship, knowledge and learning as the tool to reduce the level of threat from the risk. Verbano and Venturini (2013) deliver the four processes of risk reduction as identification, evaluation, treatment and monitoring-auditing.

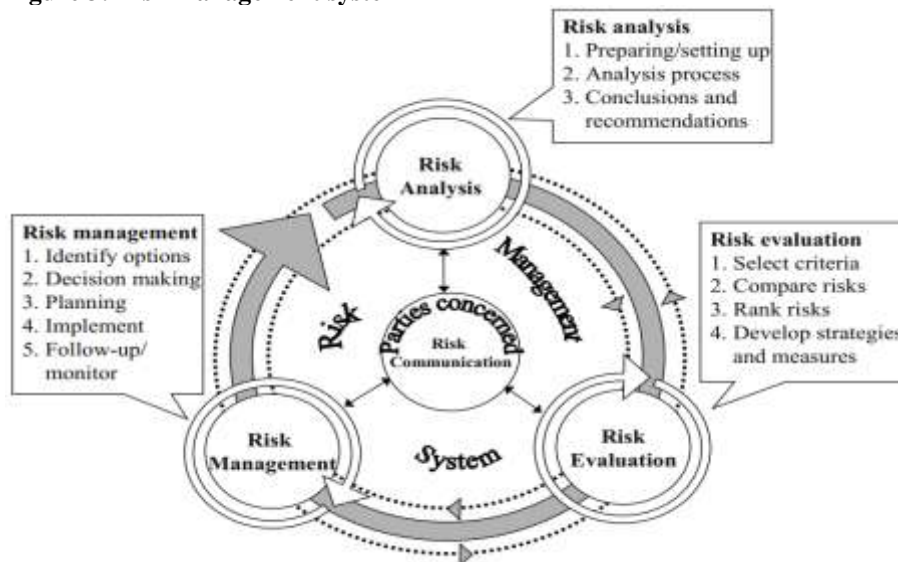
Figure 2: Model relating to four processes of risk reduction



Source: Verbano and Venturini (2013)

Manners-Bell (2014) suggests a risk management system which constitutes three counterparts as risk analysis, risk evaluation and risk management. From all the mentioned information, therefore, there is a need to target how the SMEs owners in Laos have been prepared so far in an attempt to understand their risk management behaviour which moderates their business strategy, financial, workforce and supply chain issues. According to Parnell (2015), the selection risk management process varies and is context specific in an emerging economy. In this AEC integration, Lao SMEs need to identify the right approach resonating the contextual framework and be practical in Laos in order to overcome the risk and be internationalize.

Figure 3: Risk management system



Source: Manners-Bell (2014)

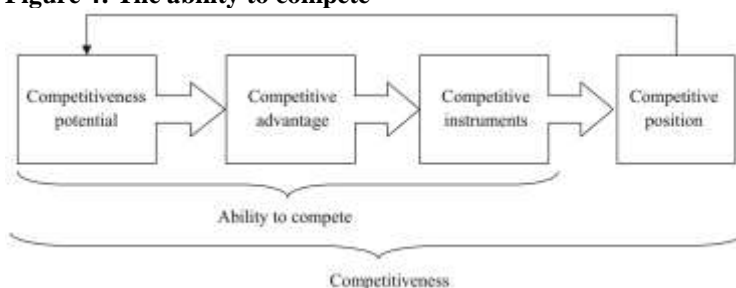
Business Strategy in SMEs in preparation for joining AEC

According to Du Plessis (2015) business strategy is the plan based on vision and mission to accomplish the settled goal and objective. Practically, the observation on threats, both macro and micro environment levels, where the firms belong are essential. This is to wisely plan and then optimally exploit resources in order to maintain the competitive advantage (Parnell, 2014). Grant, Butler, Orr, and Murray (2014) insist that strategic formulation and strategic management which focus on the process and implementation are crucial for success. One strategy as a characteristic of SMEs is that their small product runs create high flexibility to innovate and it is easier to change. As a result, SMEs could exploit a gap in the market as their strategy is emergent and informal, which is flexible to customers' needs and market niche (James, 2014).

In regard to Laos where business rapidly changes, the right strategy will separate gain from loss whereas the best practitioner can increase shares and become the leader in the industry (Gendron, 2014). Porter (2008) as cited in Rostek (2015) points out five forces threatening business competitiveness are threat of entrants, power of clients, threat from competitors, power of suppliers and the threat of substitutes. By concentrating on these five factors, the business would gain higher competitiveness in the market.

Stankiewicz (2000) as cited in Rostek (2015) developed the scheme of competitiveness development step into four stages as competitiveness potential, competitive advantage, competitive instrument and competitive position. In addition, the first three are considered as the ability to compete in a business. With regard to this model, it is to guide the business to be aware on positioning and direction in order to create the ability to compete with other businesses.

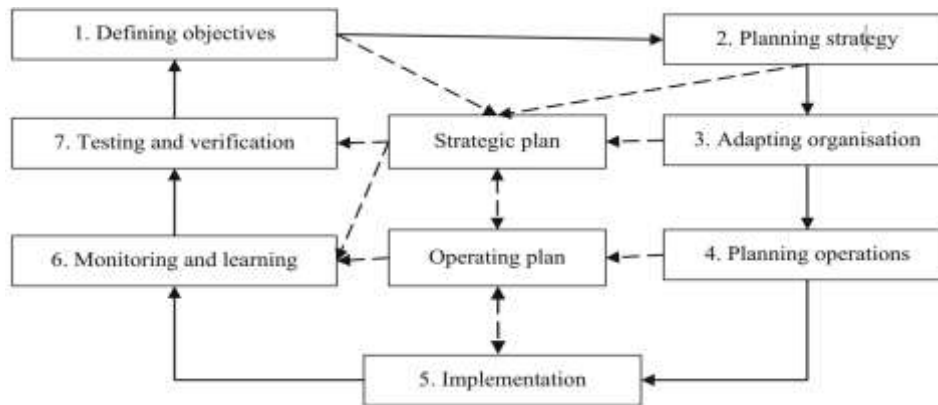
Figure 4: The ability to compete



Source: Stankiewicz (2000) as cited in Rostek (2015)

Kaplan and Norton (2008) as cited in Rostek (2015) stimulate strategic and operating plans in performing business competitiveness with seven processes including defining objective, planning strategy, adapting organization, planning operations, implementation, monitoring and learning, testing and verification. This procedure is regarded as the cycle steps to operate and monitor the daily business operational stream line.

Figure 5: Seven processes model

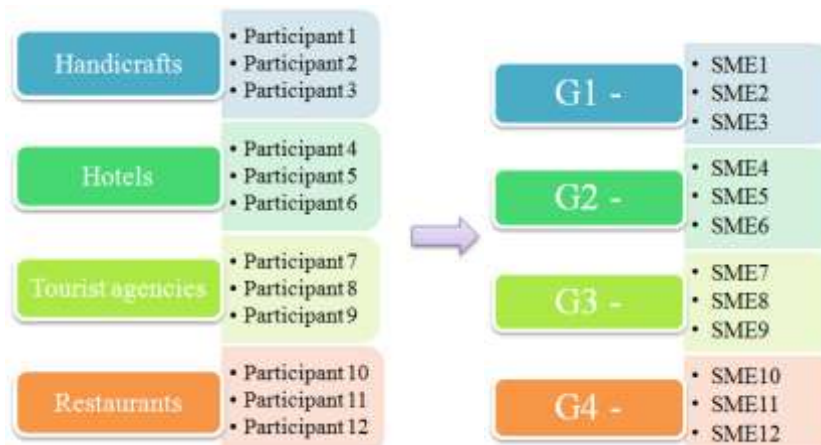


Source: Kaplan and Norton (2008) as cited in Rostek (2015)

The researchers have previewed the literatures in relation to the concept and characteristic of SMEs both internationally and in Laos. The concept of a trade union in general such as the EU is given as an example of international trade integration. In addition, the researchers have narrowed into the target of the AEC. In this regard, the benefits as well as the challenges ahead when entering these unions are shown. Following the literature, the researchers pinpoint to the risk management issues which are strategy, finance, and workforce. These four components in risk management are selected due to their being essential to help SMEs to survive in entering the AEC.

ANALYSIS OF THE RESULTS

Regarding ethical considerations on personal identity, the research represents the anonymity of the participants by the specific codes in order to maintain their confidentiality. By using the codes from G1, G2, G3 and G4, these remarks as the groups of the sub-industry where the SMEs belong to in this study, which are handicrafts, hotels, travel agencies and restaurants respectively. The abbreviations of SME1 to SME12 are provided for each participant individually. By doing so, the unique characteristic of each respondent is easier to identify enabling a better understanding for consistency of coding in the analysis stages. As a result, the coding of all 12 participants are as below:



Throughout this research, the qualitative approach of the semi-structured interviews is deployed as the data collection technique. From the interviews, 12 SME business owners are the main core drivers providing meaningful conversations to generate information and then be analysed as the result of the findings. From those findings, the extracted answers correspond to four sub research questions and six objectives and are presented with relevant literature as follows:

Sub research question one: What are the Lao SMEs owners' perspectives on the understanding of SMEs? If their number of employees does not reach 100, and the types of their businesses make them believe that their firms are SMEs. Their perception is right as it is supported by the literature that a firm is considered as a SME when the number of workers is under 100 and the sector business belongs to production, trade and service (Asian Development Bank, 2010; Kamakura et al., 2012). Further discussion in the interview also makes their perspective stronger as all respondents emphasised that their businesses match with their lifestyles and come from personal interest.

In Laos, people now superficially categorise SMEs from only the number of employees whereas the three criteria to be a SME from Table 1, above, are number of employees, annual turnover rate and sector of business. This blurs the standard line of SMEs which transparency in offering banking loans and financial assistance would be ruined. The findings reject a point from Mekong Institute (2012) that SMEs are family businesses whereas all 12 participants started their business by their own hand.

Sub research question two: What are the Lao SMEs owners' perspectives on the understanding of the AEC? From the elaboration of answers, the information helps solve this sub research question two and at the same time, the second objective "To explore the perception in terms of understanding of threats that SMEs in Laos have on the AEC" is fulfilled. More than half of the interviewees are aware of the integration of the AEC. They also acknowledge the regulations that the country has to obligate which are free flow of goods, labour and investment, therefore their perception is valid. The majority of Lao SME owners see the AEC as an opportunity as free movement of population will inherit investment and skilled labour while wages will be lower, standardising of services will lift due to competition for quality and the number of service providers. Their expected perception is correct. The threats associated with the AEC also appear in the Lao SMEs perception and project to the second objective in this research. Some of Lao's firms are fearful over the huge investment with which they could not compete.

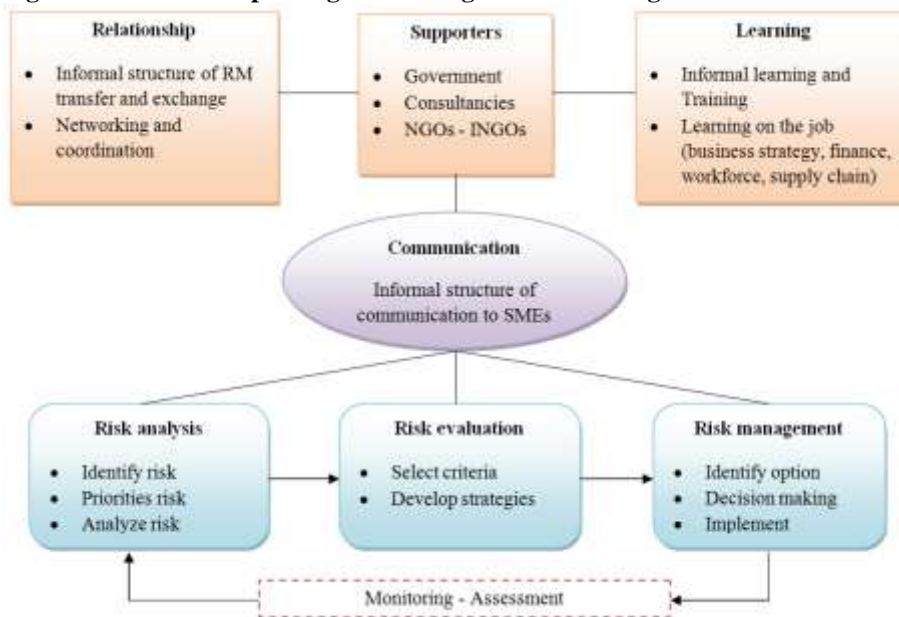
Sub research question three: What are the risk management approaches that the SMEs owners in Lao have used currently? This sub research question enlightens the third research objective "To find out the risk management approaches that SMEs in Laos have prepared before entering the AEC". By reviewing the answers from the interview, this question and objective is clear.

Half of the respondents have the view that risk is a threat happening in business processes, and it can be minimised or eliminated through choices of possible solutions. There were only four SMEs (respondents' SMEs) that had risk management in their strategy. The approach to risk that they use are screening is solution procedures and three approaches: reduce, avoid and transfer. Insurance companies, partnerships and constancies are the real forms representing the approach which are also mentioned in the literature.

Two thirds of the participants have no risk management approach, which is a huge sharing percentage if generalised to all the SMEs in Laos. The given reasons for this are that the business is too small, no time, no money and they have no experience of any threat before. Putting the solution in a nutshell, government assistance to improve SMEs risk knowledge management, building on the relationship of networking as well as the learning process through informal communication as shown in Figure 6, above, should be formulated.

From the interviewees' answers, not only this sub research question four is addressed, the answers also connect to the fourth research objective; the detail in parts of business strategy, financial, and workforce issues also link to the fifth and sixth objectives. Four respondents have made no change to their risk management whereas the rest of the participants had no risk approach. The research then narrows and focuses on their current business strategy, financial, and workforce issues in order to evaluate if it is already good enough to meet the challenges of the AEC. Regarding this, a suggestion and adaptation from literature as well as the concrete knowledge and experience from the authors are inserted.

Figure 6: Model of improving risk management knowledge for the Lao SMEs



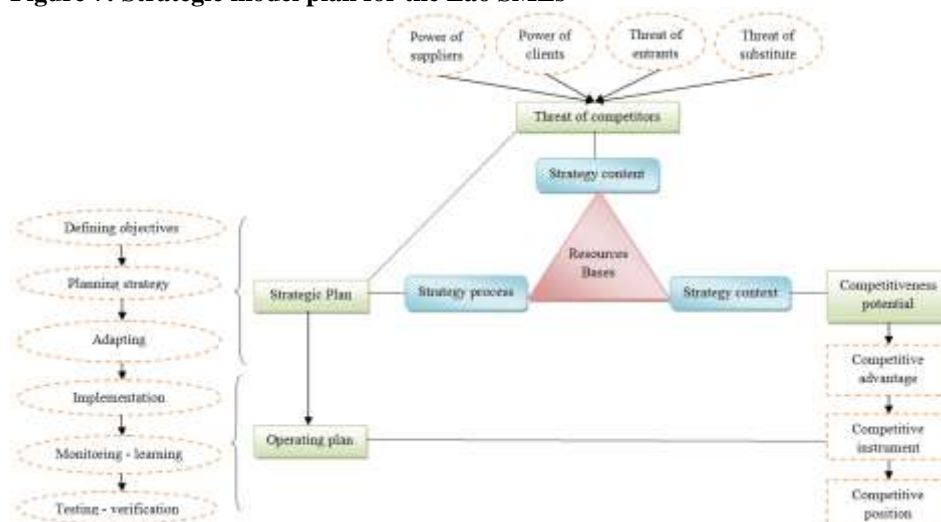
Source: Developed by the authors from the answers by respondents, and adapted from Gao, Sung, and Zhang (2013), Manners-Bell (2014), Verbano and Venturini (2013)

Sub research question four: How does the risk management strategy of the SMEs owners in Laos change after they are aware of joining the AEC, in particular, to business strategy, financial, and workforce issues?

Business strategy

Half of the interviewees clarify that they have a business strategy on their daily business plan, and they think that their strategy fits in the Lao business context environment from the growth of revenues and branches.

Figure 7: Strategic model plan for the Lao SMEs



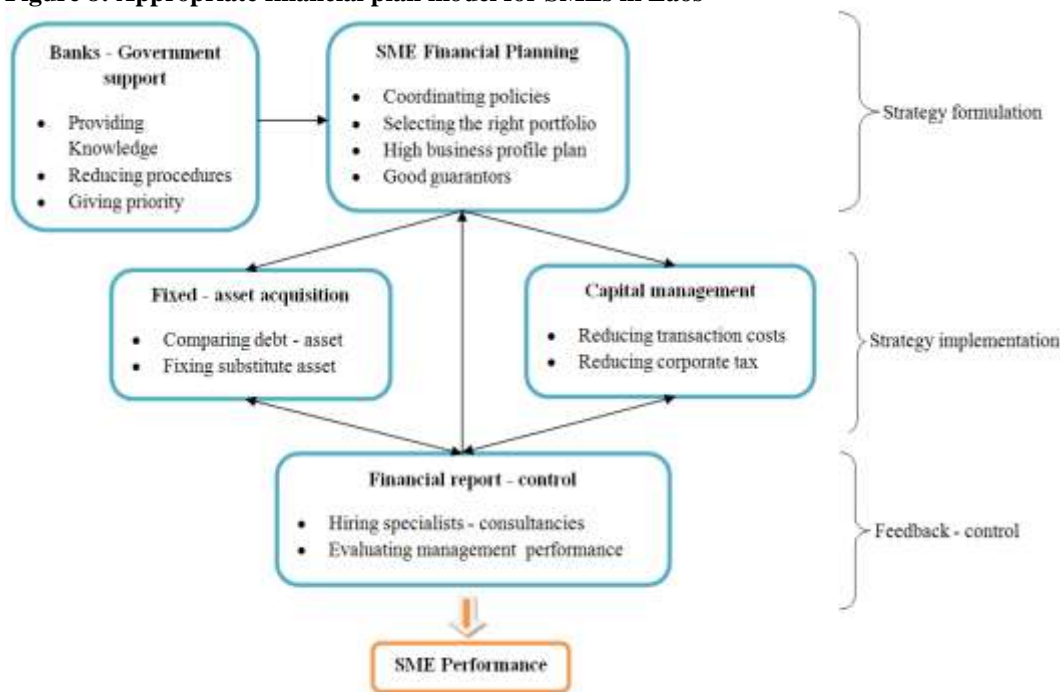
Developed by the authors and adapted from De Wit and Meyer (2010), Kaplan and Norton (2008), Porter (2008) and Stankiewicz (2000) as cited in Rostek (2015)

The components in their strategy include networking, branding and advertisement in which the core driver is organisational resources. After evaluating their strategies and knowledge they have, proper knowledge of business strategy should be added up in order to help Lao SMEs understand more about environmental factors and strategic processes. Figure 7, above, was developed by adapting from the academic literature to enhance SME's business strategic planning. The core components of this model comprise of strategy content, context and process.

Finance

Lack of financial knowledge management is the main concern evident from the research undertaken. For Lao SMEs, access to finance is a difficult procedure. Without proper financial knowledge, no good guarantors, low asset and unclear business plan, it is impossible for a small business to obtain financial credits. From their daily operation, focusing on reducing transaction costs and corresponding double taxation are their techniques. Figure 8, below, is an established model including factors that need to be targeted in order to protect SMEs financial growth. The model is set up under the flow of a financial plan in the Lao context. Toward this plan, government and banking assistance are significant at the macro level.

Figure 8: Appropriate financial plan model for SMEs in Laos



Source: Developed by the authors and adapted from Anton (2011) and Karadag (2015)

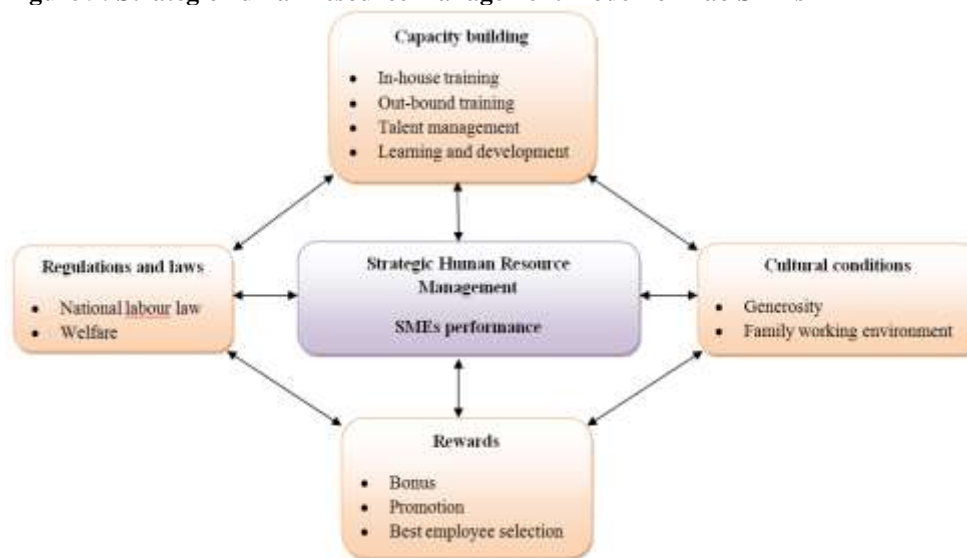
Workforce

Lao SMEs have performed well in securing their workforce. Aside from the fundamental national labour policy to create basic trust between owners and workers, cultural contexts of generosity and the family working environment are specific characteristics to maintain labour when operating business in Laos. In terms of training, talent, learning and development of strategy are the development mechanisms for their labour. Notwithstanding the importance of training, some SMEs neglect this function because they do not see the necessity of training, as staff have no need for more training as their competencies already match with the job description.

From the research done and the literature review, the model of strategic human resource management in Figure 9, below, has been developed. Instead of abandoning training, this model has merged capacity building,

cultural conditions, reward as well as regulations and laws together in an attempt to be feasible in the Laos working scheme.

Figure 9: Strategic human resource management model for Lao SMEs



Source: Developed by the authors

MANAGERIAL IMPLICATIONS

For managers of SMEs in Laos, very helpful academic knowledge asserts in this research, which adapts to the Laos cultural context and could guide new business starters as well as current operating SMEs to sustain their businesses. By applying the models and following the suggestion in relation to risk management, business strategy, finance, and workforce, a SME can ensure their success, smoothness and survival to a high degree. From the remarks in this project that Laos SMEs still lack knowledge of those mentioned terms, every business should be aware of them and see the importance of the changing environment that will bring about high competition, better quality of services and mass production investment into Laos.

Another implication for SME managers and owners is that the results of this research align with the decision from the Laos government that has not yet accepted the full phase of joining the AEC at the end of 2015 (after this research was done, it was learned that the Laos Government postponed the joining) as the country is not yet ready to overcome the challenges of the union. The reasons to postpone are based on the weakness of the Laos market, poor standards of service and low quantity of production whereas skilled labour and people need more time to prepare. Therefore, the country requires a certain time to create the readiness on those factors which are now on the shoulders of the managers and owners of SMEs.

Managers and owners should take note from the evidence above that the authors are confident that this research study is in the right direction as positioning a qualitative study, utilising concrete examples and practical literature. When adapted and evaluated with the authors' experience, it fulfils the gaps in the SMEs academic literature. Nevertheless, in the context of Lao where demography and cultural issues are similar to their neighbours', the transferred results could be practiced by managers. In the academic study, this research is one of the initial projects addressing risk management in SMEs scale and particular to the AEC which fulfils the gaps in this field of study.

RECOMMENDATIONS FOR MANAGERS, HR PRACTITIONERS AND OWNERS OF SME's IN LAOS

According to the results of the study, the researchers have provided recommendations that could improve the perception, and preparation in terms of risk management of SMEs owners in Laos toward the joining of ASEAN AEC as follows:

- Changing their perception: Lao SMEs could not move forward and would collapse if they do not change their perception. SMEs must always be prepared to identify opportunities, make profits and be preventive of threats.
- Assistance: Government, banking institutions and non-government organisations (NGOs) are part of macro-level assistance and they should cooperate in order to effectively allocate assistance to all areas of Lao SMEs. Managers should encourage positive perceptions of employees about the strategy used by their SMEs by increasing their levels of participation in the strategic process, asking their ideas, listening to them, and communicating openly with each other.
- The engagement of NGOs will strengthen the SMEs' capacity and connect the host country-local banks to the standard of the union systems.
- Knowledge management: Not only perception needs to change; improvement of knowledge management should also be part of the process
- Understanding characteristics: To investors, in Laos, international regulations and rules would not be appropriate. By first understanding the exclusive norm and culture of Laos would help smooth the investment process

CONCLUSIONS

In conclusion, this research has addressed all the sub research questions, objectives, and successfully provided the answer to the main research question. The findings derived from the interviews provide crucial evidence that answers the main research question, and achieve the purpose and aim of the research. This research provides guidance for SMEs to improve their perception, and preparation in terms of risk management of SMEs owners in Laos towards the joining of ASEAN AEC. Measuring the degree of success in this research, the authors are satisfied with regard to the outcomes that can fulfil the gaps in literature and create practical value results in the SMEs field of business in Laos. All important information from the previous sections is concluded in the way that the readers can concisely understand and get into the personal points of interest. Therefore, the authors have high confidence and believe that this research gives value to society which is particular to the ASEAN members and Laos. Although there are several factors that influence the outcome of strategy, however, the perceptions of employees are certainly among other major factors that determine the success of business strategy in Laos. Managers / owners of SMEs and HR practitioners in Laos should consider every possible factor that can lead to the success of their SMEs. Undoubtedly, employees', managers and SME owners' perceptions are the factors that should not be neglected in Laos.

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TRUST LEVELS TOWARD ISLAMIC BANKS IN TUNISIA: USERS OR NOT USERS IT DOES MATTER?

Nabila El jed, Manouba University, Tunisia
Chokri El Fidha, University de Tunis El Manar, Tunis University, Tunisia

ABSTRACT

The purpose of this paper is to provide an overview of customer trust toward Islamic banks, and to measure the different level of trust of users and not users of Islamic banks. Our sample is divided into two groups 200 customers of conventional banks and 150 customers of Islamic banks. Trust is measured based on three dimensions: Ability, Integrity, and Benevolence. To measure the different levels of trust toward Islamic banks, we performed a cluster analysis of dynamic clusters. We find three trust levels: high, medium and low whether they are users or not users of Islamic banks services. After obtaining the three classes of confidence, we conducted an ANOVA. Then we divided the sample into two categories based on adhesion: adherent or not adherent to Islamic banks. Finally, we crossed the variable adhesion with different levels of trust. The results show that there are three levels of trust for users and not users of Islamic bank services but with different proportions. The results of this research show that trust is not uniform for the two groups and help the marketers in Islamic banks to know more about customers trust and how to adapt marketing strategies to enhance it.

Keywords: trust, benevolence, integrity, credibility, Islamic banking, levels of trust.

INTRODUCTION

Trust is a dynamic and multi-faceted concept (Dimitriadis and al., 2011; Flavian and al., 2005). In the context of Islamic banking, trust is defined as a moral obligation of every person in accomplishing his or her duties in society. Islam places the highest emphasis on trust and considers being trustworthy as an obligatory personality trait (Iqbal and Mirakhor, 2007). Thus, the foundation of the philosophy of the dimension of trust in the Islamic banking system can be seen as a symbol of trustworthiness, honesty, equity, equality among human beings, and moral values that are established to enhance the business relationship between banks and customers (Sauer, 2002). Similarly, ethics and compliance with Islamic principles (Shariah) are highly regarded and sustained as pillars in running Islamic banking activities based on trust (Kayed and Hassan, 2011). Although the definition of trust in a business-to-business relationship has been established, there seems to be a consensus in interpreting trust as honesty, confidence, integrity, and trustworthiness (Iqbal and Mirakhor, 2007; Othman and Owen, 2002). However, there is not much research which have focused on measuring trust toward Islamic banks and to measure the different level of trust of Islamic banks customers. The current work intends to identify the different levels of trust among users and not users of Islamic banks. The answer to this question can help us to better understand of Islamic consumer behavior. In the context of Islamic banking, it is not only crucial that confidence be given to the bank as a service provider, but the bank have to apply the principles of Islamic Sharia (Hoq and al, 2010). We summarize the 5 principals of Islamic banking as follows:

- 1) It's forbidden to get or to pay interests "RIBA".
- 2) The Principle of sharing profit and loss (Haron, 1997; Idris and al., 2011).
- 3) It's forbidden to invest in immoral activities "HARAM" (alcohol, weapons, Pork industry...).
- 4) The contract has to be backed to a tangible asset. Any financial transaction must be backed by real assets.
- 5) Interdiction of uncertain activities "Gharar" and "Maysir" gambling (Idris and al 2011).

Literature Review

Several Islamic banking studies (Erol & El-Bdour 1989; Erol et al 1990; Gerrard & Cunningham, 1997) revealed that trust is one of the important factors in the selection of the Islamic bank. Other studies consider trust as a mediating variable between satisfaction and loyalty (Abdu Hassan & al 2008; Hoq & al 2010; Muslim & al 2013; Misbach & al 2013 and Rizwan & al 2014). Trust was studied and defined by a variety of disciplines (psychology, economy, sociology, management and marketing). Therefore there is no consensus on his definition. Anderson and Narus (1990) consider that trust occurs when a party believes that the other party will take action that procure a positive outcome for their own interests and will not take action which is harmful. Usman (2015) consider trust:” (i) as the confidence to believe or expectation (trusting beliefs), and (ii) the willingness or intention to be bound by the trustee (trusting intention). Concept of trust belief shows that confidence to the other party does not require a condition in which the trusting party has had experience dealing with the truster, and does not require trusting party also has the intention to be willing to be bound to the other party”. Meanwhile, in this study, not all respondents have experience dealing with Islamic banks, we have customers of conventional banks.

Methodology

The sample of this study is constituted of 150 users of services Islamic banks and 200 of not users. In an exploratory phase we tested our questionnaire on a sample of 50 persons. Data collection was carried out using internet. For the users of Islamic banks services we collected their e mail address in the agencies of Islamic banks, they gave it voluntary and agree to respond to the questionnaire. For the not users, we used data bases of university teachers, friends, and the snow ball effect. The demographic profile of the respondents is summarized in the following table:

Table 1: Demographic profile of respondents

Particulars	Frequency	Percentage
Bank of Respondent		
Zitouna Bank	116	33.142%
Al Baraka Bank	34	9.7%
Conventional Bank	200	57.14%
Gender		
Male	226	64.57%
Female	124	35.43%
Age		
Between 20 and 30 years	63	18%
Between 30 and 40 years	128	36.57%
Between 40 and 50 years	79	22.57%
Between 50 and 60	64	18.28%
More than 60	16	4.57%
School levels		
Primary	0	0
Secondary	12	3.43%
Graduate	338	96.57%
Socio-Professional Category		
professional	65	18.57%
Senior executives	225	64.28%
middle managers	46	13.14%
Workers	6	1.71%
retireds	4	1.14%
Other	4	1.14%
Monthly Income		

Under 500DT	26	07.43%
Between 500DT and 1500DT	116	33.14%
Above 1500DT	208	59.43%

We opted for our own research for a conceptualization of one facet (institutional) and three dimensions of trust (Usman 2015). We will measure institutional trust, with three dimensions: competence, integrity and benevolence. The latest research in business to consumer, as opposed to those in business to business, privilege, indeed, a conceptualization of three dimensions of trust (Chouk, 2005; Gurviez and Korchia 2002 . Sirdeshmukh et al, 2002). We adopted the three dimensions of trust identified by Mayer et al. (1995): ability, benevolence, and integrity. Items statement used to measure these dimensions was adopted from various researches (Doney & Cannon, 1997; McKnight & Chervany, 2002; Wakefield, Stocks & Wilder, 2004; Voona et al., 2011). They were measured using a Likert scale between 1 (strongly disagree) and 5 (strongly agree). We processed the data using SPSS version 21. To test the validity and reliability of the trust scale we used PCA in the exploratory phase (SPSS 21) and in the confirmatory phase we used FAC (AMOS 21).

To measure the different levels of trust toward Islamic banks, we performed a cluster analysis of dynamic clusters. At the eighth iteration we got the final analysis centers of three confidence levels of classes: high, medium and low whether they are users or not users of Islamic banks services. After obtaining the three classes of confidence, we conducted an ANOVA. We noted that F values are strong and the significance is zero. Then we divided the sample into two categories based on adhesion: adherent or not adherent to Islamic banks. Finally, we crossed the variable adhesion with different levels of trust.

RESULTS AND DISCUSSION

We find that trust toward Islamic banks is not uniform for the users and not users but it's divided on three levels. The examination of the table 1 based on the classification of dynamic clusters gives us three clusters. These clusters were obtained at the eighth iteration. The results of the final cluster centers are presented in the table 1. We notice that there are three levels of trust: first cluster: medium trust, second cluster: low trust and third cluster: high trust.

Table 2 :centers of final cluster

	Cluster		
	1	2	3
I believe that Islamic banks are able to compete in the banking sector.	3,60	2,74	4,35
I believe that Islamic banks are run by people who respect Islamic guidelines.	2,65	1,61	3,80
I believe that Islamic banks still have a commitment.	3,29	2,12	4,15
I believe that Islamic banks will fulfill their promise to the customer.	3,50	2,12	4,36
I believe that Islamic banks have a legal source of funds.	3,02	2,24	4,14
I believe that Islamic banks have always acted responsibly.	3,16	2,06	4,25
I believe that Islamic banks have always acted in the interest of customers.	2,76	1,50	3,93
I believe that Islamic banks will help the client to take a favorable decision.	3,13	1,88	4,13
I believe that Islamic banks will not let customers suffer losses.	2,67	1,46	3,66
I believe that Islamic banks are always ready to help customers solve their financial problems.	2,73	1,51	3,89
I believe that any action by Islamic banks is based on a sense of justice.	2,73	1,50	4,09

After obtaining the three clusters of confidence, we conducted an ANOVA. We note that F values are high and the significance is zero. The ANOVA results are shown in the following table:

Table 3: ANOVA

	cluster		Error		F	Signification
	Mean square	df	Mean square	df		
I believe that Islamic banks are able to compete in the banking sector.	68,167	2	1,134	347	60,130	,000
I believe that Islamic banks are run by people who respect Islamic guidelines.	126,936	2	,834	347	152,118	000
I believe that Islamic banks still have a commitment.	109,268	2	,679	347	161,026	,000
I believe that Islamic banks will fulfill their promise to the customer.	134,479	2	,555	347	242,392	, 000
I believe that Islamic banks have a legal source of funds.	96,804	2	,913	347	106,012	,000
I believe that Islamic banks have always acted responsibly.	126,280	2	,587	347	215,012	,000
I believe that Islamic banks have always acted in the interest of customers.	156,910	2	,630	347	249,224	,000
I believe that Islamic banks will help the client to take a favorable decision.	134,823	2	,557	347	242,138	,000
I believe that Islamic banks will not let customers suffer losses.	128,490	2	,693	347	185,307	,000
I believe that Islamic banks are always ready to help customers solve their financial problems.	148,473	2	,560	347	264,911	,000
I believe that any action by Islamic banks is based on a sense of justice.	177,081	2	,618	347	286,526	,000

The ANOVA results showed a difference between groups ($p < 0.05$) and the value of F is very important. The chi-square test gives us a chi-square equal to 60,350 with significance equal to 0.000. So the result is significant. Therefore, the contingency coefficient is equal to 0.383 with an approximated signification equal to 0.000. the result of this research shows that there is a relationship between adhesion and the level of trust in Islamic banks.

Then we divided the sample into two categories based on adhesion: users or not users of services of Islamic banks. Finally, we crossed the variable adhesion with different levels of trust, we obtained the following results:

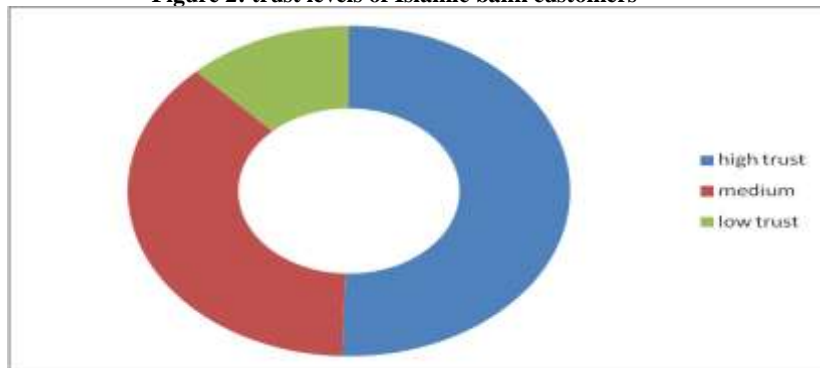
Table 4: Crosstabulation class assignment (dynamic clusters) * Adhesion

		Adhesion		Total
		Adherants	Not adherants	
Medium trust	Effectif	56	83	139
	% included in class assignment (dynamic clusters)	40,3%	59,7%	100,0%
	% included in Adhesion	37,3%	41,5%	39,7%
	% of total	16,0%	23,7%	39,7%
Low trust	Effectif	19	86	105
	% included in class assignment (dynamic clusters)	18,1%	81,9%	100,0%
	% included in Adhesion	12,7%	43,0%	30,0%
	% of total	5,4%	24,6%	30,0%
High trust	Effectif	75	31	106

% included in class assignment (dynamic clusters)	70,8%	29,2%	100,0%
% included in Adhesion	50,0%	15,5%	30,3%
% of total	21,4%	8,9%	30,3%
Effectif	150	200	350
% included in class assignment (dynamic clusters)	42,9%	57,1%	100,0%
% included in Adhesion	100,0%	100,0%	100,0%
% of total	42,9%	57,1%	100,0%

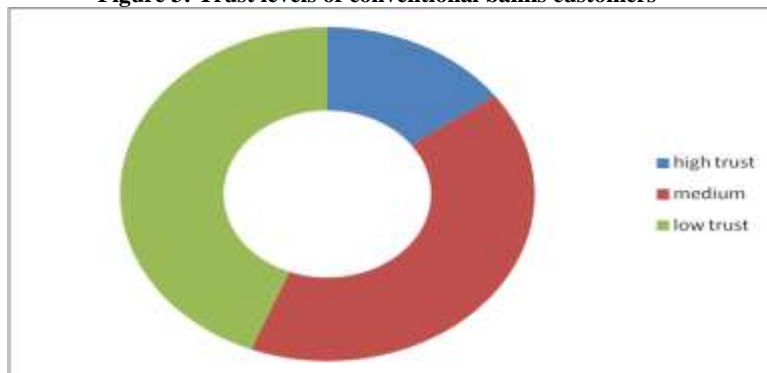
We find that 50% of customers of Islamic banks have a high trust, 37.3% have a medium trust and 12.7% have a low trust (this proportions are presented in figure 1). The results show that trust among Islamic banks customers is not taken for granted. Even for the customers of Islamic bank we find three levels of trust. We could explain the low trust of the customers by a disappointed experience with the bank or doubts about the compliance of the bank to the Sharia law. The medium trust could be explained as an indifference to the bank. The different levels of trust should be interpreted and analyzed by the marketers of the Islamic banks. They should make more effort to win the high trust of customers.

Figure 2: trust levels of Islamic bank customers



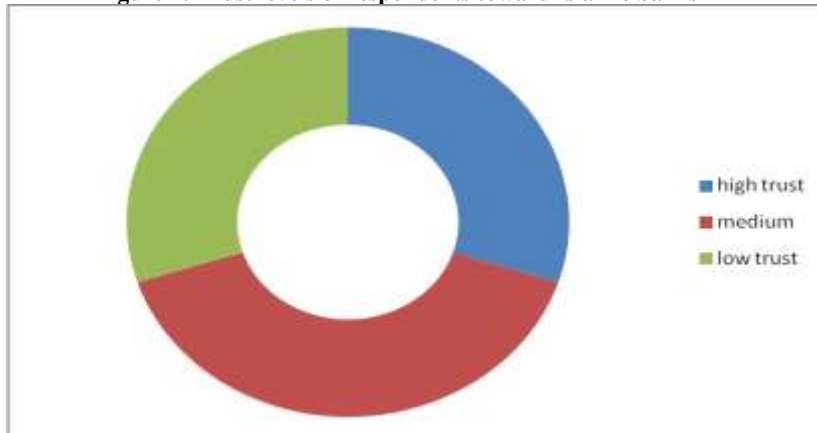
While 15.5% of customers of conventional banks have high trust in Islamic banks, 41.5% have a medium trust and 43% have a low trust (see figure 2). The result of high trust of not users of Islamic banks shows that people trust Islamic banks even they are not a customer but they could be a potential one; if the marketers make more effort to attract them.

Figure 3: Trust levels of conventional banks customers



The proportion of users (50%) of Islamic banks services that have high trust is more important than the not users (15.5%). While the proportion of medium trust is more important for the not users (41.5%) than the users (37.3%). Whereas the low trust is important in the group of not users (43%) than the users (12.7%). We find that 30.3% of respondents (users and not users of Islamic banks services) have a high trust, 39.7% have a medium trust and 30% have a low trust (see figure3).

Figure 4: Trust levels of respondents toward Islamic banks



CONCLUSION AND MARKETING IMPLICATIONS

The results of our research revealed that trust have three different levels: high, medium and low among users and not users of Islamic banks but with different proportions. the main contribution of the study, showing that the degree of consumer trust varies depending on the adherence or not to an Islamic banks. The marketer should know those different levels; to enhance high trust and try to convert medium and low trust to the first one. Therefore, he could choose the relevant strategy. In our research we found 50% of users of Islamic banking services have high trust but only 15.5% of not users have high trust. The result shows that marketers have to maintain the first group because they are real customers and they will bring potential customers. Several studies have revealed that personal information sources affect the customer's decision to adopt Islamic banks (Zainuddin and al, 2004; Khan and al, 2008; Hasan and al, 2012). The not users group have high trust in a small proportion (15.5%) that could be explained by a lack of information about Islamic banks, the complicated way to explain the Islamic banking products (web sites of Islamic banks, brochures) and the absence of familiarity with this system. Several researches find that the low level of familiarity with the Islamic finance is due to the lack of information and communication campaigns to promote this sector with the population (Abdul Hamid & Nordin, 2001 and Almosawi, 2001). Even Usman (2015) found that trust of users of Islamic bank services is higher than trust the customers of conventional banks in Indonesia. He explains the low level of the trust toward Islamic banks in Indonesia for two reasons. "First, customers do not know the concept and system have been offered by Islamic banks, and second, customers have experienced disappointed by the Islamic banks. However, by looking at the average score of trust in general, most likely cause is the lack of customers' knowledge." The medium trust level is 37.3% in users and 41.5% in not users of Islamic banks services. The medium trust can be interpreted as the indifference toward Islamic banks. For those two groups, they don't make a difference between Islamic and conventional banks. The marketers should emphasize on the positive values of the Islamic banks: Islamic principles, ethical behavior, and quality of services... Islamic banks manger should take the chance that the medium level of trust is important which could be converted to a high level with an appropriate strategy of communication. Communication is an antecedent of trust (Morgan & Hunt, 1994 and Doney & Cannon 1997). The low trust level is 12.7% in users group but 43% in not users of Islamic banks services. The first result is like an alarm for the marketers in Islamic banks. They should make more effort to reassure the customers about the compliance of the bank to the Sharia Law (Hoq & al 2010). While the Low trust proportion among the not users is very consistent. We could explain this due to the lack of familiarity to the Islamic finance system, the absence of Islamic banks campaign of awareness and communication. Marketers should inform, explain and communicate about the Islamic banks. They should set and implement their marketing strategies, by taking into consideration the inclusion of an awareness campaign about Islamic banking. Islamic banking is still a fuzzy concept for most people. The Islamic banks should fulfill their promises; they should act in the best interest of their customers by advising and helping them to take the best decisions so they avoid financial problems and losses. The Islamic banks should act with a sense of equity, justice and responsibility toward the society. We focused in this research on institutional trust levels toward Islamic banks; that will be interesting to study the interpersonal trust levels in the future and even to study the causes of the variation of the different levels of trust.

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STRATEGIC DRIVERS: COGNITIVE AND AFFECTIVE IMPLICATIONS FOR THE INNOVATION PROCESS

Bianca Lopes Ferreira and Maria Angela Campelo de Melo
IAG/PUC, Brazil

ABSTRACT

Consisting of the set of values, mission and vision statement, Strategic Drivers are crucial for any organization in terms of directing its actuation, defining its purpose and creating its future image. They are also crucial for the innovation process as they direct what to innovate, define why and when to innovate, guide resource's allocation and organize the mental models of the organization to obtain competitive advantage. Given the importance of these strategic guidelines, this paper aims to examine the cognitive and affective elements of the strategic drivers as facilitators for the innovation process. In order to reach this main objective, a two-step procedure was employed. First, through literature review the main benefits of the strategic guidelines and their links with innovation process were identified. Then, individual interviews were conducted with a group of consultants with extensive experience in the area, in order to confirm the cognitive and affective benefits. The results indicate that cognitive and affective components of strategic guidelines are important facilitators of innovation process.

Keywords: Strategic innovation management; strategic drivers; innovation process; strategic driver's implications

INTRODUCTION

In turbulent fields, characterized by interdependency, complexity and uncertainty, the only certain thing is change. So, change is an inherent reality for organizations and the ability to manage change and continually innovate is the key to be successful in the long run.

In this context, strategic drivers, consisting of the set of values, mission and vision statement, are crucial for organizations. They are fundamental in strategic management in terms of directing the organization's actions and behavior, defining its purpose and creating a desired future image. They are also crucial for the innovation process as they direct what to innovate, identify why and when to innovate, guide resource's allocation and organize the mental models of the organization to obtain competitive advantage. Consequently, "the strategic management of innovation has become a central topic within the strategic management field" (Keupp, Palmié & Gassmann, 2012, p.367)

As strategic drivers are central points in defining priorities, directing organizational actions and conducting the decision-making process, they impact the way employees focus targets and reach results. They also impact employees' attitudes and behavior, having positive effects on their motivation and commitment. In line with the proposal of Boal & Hooijberg (2001), the benefits of the strategic guidelines can be divided in two important components: cognitive and affective. Cognitive component focus outcomes and in how to achieve them; affective component involves people's feelings and emotions, and deals with their motivation and commitment. Combined these two components can facilitate and improve innovation in organizations.

The purpose of this research is to investigate the influence of cognitive and affective benefits of strategic drivers on firm innovation, extending previous literature on this topic. The focus of analysis of this

study is on the firm level because by targeting this level is possible to reach elements that are under control of the organization and, then, give practical recommendations to managers, who can implement actions to enhance organizational innovation.

The paper is organized as follows. In the first section, a brief review of the definition of innovation and the importance of strategic management to support innovativeness are presented. In the second section a rapid scan of each of the strategic drivers is accomplished to enable to show the relationship between strategic drivers and innovation. This is followed by a description of the methodology adopted for this study. Finally, results and propositions are presented.

STRATEGIC INNOVATION MANAGEMENT

Innovation

There are plenty of definitions of innovation in literature, but, generally, innovation refers to a collective process of bringing some new problem – solving ideas into use (Kanter, 1988). In this definition, the author enforces three important elements. First is the concept of innovation as a process that needs to be managed rather than a single stage. Other authors, like Drucker (1985), Hamel (2006), McLean (2005), Tidd, Bessant and Pavitt (1997; 2001) also highlighted this characteristic. The second important element in the definition is that innovation is understood as a social phenomenon, in which individuals interact, accept and adopt new process, products/services and paradigms. So, innovation is a collective achievement based on a collaborative process. The last element to be emphasized in the definition above is the relevance of implementation of new ideas, which distinguishes innovation from invention. According to Tidd, Bessant & Pavitt (1997; 2001) innovation is more than simply designing of new ideas; it is the process of developing practical usage. They expose invention as only the first step in a long process of bringing a good idea to widespread and effective use (Tidd et al., 2001). In sum, Kanter (1988) proposed a definition of innovation that includes “the generation, acceptance, and implementation of new ideas, process, products, and services”(p.20).

The study of innovation is connected with creativity (McLean, 2005). For Amabile (1988), creative ideas are the building blocks for innovation and organizational innovation is the successful implementation of creative ideas within an organization. According to the author, creativity can be understood as a trait, a process, or a product that applies to individuals and are fundamental to innovation process, which is the end result of creative activity. McLean (2005) emphasizes that “without creative ideas to feed the innovation pipeline so they may be promoted and developed, innovation is an engine without any fuel” (p.227).

Strategic Innovation Management

Many researchers identify a large number of organizational variables to improve the innovative capacity. One of these variables is management processes that can promote or hinder innovation (Medina, Lavado & Cabrera, 2005). Among management processes, it is possible to stress the importance of strategic management for innovation.

Melo (1991) proposed Innovatory Planning, a type of adaptive planning methodology, which allows the organization to deal with the challenges of social and technological innovation (Melo, 2003), by enabling the organization to anticipate and implement the necessary changes to survive and develop within a turbulent environment. It is developed by an action-learning posture, enhancing learning, flexibility, participation and active adaptation, acting at the normative level of the organization.

In general, participative and collaborative management has been found to be related to high levels of innovation, for it encourages people to have an input in determining the change and the innovation, creating commitment to its implementation (Kanter, 1983).

According to Birkinshaw, Hamel and Mol (2008), management innovation can best be defined as “invention and implementation of a management practice, process, structure, or technique that is new to the state

of the art and is intended to further organizational goals” (p.825). In other words, innovation management is a “difference in the form, quality, or state over time of the management activities in an organization” (p.826).

Keupp, Palmié and Gassmann (2012) combine the definitions of innovation and strategic management, and suggest that “strategic management of innovation is concerned with using appropriate strategic management techniques and measures to augment the impact of the firm’s innovation activities on firm growth and performance” (p.368).

In a more comprehensive way, the strategic management process is essential to the innovation process whereas it defines the organization’s desire to transform or to improve its products, methods or internal process, position and paradigms (Bessant & Tidd, 2009) in order to gain competitive advantage.

STRATEGIC DRIVERS AS FACILITATORS OF THE INNOVATION PROCESS

The implementation of strategic drivers is crucial for the innovation process, for these drivers act as motivator elements and help to integrate the employees and direct their efforts to the organizational objectives, supporting the generation of knowledge and enhancing creativity and innovation through the organization.

For this reason, leaders should use the elements of the construct strategic drivers to the advantage the organization and to stimulate the sustained innovativeness process by creating an innovative culture, reinforcing desired behavior with the core values, facilitating the accomplishment of tasks and goals with the mission, defining priorities and providing direction with the vision.

In sequence, each of the components of the construct of strategic drivers will be shown and also explained the implications of cognitive and affective elements for innovation process.

Organizational Values

Values are the shared beliefs that underlie the conduct of an organization. They are the essence of any corporate culture and characterize the frameworks for the judgements of what is right or wrong (Schein, 1991). Usually, organization’s core values are in a small number, deeply assimilated and internalized by the members of an organization (Collins & Porras, 1996; Schein, 1991).

The internalization of organizational values lead to a congruence of individual and collective behavior, acting as the ideological glue that ties people into the system (Collins & Porras, 1996). Via socialization processes, employees learn the existing organizational norms and whether or not innovation serves as one of those norms (Martins & Terblanche, 2003). Thus, organizational values are an important element of adjustment between individuals and organizations, and can be a facilitator element of innovation. Martins and Terblanche (2003) take that the way values, norms and beliefs influence individual and group behavior will support or inhibit creativity and innovation throughout organization.

Beyond the guiding function, substantiated by their influence on the decision making process, values also lead to a congruence of individual and organizational goals. As values refer to the priorities assigned, they influence organizational outcomes and its whole performance. That is why values have a coordinative function in shaping innovation processes (Salvato, 2009).

For these reasons, organizations reinforce some values, like flexibility, risk-taking, autonomy, cooperation and collaboration in order to facilitate the generation of new ideas, which is the beginning of innovation process. Valencia, Jiménez and Valle (2011) explain that the decision of which values managers should promote in organizations depends on the firms innovation/imitation strategies (e.g. to be the first company to introduce in new markets or develop new products for a market *versus* to follow a pioneer). Companies should also reinforce some values to improve performance and attain competitive advantage, as creative culture facilitates innovative solutions to environmental threats (Amabile & Khaire, 2008).

In sum, shared values blend affective and cognitive benefits in the way they influence people behavior, how people work together and how they strive to attain the desirable goals (Oliveira & Tamayo, 2004).

Mission

Mission statement represents the purpose of the organization; it defines the reason of being of the company (Collins & Rukstad, 2008; Collins & Porras, 1996, 1991; Pearce & David, 1987), specifying what the company is, what it does and why it is where it is. A good purpose statement is broad, fundamental, inspirational and enduring. It captures the 'soul' of the organization (Collins & Porras, 1991).

When developing the purpose statement, managers and members of the team should reflect on some issues, such as the reasons they would dedicate their creative energies to company's efforts; what are the personal purposes they feel for their own lives, and how can their united effort fit with these. Only in this way it will be possible to elaborate a mission statement with meaning to people all around the organization that galvanize everybody's best efforts toward a compelling goal (Collins & Porras, 1991).

Rather than just describing the organization's output or target customers, an effective purpose statement has to articulate an inspirational purpose in order to motivate people to work toward a common end, and has to reflect the importance people attach to the company's work, tapping with their idealistic efforts (Collins & Porras, 1991).

The mission statement is also important to keep the focus on what really matters and to serve as support for the decisions, strategies, priorities and operational tasks, satisfying the necessity of producing something worth, which influence directly the behavior, the motivation and the commitment of the employees (Bart & Baetz, 1998). If employees know the purpose of the organization and the purpose and impact of their own job in the total system, they can take on a variety of roles and responsibilities that are fundamental to the innovation process, which goes beyond any specific task.

For all above, mission statements bring cognitive and affective benefits at individual and firm level, facilitating innovation process.

Vision

Vision represents a target. Refers to a future state which has never existed and that the company wants to reach (Bennis & Nanus, 1988). Together with the values and the mission, vision will provide the link between the present and the desired future, guiding the organization strategies to reach this 'realistic dream'.

Accordingly to Collins and Porras, (1991,1996) one of the parts of the vision framework is an envisioned future, which is compound of a 10-to-30 year audacious goal, and the other one is a vivid description of how the organization will achieve the goal. Although all companies have goals, there is a difference between merely having a goal than having an inspiring goal in the vision statement (Collins & Porras, 1996). For the authors, a valuable goal "is clear and compelling, serves as a unifying focal point of effort, and acts as a catalyst for team spirit" (p.73). This inspirational vision epitomizes an attractive and realistic picture of the future that the company desires to create, engaging employees in achieving this mayor organizational objective. In this way, serves as a motivational tool, creating an emotional bond between the organization and employees, and acts as an instrument to fortify organizational commitment and stimulate progress. Thereafter, holds both cognitive and affective benefits.

There is some evidence that relationship between goals and innovation depend on the level of these goals. At the organizational level, tight goal setting has been shown to be positively related to creativity and innovation (Arad, Hanson & Schneider, 1997). That is why to foster innovation managers should introduce stimulating elements or tight goals in the vision statement. To be able to execute such vision, managers will need to be prepared to perceive changes and to have access to the right tools and practices, and sometimes to adopt organizational structures and processes to support its implementation.

In turbulent times, a too narrow focus on the present might end up sacrificing the future or a too narrow focus on determined future goals may culminate with an opportunity loss. Thus, it is important to emphasize, though, that, notwithstanding all its benefits to the organization, the vision statement might be harmful, by establishing rigidity in one direction, neglecting opportunities or environmental changes. This inability to adapt to the environment refers to Argyris (1977) single-loop cycle, in which actions and decisions are taken without challenging standards and values. Only the double-loop cycle introduces the possibility of influencing organizational results, providing significant changes and enhancing the process of innovation, since learning, in this case, is provided by the revision of guidelines, principles, policies and objectives, which can lead to a transformational action.

METHODOLOGY

This is a qualitative study that aims to examine the cognitive and affective elements of the strategic drivers as facilitators for the innovation process. In order to reach the main objective, a two-step procedure was employed. First, through literature review, the main benefits of the strategic guidelines and the link with the innovation process were identified. Then, individual interviews were conducted with a group of consultants with extensive experience in strategic management, in order to confirm the cognitive and affective benefits of strategic guidelines. The data were collected using semi-structured questionnaires, applied to a convenient sample of six consultants, whose average time experience was about twenty-one years.

The paper focuses the organizational level of analysis, frequently neglected by reviews. Furthermore, strategic management is fundamentally concerned with measures that firms use to achieve competitive advantage (Keupp, Palmié and Gassmann, 2012). Moreover, the findings at the firm level function as practical guidance, helping executives to implement best practices to enhance organizational innovation.

It is relevant to point three major limitations of this study. The first is related to the interpretation of the researcher about the object; the second involves the selection and the size of convenient sample, based on the perception of consultants rather than managers, due to the difficulty in getting data directly from firm employees. Although the sample appears to be small, on average, each consultant has acted in about thirty-four projects along professional life. Therefore, the number of projects in which these professionals have acted over the years is considerable. The third limitation is connected with the degree in which the findings can be generalized from the specific sample to the entire population. Limitations in the data were considered in the interpretation of the results.

RESULTS AND DISCUSSION

Limitations aside, both literature review and interviews results reveal cognitive and affective benefits of strategic guidelines. The consolidation of the outcomes indicate adherence of conceptual and practical results. So, the study confirms that cognitive and affective components of strategic guidelines are important facilitators of innovation process, having a well established link between them.

The interviewees emphasized the importance of a collaborative process of conception and the necessity of constant communication of the leadership to guarantee the effectiveness of strategic drivers and, consequently, enhance their benefits. They also commented that differently from mission and vision, that have to be implemented, values have to be lived by the leadership (walk the talk) to bring effective results.

The focus on organizational level was chosen targeting at giving practical orientation to executives, extending previous literature on this topic. So, the discussion highlighted instruments that are under control of managers and that can be applied by organizations in order to enhance innovativeness. In this way, this work was developed to contribute both to practice and research, directed to demonstrate the value of strategic drivers as powerful innovation tools.

To enhance the findings of this article, it is necessary to conduct more research based on the perception of other agents, as innovative business managers, employees or leaders, to verify the implications of strategic drivers in the innovation process and analyze their impact on organizational performance.

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OPINION ADOPTION IN ONLINE TOURISM COMMUNITIES

**Jorge Brantes Ferreira, Eduardo Rocha Guaraná, Jorge Ferreira da Silva
and Luis Fernando Hor-Meyll Alvares, Pontifical Catholic University of
Rio de Janeiro, Brazil**

Angilberto Sabino de Freitas, Unigranrio University, Brazil

ABSTRACT

Based on the TripAdvisor virtual community, this study sought to evaluate factors affecting information adoption in online consumer communities. Structural equation modeling was used to analyze data from a 288 respondent sample acquired via a survey. The results indicate that information utility, primarily driven by relevance and reliability, is crucial for information adoption processes.

Keywords: electronic word-of-mouth, information adoption, TripAdvisor, virtual communities

INTRODUCTION

The Internet's advent has greatly increased the opportunities for information access and interaction between consumers and between consumers and companies (Goldsmith, 2006). This communication takes place through online platforms, such as blogs, consumer community websites, discussion forums, social networks, and chatrooms (Goldsmith, 2006; Kozinets, Valck, Wojnicki, & Wilner, 2010). In this context, interpersonal communication generates so-called 'electronic word-of-mouth' (eWOM) (Goldsmith & Horowitz, 2006; Ya, Vadakkepatt, & Joshi, 2015). Different from traditional WOM (Katz & Lazarsfeld, 1955), which transmits messages through personal contact, eWOM appears in virtual and text formats, generally shared by strangers and geographically dispersed individuals (Park & Lee, 2009). Among the most common formats of eWOM are online consumer communities. These are simple to join and do not require special knowledge, which allows any person with Internet access to publish or find information. In addition, online consumer communities focus on nearly all areas of consumption (Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004). Among the many communities of this type in Brazil are TripAdvisor, Yelp, and Foursquare.

Given the growing importance of these communities, various studies have researched members' reasons for engaging in eWOM, examining not only information production (Hennig-Thurau et al., 2004; Lee, Cheung, Lim, & Sia, 2006) but also information search (Goldsmith, 2006; Goldsmith & Horowitz, 2006). However, in Brazil, a search of the Spell portal (www.spell.org.br) — a local scientific research output system that concentrates Brazilian studies in administration, accounting, and tourism — on 15 April, 2015, identified only one study on this topic (Vieira, Matos, & Slongo, 2009). This suggests that a gap exists in the literature on eWOM in Brazil. To fill this lacuna, the present research sought to analyze the factors that affect information adoption in online consumer communities focusing on tourism services, as well as how these factors influence decisions to purchase tourism-related products and services in Brazil.

LITERATURE REVIEW

A virtual community is any group of people that share common ties on the Internet without being dependent on physical interactions or shared geographical settings (McDonough, 1997), such as online consumer communities.

Hennig-Thurau et al. (2004) assert that these communities are the most common platform generating eWOM, giving consumers the chance to read other consumers' opinions of their product consumption and service experiences, as well as allowing members to publish their own reports. To explain these communities' success, the cited authors highlight their simplicity of use, which does not require extensive knowledge of how to use the Internet.

Electronic Word-of-Mouth (eWOM) can be defined as any positive or negative statements made by potential, current, or former clients about a product or company, made accessible to a great number of people and institutions on the Internet (Hennig-Thurau et al., 2004). Cheung, Lee, and Rabjohn (2008) describe eWOM as an extension of traditional interpersonal communication on the Internet. eWOM does not require personal contact (Gelb & Sundaram, 2002), happening whenever any individual transmits or receives information in any part of the world (Chan & Ngai, 2011). The platforms generating eWOM include review and recommendation websites, blogs, online consumer communities, discussion forums, social networks, and chatrooms (Goldsmith, 2006). Given the exponential growth of online communities and social networks and the expansion of e-commerce, researchers have paid eWOM much attention in recent years (Ya et al., 2015). Various studies have sought to understand how eWOM affects consumer behavior. Hennig-Thurau et al. (2004) and Lee et al. (2006) examined the reasons why people engage in eWOM, publishing information about products and services, while Goldsmith (2006), Goldsmith and Horowitz (2006), and Khammash and Griffiths (2011) researched motives for information searches. Kozinets et al. (2010) point out that messages and meanings do not flow in one direction, but, instead, members exchange messages within the same networks. Furthermore, signs of being up-to-date enhance the value of positive reviews, increasing the probability that readers will choose products with positive reviews (Chen & Lurie, 2013). Finally, Liang, Ekincia, Occhiocupo, and Whyatt (2013) show that WOM influences the use of electronic communication and that users' attitudes toward eWOM partially moderate the impact of travelers' adoption of this digital technology. Varadarajan and Yadav (2002) note five important changes in purchasing processes resulting from the appearance of eWOM. These are (1) a substantial increase in information about prices and product and service attributes; (2) much easier information searches; (3) better quality information; (4) organized and structured information; and (5) a greater ease to compare and evaluate possible alternatives for the consumer. Other features of eWOM are the great variety of channels used to exchange information and the anonymity and confidentiality of online environments, allowing consumers to remain unidentified while they search for or provide information. Furthermore, users enjoy the liberty of no geographical or temporal barriers and this type of message's greater availability (Gelb & Sundaram, 2002).

Although eWOM is a way to exchange information, the true impact of messages, once received, can vary from person to person (Cheung et al., 2008). The same content can generate different responses in different recipients, depending on each individual's perceptions and experiences (Chaiken & Eagly, 1976). This variability has increased researchers' interest in searching for a greater understanding of how the information adoption process occurs in virtual environments, in order to understand how computers' expanded influence affects people (Cheung et al., 2008). In the literature about information systems, various studies relied on dual process models to explain how people are influenced to adopt ideas and information. Petty and Cacioppo (1986) assert that, even though different theories of persuasion have adopted different terminologies, postulates, underlying motives, and distinct effects to explain changes in attitude, all researchers end by emphasizing one of the two routes proposed by the elaboration likelihood model (ELM) to explain changes in attitude. According to Petty and Cacioppo (1986), the ELM proposes that a message can influence people's attitudes and behaviors in two ways. The first or "central route" reflects how attitude change results from a rational and critical evaluation of arguments. Attitude changes induced by the central route are relatively long-lasting and predictable (Petty, Cacioppo, & Schumann, 1983). The second or "peripheral route" leads to attitude change because the message is associated with positive or negative affective signals or because an oversimplified decision-making guideline is used to evaluate the message. In this case, rather than reflecting on the arguments offered, the individual may accept these simply because the information's source is an expert. Attitude changes induced via peripheral routes are generally temporary and unpredictable (Petty et al., 1983).

Sussman and Siegel (2003) used the ELM's basic tenets to propose a theoretical model of information adoption in computerized communications, in order to explain individuals' information adoption process. The cited authors' model identifies two key factors: (1) the quality of the argument and (2) source credibility. The model considers the quality of arguments as the central route for information adoption and the source's credibility as the peripheral route. Sussman and Siegel (2003) also argue that the ELM overlooks the role of the usefulness of information in the influence process, even though usefulness is already considered a key concept in adoption of

behaviors. Thus, the cited authors ensured their model shows that the usefulness of information is more strongly associated with information adoption than are other factors included in the ELM's propositions. These authors, therefore, argue that the perceived usefulness of information can be explained by theories of informational influence and believe that the perceived usefulness of information acts as a mediator between the results of influence (e.g., purchase intention) and ideas about argument quality or source credibility.

Doll and Torkzadeh (1988) assert that computer users' satisfaction is essentially connected to information quality, based on content, format, accuracy, and the opportunities generated. Specifically focusing on e-commerce, Cheung et al. (2008) studied the influence of information quality on individuals' decisions to use information. Since practically all Internet users can publish information on the Internet, low quality messages inevitably appear. In this context, according to the cited authors, the force of the argument, the source's credibility, and the confirmation of previous beliefs have a positive influence on perceived information quality. McKinney, Yoon, and Zahedi (2002) had previously proposed an online consumer satisfaction model that takes into account three key factors when analyzing information quality: comprehensibility, reliability, and usefulness.

Internet users, however, hardly ever read web pages carefully. Instead, they scan websites to find the information that interests them (Madu & Madu, 2002). Users want to find the needed information quickly and easily (Nah & Davis, 2002). Therefore, online consumer communities must offer *relevant* information to their users. Dunk (2004) emphasizes this aspect as well, pointing out that relevance is an important factor in readers' decision making and suggesting that the more relevant a message is, the more readers perceive the information as useful. When a website is not constantly updated, the content provided fails to meet users' expectations, and they stop giving value to the content (Madu & Madu, 2002). Users, thus, may regard past reviews as out-of-date, which reduces their usefulness. Therefore, the more users perceive a message as *up-to-date*, the more users perceive the message's information as useful. A message's *accuracy* is connected to its reliability. Accuracy is the users' perception that the information given is correct (Wixom & Todd, 2005). One of consumers' motivations for seeking out eWOM is their desire to reduce the risks involved in decisions to purchase (Khammash & Griffiths, 2011). Inaccurate messages can have the opposite effect of what is desired, creating even more doubts about the product or service being researched. One can infer that the more accurate the message, the more likely users are to perceive the message's information as useful. A message's *comprehensiveness* is connected to its completeness. Sullivan (1999) suggests that more detailed messages reach a wider range of users, resulting in a greater probability of users' conversion and retention. Hence, the more *comprehensive* a message is, the more users will perceive the message's information to be useful. Taking into consideration the four above-mentioned dimensions of information quality—relevance, up-to-dateness, accuracy, and comprehensiveness—the present study's first four hypotheses were formulated as follows:

H1: *The perception that a message is highly relevant will have a direct and positive effect on the perceived usefulness of that message's information.*

H2: *The perception that a message is up-to-date will have a direct and positive effect on the perceived usefulness of that message's information.*

H3: *The perception that a message is accurate will have a direct and positive effect on the perceived usefulness of that message's information.*

H4: *The perception that a message is comprehensive will have a direct and positive effect on the perceived usefulness of that message's information.*

Chaiken (1980) defines source credibility as the message receiver's perception of the author's credibility, without any consideration of the message itself. Source credibility can also be defined as the extent to which a recipient perceives a message's source as credible, competent, and reliable (Petty & Cacioppo, 1986). Messages attributed to prestigious sources generally are more widely accepted than those attributed to less prestigious sources (Hovland & Weiss, 1951). Cheung et al. (2008) assert that information adoption takes into consideration a source's credibility via two dimensions: expertise and reliability. In addition, according to Cheung et al. (2008), credibility flows along the ELM's peripheral route, through which the recipient can be influenced not only by source credibility but also by the source's attractiveness and appeal. Since the Internet gives consumer community users almost unlimited liberty to publish and express their feelings without having to reveal their identity, review readers have to determine the contributors' degree of expertise and reliability, in order to decide whether to accept or reject the information. If users understand that the posted reviews come from highly credible people (i.e., high levels of expertise and reliability), readers will perceive the reviews as more useful (Cheung et al., 2008). One way to evaluate a user's

reputation involves the number of reviews that person posts. Another technique is to ask readers if a specific review was useful. The number of readers who note that the user's reviews are useful (Cheung, Luo, Sia, & Chen 2009) thus measures the credibility of the user in question. Based on these findings about source credibility, the following hypotheses were formulated:

H5: *The perception that a message's source is an expert on the topic will have a direct and positive effect on the perceived usefulness of that message's information.*

H6: *The perception that a message's source is reliable will have a direct and positive effect on the perceived usefulness of that message's information.*

The usefulness of an information refers to the perception that those who utilize it can obtain benefits, which makes it an important antecedent of information adoption (Davis, 1989). This expectation of obtaining benefits is what most often causes users to search for information in consumer communities (Cheung et al., 2008). Information adoption, on the other hand, refers to the process by which individuals decide to use (or not) the information received. Online consumer communities offer diverse opinions and information related to products, services, and companies. By analyzing these reviews, users develop their own perceptions of how useful this information could be. Hence, the more information is perceived as useful, the stronger the users' intention to make use of this information (Cheung et al., 2008). Thus, the follow hypothesis was developed:

H7: *The perception that a message contains very useful information will have a direct and positive effect on consumers' adoption of this information.*

Based on Cheung et al. (2008) and Sussman and Siegal (2003)'s proposed constructs, the model adopted for this study shows that the argument's quality takes into account the four dimensions laid out by Cheung et al. (2008): relevance, up-to-dateness, accuracy, and comprehensiveness. On the other hand, source credibility take into consideration the source's expertise and reliability. These constructs affect the information's usefulness as perceived by the message's recipient and, consequently, the adoption, or not, of the information.

METHODOLOGY

To test the hypotheses, the present study used a cross-sectional survey (Parasuraman, Grewal, & Krishnan, 2006) of the relevant population (adults that travel at least once an year and have used the TripAdvisor online community to search for tourism-related information), using structured and self-administered questionnaires (Aaker, Kumar, & Day, 2001). The consumers surveyed had access to the questionnaires through a research website (i.e. Qualtrics), the link to which was distributed via e-mail and social networks. As the present study sought to investigate the factors that affect information adoption in online consumer communities, the model was tested based on respondents' perceptions about an existing online community, TripAdvisor. This is the largest travel website in the world, offering more than 150 million user reviews of hotels, restaurants, and many tourist attractions. The questionnaire used scales already developed and tested in the literature to measure all the employed constructs. The research instrument included 26 items measured on a five-point Likert-type scale, with options ranging from "totally disagree" to "totally agree". The questionnaire items were translated into Portuguese by professionals, including translation and retranslation steps to guarantee that the Portuguese scales were as close as possible to the original versions. Two pretests were carried out in order to refine the wording of items and the layout of the survey. The present research used non-probabilistic convenience sampling (Aaker et al., 2001), which resulted in 328 completed questionnaires, of which 40 were eliminated because of missing or inconsistent data. The final sample included 288 valid questionnaires answered by travelers that have already used TripAdvisor, with 146 of the respondents identified as female (50.7%) and 142 as male (49.3%). A total of 256 respondents (88.9%) were single, while 32 were married (11.1%). Regarding income, 62.8% indicated a monthly family income above 10,000 Brazilian reais, while another 18.1% reported a monthly family income of 6–10,000 Brazilian reais. The majority (77.1%) were between 18 and 24 years old, with only 35 respondents 30 years old or older (12.2%). A little more than half (52.4%) of the respondents reported they went on trips two or three times a year, 23.3% once a year, 14.2% from three to six times per year and 10.1% more than six times a year. The main reason for trips was pleasure (94.1%), with 3.8% being primarily motivated to travel for business, events, or conferences. In regards to TripAdvisor use, 75.7% reported they already used TripAdvisor to get information on hotels, restaurants, or tourist attractions, while 24.3% answered that they used this review platform to share

experiences. The questionnaire's fifth item asked respondents to list their reasons for using TripAdvisor. The most common reason was to find suggestions for hotels, restaurants, or tourist attractions (69.8%).

RESULTS

This study utilized confirmatory factor analysis to test the validity, unidimensionality, and reliability of the scales used in the measurement model. The final measurement model, with all the 26 indicators present on the research instrument, resulted in satisfactory adjusted indices (Hu & Bentler, 1999) with a root mean square error of approximation (RMSEA) of 0.059 (with a confidence interval [CI] ranging from 0.051 to 0.066), a comparative fit index (CFI) of 0.93, an incremental fit index (IFI) of 0.94, a Tucker Lewis index (TLI) of 0.91, and a significant value for the chi-square index ($\chi^2 = 538.93$; d.f. = 271; $p < 0.001$; $\chi^2/\text{d.f.} = 1.989$). The face validity of all the scales was guaranteed during the development of the research instrument. To verify the nomological validity, the matrix of correlation between constructs was analyzed, revealing that all correlations were significant and in the expected direction. With respect to convergent validity, the average variance extracted (AVE) was calculated for each construct. All the AVE values fall between 0.50 and 0.70, providing evidence for the scales' convergent validity. Regarding the scales' internal consistency and reliability, all met the minimum required levels of reliability (Fornell & Larcker, 1981) with values between 0.70 and 0.85 not only for the alpha coefficient but also for composite reliability. Finally, all the shared variances proved to be less than the extracted variance for the items measuring the constructs, which indicates adequate discriminant validity.

The present study applied structural equation modeling to test the proposed model and hypotheses. All the indices confirm the model's goodness of fit to the data. The chi-square index obtained is statistically significant ($\chi^2 = 853.866$; d.f. = 292; $p < 0.001$), with a $\chi^2/\text{d.f.}$ of 2.92, below 3.0 — the value suggested by Byrne (2010). The incremental fit indices include a CFI of 0.91, IFI of 0.92, and TLI of 0.90. The RMSEA is 0.075 (with a CI from 0.070 to 0.080), showing that the indices are in accordance to the values suggested in the literature (Byrne, 2010) and indicating that the model's goodness of fit is satisfactory. After the confirmation that measurement and structural models' goodness of fit indices were adequate, the coefficients estimated for the causal relationships between constructs were evaluated (see Table 1).

Table 1: Estimated standardized coefficients, hypotheses, and significance

Proposed Relationship	Standardized Coefficient	p-value	Hypothesis Verified
H ₁ : Relevance → Information Usefulness	0.49	<0.001	Yes
H ₂ : Up-to-Datedness → Information Usefulness	0.18	0.007	Yes
H ₃ : Accuracy → Information Usefulness	-0.04	0.075	No
H ₄ : Comprehensiveness → Information Usefulness	0.16	0.007	Yes
H ₅ : Source Expertise → Information Usefulness	-0.06	0.292	No
H ₆ : Source Reliability → Information Usefulness	0.38	<0.001	Yes
H ₇ : Information Usefulness → Information Adoption	0.72	<0.001	Yes

DISCUSSION

The results indicate that usefulness of information strongly influences (0.72, $p\text{-value} < 0.001$) consumers' decisions to accept information found in online tourism communities (i.e., H7). This confirms Cheung et al.'s (2008) results, now tested in the tourism industry. These findings indicate that, in Brazil, tourism consumers also make use of information perceived as useful because they believe this will bring future benefits, be it in regard to finding better hotel deals, choosing the best destinations for their trips, finding restaurants that better match their tastes or entertainment/sightseeing choices that seem most rewarding. Relevance, up-to-datedness, accuracy, and comprehensiveness are the constructs used to test the influence of information quality, while source expertise and reliability were used to test the influence of source credibility. Relevance was the factor with the strongest impact on the perceived usefulness of information (i.e., H1), reinforcing Dunk's (2004) finding that relevant information is an important factor in decision-making. This suggests that users often do not have enough patience or time to read all the reviews of an establishment or destination, a behavior confirmed by Nah and Davis (2002), who emphasize that users want to find the information they need quickly and effortlessly. A

practical implication of the present results is that, given the impact of relevance on the perceived usefulness of information, eWOM platforms need to find ways to highlight relevant points in reviews in order to facilitate consumers' use and evaluation of information. However, users necessarily have different evaluation criteria, and the same information can be relevant for some consumers and irrelevant for others. Including a meaningful title or indicating keywords could help users find relevant information. Up-to-dateness also has a direct and positive impact on the usefulness of information (i.e., H2). These results, contradict Cheung et al.'s (2008) findings that up-to-dateness does not have any influence on usefulness of information. One explanation for the present confirmation of this relationship for Brazilian consumers could be the type of community studied. Cheung et al. (2008) studied a community that evaluates food, while the present study evaluated experiences related to tourism. Tourism is strongly connected to services and seasonality, which requires that the relevant information be constantly updated. For food, up-to-date information may not be as important to consumers, since significant changes over time in the quality of products are hard to produce, as opposed to what happens in services, as previously noted for tourism. Therefore, old information appears to have a negative impact on the perceived usefulness of information, which suggests that users are not willing to accept information they perceive as being outdated.

Regarding the impact of accuracy on usefulness of information (i.e., H3), the present findings did not confirm this hypothesis. Users may find it difficult to evaluate the accuracy of messages about destinations, hotels or services that they never had contact with before, which could be an explanation for why they do not consider accuracy in their evaluation of messages regarding tourism consumption. Cheung et al. (2008) assert that the perception of accuracy involves confirming parts of the message based on what users already know is true or false. If part of a review matches what the users already know, they are more inclined to consider the rest of the review as accurate. The present results show that messages' comprehensiveness has a positive influence on the usefulness of information (i.e., H4). That is, the more comprehensive and detailed the information in a message is, the stronger the perceived usefulness of the contents, which corroborates previous research findings (Cheung et al., 2008). In terms of the tourism industry, this means that messages that talk about many distinct aspects of a hotel or destination experience, providing in-depth evaluations of previous travelers that already experienced a certain tourism product or service, will have a positive effect on a consumer's assessment of a message's usefulness. Within the constructs that tested source credibility, the level of expertise did not present a significant impact on information usefulness (i.e., H5), which confirms Cheung et al.'s (2008) results. Thus, Brazilian tourism consumers, the present study was also not able to confirm the influence of expertise on perceived usefulness of information. One of the factors that makes eWOM so influential is precisely the spontaneity with which ordinary users share their experiences of products or services. The present results indicate that TripAdvisor users are not looking for expert opinions, but rather the opinions of ordinary people like themselves, who might have the same views or needs that they have regarding tourism products and services. Experts' evaluations, which in most cases have business connotations, can be found in other sources. Therefore, this finding supports the conclusion that, in eWOM, the level of sources' expertise does not have a positive impact on perceived usefulness and, on the contrary, expertise may have a negative impact on a consumer's perception if a review is seen as commercially motivated. The present study confirmed that source reliability has a positive influence on usefulness of information (i.e., H6), which contradicts Cheung et al.'s (2008) results. The present findings suggest that users trust opinions posted in online consumer communities, even though readers do not know the source of this information. The reason for this may be that eWOM users perceive other users as being similar to themselves. This result also corroborates the rejection of H5, as previously explained. Tourism-related reviews, although often weak on a technical level, communicate consumers' authentic experiences with hotels, destinations, flights and other services. Thus, a higher level of source reliability increases the chances recipients will perceive messages as useful.

CONCLUSIONS

The main contribution of the present research is to broaden the understanding of eWOM use in the tourism industry and in Brazil, in particular. Based on Cheung et al. (2008) and Sussman and Siegal's (2003) proposed approach, the present study sought to fill a gap in the literature on this phenomenon in Brazil. Only after examining Brazilian consumer behavior can researchers identify these users' specific behaviors and detect differences from users in other countries, which this research proved to be the case. Three hypotheses refuted in Cheung et al.'s (2008) study were confirmed by the present results: H2 (i.e., up-to-dateness → usefulness of information), H4 (comprehensiveness → usefulness of information), and H6 (source reliability → usefulness of information). These differences suggest that Brazilian consumers evaluate messages related to tourism

differently than Chinese consumers evaluate messages related to restaurants and food services (i.e., Cheung et al.'s [2008] study population). This opens up room for discussion about differences in what consumers in different online communities perceive as truly important in information adoption processes, as well as differences in consumer behavior in different countries. In this context, the present study verified the strong impact of relevance on usefulness of information. Based on this result, online tourism platforms need to make an effort to highlight relevant information in reviews, in order to retain users' attention. For example, platforms can include a keywords field for each review. Thus, users who look for reviews of hotel or entertainment services, for example, could more easily filter the available reviews in order to read only those that are relevant. Comprehensiveness also proved to have an impact on usefulness of information. Users want to obtain the largest possible quantity of information available on the product or service in which they are interested. Presenting a user-friendly summary of the main aspects evaluated in reviews of destinations, services or establishments could be a way to highlight comprehensiveness in tourism-related messages.

Businesses evaluated on eWOM platforms can, and should, constantly monitor their pages on these platforms to make sure that basic information such as address, telephone number, menu, and pricelist are always up-to-date. In addition, eWOM is an excellent way to obtain client feedback on products and services offered, which can produce better results than customer satisfaction surveys carried out directly with consumers. Furthermore, interacting with customers on these online communities can also benefit tourism-related enterprises: by directly participating on conversations with online reviewers, answering doubts, solving problems or highlighting key aspects of their business, hotels, airlines, restaurants and other services can emphasize their commitment to providing better experiences for travelers and enhance consumer trust. Finally, the results indicate that TripAdvisor users are not looking for experts' opinions, but rather the opinions of ordinary people like themselves. This leads to the conclusion that, in an eWOM environment, the source's expertise does not necessarily have a positive influence on perceived usefulness of messages, and, if reviews are perceived as commercially motivated, expertise can have a negative impact. Reviews, although often weak on a technical level, communicate authentic consumer experiences of particular products or services. Readers of these reviews believe they could have similar experiences, whether these are positive or negative, should they purchase the product or service in question. The present study only surveyed one online consumer community in the tourism sector—TripAdvisor. Thus, other communities may not prove to have the same habits. As a suggestion for future lines of research, the proposed model could be tested in eWOM platforms focused on other areas of consumption. Other studies could verify if the relationships between the constructs examined in this study are specific or not to tourism. Further research also could verify differences in results for users who travel for business or pleasure. Regarding this study's limitations, the non-probabilistic sample may mean that the results cannot be generalized to other populations. The convenience sample had a large percentage of young respondents with a high family income. A more diversified sample could expand researchers' understanding of the influence of information on consumer behavior.

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STRATEGIC ALLIANCES OF LEADING SHOPPING CENTERS IN BRAZIL

**Renata Maria de Almeida Bastos Gomes, Fábio de Oliveira Paula and
T. Diana L. van Aduard de Macedo-Soares
Pontifical Catholic University of Rio de Janeiro, Brazil**

ABSTRACT

Although the shopping center -SC industry in emerging countries has grown fast over the last decade, it is showing signs of slowing down confronted with a very challenging environment. However, some companies perform well. Since SC-firms operate in alliance networks, these create relational opportunities and risks that must be considered when analysing these firms. This article presents results of research into two leading SC-firms in Brazil with a view to answering the following questions: if and how characteristics of leading SC-firms' alliance networks contribute to their success by mitigating the structural threats the industry is facing? The research made evident that several of the SC-firms' alliance network characteristics not only mitigate some of these threats but also enhance structural industry opportunities. The article highlights the importance of adopting the relational view and network theory to ensure a more accurate strategic analysis in the case of SC firms.

Keywords: Alliance Networks, Strategy, Relational View, Network Theory, Shopping Centers.

INTRODUCTION

Throughout 2012 and 2013 168 new shopping centers (SC) were inaugurated in six countries in Latin America, representing an increase of 60% in SC gross leasable area (GLA) in the region (Cushman & Wakefield, 2014). In Brazil, specifically, the SC industry has more than doubled in size over the last eleven years (ABRASCE, 2015; BNDES, 2009). An increase in foreign capital investments and in emerging consumers contributed to this growth as well as to changes in the profile of SC-firms. New business models were adopted, notably, that of publicly traded companies specializing in SCs that benefitted from foreign capital (Primon & Monetti, 2010).

However, in Brazil there are signs of a slowdown in the SC industry's growth, such as an increase in vacancies (IBOPE, 2014) and decrease in retail sales growth (IBGE, 2015). In fact, the industry shows signs of both maturity and increased competitiveness; in major metropolitan areas (ABRASCE, 2015) many firms compete for the same customers and in similar geographic markets.

Despite this hardly encouraging situation, a few companies in Brazil maintain large asset portfolios and continue to invest in new SCs. This apparent paradox suggests that they adopt strategies that protect them from threats and enable them to take better advantage of the industry's opportunities. Since SC activities, by their very nature, imply close relationships between SCs, the retail community and real estate investors, configuring alliance networks involving these different actors, one can assume that alliance networks' characteristics have strategic implications for these firms, constituting both opportunities and threats that must be considered when analysing their strategies.

This article presents results of the strategic analysis of two leading SC-firms in Brazil with a view to answering the following questions: if and how characteristics of leading SC-firms' alliance networks contribute to their success by mitigating the structural threats the industry is facing? Its objective is two-fold. Firstly, to contribute to theory regarding strategic management of SC firms by highlighting the importance of adopting a relational view, i.e. pertinent to the firm's relationships, such as alliances (Dyer & Singh, 1998) and the networks these configure, instead of the commonly used "traditional" (non-relational) one, to ensure a more accurate

strategic analysis of these firms. Secondly, to contribute to SC firms' practitioners by showing how to carry out a strategic analysis from a relational/network perspective and by presenting some useful lessons from successful SC firms regarding their engagement in alliance networks. Although the SC industry's growth has aroused academic interest in Brazil (Baldin, 2012; Primon and Monetti, 2010), we found no studies on the strategies and alliance networks of SC companies in our preliminary literature review. Even in countries such as the US, where the SC industry has been highly developed for decades and extensively investigated, hardly any studies take into account the SC firms' alliance networks.

THEORETICAL REFERENCES

The business environment has increasingly displayed collaborative features between companies, reflecting a world marked by the interdependence of actors involved in firms' value chains and networks of relationships. This explains the relatively recent importance given to the relational view in a firm's strategic management (Dyer & Singh, 1998; Gulati, 1998), according to which "critical resources and value creation activities ... may be embedded in its interfirm relationships (e.g. strategic alliances)" (George et al., 2001, p. 206-7). In keeping with this view, alliances are significant competitive factors, constituting sources of valuable and difficult-to-imitate resources, as long as the firm can exploit the benefits of the alliance (Barney, 2001).

In this research we defined alliances, in accordance with Gulati (1998), as voluntary arrangements among two or more firms, involving exchange, sharing or joint development or provision of technologies, products or services. We used a typology of linkages, inspired by Contractor and Lorange (1988), based on relationship intensity, and adapted to the SC industry; relationship intensity is important for strategic analyses because research has suggested that the greater the alliance intensity, the stronger its strategic impact. The typology considers a spectrum of linkages from M&A and joint ventures - most intense - to agreements - less intense. Except for M&A, the others are alliances when they meet Gulati's (1998) definition.

A network of alliances, or alliance network - also called "ego-net" - is the set of the focal firm's alliances with other firms, whether or not they belong to the same industry (Gulati et al., 2000) and includes relationships between partners. To increase its capacity to perform effectively the firm must ensure strategic fit (Barney, 1996; Hofer and Schendel, 1978). In line with Macedo-Soares (2011), we posit here that in the case of firms in alliance networks, strategic fit implies that the firm's strategy, given its characteristics, can lever the forces constituted not only by its internal resources - thus minimizing its weaknesses - but also by those of the alliance network. The objective is to exploit the opportunities created not only by the industry's structural factors - strategic actors and micro-environmental factors - but also by the alliance network, i.e. relational factors, while mitigating the threats posed by both types.

In the literature, there are several frameworks for carrying out strategic analyses from a relational perspective (Contractor, Wasserman & Faust, 2006; Gnyawali & Madhavan, 2001; Madhavan, Koka & Prescott, 1998; Zaheer & McEvily, 1999). This research adopted Macedo-Soares's (2011) Global SNA Framework because it considers at once relational and non-relational, i.e. "traditional" organizational and industry structural (Porter, 1985; Austin, 1990) factors within a holistic perspective. It thus differs from relational frameworks that, with just a few exceptions, focus only on relational factors (e.g. Yamakawa, Yang & Lin, 2011; Balestrini et al., 2014).

The generic SNA Framework (Macedo-Soares, 2002; Macedo-Soares & Tauhata, 2004) and its variations such as the Global SNA Framework (Macedo-Soares, 2011) have been useful for assessing the strategic fit of firms in alliance networks or merely to identify significant strategic implications of structural and relational factors of such firms at industry level. These frameworks have been applied successfully in more than thirty firms (e.g. Macedo-Soares, Tauhata & Freitas, 2004; Macedo-Soares and Lyra, 2012; Bastos & Macedo-Soares, 2007, 2014), including strategic groups (e.g. Macedo-Soares & Mendonça, 2010; Macedo-Soares & Gutierrez, 2010; Leite & Macedo-Soares, 2005). It is important to note that firms in a strategic group have similar strategic profiles, in terms of business scope and resource commitments (Cool & Schendel, 1987) and "thus are likely to face similar sets of threats and opportunities" (Barney, 1996, p. 128; Caves & Porter, 1977). The SNA Framework has three components.

- i. SNA Methodology - series of steps to carry out strategic analyses. (Note that the results of our research are presented here in accordance with the steps that are pertinent to answering our research question).
- ii. SNA Model - to map firm's alliance network/ego-net within its value net. The latter takes into account all actors, including partners, as well as their interdependencies (Brandenburger & Nalebuff, 1996).
- iii. SNA Reference Lists - constructs for data capture. They include a list of relational constructs from social network theory, classified according to three dimensions based on Galaskiewicz and Zaheer (1999) and Gulati et al. (2000) for alliance network analysis. The ones focussed here are: a) Alliance Network Structure: density, position/centrality, scope; b) Alliance Network Composition: identity in terms of success status of focal firm and partners; access to focal firm and partner resources; c) Linkage Modalities: type of linkages; strength of linkages; nature of linkages – opportunistic/collaborative, exploitative/explorative. In the research at issue here, these lists were adapted to the case of the SC industry and alliance peculiarities.

RESEARCH METHODS

Our research required a method that would take into account the specific contexts of the firms involved. At the same time, it sought to contribute to both practice and theory building, by making evident the importance of the relational view in analyses of SC firms. For these reasons, in keeping with Yin (2014), the case study method was deemed appropriate. Its main limitation – impossibility of generalizing statistically - did not apply, as this was not the study's objective. On the other hand this method enables analytic generalizations, which is relevant for theory building.

Based on Eisenhardt (1989) and Yin (2014), the study followed the principle of data and method triangulation, capturing data from different sources and through different means so as to confront it, when applicable, and thus ensure the consistency and reliability of the study's results, as well as mitigate the limitations inherent to the respective means adopted. These were as follows:

1) Investigation of data available in electronic media, such as publicly-owned Brazilian SC-Firms annual reports, trade association and government reports, research and consulting firms' reports, and the specialized press;

2) Investigation of documents (standard/special lease contracts, co-development agreements, shareholder agreements);

3) Twelve in-depth (90 minutes) interviews of a) two senior executives (commercial/operations director of each SC-firm focussed), b) four specialists on the SC industry, one manager of an equity fund, one leasing partner and two ex-general manager of SC, c) four retailers, one of whom is an ex-president of an international retailer in Brazil, one national expansion manager of a retail chain and two owners of franchise units d) two SC co-owners whose management is in the hands of a SC-firm.

The cases were selected because of their relevance. Out of the six largest SC companies in Brazil, we selected two SC-firms that were both leaders and appeared to have similar strategic profiles. If this proved to be the case, they could be considered as part of the same strategic group.

The field work took place between August and October 2014. The in-depth interviews were performed using semi-structured questionnaires. These had been tested in previous investigations with the SNA Framework and were adapted to the case of SC-firms. The interviews were recorded, transcribed and analysed with the help of inductive content analysis techniques (Elo & Kyngas, 2008). The dearth of specific SC-firm strategy literature and the fact that our research was to a certain extent exploratory justified this choice.

RESULTS

Shopping Center Industry & SC-firms Focused

Shopping centers (SC) are planned retail agglomerations (Teller & Reutterer, 2008), as opposed to those that develop organically (street commerce) and are typically developed as a real estate property. SCs (or simply 'malls') are managed by a centralized entity - appointed by their owners - that controls the agglomeration's features, notably the 'atmosphere' created by the physical environment, its access and parking facilities, the

retail, leisure and services offered (tenant mix), and any other common marketing efforts, such as joint promotions and mall exhibits (Teller, 2008).

The SC industry can be characterized as an economic activity that provides the final consumer with a convenient and varied dual shopping and leisure type experience during a single visit (Chebat, Sirgy & Grzeskowiak, 2010). But, unlike other real estate activities, whose performance depends directly on the rent earned from end customers, SC performance depends on the rent earned from retail firms (tenants), and, indirectly, also on that of the end customers who spend money at the SC's tenants (Delisle, 2005). SCs are therefore directly connected to the retail market and have a vested interest in their tenants' performance. The pursuit of the 'ideal tenant mix' is fundamental to achieving the necessary balance of tenants for enhancing SC attractiveness to consumers and providing adequate rentals to the SC owners (Delisle, 2005). Consumers are also attracted to malls because of the presence of well-known anchor-stores (Finn & Louviere, 1996). Anchors generate mall traffic that indirectly increases the sales of lesser-known mall stores, creating external economies in the mall. Mall managers internalize these externalities by offering rent subsidies to anchors and by charging rent premiums to other mall tenants (Pashigan & Gould, 1998).

The SC industry focuses on the companies responsible for the development and management of SCs, known in Brazil as "SC-firms" (Baldin, 2012; BNDES, 2009). A SC-firm is a corporate owner and developer of commercial real estate assets as well as a provider of the integrated management services of these assets. SC-firms have two types of clients: tenants, who pay the rents for mall space, and co-owners of the malls managed by the SC-firm, who pay management service fees (commercial, administrative and financial management). The latter can be composed of a mixed groups of investors, including other SC-firms and/or private investors (BNDES, 2009). The SC-firm's revenues, therefore, come from the lease of commercial spaces in SCs in which the SC-firm company has a share, and from the provision of management services, even if the SC-firm is not a shareholder of a specific mall and acts only as their manager (BNDES, 2006).

Note that tenant leases involve not merely rental contracts but commitments by both parties to share gains and risks and jointly contribute to the proper functioning and promotion of the SC as a retail agglomeration. In SC rental contracts, the existence of a 'percentage' rent, where tenants agree to pay a fixed percentage of their sales in a given period, configures a 'partnership'/alliance between SCs and their tenants. As noted by Benjamin, Boyle and Sirmans (1990), this configuration transfers risks and gains from tenant to SC owner and motivates management to promote mall sales and avoid internal competition among stores that could affect total sales.

The two SC-firms focused in our study were BRMalls and Aliansce. BRMalls was created when GP Investments and Equity International American got together and bought a Brazilian pioneer SC-firm, ECISA, co-owner and manager of six SCs in Brazil (BRMalls, 2014). Aliansce was the result of a joint venture involving Brazilian pioneer SC-firm National Iguatemi and American General Growth Properties (Aliansce, 2014). Both SC-firms went public and started carrying out further acquisitions as well new developments. Although there is no official ranking in the country, both SC-firms are quoted in sectorial reports (BNDES, 2009; GVCev, 2012) as leaders in Brazil, both in number of malls and in total GLA. Table 1 depicts their main characteristics.

Table 1 – Main characteristics of firms focused in study

Main characteristics	BRMalls	Aliansce
Founded in	2006	2004
Year IPO	2007	2010
GLA Owner (Thousand m2)	987	465
GLA (Thousand m2)	1691	696
% Ownership (GLA Own/GLA Total)	58%	67%
Nº of SCs (owner)	48	19
Nº of SCs (service deliverer)	45	33
Nº of States in Brazil	18	10
Nº of shops	9000	3300
Tenants Sales (R\$ Million)	22000	8000
Net Operating Income (R\$ Million)	1400	443

Source: Aliansce (2014) and BRMalls (2014)

Strategic Analysis

Characterization of SC-firms' Strategies – Step 1 of SNA Methodology

The documental investigation confirmed that the SC-firms focused had similar strategic profiles and could therefore be considered part of the same strategic group, and thus, in accordance with Barney (1996), faced similar structural industry opportunities and threats. According to Mintzberg's (1988) typology, both firms had differentiation strategies, predominantly through quality (better properties, better location and more profitable tenant-mix in terms of satisfying customers and shareholders), but also through support, as both firms claim to offer a better specialized service management. This was reflected in their vision and mission statements (BRMalls, 2014; Aliansce, 2014). BRMalls's vision is "[...] being the largest and the best SC company in the world". As a BRMalls interviewee put it: "[...] preferably with dominant shopping centers in their trade area, that means size, good tenant-mix with high-performance sales, and operational efficiency, this is our differential".

Aliansce's mission is "[...] being the developer of the best SCs in the country, working in the planning, development, management and marketing of these ventures." Its website mentions explicitly: "We are distinguished by quality, service delivery and management ... and pioneering SC market". Table 2 presents details regarding the SC-firms' strategy scope, competitive posture and goals, according to Fahey and Randall's (1998) constructs, highlighting the SC-firms' similar strategic profiles. The only difference between them is in terms of their vertical scope. Whereas BRMalls manages SCs in which it has a financial stake, Aliansce also provides services to SCs in which it has no stake.

Table 2 – **Strategy scope, competitive posture and goals of SC-firms**

Scope	Product/Market	SCs well located and attractive marketing mix Consumers of all ages and from different social classes
	Direct Clients	Retailers and service retailers (restaurants, cinemas) Co-owners of SCs
	Geographic	Nation-wide
	Vertical	Acquisition of land and SCs Management of SCs.
	Stakeholder	Government; land owners; stockholders of SC-firms; retailers; consumers; employees
Competitive Posture		Leadership through quality differentiation (best SCs, best location, best management service)
Goals		Expansion to other markets (cities, regions); expansion of different SC types (outlet centers, mixed-use complexes); expansion through acquisition of SCs (or increase of firm's own shares in SCs).

Opportunities and Threats of Structural SC Industry Factors – Step 2 of SNA Methodology

Using Austin's (1990) constructs, we first of all identified, in the scope of our documental investigation, namely reports from IBGE (2015), the main opportunities and threats constituted by the industry's macro-environmental (political, economic, demographic, social) factors (Table 3).

As regards political factors, the country's relative political stability was perceived to be an opportunity for long-term foreign investments. On the other hand, institutional bureaucracy was viewed as a great threat, because of the high transaction costs involved (The Economist, 2013). High taxation policy (The Economist, 2013) for retailing is also considered a major threat, as it diminishes retailers' attractiveness to investors, provoking a dearth of new retailers and reducing the main source of business in the SC industry.

Where economic factors are concerned, the SC-industry faces major threats arising from economic instability – unpredictable and rapid alternation of waves of growth and recession. During recession periods, the reduction in middle classes' purchasing power, coupled with the lack of affordable capital to support retailers' expansions and operations (IBOPE, 2014), may lead to the increase in lease delinquency rates and closure of stores, thus resulting in mall vacancy. Economic instability also affects new SC developments and the expansion

of franchise models (ABF, 2015). Because the development cycle in the SC-industry takes from 3-5 years, malls that were planned during growth periods may be inaugurated during a recession (Portalnovarejo, 2015).

Table 3 – Opportunities and threats of macro-environmental factors

COUNTRY LEVEL	INDUSTRY LEVEL	OPPORTUNITIES	THREATS
<u>Political Factors</u>			
Political stability Highly bureaucratic institutions	High taxation that affects retail activities	Political stability encourages long term investments, especially from foreign investors	High taxation inhibits investment on retail business High transaction costs
<u>Economic Factors</u>			
Economic instability (alternate growth and recession waves) Consumption power of middle classes is highly dependent on economic situation Lack of affordable capital to small entrepreneurs	Fragmentation of SC property Underdeveloped industry when compared to other countries Industry with a long development cycle High dissemination of franchise model	New malls and expansion of existing ones Acquisition of SCs shares Unattended small/medium towns Franchise as a source of tenants	Reduced retailers' operational profit and expansion capacity leads to high delinquency rates and closure of mall stores (vacancy) SC development cycle of 3-5 years not always match the inconstant economic situation Retailers face logistics problems to operate in small/medium towns
<u>Demographic Factors</u>			
Population growth about 1% but tends to stabilization	Young adults/children being raised inside SCs Elderly feels safe and comfortable in SCs	More loyal consumers, all ages and social strata	
<u>Socio-cultural Factors</u>			
Unattractive urban environment	SCs increasingly replacing the public space Consumption habits: increased proneness to frequent SCs	SCs: place for combining shopping and leisure (social hub);	E-commerce: reduces spending in malls' stores

After a decade of growth, Brazil is now experiencing a weak economic period that strongly affects the consumption capacity of the emerging middle class (The Economist, 2015). On the other hand, the latter has acquired a taste for visiting SCs and if the Brazilian economy improves and, consequently, the country's purchasing power, the SCs will probably benefit more than other retail agglomerations. Moreover, the Brazilian SC industry is considered "underdeveloped in terms of quantity of malls, total gross leasable area and gross leasable area per inhabitant when compared to other countries" (BRMalls, 2015) and the malls property is fragmented among several different owners (Aliansce, 2015), constituting an opportunity for real estate investments. As to demographic and sociocultural factors, the study suggested that for the most part these represented opportunities for the SC-industry. The only threat identified was competition from e-commerce.. One of the greatest opportunities was that SCs are increasingly replacing public space, not only in Brazil (Padilha, 2011), but in several emerging countries (Abaza, 2001; Kuruvilla & Ganguli, 2008) that suffer from an unattractive urban environment. Future adults are already being raised in malls, and the elderly feel safer and more comfortable in the SC's 'protected' environment (Bittencourt, Valle Ferreira & Pacheco, 2012) that constitutes a social hub.

With the help of Porter's (1980) constructs for analyzing strategic actors' implications for firm performance, on the basis of our documental investigation we identified SC-firms' clients as constituting the main threat because of their high bargaining power, namely powerful tenants such as large retail chains and franchisors. Moreover, as the country's economic conditions worsen, this affects tenants' capacity to invest and expand, which obviously also has a negative impact on SC-firms.

As regards rivals, we identified two main groups in Brazil. One composed of "the big SC-firms", which according to GVCev (2012) accounts for 40% of the market, measured by commercial area (GLA) and another comprising SC co-owners. Rivalry only exists among firms of the first group which includes the two firms focused here. These rivals represent a significant threat because the recent slowdown in industry growth steps up competition for land to build new malls and to buy existing ones that are in small owners' hands. High exit barriers in the industry, such as the very high cost of divestment of high-value fixed assets, increases this threat. New entrants posed a major threat when the economy was booming. Currently, however, the difficult economic situation, the lack of good sites and high capital costs involved in entering the SC market mitigate this threat. In addition, new entrants generally do not have easy access to potential clients, namely local tenants and co-owners of existing SCs. Among substitutes, e-commerce sales constitute the most significant threat in that they affect the sales of SC tenants (Jones & Livingstone, 2015). E-commerce sales grew 22% in 2014 compared to 2013 (Ecommerce Brasil, 2015), while SCs' sales rose only 10% in the same period (ABRASCE, 2015). Suppliers, on the other hand, represent a very small threat because little product differentiation is needed and there are a lot of contracting companies and many other equipment suppliers to the real estate industry.

Main Alliances of SC-Firms focused – Step 3 of SNA Methodology

Our analysis of data, captured from documents of the two SC-Firms, revealed a strong similarity between both SC-firms where alliance types were concerned (Table 4), according to Contractor and Lorange's typology (1988).

Table 4 – SC-firms alliance types

Partner	Partner Type	Alliance Type
Rivals	Other SC-firms	Co-Development, Co-Management (shareholders agreement)
Clients: Tenants	Retail chains (key tenants)	Co-Marketing (long-term lease agreements; special lease agreements, letter of intent for new ventures)
	Satellite-stores	Co-Marketing (standard lease agreements)
	Advertisers	Co-Marketing (joint promotion agreements)
Clients: Co-owners	Co-owners of SCs managed by SC-firm	Co-Development, Co-Management (shareholders agreement)
Complementors	Real estate companies	Co-Development, Co-Management (shareholders agreement)

Note: The research did not consider specific agreements with service providers, such as lawyers, architects and building maintenance firms that are common to any real estate business.

Both SC-firms engaged in alliances with rivals, clients and complementors. We found no evidence of alliances with substitutes (e-commerce players) or with new entrants. Note that, in the past, acquisition of incumbents was an important mode of entry into the Brazilian SC market (BNDES, 2006). The focused firms establish alliances with rival SC-firms to share risks and resources and these usually occur in the development phase of a new SC. They are for co-development and co-management of SCs, based on shareholder agreements and management service agreements. Cases in point are the alliance between BRMalls and Grupo JCPM (2015) for Shopping Granja Vianna (SP) and the alliance between Aliansce and General Shopping Brasil (GSB, 2014) for Parque Shopping Santana (SP). Alliances with clients (tenants) are of a co-marketing nature, based on leasing agreements. These are alliances because they are not merely rental contracts but commitments to contribute jointly to the proper functioning and promotion of the SC as a retail agglomeration.

Our study identified different types of linkages per tenant type. In the case of stores belonging to retail chains (key tenants) - notably anchor-stores and major national and international retailers, including franchisors - alliances are based on special lease contracts with specific covenants with respect to the obligations of both

parties, addition of special clauses to accomplish franchise mode and change of ownership of the retailing brand. Alliances of general satellite-stores - retailers that operate few stores, normally a family business - are based on standard lease contracts, and alliances of key tenants, established during the development phase of a new SC, are based on letters of intent. In the case of advertising companies (and their clients, e.g. Visa, Disney), alliances are constituted by co-marketing agreements where both parties benefit from in-mall promotions. The SC gains from increased customer traffic and the advertisers benefit from brands' exposure (BRMalls, 2014). The SC-firms focused here also engage in alliances with another type of client, namely the co-owner of malls, to whom the SC-firm provides management services. With this type of client, the alliance is a management service agreement, which may, or may not, involve a shareholder agreement. Co-owners are part of a highly diversified group of investors, which includes pension funds, real estate investment funds, non-real estate firms that invest in real estate and individuals. The documents consulted also identified co-development alliances between the SC-firms and complementors, namely, other real estate companies, focused on residential or corporate businesses and landlords, for the development of a new SC or the expansion of an existing one. Specific contracts were designed to support these alliances, involving managing rights, exchangeable property ownership and liabilities.

Strategic Implications of SC-firms' Alliances from a Network Perspective – Step 4 of SNA Methodology

With the help of the relational constructs in the SNA Reference Lists, we identified the opportunities and threats constituted by the alliances of the SC-firms from a network perspective (Table 5). Below, we comment on the most relevant ones.

Table 5 – Alliance Networks' strategic implications

Constructs	Characteristics	Opportunities	Threats
NETWORK STRUCTURE			
Density	Medium/High: Many linkages with focal firm, many linkages between partners	Create entry barriers	Lock-in effect
Centrality	Central Position	Strong influence upon other actors in the network	
Market Scope	Wide: with key tenants and co-owners	Promotes increased sources of information and resources	
Geographic scope	Wide: at national level	Increases market sources	
NETWORK COMPOSITION			
Identity/Status of SC-firms	Strong identity in terms of success status	Ensures high bargaining power, increases attractiveness to investors and retailers	
Identity/Status of partner firms	Strong identity associated with high success status of most partners	Key tenants, rivals, co-owners and complementors represents significant partner resources	Relative threat from bargaining power of strong partners
	Weak identity of general satellite stores	Opportunity from bargaining power of weak partners	
Access to partners' resources	Easy access: key tenants' resources.	Complementary marketing capabilities of key tenants.	
	Easy access: co-owners, rivals, complementors resources	Complementary development capabilities and financial resources	

LINKAGE MODALITY

Strength of linkages	Weak: tenants		Increase transaction costs
	Strong: co-owners, rivals, complementors, key-tenants	Increasing trust (without reducing transaction costs due to real estate contracting standards)	Lock-in effect
Nature	Collaborative – with all partners	Fostering trust and commitment to the success of the SC	

As mentioned earlier, SC activities necessarily imply close relationships between the SCs, the tenant community and property co-owners, accounting for strong interconnectedness between partners in the alliance networks, or in other words high density, i.e. a very high number of connections in relation to the maximum possible of connections between firm and partners and among partners (Knoke, 2000). In the case of the focused SC-firms, the linkages involve a great number of partners who are mainly tenants (see Table 1). The research found qualitative evidence of linkages between co-owners, rivals and complementors. A co-owner, for example, observed that he is a “shareholder of two malls, each belonging to a different SC-firm”. A specialist noted that “several real estate companies engage in multi-use property projects with different SC-firms”. On the other hand, we found no evidence regarding linkages between tenants. The SC-firms’ alliance network density was therefore considered as being medium to high. Also, the SC-firms were found to have high centrality in the network, i.e. a high degree of influence on partners, one of whose measures is their dependence on the SC-firms. When asked what was the degree of such dependence, a SC tenant replied:

“The anchor stores and the big retail chains (key tenants) are very dependent upon the leading (SC) firms as they own the biggest and best malls in the country. We thus have to maintain a good relationship (with them).”

When analysing the tenant mix of the SC-firms’ properties it became obvious that the market scope of the alliances with key tenants and co-owners was wide, as they involved many of their properties. This was also the case of the geographic scope, at national level. In keeping with social network theory, high density, centrality and wide scope of the SC-firms’ alliance networks constitute opportunities at industry level, by providing firm access to extra informational and other desirable resources (Gulati et al., 2000; Knoke, 2001). They also increase the chances of acquiring new assets. As stated in BRMalls’s website: “Our national scope and close relationship with other companies ...are paramount to finding good acquisition opportunities”. Being part of one of the SC-firms alliance networks has thus been highly attractive, as observed by one of its co-owners: “if my mall is not in a SC-firm network it would be difficult to get the good big tenants and the international brands that are entering Brazil. That is why I opted some years ago to let them manage my mall” However, these network structure characteristics that also constitute opportunities by creating high barriers to new entrants were viewed as potential threats to the SC-firms because of the potential ‘lock-in’ effect (Greenstein, 1997; Gulati et al., 2000), especially when partners have conflicting objectives. As mentioned by a co-owner, objectives are not always convergent and may end up in disagreements: “I usually follow the majority with respect to new investments in my SC. But sometimes I do not agree with what they are proposing and stop the process”.

With respect to the network composition dimension, according to sectorial reports (BNDES, 2009) and interviewees’ comments, the SC-firms were found to have a strong identity associated with their high success status, which is hardly surprising as they are leaders in their industry. Similarly, most of the SC-firms’ partners, because they are important retailers, real estate companies or even other SC-firms, were found to have a strong identity due to their status, providing easy access to their resources, notably, complementary marketing capabilities with tenants for promotion of the mall and complementary development capabilities with co-owners and complementors.

According to network theory (Gulati et al., 2000), strong focal firm identity/high status, as well as easy access to partner complementary resources, especially high status partners, are network attributes that create opportunities for the focal firms. The identity of success of the SC-firms also increases their attractiveness for key tenants and co-owners. The following statement of an anchor-store manager regarding the importance for its

store's expansion plans of being partners with what are considered 'excellent' SCs is relevant in this respect: "[...] it is easy to develop an expansion plan when I know that these companies are there with excellent SCs in many places. One single meeting and a lot of new units are negotiated and contracts signed".

As the SC industry depends on tenants' strategic decisions, when these have high status, they could pose a threat because of their strong bargaining power which enables them to reduce rents and demand special spaces in the mall. However, this threat is mitigated in the case of the high status SC-firms focused, as noted by a co-owner of a SC that was not managed by one of the SC-firms studied:

"The tenant [anchor-store] asked us to find a place for the store in our SC. We changed the project, included more area for its store and some other satellite-stores. When the SC was about to be launched, the guy declined, paid a fine, and never entered. The place is still vacant. I doubt that this tenant would do the same in a BRMalls' mall..."

When co-owners have a high status similar to that of the SC-firm, they represent an opportunity for acquiring complementary resources, but also a threat because of their high bargaining power. As mentioned by a SC specialist, with respect to SCs in small regional markets, "if on the one hand, it is easier to operate in the local market, because the partner is strong and already there, on the other, the SC-firm depends even more on this (strong) partner to take decisions, such as regarding investments and innovations". With respect to the linkage modality dimension, the documental investigation found that the SC-firms' alliances with tenants, that were mainly based on lease contracts, were predominantly weak. However, those with co-owners, rivals and complementors - mainly shareholder agreements, - and those with key tenants - mainly special lease contracts - were strong. As regards their nature, all were collaborative. The SC-firms were interested in helping their tenants, for example, to improve their businesses, as the SC success is partly dependent on that of the tenants. As an interviewee from Aliance said: "...We spent four years to convince [the tenant] to change his store's layout for his own benefit. He finally agreed and transformed his store into a flagship, beautiful... sales increased, everybody is happy now". At first sight, alliances with co-owners of small shares could be considered opportunistic, as the SC-firms often manage the co-owned malls with a view to increasing their share of these in the future (see Aliance, 2015; BRMalls, 2015). A closer analysis suggested that, as long as they are engaged in the alliance, they are in fact, collaborative in that they seek to cater to both parties' objectives: the mall's success.

According to network theory (Gulati et al., 2000), the strong linkages of the SC-firms with partners should constitute opportunities by enhancing trust and thus reducing transaction costs. However, the very nature of the real estate business in Brazil involves very high transaction costs even when there is trust. As mentioned by a co-owner, "Contracts are enormous and full of details, a lawyer is needed to understand them. We have few options and in most cases we have to follow the majority... Monthly meetings are never-ending...". Moreover, strong linkages always carry the potential threat of 'lock-in'. Also according to network theory, collaborative linkages are usually opportunities. In the case of the focused SC-firms, their collaborative alliances with all partners indeed constitute significant opportunities, such as more rapid development of the mall and, thus, faster company growth, reduced financial risks and enhanced mall performance.

DISCUSSION AND CONCLUDING REMARKS

In this section, we first compare and discuss some of the study's results from Step 2 of SNA-Methodology – traditional perspective, with those of Step 4 of SNA-Methodology – relational perspective, to verify if and how the SC-firms' alliance network characteristics mitigate some of the structural threats the industry is facing. We saw that the currently most significant real threat, from the traditional perspective, comes from the weak and unstable economy that affects purchasing power and, consequently, the retailers' results. Another threat has to do with the fact that retailers have few options in terms of getting the necessary capital to sustain their business during a recession. From the relational perspective, it became evident that several alliance network features, notably, high centrality of the focused SC-firms, their status of success, wide scope, and access to valuable marketing and development resources of high status partners (key tenants, co-owners and rivals) contribute jointly to mitigate, to a certain extent, these industry structural threats. They indeed increase key tenants' trust in the SC-firms and thus encourage investments and reduce transaction costs related to consequences of economic instability and weakness, such as increased lease delinquency rates and mall space vacancy.

As regards the other real structural threats faced by the SC industry, from a traditional perspective – highly bureaucratic institutions and high taxation policy – the relational analysis did not find any alliance network features in the case of the SC-firms that could neutralize these threats. On the other hand, the analysis found several relational features that enhanced industry structural opportunities, such as those related to the relatively underdeveloped nature of the SC industry in Brazil which provides plenty of room for new developments. The medium to high density of the SC-firms' alliance networks, as well as their strong identity associated with their success status creates entry barriers for new entrants that favour incumbents, i.e. the SC-firms. Another case in point is the opportunity for acquisitions on the part of the SC-firms of other malls, and increased shares in their portfolio of malls, as a result of the property fragmentation that characterizes Brazil's SC industry. This opportunity of increased shares can be more easily exploited through the alliances they have already established with co-owners in the network.

In sum, our research thus made evident that several SC-firms' alliance network characteristics (centrality, density, wide scope, strong identity/success status of both focal and partner firms, strong collaborative ties) indeed not only mitigate several of the most important threats the industry is facing, but also enhance several structural industry opportunities. This is especially true in the case of the alliances in the network with the SC-firms' key tenant and co-owner partners. One can conclude that the SC-firms focused were successful in part because they were able to take advantage of the above-mentioned alliance network characteristics. This is indeed a very important lesson of our research for other less successful shopping center firms that practitioners could benefit from. By showing how alliance network features positively or negatively influence structural industry factors the research highlighted the importance of adopting a relational view in strategic analysis and consequently also strategic planning and decision-making in the case of SC firms. Both at academic and at practitioner levels this is all the more important given that, in practice, strategic analyses of SCs are almost always carried out at the shopping centre unit level without taking into account the strategic implications of the network to which they belong. By analysing the SC-firms focussed here with the help of the SNA Framework we exemplified how firms could carry out a strategic analysis from a relational/network perspective with the right tools. We also made evident how much more accurate the results of such a comprehensive relational analysis are as compared with the more common traditional analyses that do not consider the strategic implications of the firms' alliance networks. The research had some limitations related to confidentiality issues, notably with respect to certain clauses in lease contracts and shareholder agreements with partners that would have provided useful information regarding the alliances. Another obvious limitation was the fact that the study limited itself to only two firms, albeit leading ones that are representative of the most important strategic group in the industry. We therefore highly recommend the replication of this study, not only in other SC firms in the same strategic group and in firms in other strategic groups of the SC industry, but also of real estate companies involved in SC management or development. We also suggest carrying out comparisons with SC firms in other countries - both emerging and developed - where the SC firms (corporate owners, developers and management service providers for commercial real estate assets) are important players in the SC industry.

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THE DYNAMICS OF SOCIAL MEDIA IN THE FASHION INDUSTRY: THE CASE OF THE MILLENNIAL GENERATIONS

Guida Helal, American University of Beirut, Lebanon
Wilson Ozuem, University of Gloucestershire, United Kingdom

ABSTRACT

Companies have recognised the opportunity to deploy social media as a marketing tool within business operations. This paper examines the effect of social media on brand perceptions in the UK fashion industry, particularly the moderating effect of evolving social media ecosystems on consumer brand perceptions. Prior research examining the effect of social media in the fashion industry has focused almost exclusively on brand equity, consumer purchase intentions and post-purchase assessments. Drawing on social identity theory, this paper centres on how social media affect brand perceptions in the millennial generation. We discuss the managerial implications and future research directions.

Keywords: Social Media; Internet; Millennial Generation; Fashion industry; Identity Theory; Brand perceptions.

INTRODUCTION AND CONTEXT

Throughout the years, marketing logics and developments have evolved to accommodate a whirlwind of evolving innovations that belong to the fashion industry. The dynamic nature of marketing means fashion companies are relentlessly on guard for the next groundbreaking development (Jayachandran et al., 1999; Lusch, 2007; Vargo & Lusch, 2004; Webster, 1992). One case of a sought after phenomenon that has dramatically revolutionised today's society is the technological Millennial approach to communication. Long gone is the reliance on traditional marketing, as one-way communication renders obsolete and makes way for the dominance of two-way interchange (Houman Andersen, 2001; Ozuem, Howell & Lancaster, 2008). Multinational corporations have, as a result, embraced the likes of Internet technologies along with their varied manifestations, such as social media, in adopting platforms that their brands can use to contribute content to followers (Evans, 2012; Hoffman & Novak, 1996; Zarrella, 2009). This has sparked vast literature on the progression of social media and the potential it has in leveraging various aspects of daily life (Fischer & Reuber, 2011; Hanna, Rohm & Crittenden, 2011; Hoffman & Fodor, 2016; Huy & Shipilov, 2012; Kaplan & Haenlein, 2010; Kietzmann et al., 2011; Michaelidou et al., 2011). Other studies have examined the premises of employing social media as part of a brand's marketing scheme (Luo, Zhang & Duan, 2013; Naylor, Lamberton & West, 2012; Simmons, 2008; Tuten & Solomon, 2014; Ozuem, Pinko & Azemi, 2016). Kim and Ko (2012) addressed the success of social media marketing activities in enhancing customer equity for luxury fashion brands. The study revealed the degree to which luxury fashion brands have prevailed from employing social media marketing activities including entertainment, interaction, or word of mouth. The findings demonstrated a positive correlation between the application of social media marketing and subsequent purchase intentions and customer equity within the luxury fashion industry. However, the study paid limited attention to a demographic age that is familiar with social media and able to produce pertinent feedback that enhances the accuracy of research results. An annual demographic analysis of social media usage compiled by PewResearch revealed the highest rate of usage in 2014 was exhibited by those aged between 18 and 29 years (Duggan et al., 2015). In spite of the extensive literature dedicated to expanding the knowledge of social media, few studies have examined how social media has impacted on the fashion industry, particularly on the Millennial generation.

THEORETICAL FOUNDATIONS

Companies have recognised the opportunity to deploy social media as a marketing tool within business operations (Fischer & Reuber, 2011; Luo, Zhang & Duan, 2013; Mangold & Faulds, 2009). This communication portal has compelled organisations to combine different marketing strategies, such as outbound marketing (dispensing promotional messages) with inbound marketing (receiving consumer messages through social media), to achieve an optimised balance of promotion (Smith & Zook, 2011; Stokinger & Ozuem, 2015). By triggering viral chatter and gaining vast exposure, social media has prompted brands to capitalise on potential connections in establishing strong brand-customer relationships within brand communities, while amassing critical customer feedback (Chiu, Hsu & Wang, 2006; Enders et al., 2008). Creating brand-customer social ties evokes an exchange of resources, such as trust between users, and facilitates a shared vision for companies that extend beyond overpowered geographic distances and broken organisation-customer barriers (Ngai, Tao & Moon, 2015; Heinonen, 2011; Tsai & Ghoshal, 1998). In implementing social media within organisational marketing strategies, certain axioms are applied in designing attractive platforms for consumers. These axioms allow companies to reflect on each nation's local economic, political and cultural stance in communicating with users on social media, while also maintaining consistency of content produced at a global level (Berthon et al., 2012; Hinz et al., 2011). As such, social network activities ensure memorable content that customers worldwide can relate to. Brands utilise corresponding touch-points in connecting with customers throughout the day and ultimately ensuring incessant brand awareness (Ashley & Tuten, 2015; Tsimonis & Dimitriadis, 2014; Stokinger & Ozuem, 2016).

Social Identity Theory (SIT) and Social Media

Social media has granted individuals a large platform in relaying identities (Bagozzi & Dholakia, 2002; Bargh & McKenna, 2004; Dholakia, Bagozzi & Pearo, 2004; Hogg & Reid, 2006; Pentina, Prybutok & Zhang, 2008; Hennig-Thurau et al., 2004; Kane et al., 2014; Veletsianos, 2013). By route of social media and subsequent online brand communities, current and aspirational customers are emboldened in voicing affiliation with a brand and consequently augmenting self-presentation. Consumers seek to rely on brands, among the public network of social networking sites, to enhance the self. Customer engagement is consequently heightened and relationships are formed within brand communities as such interchanges promise customers the symbolic benefit of social placement (Algesheimer et al., 2005; Ma & Agarwal, 2007; Ren et al., 2012). Individuals are more compelled to express affiliation with a brand that empowers them to climb the ladder of social enhancement.

Social identification of the self is comprised of two identities, personal and social. Personal identity refers to an identification of personal characteristics; whereas social identity considers a collective identification of the group that the individual belongs to (Luhtanen & Crocker, 1992; Nowak, Szamrej & Latané, 1990; Onorato & Turner, 2004). Individuals seek to enhance both identities by embracing behaviour that accentuates their individuality; however, this is individualism that is socially commended. Customers pursue brands that convey personal attributes, while maintaining societal compliance over a public scale. Drawing on Onorato and Turner's (2004) study to investigate the weight individuals place on either identity, their findings revealed that greater importance is placed on social identity, since personal identity has more of a context-driven, variable nature. Individuals altered their behaviours according to societal standards, especially within circumstances involving high salience. Conspicuous situations influenced individuals to assert behaviour that complied with the salient identity.

Social media is a prime example of a public setting that may exert such social influence. The consolidated global network of users, under a common platform of user-generated content, encourages individuals to express any personal opinion or preference. However, personal identity is shared under the premise that it parallels the salient identity held by the public (Clement & Krueger, 2002; Haslem et al., 1999; Hogg & Turner, 1987; Kietzmann et al., 2011). Individuals and companies are increasingly adopting social media as a platform to enforce social inclusion by expressing identical behaviour among the desired social group.

Word of Mouth (WOM) Versus Electronic Word of Mouth (EWOM)

Companies have assumed stealth marketing by employing procedures such as viral marketing to promote brands in a subtle manner (Kaikati & Kaikati, 2004; Martin & Smith, 2008; Roy & Chattopadhyay, 2010). Viral marketing is defined as “the process of getting customers to pass along a company’s marketing message to friends, family, and colleagues” (Laudon & Traver, 2015, p.381). This web circulation thrives on the free-flowing nature of social media. One form of viral marketing that has predominantly flourished offline, as an eminent promotional technique is word-of-mouth (Katz & Lazarsfeld, 1955). Word-of-mouth (WOM) has been defined as the exchange of information on a particular subject among consumers (Arndt, 1967; Kaplan & Haenlein, 2011; Stern, 1994).

Buttle (1998) describes WOM according to five characteristics: *valence*, *focus*, *timing*, *solicitation* and *intervention*. *Valence* considers the positive or negative force WOM may impress on receivers with regard to a brand. According to a study by File et al. (1994), WOM can be appropriately managed to produce a desired effect among customers. The second characteristic Buttle (1998) addresses is the *focus*, which the brand adopts in influencing customers through the management of WOM. *Timing* refers to the use of WOM as a pre-purchase or post-purchase evaluation amongst consumers. *Solicitation* discusses the potential of customers to accept WOM and this may be influenced by the *intervention* of spokespersons, or celebrities hired by the brand. In most cases, WOM is assumed to occur naturally among customers who share brand experiences, and this consequently creates trails of chatter that diffuse across multiple receivers (Anderson, 1998; Bone, 1995; Herr, Kardes & Kim, 1991; von Wangenheim & Bayon, 2004; Ozuem & Mulloo, 2016). However, brands have managed to exert their own influence over handling WOM, particularly through virtual outlets (Biyalogorsky et al., 2001; Godes & Mayzlin, 2009; Mayzlin, 2006). Amid the influx of shoppers seeking social media for brand review evaluations, word-of-mouth has gradually transposed to online channels to become electronic Word-Of-Mouth (eWOM), whereby customers are exposed to a greater magnitude of user inputs (Cheung & Thadani, 2012; Chu & Kim, 2011; Trusov et al., 2009). Bearing in mind that virtual communications cannot completely replace the conventional way of physically communicating; still, such means can be employed as an adjunct to evolving consumer behaviour (Kozinets, 1999).

Chevalier and Mayzlin (2006) undertook a study to evaluate customer dependence on eWOM. This study compared sales of the same products from different websites. The results demonstrated a discrepancy between the businesses in terms of sales of the same products generated, as the website with more positive feedback submitted on those products generated more sales. Positive eWOM exhibits the capability of shaping customer purchase decisions. However, Schlosser (2005) demonstrates that negative reviews also significantly influence buyer behaviour by discouraging potential customers whilst swaying current customers that have a positive stance towards the brand.

Electronic word of mouth enables an accumulation of customer feedback that evidently adds to the image of a brand, and shapes a customer’s screening process (Chakravarti & Janiszewski, 2003; Dellarocas, 2006; Dhar & Chang, 2009; Trusov, Bucklin & Pauwels, 2009). Consumers have gradually come to refer to and rely on eWOM to make purchase decisions. Typically, the consumer decision process involves different stages, beginning with *need recognition*, *information search*, *evaluation of alternatives*, *purchase*, and *post-purchase evaluation* (Solomon, 2012; Liang & Huang, 1998; Ozuem et al 2016). De Valck, van Bruggen & Wierenga (2009) conducted a study to explore the impact of virtual communities on the consumer decision processes. The findings reveal that substantial virtual interactions weighed on a number of the phases involved within the decision process; largely the first three stages and the final stage of the process through the retrieval, supply and discussion of information. According to this study, the open flow of information communicated via virtual platforms has exposed users to ample levels of information, through which customers are able to retrieve choices within their needs for recognition, information search, alternative evaluation and supply experiences in the post-purchase stages.

CONCLUSION AND MANAGERIAL IMPLICATIONS

The outcome of this paper is that it offers an insight into a relatively unexplored area of how social media influences brand perceptions in the fashion industry, particularly among Millennials (Colliander & Dahlen, 2011; Gensler et al., 2013; Kim & Ko, 2012; Moore, 2012; Singh & Sonnenburg, 2012; Taken Smith, 2012). The

results suggest there is much for the fashion industry to be optimistic about in reaching customers through social media by identifying four main themes that influence fashion brands. It should be regarded as a complement to traditional channels. Instagram, for example, can be used to entice customers, develop relationships and draw them to the website or, more conventionally, to stores. Fashion brands have employed print broadcast as prime marketing portals for decades. Visual campaigns are promoted through costly magazine spreads on a frequent basis. The fashion industry would benefit from employing social networking sites in promoting never-ending new collections, seasons, runways and campaigns that define the fashion businesses. Prior to adopting online channels, communication between brands and customers was limited to the traditional channels of print, television or in-stores. Brands assumed the role of relaying messages through one-way channels, and customers accordingly received those messages (Hanna, Rohm & Crittenden, 2011; Kaplan & Haenlein, 2010; Ngai, Tao & Moon, 2015; Ozuem, Howell & Lancaster, 2008; Ansarin & Ozuem, 2015). The conception of social media induced a shift in these dynamics causing consumers to possess more power. Brands have transferred communication to the virtual realm in being active pursuers of customers.

This study presents a richer understanding of how social media has developed in the fashion industry. Industries are moving at a quicker pace and the fashion sector has become the frontrunner in generating a rapid turnover of ever-changing trends to feed the relentless demand of consumerism. The findings of this research demonstrate the significance of social media as a marketing tool in remaining relevant within the modern world, as traditional methods can no longer sustain such power. This study contributes to the existing literature on marketing to the technologically savvy generation of Millennials (Kilian, Hennigs & Langner, 2012; Moore, 2012; Taken Smith, 2011). This age has grown with the presence of technology and resorts to social media for regular interaction. Brands may find social media beneficial for communicating with such customers in real-time. However, Millennials use offline channels as well, and view social media as a complement to traditional brand outlets. Companies should be mindful of creating an online presence that is in keeping with a brand identity. Brands should reconsider handling social media as a separate entity. Rather, social media should be integrated as a key aspect of a marketing strategy as the content produced through social networking sites must represent the brand DNA aligned to fit the entire personality of the brand. This study highlights the importance of integrating online channels into business operations when employing social media as a marketing tool among Millennial ages.

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WATER AND SANITATION AS PERCEIVED BY EDUCATORS AND OTHER STAKEHOLDERS ON LEARNERS' PERFORMANCE IN SOUTH AFRICAN SCHOOLS

Bongani Khumalo, Genesis Molepo and Andile Mji
Tshwane University of Technology, South Africa

ABSTRACT

The purpose of this study was to explore the views of educators and other stakeholders about the effects of poor water and sanitation on learners' performance. One – on – one interviews were used to collect data. The results show that educators identified water and sanitation as critical in the learning and teaching environment and have a potential of influencing learners' performance either way in schools. In most cases, educators and other stakeholders painted a bleak picture regarding poor water and sanitation in schools. Therefore, it is recommended that the government should provide solutions wherein learners can be provided with safe and sustainable sanitation to promote safe hygiene.

Keywords: Educators, Learner performance, rural schools, sanitation, water

INTRODUCTION

The United Nations Millennium Development Goal 2. A, aimed to ensure that by 2015, children everywhere would be able to complete a full course of primary schooling (United Nations, 2011). However, challenges facing the delivery of rural education in developing countries still persist. One undeniable fact is that education system has been beset by poor access to water supply and by access to sanitation facilities. In fact, one of the human rights of every South African is the basic right to water and sanitation as acknowledged by Statistics South Africa [Stats, RSA] (2011). Regarding this, the Stats SA (2011) indicated that the South African government has been working hard towards universal access to safe water and basic sanitation by 2014. Surprisingly, to this end, it has never happened in some areas especially rural areas. Good physical infrastructure at schools enhances access to education, while inadequate and poorly maintained infrastructure excludes learners. The public school education system in South Africa is characterised by large disparities in the distribution of education infrastructure as a result of the policies of the apartheid regime. In that system, all developmental issues related to African people in particular were either minimal or non-existent in many areas of life. This means that those who were in rural areas, including schooling, were even more neglected by that system. In fact it has been pointed out that most problems experienced in historically disadvantaged schools in South Africa are traceable to the apartheid system (Singh & Manser, 2002). Furthermore, the Department of Education [DoE, RSA] (2004) too has lamented the fact that apartheid denied many citizens access to opportunities to gain information, skills and experience necessary to develop and equip them to contribute towards economic growth. The denial of opportunities arose because of racial segregation accompanied by unequal distribution of resources in favour of whites (ibid).

Adequate water supply and basic sanitation are an integral component of the learning and teaching context and need to be managed. According to Stats SA (2011), there are three fundamental objectives for managing South Africa's water resources. These are as follows:

- ❖ To achieve equitable access to water;
- ❖ To achieve sustainable use of water; and
- ❖ To achieve efficient and effective water use.

It is worth to point out that inadequate water and sanitation facilities in the school environment have been reported as a major hindrance on learners' performance (Jasper, Tam Le & Bartram, 2012). The lack of water and sanitation in many rural schools have a detrimental effects on health and school attendance of learners and educators. It has been reported that many learners in both developing and developed nations spend time absent from schools due to diseases contracted within school environment (Jasper, 2012).

LITERATURE

The legislative framework for education in South Africa enforces the democratisation and transformation of education consistent with the values of human dignity, equity, human rights, and freedom (DoE, RSA, 1997). South African law has created a new legal context and it is important for principals and educators to know the law relating to rural education, and to be familiar with legal concepts, principles and procedures so that they can continue building and maintaining effective schools. One of the major improvement in the education system is the fact that it operates under law which encourages all the citizen to attend school irrespective of age or gender. The fact of the matter is that schools operate under the supreme law as prescribed in the Constitution of the Republic of South Africa (Joubert, de Waal, & Rossouw, 2004). The Constitution guarantees the right of all South Africans to basic education. The South African Constitution Act was passed in 1996, and came into operation on 4 February 1997. The Bill of Rights (Chapter 2 of the Constitution), as well as the Schools Act, have introduced a new human rights culture in schools. Both these documents reflect the culmination in the field of education, of the political transformation the country has undergone since 1994. The supreme law of this country contains specific protection against behaviour that could threaten a person's dignity, safety and fundamental rights.

The Constitution of South Africa states that the nation is founded on principles of 'Human dignity' the achievement of equality and the advancement of human rights and freedom. It holds that everyone has the right to a basic education, including adult basic education; and to further education, which the State, through reasonable measures, must make it progressively available and accessible (Mkokeli, 2005). It further emphasises that everyone has the right to have his dignity respected and protected and enjoy all rights and freedom (Tissington, 2011).

Lack of water, sanitation and hygiene

Appropriate sanitation infrastructure at schools improves access to education. For example, it should be pointed out that basic water facility is perceived as the infrastructure necessary to supply 25 litres of water per person per day and minimum of 10 litres per minute or 6000 litres of water supplied per formal connection per month. Also, basic sanitation is seen as the infrastructure necessary to provide a sanitation facility which is safe, reliable, private and protected from harsh weather conditions (Stats SA, 2011). It is reported that if there is an adequate water supply, sanitation, hygiene and waste management, then the learners' educational attainment is likely to be achieved (Adams, Bartram, Chartier & Sims, 2009). In spite of the remarkable changes in South Africa the level of water supply, sanitation and therefore hygiene is critical in rural schools. For a good culture of learning and teaching it is important that government should pull together and support rural communities with clean water. In this regard, it is argued that diseases related to inadequate water, sanitation and hygiene are a huge burden in developing countries (Adams et al., 2009). There is often no water on site, sanitation or handwashing facilities thus such conditions do not only restrict the teaching and learning activities of the school but also threaten the health of learners and educators as well. In fact, this is contrary to the Bill of Rights (Chapter 2 of the Constitution), which stipulates that "everyone has a right to access safe and sufficient water." In areas where such facilities do exist they are often inadequate in both quality and quantity. In some cases learners and educators need to travel long distances for water and toileting. In some instances, girls and female educators are more affected than boys because the lack of sanitary facilities means that they cannot attend school during menstruation period. Regarding this, it is argued that children in rural areas are denied the right to clean and healthy sanitation facilities in their schools (Gibberd & Mphutlane, 2005; Murtaza, 2012).

The following are suggested guidelines that may be used in providing a healthy environment in a school (Adams et al., 2009):

- a) develop specific national standards that are relevant to various types of school in different contexts;

- b) support national standards and set specific targets at local level;
- c) assess the situation in existing schools, to evaluate the extent to which those schools may fall short of national standards and local targets;
- d) plan and carry out any improvements required;
- e) ensure that the construction of new schools is of acceptable quality; and
- f) prepare and implement comprehensive and realistic action plans, so that acceptable conditions are maintained.

THE PROBLEM

The lack of sanitary facilities as indicated have a negative effect on learning and teaching in rural areas of South Africa. Poor water supply, sanitation and hygiene are a major challenges in some rural schools. This suggests that the situation renders teaching and learning extremely difficult in these schools. As a result, some rural schools fail to meet the values of human dignity, equity, human rights, and freedom as captured in the Constitution of South Africa in terms of poor water, sanitation and hygiene. Specifically, we wanted to understand educators' perceptions regarding poor water and sanitation on learners' performance in rural schools. Ultimately, the goal was to recommend plausible solutions that would possible address prevalent issues in rural schools.

Study site

This study was conducted in both rural and urban areas of Umzinyathi District where the first author works. Rural schools in this part of the district may be classified as extremely poor because of lack of key resources that influence effective teaching and learning. The district has schools without running water and sanitation facilities. Rural schools obviously function in environments that are quite different from urban settings. This situation means that lack of water supply and sanitation often have greater impact upon rural schools and educators due to the complex setting in which they occur.

RESEARCH QUESTION

The main research question of this study was: *What are rural and urban educators' perceptions on water and sanitation in their schools?* To answer this question, two sub-questions were used in one-on-one interviews with the participants. These were: (i) *What are perceptions of educators regarding poor water and sanitation in South African schools?* (ii) *What factors are identified by educators as the root cause of diarrheal and cholera outbreak?*

METHOD

To collect data three techniques were used. These were interviews, observations and document analysis. The three were used in order to collate and make sense of the information collected from the different perspective. This process of collecting and analysing data from different techniques is referred as triangulation.

PARTICIPANTS AND PROCEDURE

Sample

In the study site there are approximately 30 schools from rural settings and 10 from urban areas. Seven principals, three School Governing Body members (SGB) and two learners from rural schools were interviewed and other three principals were from urban schools participated. For logistical reasons, such as the ability to have access to all schools and to minimise transport costs, the intention was to interview a sample of 20 members of the population. The principals and other stakeholders were purposefully selected because they were able to provide first-hand information on their schools. Moreover, principals were selected because they are accountable

within the school system. However, five participants were unavailable to be interviewed on the appointment dates. Therefore in this qualitative study, the interviews were limited to being conducted with ten principals, three SGB members and two learners.

Instrument and procedure

Data were collected by means of open ended interviews. The aim of the interviews was to give an independent voice to the participants. In particular, each participant was encouraged to provide as honest a view as they felt was applicable to them. In collecting the data we ensured that we visited the participants in their schools. In doing this, we were mindful of the argument that a researcher has to go to the setting of the study because if participants are removed from their setting, this may lead to contrived findings that are out of context (Cresswell 1998).

RESULTS

Here, an analysis of the collected data, its interpretation as well as the findings from the participants' perspective is provided. In particular, participants' perceptions regarding water and sanitation in their schools are outlined. Their views were coded into a theme or category with the aim of deriving meaning from these. The theme was labelled using in vivo coding. In other words, responses that were judged to convey the same or similar views were grouped together. Importantly, actual words or phrases used by the participants were then used to name the emerging theme in this study. Table one records the participants' biographical information.

Table 1 Biographical data of the sample (N = 15)

Category	N	%
Gender		
Women	5	33
Men	10	67
Age		
10 – 29	5	33
40 +	10	67
Highest academic qualification		
Grade 12	5	33
Diploma (e.g. Diploma in primary education)	5	33
Degree or higher (e.g. B.A. or B.A. Honours)	5	33
Teaching experience (Educators)		
0 – 9	3	30
10 or more	7	70

Participants' Views

Here, pseudonyms are used for all the seven participants. The participants are referred to as: Ms Mbatha, Ms Zwane, Mr Ngubane, Mr Khuzwayo, Mr Zulu, Mr Zondo, Mr Zungu, Mr Venter, Mr Koos, Mr Kobus, SGB 1-3 and learner 1 and 2. Here participants were asked: *What are the effects of poor water and sanitation on learners' performance in your school?* There was only one theme emerging from this question. This was named: *Lack of water and sanitation*. Here, almost all the participants indicated that they had a problem with the lack of water and sanitation in their schools. Like classrooms, a shortage of water and toilets in rural schools was identified. Not only were there few toilets those that were there we not waterborne but pit latrines. This also means that there were no water or sinks for washing hands. For instance, SGB 1 indicated "... there are only two pit toilets for learners in this school. SGB 3 emphasised that ... "can you imagine a school with more than 400 children and they only have two toilets?" Also, Ms Mbatha pointed out "... For us, you have to walk a long distance to neighbouring homes to use a toilet ... think about it, what happens all this time you are gone?" Mr Ngubane voiced his concern about the conditions of the toilets which need consistent maintenance. On the same issues, learner 1 said "... the provision of running water makes it possible to meet sanitary requirements." Ms Zwane indicated that ... "girls and female educators do not attend school during menstruation period." On the same

vein, learner 2 indicated that ... “the resultant effect of this is that our performance is affected. About this Mr Khuzwayo said ... “my school lack drinking water and sanitation facilities.” On the same view, Mr Zulu argued, “... every school must have elements that make the environment healthy. My learners are exposed to hazard conditions. Furthermore, SGB 2 argued that “... sufficient numbers of toilets will decrease health concerns.” Also, Mr Zondo expressing a similar view as articulated by Mr Zulu said, “... I think if sanitary requirements are lacking the school will certainly be affected ...” Asked in what way, he said “... what do you think will happen if there is a diarrhoea outbreak among learners for instance, ... it will be a crisis ... that’s all.” On the same vein, Mr Zungu said ... “the diarrhoea outbreak forces many learners to be absent from school. Also, he emphasised that ... “the effect of disease on educators increase the rate of absenteeism.”

Regarding urban schools things were completely different. For participants in these schools sanitation was not a priority. Here, participants referred rather to the extension of school buildings. It should be mentioned though that increasing the number of toilets was mentioned by some participants. For instance, Mr Koos who said “... my school needs to increase the number of classrooms to accommodate more learners. On the same issue Mr Venter said ... increasing the number of toilets will allow us to admit more learners.” When asked what about issues of sanitation and toilet facilities, Mr Kobus said “... no, no, no toilets are fine we have enough ... maybe we can add some if the school is eventually extended.”

The researcher observed the disparities in both the rural and urban schools with regards to toilet facilities. The toilets in the rural schools where indeed in a state of disrepair so the researchers could confirm the claims educators such as Ms Mbatha. The views expressed by urban schools’ participants about the presence of toilet facility were also easy to observe. The researchers observed that in most urban schools toilet facilities were functional and sinks were there for hand washing. In some schools a handyman was even employed. One handyman was asked what he does and he indicated “... I do general repairs in this school.” Asked what sort of repairs, he said “... everything, I repair doors, broken windows, broken desks, leaking taps ... everything.”

IMPLICATIONS OF FINDINGS

The implications of the issues raised here from the rural perspective mean that there is an urgent need to address the participants’ concerns. For instance the need for water may be seen from Mr Ngubane’s argument that poor provision of running water makes it difficult to meet sanitary requirements. Furthermore there is a need to build toilets that meet sanitary requirement in the schools. This is an issue that was illustrated by Ms Mbatha who declared that they walk a long distance to neighbouring homes to use a toilet.

STUDY SUMMARY

In this study, the aim was to explore the perceived impact of poor water and sanitation facilities on the performance of learners in Umzinyathi. It should be noted that the research site of this study is one of the twelve districts under the KwaZulu-Natal provincial department of education. A majority of schools in this district are more rural (60 schools) than urban (50 schools). Rural schools in particular have produced mixed student performance in the national senior certificate. Some schools and learners have performed extremely well while others poorly. The poor performance however, has unfortunately been in the majority of cases. What this shows is that lack of appropriate sanitation infrastructure has an impact on students’ performance. This is consistent with reports from Nigeria that resources are a major contributing factor to academic performance in the school system (Akinfolarin, 2008).

DISCUSSION

The theme that emerged in this study was about the lack of water and sanitation facilities in rural schools. For instance, Ms Mbatha revealed that there were two pit toilets for more than 400 learners in her school. It is argued that a clean and healthy environment in schools is a fundamental human right “... however, thousands of children are being denied to their basic right as they have no or very limited access to clean and healthy sanitation facilities in their schools, especially located in rural areas” (Murtaza, 2012). This is also a finding of this study among the rural schools. So this implies that the learners are denied their fundamental human rights.

An important aspect about the lack of sanitation in schools is that it may bring a threat of diseases. When there is no water, learners do not get a chance to wash their hands for instance after using toilets. About this issue, it is reported from a Zimbabwe rural schools perspective for example that lack of access to water and sanitation had the risk of leading to learners developing illnesses and missing school (*Dube & January, 2012*).

CONCLUSION AND RECOMMENDATIONS

The empirical data in this study indicated that participants' perceive that the poor provisioning of water and sanitation underpin learners' performance. What this study's participants seem to suggest is that good infrastructure will assist learners to perform better. In a sense this appears to be reasonable because the urban schools that participated in this study showed this. Also, studies have focused on the good virtues of good infrastructure at school. For example, it is pointed out that good buildings are essential in improving student academic achievement (Fisher, 2001). The implications of the issue raised here from the rural perspective mean that there is an urgent need to address the participants concern. It is important that government should provide proper and adequate school infrastructure. In this regard, when the toilets are built for instance, they should meet sanitary requirements (Khumalo & Mji, 2014). This is important because it is argued that when increasing access to adequate sanitation, there will be a decrease in diarrhoea and gastrointestinal diseases (Jasper et al, 2012). With regard to water and sanitation, it was shown here that this is a fundamental human right. It is recommended therefore that "[H]igh priority needs to be given to the provision of safe and sustainable sanitation and water facilities and to promoting safe hygiene behaviours, particularly among children" (Lewin, Norman, Nannan, Thomas, & Bradshaw, 2007, p. 755). Also, it is recommended that schools' health programmes should be strengthened (*Dube & January, 2012*).

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DECOLONISATION OF THE CURRICULUM: A SOUTH AFRICAN REALITY

Jessica Knight and Geoff A Goldman
University of Johannesburg, South Africa

ABSTRACT

The advent of protest action by students in South Africa has brought to light a demand for the decolonisation of the curriculum in tertiary institutions. This article, through an in depth review of relevant literature, explores the shaping of indigenous knowledge by colonial systems and Apartheid in South Africa. It furthermore examines the implications of a process of decolonisation of curriculum for the discipline of Business Management in South Africa where it is suggested that Post-colonialism and Critical Management Studies be utilised as a first step towards and foundation for decolonised knowledge, respectively. Speculative doubt is cast regarding the potential for the achievement of an entirely decolonised curriculum resulting from the protracted marginalisation of indigenous knowledge. However, if achieved will consequently shift the dependence of South Africa on Western theory to Indigenous African theory or a hybrid thereof, resulting in a fundamental change in African epistemology, knowledge and practice and the approach to which such knowledge is developed.

Keywords: Decolonisation; Post-Colonialism; Curriculum; Business Management; South Africa

INTRODUCTION

In October 2015 the South African higher education landscape witnessed the largest student protests since the Soweto student uprising of 1976. These protests began at the University of the Witwatersrand (WITS) in retaliation against a proposed 10.5% tuition fee increase proposed for 2016 (Rahlaga, 2015). The protest movement gained momentum and quickly spread across the country, affecting many South African universities, including the University of Cape Town, Rhodes University (Grahamstown), Nelson Mandela Metropolitan University (Port Elizabeth), North West University (Mahikeng) and the University of Johannesburg (Kekana, Isaacs & Corke, 2015). In what become known as the #FeesMustFall campaign, the student agenda was more far reaching than just a rebellion against tuition fee increases. A manifesto published by the movement includes a list of demands, most prominent of which are a call for state subsidised higher education, an alleviation of student debt, the insourcing of outsourced labourers, accelerated affirmative action measures amongst academic staff, and the so-called “decolonisation of the curriculum”.

It is the “decolonisation of the curriculum” that is the focal point of this paper. This concept of decolonisation has far-reaching implications for the discipline of Business Management in South Africa at the current point in time, as it calls for a basic re-examination of the relevance of the type of knowledge and wisdom universities are passing on to their students. By way of example, the Wits FeesMustFall Manifesto stipulates that decolonisation of the curriculum is centred on the inclusion of black thought and intellectuals. This includes a fundamental shift in the geography of thought from a European centralisation to a centralisation in African thought (#feesmustfall, 2015). Decolonisation of the curriculum has to be contextualised in the history of South Africa. As such, the impact of imperialism, colonisation and apartheid cannot be ignored, as they have shaped not only the education system of South Africa, but also the prevalent wisdom regarding managerial practices.

The rationale behind this study stems from the fact that as a developing nation, South Africa is still grappling with many issues associated with a legacy of colonial rule and apartheid. These issues are not solely the realm of the political, but also filter through to social, economic and educational realms. Although political liberation has been achieved in South Africa, many question marks still remain around issues of true economic

and intellectual liberation. It is especially this issue of intellectual disenfranchisement, specifically in business management, that this study aims to focus on.

This conceptual paper draws from diverse literary perspectives and employs critical reasoning to posit what “decolonisation of the curriculum” means for Business Management as both an academic discipline and profession in South Africa. Therefore, methodologically speaking, this research is framed within Critical Management Studies, as it interrogates management education from a post-colonial point of view. The paper will firstly probes the aftermath of colonisation, and explores the marginalisation of African values in the promotion of Eurocentric beliefs and knowledge. The concept of epistemic ‘othering’ is explored as well as its effect on the creation and distortion of indigenous epistemologies. Post-colonial theory is assessed in its ability as a potential first step towards the decolonisation of knowledge (and the curriculum) through a critique of dominant Western perspectives, as well as its self-reflexive function as a truth seeking device. Critical Management Studies is also explored as a potential foundation upon which to build decolonised knowledge, and in so doing create a legitimate space for the perspective of the periphery. The theory creates certain assumptions about the process of decolonisation in the context of South Africa and an analysis of the two phases of decolonisation lead to the suggestion of an incomplete decolonisation process. Decolonisation of curriculum in the context of business and management education and practice is discussed along four major themes: the first is the call for an African renaissance which requests that indigenous knowledge be rooted in management frameworks; the second is the concept of communalism directly contrasted against individualism and a brief outlook into concepts such as *Ubuntu* and *Umunthu*; the concept Uniquely African Management is discussed with regards to the unique environment of South Africa and an equally unique African Management perspective needed to address this environment; lastly the concept of the de-privatisation of public spaces is explored along with the suggestion for a pluriversity to replace the university structure.

IMPERIALISM, COLONISATION AND APARTHEID: SHAPING EDUCATION IN SOUTH AFRICA

In attempting to grapple with the concept of “decolonisation of the curriculum”, it is necessary to gauge the antithesis – in this case colonisation and the effect that colonisation had on the curriculum, the generation of knowledge and the dissemination of knowledge. Here, the argument centres around the complexities associated with the concept of decolonising the curriculum, resulting from the expansion of imperialism by European states into Africa which resulted in Africa being subjects of colonial masters. In South Africa, the era of colonialism was followed by almost five decades of minority, Apartheid rule. All of these eras had a marked effect on the creation and dissemination of knowledge (encapsulated in the prevalent education system) in the region.

In the imperially driven “Scramble for Africa”, various reasons were put forward for European interest in the African continent. These include an urge to gain knowledge about the esoteric “Dark Continent”. In line with this is the geographical exploration of unknown territories (Khapoya, 2012). The imperialist agenda of claiming land in distant countries for the extension of power and control by imperial powers is one of the most prominent reasons for the interest in Africa (Kayira, 2015). In 1884, Africa was basically “cut up” and divided between the European powers at the Berlin Conference; an official distribution of Africa without the consent of Africans (Devenish, 2013).

Pre-colonial African society had adopted a successful informal process of education with situational-specific responsiveness to the needs of the unique African environment (Abdi, 2003). This would however change through the process of colonisation. The Dutch were noted as the first settlers to reside permanently in South Africa. European ethnocentricity and religious motivations resulted in the dispatch of missionaries to Africa for the indoctrination of Christianity and Islam (Khapoya, 2012). Schools were established to ensure that indigenous people were “educated” to meet the requirements of the semi-skilled labour force, needed to work in colonial bureaucracies (Goldman, 2013; Khapoya, 2012). These schools were mostly run by missionaries who not only imparted religious doctrine on indigenous people, but also inculcated the notion of the inferiority of African beliefs, norms and customs when compared to Western beliefs, norms and customs. The message was portrayed that the European presence in Africa was to the advantage of indigenous people, as Western civilisation would uplift the African people out of their “barbaric” norms (Khapoya, 2012). Education was thus utilised as a tool for domination, to further the agenda of colonial powers. Westernised education alienated

indigenous people from their culture, beliefs and heritage, which would eventually be neglected under colonial rule (Goldman, 2013; Khapoya, 2012; Abdi, 2003).

Imperialism is exemplified by Cecil John Rhodes (Dubow, 2014). Rhodes was a British entrepreneur who arrived in South Africa in 1870 and rose to prominence in the diamond trade. Rhodes was impassioned about the British Empire ruling the African continent from the Cape (of Good Hope) to Cairo. His success as a businessman saw Rhodes also acquiring great political power, serving as Prime Minister of the Cape Colony from 1890 to 1896 (Dubow, 2013; Warden, 2012).

On 31 May 1961, South Africa gained independence from British colonial rule (Devenish, 2013). At this time, South Africa should, like other African colonies, have entered into an era of transformation into a post-colonial state. Instead extreme “internal” colonialism was perpetuated, in the form of Apartheid, by the National Party (Abdi, 2003). The Apartheid regime implemented a system of separate and inferior education for non-whites to maintain the underdevelopment of black South Africans and to promote the superiority of (especially) the Afrikaner (Abdi, 2003; Warden, 2012). Apartheid therefore continued the colonial notion of European superiority over indigenous people and other, non-white groupings of society in all aspects of life (Goldman, 2013). Historically, so-called “black” universities were created to prevent black South Africans from attending well-resourced, “white” universities. In 1991 there was a ratio of 6:0.1 of white students vs black students who had attained a bachelor’s degree, this just three years away from the official democratisation of South Africa (Abdi, 2003).

Full democracy in South Africa was achieved in 1994. However the effects of colonialism transcend the political sphere, and the consequences of educational and socio-economic apartheid remain prevalent in the lives of South Africans in current day (Abdi, 2003).

THE AFTERMATH OF COLONIALISM: AFRICAN KNOWLEDGE AND EDUCATION

Colonialism was successful in its marginalisation of indigenous beliefs and value systems, resulting in the overall Westernisation of theory in African education and practice (Higgs, 2011; Kayira, 2015). Colonial education systematically destroyed the belief of indigenous people in themselves, through the nullification of the meaning associated with their heritage, languages, names and environment (Kayira, 2015). The African worldview, therefore, become convoluted with a lack of indigenous identity under the increasing emphasis of Euro-centricity. This can be attributed to epistemologies centred around western practices and culture, as well as the simultaneous suppression of all indigenous aspects of life (Higgs, 2011; Nkomo, 2015). African history has been indelibly marked by the colonial presence, and this has contributed to knowledge creation and dissemination practices at African universities that still predominantly fall within the parameters of a western framework (Higgs, 2011; Keet, 2014).

African ‘othering’ and the colonisation of the mind

Colonisers viewed the colonised through the perspective of ‘Othering’. This was a hierarchical process of classification whereby the coloniser lay at the optimum end of the spectrum (or top of the hierarchy) as superior, civilised, developed, scientific rulers and the colonised lay at the opposite end of this spectrum (or bottom of the hierarchy) as inferior, savage, unscientific subordinates (Kayira, 2015). Epistemic ‘othering’ stems as a consequence of epistemic injustice that emerges from the concrete prejudice inherent in collective interpretive resources (Keet, 2014). This prejudice was justified through the ‘need for betterment’ of the ‘inadequate’ indigenous people, who displayed ‘barbaric and uncivilised characteristics’ in both knowledge and practice (Kayira, 2015).

This collective understanding, rooted in prejudice, creates an obscurity of one’s own social experience, therefore the obscurity of the indigenous social experience. Aspects of knowledge that have been designated or identified as ‘African’ are, in fact, a complete misrepresentation of reality (Keet, 2014). The notion of the conquest of indigenous epistemology means that even at the point of decolonisation, political territory may be

regained but the same cannot be said for intellectual and social territory. A contributing factor here is the colonisers' view that indigenous culture was shameful and worthless and ought to be abandoned by indigenous people (Kayira, 2015).

Post-colonialism – The first step to decolonising knowledge

Post-colonialism challenges the dominant functionalist perspective (relating to management education in this context), criticising its assumptions and exposing inequalities that exist (Joy, 2013). Post-colonialism identifies the concepts of the centre and of the periphery, where the centre is the dominant western force (developed countries mainly in the global North) and the periphery is seen and the underdeveloped or developing countries (mainly in the global South) that make up the previously colonised surrounding (Nkomo, 2015).

When looking at Management Education, it is important to realise that this system is typified by the centre transferring knowledge to the periphery. This implies a 'superiority' of knowledge from the centre, while under-representing the knowledge of the periphery (Joy, 2013). Post-colonial theory is critical of the view that the periphery is treated as a primitive version of the centre, by the centre, in need of transformation to align its views and values with that of the centre (Meucke, 1992). This is 'needed' to upgrade the inferior values and knowledge of the periphery to attain the level of the centre (Joy, 2013). Post-colonial thought emphasizes the reconstruction and transformation of thought, away from colonial rationalisation and dominance (Kayira, 2015). In the context of decolonisation of the curriculum, this translates to a rejection of the current status quo of the inequality of the centre and the periphery in management theory, to allow for the periphery to constitute an equal contribution of indigenous based knowledge and perspective to the overall body of knowledge (of, in this instance, the discipline of business management).

Post-colonialism is said to be self-reflexive in nature, constantly questioning its own assumptions (Kayira, 2015). This is tantamount to cannibalising one's own existing knowledge in the search for true knowledge, not limiting oneself to the superficial appearance of truth in dominant thought (Goldman & van der Linde, 2008). In this way, post-colonialism not only challenges its own truth, but the truth of dominant western thought and in so doing, questions how current reality came to be constituted.

Hybridised knowledge presents another option whereby knowledge can be created or enhanced through connections of indigenous life with Euro-centric scientific principles (Kayira, 2015). The concept of hybridity comes into view where a member of the periphery does not replicate the exact characteristics of the centre but combines new knowledge and values of the centre with those previously established in the periphery (Joy, 2013). In this space the conceptualisation of words, languages, practices and knowledge must be negotiated to merge cultures (Kayira, 2015). This adopts the stance of Lemak (2004: 1309) to deal with the present and the future through learning from the past.

CRITICAL MANAGEMENT STUDIES: A DYNAMIC FOUNDATION

The emergent paradigm of Critical Management Studies (CMS), has significant potential in terms of being able to present a new dynamic foundation for decolonised thought in the discipline of business management. "Dynamic foundation" might seem paradoxical, however, there is a necessity for an ever-changing element within management theory whilst ensuring the provision of a platform upon which knowledge (decolonised knowledge, in this case) can be built.

CMS, as with post-colonial theory, offers an alternative to dominant epistemologies and paradigms stemming from the 'centre' but encompasses a broader spectrum of perspective than the limitations of post-colonialism (Fournier & Grey, 2000; Nkomo, 2015). This alternative places criticism upon systems of business and management as opposed to criticism of individuals within such systems, so as to leverage against the one-sidedness that the systems produce (Adler, Forbes & Willmott, 2007). The criticality of CMS aims to expose how dominant patterns and structures not only nurture but sustain an environment in which managerial beliefs and practices have moral questionability, where individual or societal obligations of an organisation require

bottom line justification (Adler *et al*, 2007). This criticality enables the non-performativity of dominant managerial practice (Goldman, 2013).

CMS offers a lack of exactness whereby boundaries remain largely undefined regarding the classification of content as critical or non-critical (Fournier & Grey, 2000). This lack of definitude creates a barrier to ownership of the critical management discourse, resulting in the prevention of a singular dominating force controlling content. Thus the space is opened for the alternative perspective of the 'periphery' to have standing in a theoretical or paradigmatic context, not to overcome dominant thought but to be examined alongside it. The creation of this type of space is necessary for decolonising knowledge, as the assumption of universal applicability of western models creates structures which lack foundation in the periphery, with little relevance to indigenous context (Goldman, 2013); emphasising the need for a new foundation for decolonised knowledge and the prevention of western entrenchment within this foundation (Nkomo, 2015 ;Nzelibe, 1986). The prevention of western entrenchment can be seen as a denaturalisation of 'the way things are', thereby creating potential for alternatives in the new foundation (Goldman, 2013).

DECOLONISATION: ASSUMPTIONS AND PHASES

Decolonisation in South Africa is not seen as a formal process, as in other formerly colonised nation states, as a result of the continuation of colonial principles through the Apartheid regime. Decolonisation in South Africa is more likened to a liberation struggle as opposed to a systematised process (Pal, 2012). Decolonisation transcends the simplicity of the mere transfer of power, as is evident in the concept that the removal of the coloniser does not eradicate colonial legacy effects, such as the colonisation of the mind and knowledge (Pal, 2012). Thus, two main phases can be discerned in terms of decolonisation. The first is the recovery of geographical territory or the repatriation of land and the second is the changing of the cultural territory or the regeneration of indigenous knowledge or ways of life (Keet, 2014; Pal, 2012).

Decolonising knowledge: African Renaissance; Communalism and Ubuntu

Neo-colonialism and Globalisation have left an indelible legacy on the present day, long after the independence of most African countries from colonial rule (Kayira, 2015). There is an increasing demand for an African Renaissance, where reflection would be cast upon Europe within an African knowledge framework, as opposed to reflection being cast upon Africa from a Eurocentric point of departure. It is perceived that theory, research and practice is, to a large extent, European and therefore not contextualised within the African Environment. There is a call to embrace indigenous African knowledge and to root such knowledge into epistemological frameworks and paradigms (Higgs, 2011). This revitalisation of African knowledge may reduce the psychological remnants of inferiority (Goldman, 2013) and empower African academic literature.

In order to decolonise the curriculum from this context, the creation of an African Body of Knowledge is necessary to depart from a Euro-centric epistemology. A starting point for this body of knowledge could be to interrogate the meaning of 'African knowledge' and what constitutes that knowledge be classified as 'African'. Considerations for the classification of knowledge as African, may include whether or not literature or knowledge must be produced by an African; the classification of a person or group as African or the inherent reflection of African culture or philosophy within the knowledge/literature to build an Afrocentric curriculum representative of the indigenisation of content (Higgs, 2011)

Communalism plays a large role as a component of traditional African life. Concepts such as *Ubuntu* and *Umunthu* are directly related to humanism, where the dignity of people, their interests and needs are a focal point of importance in African tradition (Higgs, 2011) and African management principles (Goldman, 2013). A nation cannot be empowered if current ways of thinking have been designed to oppress the people within the nation. People are empowered through their identity inherent in their indigenous knowledge (Higgs, 2011). Western individualism conflicts with the communal customs of African tradition regarding humanism and undermines the belief of the interconnectedness of people in the spirit of *Ubuntu* (Kayira, 2015). Decolonisation of Management curriculum would therefore entail the removal of individualism as the dominant or correct paradigm to make room for the comparison to communalism as an equally important or valid paradigm in Management knowledge and education.

Umunthu promotes individuality without individualism whereby one can pursue their individual interests and compete with others, while remaining mindful of the pursuits of others on a communal level (Kayira, 2015). This philosophy of humanism and interconnectedness could form the basis of African Management Philosophy (Goldman, 2013) and change the context within which Management is conducted in South Africa.

DECOLONISING MANAGEMENT KNOWLEDGE

In 2005, South African higher education saw a complete restructuring in an effort to promote transformation, increase access to higher education and allow for better articulation and migration between institutions. However this restructuring did not include successful indigenisation of the curriculum. In terms of the academic discipline of business management, American and European thought still dominates thinking, practice and knowledge creation. The concern is that American and European management thinking does not adequately address and confront challenges faced by organisations operating in an emerging economy like South Africa. Coupled with the aforementioned ‘othering’ of indigenous people, there is a fundamental problem with the relevance of Management education in South Africa (Nkomo, 2015).

Currently management knowledge and thinking in South Africa is a slightly edited replication of Western theory, limiting the actualised achievement of developmental goals (Goldman, 2013). The unique South African environment demands unique management principles, therefore knowledge (and the associated curriculum developed to impart and transfer this knowledge) must be transformed, or decolonised, to address challenges facing South Africa, such as poverty, unemployment, inequality and racism (Goldman, 2013; Nkomo, 2015). An alignment of African Management with African goals may see their achievement in business practice.

The “decolonisation of the (management) curriculum” should be supplemented by the incorporation of African philosophy; pre and post – colonial theory and history in the context of South Africa so as to decolonise the western dominance and create a clear epistemological position on the unique dynamics of South Africa for the implementation of appropriate African (Indigenous) Management theory (Nkomo, 2015).

A tendency towards a private imperative burdens the outcomes of tertiary education whereby consumers as opposed to academics are created. This perpetuates the concept of the privatisation of public spaces such as universities and forwards an individualistic agenda (Mbembe, 2016). The decolonisation of public spaces will enable the decolonisation of management systems that propagate higher education as a marketable product to be bought and sold (Mbembe, 2016). The implication of this is a fundamental questioning of that which is public and that which private and if the operation of such entities are in line with their classification. In the context of the university, an alternative is suggested whereby the ‘university’ be reconstructed as a ‘pluriversity’ in the endeavour to decolonise knowledge constructs within the university system (Mbembe, 2016). This pluriversity will be based upon an openness within the production of knowledge to epistemic diversity and will therefore not disseminate a eurocentricised model of universalism (Mbembe, 2016). The universality of knowledge will not be completely forsaken however unilateral approaches will not be employed but replaced by a horizontal approach to the consideration of a multitude epistemic traditions (Mbembe, 2016).

CONCLUSION

The protracted marginalisation of African aspects of life including culture, norms and indigenous knowledge creates doubt as to whether the decolonisation of curriculum can be achieved entirely. The historical aspects of imperialism, colonialism and apartheid (in the instance of South Africa) institutionalised the ‘inferiority’ of all aspects of African life while promoting the ‘superiority’ of the European way. The extent of this is so severe that it stands to reason that African epistemology may never regain its Indigenous Knowledge as a result of colonial distortion. Post-colonial theory serves as a means of decolonising knowledge through critiquing the foundations of dominant Western assumptions while self-reflexively ensuring the promotion of truth. Critical Management Studies offers a new dynamic foundation upon which decolonised knowledge can be built as it not only questions and challenges dominant thought but creates an open space for building new knowledge not based upon westernised foundations. Curricular decolonisation challenges the validity of the dominance of Western

theory in South African Management education and puts forward the need for an African Renaissance; the importance of traditional African communalism in creating an alternate paradigm to that of Western individualism and the concept of uniquely African management to address uniquely South African problems. The de-privatisation of public spaces and in particular the university is necessary to stop the cycle of grooming students to be consumers whilst offering an alternative structure termed the 'pluriversity' in which a horizontal approach is taken for the consideration of various epistemological paradigms. It is therefore evident that the decolonisation of the management curriculum will shift the dependence of South Africa on Western theory to Indigenous African theory or a hybrid thereof, resulting in a fundamental change in African epistemology, knowledge and practice and the approach to which such knowledge is developed.

Although this paper highlights a topical, South African issue, and might not be particularly relevant to a, say, European or American audience, certain insights do transcend boundaries. Firstly, this paper yet again underscores the growing realisation that management is a highly contextual exercise, and the uniqueness of the context in which the task of management occurs, cannot be ignored. Secondly, and most importantly, the paper highlights the claim of Critical Management Studies scholars that the political and historical backdrop of business and management should not be underestimated, as it has a profound effect on how business and management rolls out. In other words, business and management are inseparable from the political and historic contexts within which they function, and any attempt to claim political and historical neutrality is an oversimplification of the issue.

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EFFECT OF FOOD SCENT INTENSITY ON THE DESIRE TO EAT AND FOOD CONSUMPTION

Yamen Koubaa, Brest Business School, France
Rim Boudali Methamem, ESSEC Tunis, Tunisia
Amira Eleuch, France

ABSTRACT

The question of how consumers respond to different levels of food scent intensity requires attention from marketing researchers. Along this research we test the effect of different food scent intensities on consumer visceral responses using data from laboratory experiments.

Keywords: Food scent; scent intensity; desire to eat; food consumption

INTRODUCTION

Previous scent research findings are the outcomes of research settings where consumer responses are measured while comparing an odorous episode to a non-odorous episode or a pleasant to a non-pleasant one. This setting is relevant to capture the effects of odor diffusion into a neutral environment (i.e., null odor intensity) but it is inappropriate to test for different levels of odor intensity on consumer behavior where the shift is from a low intensity to a higher intensity scent for instance. Odor intensity is the perceived strength of odor sensation and it is measured in terms of the odorant concentration in the air (Coffey and Toohey; 2006). The neurobiology of smell explains that human brain reacts in a non-regular way to different odor intensities (Devriese, S et al. 2000). Along this research we test the effect of different food scent intensities on consumer visceral responses using data from laboratory experiments.

CONCEPTUAL DEVELOPMENT

Sensory marketers are pulling out all the stops to tempt consumers with irresistible smells that stimulate olfactory cells and manipulate behaviors. Whether at the mall, the airport, the bakery or the restaurant, having a coffee or a glass of wine, eating cheese or milk chocolate, nose detects a mosaic of natural and artificial food scents which are likely to trigger visceral responses. But consumers are not exposed equally to food scents. Being inside the bakery when the bread is pulled off the oven would expose the consumer to a higher intensity of food scent than when he/she lines up outside. The impact of food scent on consumer's responses depends also on its valence and prior knowledge of the odor by the subject (Chambers and Baker Wolf, 2005). But whatever the valence of the food scent and the familiarity of the subject with it, it would impact consumer's responses only if it is detectable. The volatiles of the food scent in the air surrounding the consumer (i.e., the headspace) must reach a minimum concentration level so can olfactory cells detect the smell. From the other side, if scent intensity becomes excessive, people may feel annoyed. (McGinley, Mahin and Pope. 2000). Here arises the question of how would consumers react to different intensity levels of the same food scent? In practice, food shops like Subway and Starbucks (foodbabe.com) have adjusted their settings and ventilation to monitor food scent intensity. Subway places the bread oven up front of the restaurant so that smell hits clients when they walk in the door and Starbucks adjusted ventilation to monitor the concentration of coffee volatiles inside the shop to make sure that the store smells coffee and not the cheese of the sandwiches.

Despite the relevance of monitoring food scent intensity in food marketing practices, academic research on food scent has been dominated by the investigation of significant scent effects on consumer's responses without looking at how these responses would evolve if scent intensity changes. Food scent research settings were mainly investigating consumer' responses while comparing an odorous to a non-odorous episodes; pleasant to non-pleasant scents; and/or congruent to incongruent scents. But the effects various intensity levels of food scent would have on consumer' visceral responses remain largely unexplored. It is unclear how food scent intensities would drive consumer responses? To address these questions, we review the neurobiology of smell and eating as well as the food scent research.

The neurobiology of smell and eating

Odorants are chemicals in the air that are part of the odor perception by stimulating the olfactory nerves. Chemicals which are sniffed in pass by the olfactory epithelium and are then dissolved into the mucus at a rate dependent on their water solubility and other mass transfer factors. The more water-soluble the chemical, the more easily it is dissolved into the mucus layer. A matching site on the olfactory cells then receives certain chemicals. The response created by the reception of a chemical depends on the mass concentration of the volatiles present, which is the main measure of odor intensity (Richard, 2006). The reception of the chemical by the olfactory cells creates an electrical response in the olfactory nerves. A summation of these electrical signals leads to an "action potential." If this action potential has high enough amplitude (a threshold potential), then the signal is propagated along the nerve where it synapses with the olfactory bulb (McGinley, Mahin and Pope, 2000).). All olfactory signals meet in the olfactory bulb where the information is distributed the frontal cortex. This is where conscious sensations take place, as the information is processed with other sensations like hunger and thirst, and is compared with accumulated life experiences for the individual to possibly recognize the odor and make some decisions about the experience (Schacter, 2012). The desire to eat is generated by the brain's hypothalamus in response to a range of signals received from the body, including those delivered by olfactory nerves. The hypothalamus controls appetite by pulsing chemical substances at different time intervals which triggers or suppress appetite and feeling of hunger (Buffem, 2008). The hypothalamus commands also eating and digestive glands. These glands produce respectively different quantities of saliva and Neuropeptide and determine accordingly the individual level of satiation (Buffem, 2008).The hypothalamus behavior depends on the signals coming from the nerves (NCI dictionary of cancer terms). In the case of olfactory nerves, the occurrence of signals and their strength is contingent with the odor's intensity (Overbosch, van den Enden and Keur, 1986). Meaning is different odor intensities would not all stimulate the olfactory nerves, and if so, the nerves' signals would not have the same strength (Gilbert, 2008).

Smell in food marketing research

Food marketing research has long supported the impact of food scent, relative to no scent, on body visceral responses like feeling of hunger and thirst, salivation and eating (Panksepp,1998; Nederkoorn et al. 2000; Spence, 2011; Krishna, Morin and Sayin ,2014). Wisniewski et al. (1992) explain that presenting a palatable food stimulus, like food aroma, leads to salivation and then to the desire to eat. If food is available, this desire will probably lead to eating. A study by Moore (2004) reveals that the exposure to food olfactory stimulation did create significant increases in craving, desire to eat and eating.

Despite the report of some research where the exposure to food scent did not result in change in salivation and food consumption (Crowder and Schab, 1995; Shannon, 1974), the bulk of evidence seems to suggest that salivation can be useful physiological predictor of the desire to eat following the exposure to food scent (Krishna, Morrin and Sayin, 2014). Spence (2011) notes that failure to report change in salivation to food aroma -as an antecedent of the desire to eat- in some works is probably due to reliance on small sample size or the measurement of inappropriate glands (Lee and Linden, 1992). This failure can be also explained by the failure to monitor scent intensity.

Although the investigation of food scent intensity's impacts is quasi-absent in marketing research, it had been the subject of some works in the food and nutrition research. In their sensory flavor profiling of cumin research, Dattatreya, Prakash and Bhat (2004) found that people have more positive flavor judgments of strong smelling cumin than with weak smelling one confirming their tendency to prefer strong smelling cumin in

cooking over less smelling one. Martin (2004) notes that higher intensities of food aroma within restaurants trigger a stronger feeling of hunger and a higher appetite leading to longer stay and more food consumption. He recommends that Chefs adjust their recipes to make aromas more concentrated. An interesting work by Piqueras-Fiszman and Spence (2015) compared subjective flavor release and flavor expectation following the exposure to food scent among home and restaurant diners. They found that home diners have better flavor release and flavor expectation. The authors explain that diners are likely to be exposed to higher intensities of food scent when cooking at home than in a restaurant (kitchen are isolated in restaurants and food loses scent while being brought from the kitchen to the table). The authors recommend to restaurants the use of the cloche to store food scent at an appropriate intensity level until the plate reaches the diner or having semi-opened kitchen to let food scents migrate from the cook fry pan to the diners' noses. One major limitation of these works however is the reliance on pure subjective measures and the absence of accurate measurement of scent intensity.

Taylor and Linforth (1998) addressed this limitation in their work on the link between food scent and flavor release. They measured the impact of different food scent intensities on the process of food flavor release in the mouth based on measurements from the olfactory and gustative cells using an atmospheric pressure ionization technique. The authors found that as food scent intensity increases, flavor release increases at a similar pace until a certain intensity level. Scent intensities beyond that level result in a slower flavor release. These results partially corroborate the findings of Apter (2007). The optimal arousal theory of Apter stipulates that too low or too high stimulation by external scent stimuli may result in discomfort and negative feelings. With too low stimuli, the individual find difficulties recognizing the odor. This results in effortful thinking leading to discomfort. With too high stimuli, olfactory cells reach saturation pushing the brain to activate a feeling of discomfort as an indicator for the body to look for fresh air. In the same sense, (Sorensen et al. 2003) found that the state of annoyance resulting from the exposure to excessive scent intensity is often linked to a loss of appetite. While this research has confirmed that olfactory and gustative systems react differently to different food scent intensity levels, it did not show how these reactions would impact our desire to eat and food consumption. Such findings would be very useful for marketing purposes. But knowing that flavor release is positively correlated with salivation which a strong predictor of the desire to eat (Stevenson, 2009), we can expect similar effects.

Looking at how olfactory cells respond to changing intensity of scent and at the outcomes of the works we reviewed, it appears that a research setting where the effects of variable food scent intensity on consumer's visceral responses and with marketing-oriented findings could fill up the gap in the food marketing literature. The objective in this research is therefore to test for the impact of different food scent intensities on consumer two visceral responses: desire to eat measured in terms of salivation and food consumption measured in terms of the quantity of food consumed. We propose that, for equivalent consumers, different food scent intensities will result in different desire to eat sensations (H1) and different quantities of consumed food (H2). In line with Apter (2007) arousal theory, intensities of tolerable and recognizable food scent (between the recognition and the annoyance levels) boost the desire to eat and food consumption (H3) while weak and excessive intensities are likely to have opposite effects (H4).

THE LABORATORY EXPERIMENTS

Experiments were conducted in air-controlled rooms. The air was filtered prior to the experiment to remove extraneous odors. Participants were instructed to take a water shower without using any shampoo, body lotion, perfume or cosmetics before coming to the experiments to avoid any mixture of odors in the room.

Vanilla Cookies as food stimulus and Fresh-Baked artificial odor of Vanilla Cookies as a scent stimulus were used in the experiments. All participants are familiar with vanilla cookies and the fresh-baked vanilla cookies scent used as stimuli. The participants are equivalent in terms of health, age, fitness, level of satiation, and gender. All participants have a MBI Index between 25 and 27 and not suffering from any illness. They were asked to take their breakfast at 8 am and to refrain from eating until the time of the experiments. Experiments were conducted at 11 am. Participants in experiment 1 are different from those in experiment 2. Experiment 1 was set up to determine the appropriate odorant concentrations for the different odor intensities tested. To establish the odor intensities of the experiments, we followed the guidelines of Jiang, Coffey and Toohey (2006). An olfactometer and a group of panelists were used. Diluted odor mixtures and an odor-free gas (as a reference)

were presented from sniffing ports to a group of panelists. In comparing the odor emitted from each port, the panelists were asked to rate the smelled odor intensity on an odor intensity scale (0: no odor; 1: detectable; 2: recognizable; 3: strong; 4: very strong and 5: annoying).

In total 30 persons participated in experiment 1 and 30 ports were utilized to diffuse food scent. Experiment 1 has two episodes. In the first episode, an odor-free gas is diffused via 15 ports (control group) and an odorous gas with increasing intensity was diffused via the remaining 15 ports. Odor intensity was monitored in terms of the odorant concentration level according to the European norms (CEN EN 13725, 2003). The initial intensity of the odorous gas was the one of the odor-free gas. Each participant has 15 seconds to sniff in once at one port and to rate the smelled odor intensity. He/she was asked to repeat this task 7 times. Participants were asked to smell roasted coffee bean during 10 seconds after each sniff to cleanse their smelling sense. The intensity of the odorous gas diffused was increased every sniff up to the fourth time. An odor-free gas was diffused in the fifth sniff to check for the participants' odor cognitive habituation (Kobayashi et al. 2007). The intensities of the scent diffused in the sixth and seventh sniffs were higher than the one of the odor diffused in the fourth time. The odor diffused to the control group was always the same, an odor-free gas, but they were asked to sniff in and to rank the odor intensity 7 times. The choice to ask participants to sniff in 7 times is justified by the scent intensity perception process cut points and the needs of our research. According to the norms promulgated by The American Society for Testing and Materials (ASTM), there are three major cut points in the process of intensity perception: detection, recognition and annoyance. The reason the odor diffused in the first and fifth sniffs are odor-free gas is to allow for the comparison with the control group and to test for a possible habituation effect. Fresh-baked cookies scent intensities were as following: Sniff 1: odor-free gas; Sniff 2: odor intensity at the detection level; Sniff 3: odor intensity at the recognition level; Sniff 4: odor intensity beyond the recognition and below the annoyance level; Sniff 5: odor-free gas; Sniff 6: odor intensity at the annoyance level; Sniff 7: odor intensity beyond the annoyance level. In the second episode, the ports places were changed between the members of the control and testing groups and the experiment was replicated. To determine the odorant concentration levels and their respective odor intensities to apply in experiment 2, results from the rankings of the odor intensities by the members of the two groups were crossed. To check for a possible habituation effect, the ratings of the odor free-gas diffused at the fifth time were analyzed. 80% of the participants could correctly classify the odor free-gas and 20% classified it a very weak odor. There is no significant habituation effect on participants' appreciation of odor intensity. Since humans perceive odor according to the "power law" (Stevens, 1960), odor intensity grows as a power function of the odorant, not linearly. The power function is expressed in an equation as: $I = k C^n$, where I is perceived intensity, C is odorant mass concentration, k and n are constants, which are different for every odorant (Stevens, 1962). Therefore, to get the odorant concentrations the better reflecting intensities' perceptions, the odor effective concentrations were loaded on the odor intensities perceived by the panelists following Stevens (1962). The loading was significant at $p < 0.00$. $I = 2.50 + 0.617 C$ where I is the perceived odor intensity and C the effective odor concentration. Odorant concentration and intensity levels applied in experiment 2 have been thus adjusted according to the equation above.

Experiment 2 had a between-subject design. 6 groups of equivalent participants were investigated. The group size is 30. The experiment design was as following: Group 1: no scent group (control group); Group 2: scent group with odor intensity of the detection level; Group 3: scent group with odor intensity of the recognition level; Group 4: scent group with odor intensity between the recognition and the annoyance levels; Group 5: scent group with odor intensity of the annoyance level; Group 6: scent group with odor intensity higher than the annoyance level

Experiments were all conducted in ambience-controlled rooms. The room ambient temperature and ventilation are controlled and correspond to those temperature and humidity levels encountered in most bakeries and cookies shops. Odor intensity was measured in terms of the odorant concentration level and via an olfactometer. A real shopping scenario was simulated. Food consumption is measured in terms of the quantity of Vanilla cookies consumed. The desire to eat is measured in terms of the quantity of saliva produced. Salivation was measured at two points in time: a baseline taken just before the exposure to the odor stimulus and a post-stimulus measure taken after the exposure according to the Strongin-Hinsie-Peck dental role procedure (Krishna, Morrin and Sayin, 2014; Gal, 2012; Wooley and Wooley, 1973). This procedure consists of distributing three pre-weighted cotton dental rolls to participants in zippered bags. Participants are asked to place these cotton dental rolls in their mouths. The first and the second one placed between the cheek and lower gum and the third

under the tongue. Saliva was collected via the dental rolls in participants' mouths for three minutes in each of two collection phases. In each phase, at the end of the third minute, participants were asked to put the dental rolls back into zippered bags and hand them to the researcher. The weight of each set of three dental rolls was recorded to the nearest 0.1 grams. Saliva quantity corresponds to the difference between the baseline weight and the post-stimulus weight. Participants were told that they will take part in a food product evaluation where their jaws movements are recorded (cover story) and this requires the use of cotton dental rolls. After collection of the baseline salivation levels, participants were asked to respond to some unrelated questions for 10 minutes. They encountered then the odor stimulus for 3 minutes and asked to put again the dental rolls in their mouths. After the second measure of salivation, each participant was given 150 grams of Vanilla cookies. The cookies were placed in a sealed plastic bag to avoid any interference between the natural smell of vanilla cookies and the artificial scent used in the experiment. Participants were asked to eat as much as they like. Cookies were placed on a table with white paper and facing a blank to eliminate extraneous sensory information (Rinaldo et al. 2014). Participants were finally asked to rate the perceived intensity on the odor intensity scale. The remaining quantities of cookies were weighted to the nearest 0.1 grams.

RESULTS

The research setting comprises two dependent variables namely the quantity of saliva produced and the quantity of cookies consumed, and one independent variable which is the food scent intensity. We tested first for the appropriateness of the intensity levels applied in experiment 2 by comparing the effective odor intensities applied in terms of the European CEN norms as modified in light of the outcomes of experiment 1 and intensity perception participants had for these levels. No significant differences are detected. There was no significant gap between the applied intensities and the perceived ones in experiment 2.

The two dependent variables are continuous. The independent variable consists of six different categories of independent groups. Group size (30 participants) is enough large to capture the interactions between dependent variables. There is no apparent multicollinearity. Correlations between the dependent variables are not significant. Data has a quasi-normal distribution (Skweness value of 0.25 and 0.51 respectively for saliva production and food consumption). Given these data characteristics, MANOVA with Post Hoc tests seems to be an appropriate statistical method to apply for testing the effects of scent intensity on the desire to eat and food consumption.. MANOVA with Post Hoc tests were applied using SPSS 21 version. MANOVA outcomes show statistically significant differences in the dependent variables (saliva production and food consumption) dependent on the intensity of the food scent diffused, $F(5, 170) = 20.75, p < 0.005$; Wilk's $\Lambda = 0.39$, partial $\eta^2 = 0.38$ (see table 1 below). H1 and H2 are supported. Different food scent intensities lead to different desire to eat sensations and consumed food quantities. To see how scent intensity has impacted the desire to eat and food consumption each apart from the other, we performed tests for between-subjects effects. Results support a significant impact of scent intensity on the desire to eat (i.e., saliva produced), $F(5, 174) = 39, p < 0.005$; partial $\eta^2 = 0.53$ and on food consumption $F(5, 174) = 13.13, p < 0.005$; partial $\eta^2 = 0.27$.

To get to the impact of each intensity level on the desire to eat sensations and food consumption, we followed with a Tukey's HSD Post Hoc tests. These tests allow for multiple paired comparisons between the effects of the six categories of the independent variable on each of the two dependent variables.

Table 1: results of Tukey's HSD Post Hoc tests

Comparison	Desire to eat (Saliva production)		Desire to eat (Cookies consumption)	
	Mean difference	P	Mean difference	P
Odor free-Detect	1,7000***	,001	-5,4000	,949
Odor free-Recog	1,7333***	,001	-3,7000	,990
Odor free-RecoAnno	2,6667***	,000	18,2333**	,036
Odor free-Anno	4,5667***	,000	31,7000***	,000
Odor free-BeyondAnno	4,9667***	,000	22,1667***	,005
Detec-Recog	,0333	1,000	1,7000	1,000
Detec-RecogAnno	,9667	,214	23,6333***	,002
Detec-Anno	2,8667***	,000	37,1000***	,000
Detec-BeyondAnno	3,2667***	,000	27,5667***	,000
Recog-RecoAnno	,9333	,249	21,9333***	,005
Recog-Anno	2,8333***	,000	35,4000***	,000
Recog-BeyondAnno	3,2333***	,000	25,8667***	,000

RecoAnno-Anno	1,9000***	,000	13,4667	,235
RecoAnno-BeyondAnno	2,3000***	,000	3,9333	,987
Anno-BeyondAnno	,4000	,936	-9,5333	,619

***: significant at $p < 0.01$

**: significant at $p < 0.05$

Compared to the no scent situation and regardless of the intensity level, smelling a food scent activates and boosts the desire to eat. The higher the intensity, the bigger is the quantity of saliva produced as it can be seen in the first five rows of column 1 in the table above. When comparison is done with reference to each of the other groups, salivation increases only if scent intensity increases by a significant portion. Differences were non-significant when comparing every two successive levels of intensity but with recognition-annoyance/Annoyance pair. For the significant differences, the impact on saliva production was always positive. The higher the scent intensity is, the more saliva we produce and the stronger is our desire to eat.

When comparison is done with reference to the control group, only those intensities beyond the recognition threshold that impact food consumption. The impacts are all positive with the highest recorded between the detection and the annoyance intensity levels. When comparison is done with reference to each of the other groups, food consumption increases only if scent intensity increases by a significant portion. Differences were non-significant when comparing every two successive levels of intensity but with recognition/recognition-annoyance pair. For the significant differences, the impact on food consumption was always positive. The higher the scent intensity is, the more cookies are eaten.

If the consumer has been exposed to a weak intensity of the food scent (i.e., below the recognition level), the exposure to a higher intensity of the same food scent increases the desire to eat only if this intensity is equal or superior to the annoyance level; and boosts food consumption only if it is beyond the recognition level. The impact is positive and increasing for the desire to eat; positive and increasing for food consumption when scent intensity shifts from Recognition-Annoyance to Annoyance level and positive and decreasing when it shifts from Annoyance to Beyond Annoyance level. If the consumer has already recognized the scent, the desire to eat increases only when the subject is exposed to scent intensities equal or superior to the Annoyance level; while food consumption is significantly boosted following the exposure to intensities beyond the recognition level.

When the consumer is exposed to scent intensities between the recognition and the annoyance levels, the exposure to any higher intensity boosts the desire to eat by increasing saliva production. Food consumption is not impacted at all. If the consumer has already felt annoyed by the scent (comparison with reference to the annoyance group) any increase in the intensity does impact neither the desire to eat nor food consumption. The largest impact on the desire to eat was recorded between the null intensity and the beyond annoyance intensity while the largest impact on food consumption was recorded between the detection intensity level and the annoyance level. Based on these results, we can conclude that H3 is confirmed while H4 is rejected. Tolerable food scent intensities did boost the desire to eat (increase in salivation) and food consumption. However, weak and excessive intensities had also some significant impacts on saliva production and food consumption despite the reporting of several non-significant links. The impact of the food scent intensity seems to be dependent on whether the comparison is done with reference to control group or to a scent group. These findings are discussed in the section below.

DISCUSSIONS AND MANAGERIAL IMPLICATIONS

Food odor intensities impact the desire to eat and food consumption differently and at different paces. The significance and the strength of the impacts depend on the olfactory status of the individual. When comparison is done with reference to no scent environment, any food scent intensity significantly boosts the desire to eat while the impact on food consumption is significant only with intensities beyond the recognition level. This result corroborates findings from (Schacter, 2012) proving that odor impacts non-conscious reflexes faster and stronger than it does with conscious ones and confirms that salivation is an appropriate indicator of the desire to eat preceding food consumption. But eating can occur without a significant increase in salivation if the increase in scent intensity occurs after the scent has been already recognized. Beyond recognition, the desire to eat is

boosted only with scent intensities significantly higher than the recognition level while eating is influenced even by slightly higher intensities. This can be due to the fact that the recognition of the food scent enables the individual recalling a vivid image of food. As the food stimulus was available to the participants and were able to eat it, they were cognitively certain to fulfill their desire to eat cookies (Meggiato, 2015). Hence salivation stagnates and food consumption accelerates to fulfill the eating desire. These results provide also a possible explanation for the conflicting findings about the impact of food scent on the desire to eat and food consumption in sensory marketing research. The significance and the size of food scent effect on salivation and food consumption are contingent with the change in food scent intensity. When the scent is not known, any intensity triggers a desire to eat while only recognizable strong intensities that boosts eating. In future food scent research, it is recommended to consider the moderating effect of scent intensity on the links between smelling, salivation and eating.

Food scent intensities beyond the recognition level are the best in boosting the desire to eat. Saliva production was always positive and increasing with increasing intensities beyond the recognition level. However, food consumption is best boosted with scent intensities beyond the recognition and below the annoyance levels. Intensities beyond the annoyance level may boost food consumption but at a decreasing rate. Salivation as an indicator of the desire to eat is activated with weak intensities of scent food. Nonetheless, this activation does not result in food consumption. Food consumption increases only when the food scent is recognized. The recognition of the smell enables the individual making the link to the food and thus starts eating. As indicated by Krishna, Morrin, and Sayin (2014) food consumption occurs only when the subject recalls a vivid image of the food and this recall is possible only when the scent is recognized. Once the scent is recognized, increasing its intensity boosts food consumption at an increasing rate if the subject is not yet annoyed by the scent. If he/she reaches annoyance, the exposure to a higher intensity will continue boosting food consumption but at a decreasing rate.

These findings are useful for food businesses in many ways. It confirms the saliency of controlling odor intensity within the retail store. This is possible via the control of the odor emission source and the ventilation. In bakeries, coffee breweries and patisseries for example, food odor intensity is higher when bread and cakes are pulled out the oven or when the coffee is being brewed. This intensity can reach excessive levels and may hence weaken the desire to eat. This is also true with bars and restaurants where high intensity of food odor (like alcohol and pizza) may push consumers to drink and eat less. A measure of the intensity level (via an olfactometer) and an aeration of the store can be efficient in optimizing the effects of food scent.

Besides, intensities of weak odor smelled when crossing in front of a food store are not always effective in bringing consumers inside the shop. Although, weak food scent intensities boost salivation, food consumption is activated only when the intensity reaches the recognition level. Managers of food stores may rely on other marketing stimuli like music, shows, lighting, etc to bring consumers closer to the odor emission source and hope for largely boosting his/her desire to eat leading to food consumption as the odor intensity increases. Having a strong intensity at one moment of the food delivery process can be beneficial. Strong food scent intensities boost salivation. After an abundant salivation, salivary glands reduce saliva flow rates (Tyldesley, Lesley and William; 2003) humans feel thirsty and the need to drink emerges. This may lead to a higher consumption of drinks. These high intensity moments should be punctual and short to avoid annoyance at which any increase of scent intensity has no significant impact on salivation and food consumption.

During the food delivery process in restaurants, it is recommended to expose customers to weak detectable food scent in the beginning by diffusing artificial odor of the food or by letting the scented air migrates from the kitchen to the dining room in a controlled way. This will boost customers' salivation and desire to eat and may lead to drinks consumption. After a while, intensity should be increased to the recognition level and this should be done before getting customer's order. The recognition of the food scent increases the desire to eat and food consumption and this will likely influence the order made by the customer. This is applicable also for cake shops and bakeries. For instance, Cinnabon (roll cake and sweet company) franchisees are required to put their ovens near the front of the stores. An investigation done by the company revealed that putting the oven in the back of the restaurant hinders the smell of cakes and lowers sales. They are also required to bake cinnamon rolls every 30 minutes and even to heat sheets of brown sugar and cinnamon when there is no demand to boost scent intensity inside the shop (bizjournals.com)

These findings can also be helpful in guiding food shops managers negotiating leases. It might be appropriate to prefer closed indoor locations that allows food smell to linger and not to get watered down by the outside air. In shopping malls and airports, food retailers should ideally prefer the ground floor near a stairwell that allows the scent to raise throughout the floors above at different intensity levels.

In food outlets and/or food vending machines, the intermittent diffusion of food scent at variable intensities can boost food sales. Intensities should be between the detection and the annoyance levels as the highest impacts on the desire to eat and food consumption were recorded between these two levels. Diffusion should be intermittent to avoid any habituation effect and the air has to be regularly filtered to avoid annoyance. Counter's ventilation must be appropriate to avoid having any unpleasant odor resulting from the mixture of incongruent scents.

Food packaging can be also a source of olfactory stimulation. Companies like Kraft Foods have developed smelling food packaging that diffuses food scent once it is touched (PROMO, 2007). The intensity of the odor can be monitored to optimize the impacts of these olfactory packaging on consumers' buying decisions. The restaurant, The Grant Achatz's Chicago Kitchen is using aromatic plate ware diffusing food scent at an increasing intensity while customers are waiting for food delivery (Alinearestaurant.com)

CONCLUSION

Food scent's impacts on non-conscious and conscious body responses are contingent with the scent intensity. When the food scent is detected but not recognized, an increase in intensity boosts the desire to eat and food consumption similarly. When the scent is recognized, only strong-enough intensity that triggers a stronger desire to eat while eating can be boosted even by slightly higher scent intensities. Food scent intensity has a significant moderating impact in shaping both conscious and non-conscious visceral responses. This impact is dependent on whether the scent is unknown, detectable, recognizable, and/or at a stage of nuisance. The results of this research could be more accurate if experiment 2 was done with the same group of participants being exposed to different odor intensities. Testing the impact of different satiation levels would also help in exploring the non-regular impacts of odor on salivation and food consumption.

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STAGFLATION AND FORMS OF TARGETING MONETARY POLICY

Vladimir K. Krylov and Anna N. Zhilkina
State University of Management, Russia

ABSTRACT

The article is devoted to questions of stagflation and measures to overcome it. The work deals with the consequences of the impact of inflation targeting and other forms of targeting monetary policy on the economic situation of the country and its prospects for economic growth.

Keywords: State monetary policy, targeting, stagflation.

INTRODUCTION

Stagflation and forms of targeting monetary policy. As we know the changes in the price level is actually up to 50-ies XX century was of a cyclical character. Although such fluctuations after the 2nd World War began to appear in a weakened form. However, in the 70 years of the twentieth century, more rapid increase in prices during the stagnation of the economy began to emerge quite clearly. It is no accident and the appearance at the time the term "stagflation."

STATE SITUATION

The dictionary on the economy COLLINS given an explanation of reasons for this phenomenon:

- the lack of aggregate demand relative to potential GDP and
- increasing the cost of production factors.

The Phillips curve was inconsistent and as a result, many countries have turned to alternative approaches in the field of macroeconomic Policies- monetarism and economic theory offers (1 s.554-555)/

Specific explanations of stagflation given at that time are different: the spread of various forms of state regulation of the economy, accompanied by an increase in market demand, monopoly pricing practices support the volume of production by increasing prices, the impact of cost-push inflation factors.

Besides the original number of Western economists have suggested that the combination of inflation and the crisis in 1973- 1975 yy It was the result of the coincidence of the period-specific factors: deficit financing US Vietnam War, increased stimulation of worldwide economic growth, as well as a sharp increase in global commodity prices. Note that undoubtedly impact above factors was essential.

However, the subsequent historical development showed. What stagflation can occur in the presence of other conditions, although it is not something inevitable and permanent. Stagflation will inevitably have a negative impact on the world of finance and credit. There is a growing level of interest on loans. As a result of the commercial banks actions and policies of the central banks that are trying to fight inflation with the help of "expensive money".

But such methods are only contribute to a drop in production and investment. Moreover burden percent of enterprises are trying to pass on to consumers by increasing prices. Growing uncertainty in the securities

market, compounded by problems of the state budget. Clear drugoe- negative effects inevitably affect the social relations, for rising unemployment, falling incomes of the working people, as well as various benefits disabled.

What are the attempts by the state to get rid of stagflation. It should not be forgotten that the most acute periods used are surprisingly completely non-market methods of regulation.

So in the United States, in August 1971 was a transition to the direct regulation of prices and wages. And it had been set up non-governmental monitoring bodies conducted measures. But from November 1971 to December 1972 freeze was lifted, but was given the task of reducing the inflation rate of 2-3% per year. Any increase in prices at the same time require government approval.

Since January, 1973. state control gradually weakened. These measures, which attempted to use were not effective, that it was inevitable due to their half-heartedness and full compliance is not a market-based management. In other matters it does not constitute a waiver of those or other direct methods of influence, both the state and its institutions in the monetary economy in certain specific circumstances.

Western economists in the majority came to the conclusion that without a recession to reduce inflation to a minimum it is virtually impossible. For only a slowdown in money supply growth slowdown and rising unemployment may provide overcoming inflationary expectations and stagflation with it. In general, the existence of stagflation inertia explained the nature of the inflation process (2, p. 1338)

However, studies show. What long-term GDP negatively impact inflation has, if more than about 15% (in developed countries 3% and the developing 10-15% or more). There are abnormal cases. When the economy adjusts to the high inflation and shows, however, economic growth (3 s.71,72) With regard to the experience of Russia, the economic estimates show that economic growth becomes negative at approximately 44.5% annual inflation (3 , p. 72)

Thus making bogey of inflation is not in all cases, it is justified for economic growth. Of course we are talking about inflation processes in one way or another under the control of state regulatory institutions. You can not do without the administration of direct actions that affect the operational guidelines of the Central Bank.

As appropriate tools are used: rules of reserve requirements, interest rate controls, limiting loans, purpose loans, commitments for the purchase of government securities, foreign exchange controls, the fight against speculation in the currency market.

At the same time, a number of economists believe that monetary policy should be based on fixed rules. However, just say DE Lindsay and Henry C. Wallich, "the orientation of monetary policy for any of the financial indicators in some circumstances be harmful and overly rely on one of them should not be. However, the benefits of these indicators in other circumstances suggests that in the context of broader economic trends, none of them can be completely ignored during the evaluation or monetary policy. "(4, s.580)

However, in modern conditions common to use different forms of targeting, which involves determining the nominal anchor of monetary policy: the target value of the exchange rate, money supply, or inflation. The truth is in any case always emphasized its not perfect, the presence of negative moments. Interestingly another - when there is no general any nominal anchor.

Since FS Mishkin stressed that the United States reached a low and stable inflation "without using an explicit nominal anchor" (5, p. 608) While talking about the existence of hidden nominal anchor rather than explicit in the recent years. It appears that in fact a consistent and effective conduct of monetary policy is possible without any form of targeting. Actually, this factor is only confirmed by this author, which characterizes this strategy the Fed as "direct action policy", which differs from inflation targeting (5, p. 609)

Only primitively understood monetary liberalism can in any case to make price stability a priority and sufficient condition for the solution of all other economic problems solely by the action of the market competition mechanism

In conditions of economic crisis, all kinds of sanctions and attempts at economic isolation of particular importance is the monetary policy of the Central Bank, the search for adequate setting options.

The transition to inflation targeting are: institutional independence of the monetary authorities, highly qualified analysts and reliable statistics, economic structure independent of commodity prices and exchange rate fluctuations, developed financial system (7, 95-96.).

Nevertheless, in today's difficult conditions, the Bank of Russia stubbornly on course for the implementation of the inflation targeting regime. And all this at a time when the non-monetary factors of inflation in Russia play a significant role: the monopolistic pricing, administrative interference in the process, the shadow economy. Opinion is therefore justified that to stabilize at least a major role prices play fight against non-monetary factors of inflation.

Fighting inflation through high interest rates (which makes the Central Bank of Russia on the practice) entails a deepening economic downturn, the inability to import substitution measures, etc. All this is an inevitable consequence of the priority of anti-inflationary policy, which inevitably makes the problem of secondary growth.

From stagflation which hit the Russian economy can not escape due to the acceleration of disposal of inertial inflation. Clearly, stagflation in the Russian conditions is completely different reasons. And if so inflation targeting "is focusing" on the reduction of inflation by raising interest rates, inevitably leads to a complication of recovery from the economic downturn.

Here we can agree with S.Yu.Glazev opinion that the way out of the stagflation of the funnel, involves the creation of a sovereign production and investment lending, as well as the formation of a strategic management system development of the Russian economy.

In any case, Russian specifics is that the main stagflation caused by non-monetary factors of inflation. If in this case the fight against inflation by monetary methods, the possible reduction of inflation, if they happen, it does not eliminate the economic downturn. As used herein do not remember the position of Keynes, who believed a positive increase in the money supply at the expense of productive investment. Also in Russia, the efficiency of measures of monetary policy is possible only in the case of the fight against non-monetary factors of inflation and stimulating economic growth, leaving the second highest inflation certainly not letting her out of control.

Practice shows not only the ineffectiveness of inflation targeting in the conditions of modern Russia, but also further insistence on its implementation can not bring nothing but harm. "The continuation of policy in which monetary authorities can not only achieve the target parameters of basic macroeconomic indicators, but even to predict the direction of their movement. In terms of sanctions and falling oil prices become a threat to the sovereignty of the Russian Federation." (7, p.125).

As here again not lead to J. Stiglitz that inflation targeting - principle that whenever price growth exceeds the cash level, interest rates should be raised.

CONCLUSION

The theoretical bases and an empirical data that could reinforce this rough recipe enough. There is no reason to expect that regardless of the source of inflation, the increase in interest rates will be the best answer. It is hoped that most governments will have enough common sense to abandon the idea of the introduction of inflation targeting in their countries.

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PUERTO RICO TRAVESTY: BANKRUPTCY AND BEYOND

Frank Paul Le Veness
St. John's University, USA

ABSTRACT

Puerto Rico, or Estado Libre Asociado, as it is legally termed, has been in a state of colonial dependency since the Europeans settled in the late Fifteenth Century. The Puertorriquenos have never exercised control over their economic, to say nothing of their political affairs, either under Spanish or American rule. This paper examines the latest crisis which has emerged from this situation of political and economic dependence, namely the July 1, 2016 bankruptcy of the island's government and the efforts at immediate rescue. As beneficial as the resulting bailout may be, and even it has its critics, it does little to solve the insular long-range economic woes. The land is still steeped in poverty, a disastrous economy, with few apparent alternatives.

Keywords: *dependency, territorial bankruptcy, Supreme Court ruling, Congressional response..*

INTRODUCTION: THEORETICAL AND HISTORICAL PERSPECTIVE

This paper represents continuing study of the issues and crises of the island of Puerto Rico, particularly in the area of political economy, especially as it has been virtually stifled in its quest for development as a nation. A number of these studies have been presented at Global Business and Technology Association conferences.¹ Since Puerto Rico was sighted and subsequently colonized by the Spanish in the late Fifteenth and early Sixteenth Centuries., has been the victim of colonialism., imperialism (which Lenin referred to as the highest stage of capitalism) and what in the Twentieth Century and beyond has become known as the theory of dependency. During the entire era it was under the control of Spain, the main goals of the colonizers, whether successful or not, were to exude profits from the material wealth of the island and to exert political control. In the case of the economy, Puerto Rico suffered from what I have previously described as a boom-bust situation, which witnessed periods of wealth, based on river-panned gold, sugar, and the like, followed by those of significant poverty, as other colonial possessions, often fellow islands of the Caribbean or lands of Central and South America, were able to capture major production, or as in the case of gold, the supply simply became depleted! Whether or not particularly successful, the island was certainly involved in the typical pattern of what was referred to as Triangular Trade, with the bulk of whatever wealth was extracted proceeding to the benefit of the Europeans either in the colony or in Spain.

The political scene was perhaps equally grim, with virtually no self-government through the Eighteenth Century, and then varying degrees of improvement throughout the Nineteenth, depending upon Puerto Rican service to Spain or the beneficence of a particular governor, government representative, or the Spanish Cortez itself. The political strivings of the Puerto Rican people finally resulted in the issuing of the *Carta de Autonomia* during the very last of the Nineteenth Century, at least in significant part due to their cooperation with the Liberal Party of Praxedes Mateo Sagasta, who, when he became Prime Minister, guided the bill through the legislature and successfully presented it to Queen Regent Maria Cristina, as, indeed, he has promised the Puerto Ricans for their political support.

EARLY 20TH CENTURY POLITICAL AND ECONOMIC DEVELOPMENTS

By 1898 it was simply too late, as the American military swept ashore during the Spanish-American War, and the island was once again stripped of most of its political gains. As a matter of fact conditions proved so bad that when considering the constitutional and legal status of residences of Puerto Rico and other off-shore possessions, in a series of cases known as the Insular Cases, the U.S. Supreme Court made it abundantly clear that the U.S. Constitution did not automatically extend to these territories. In the instance of Puerto Rico, see *Downes v. Bidwell*, 1901 (182US244).

The island's economy remained poor, especially with the varying quality of the insular governors, all mainlanders appointed by the president. This evidence of that so-called boom-bust economy continued throughout the Twentieth Century. However, as that century progressed, so did civil and political rights for the Puerto Ricans. There is insufficient space in this study to examine this phenomena in detail, but highlights include the passage of the Foraker Act in 1901 (XXXI US Stat 77) which organized a colonial government in which only the insular lower house was popularly elected, the granting of citizenship under the Jones-Shafroth Act in 1917 (XXXIX US Stat 951), the 1946 appointment of *ing.* Jesus Toribio Pinero Jimenez as the first Puerto Rican governor of the island by President Harry S Truman, followed the succeeding year by the elective governor act (LXI US Stat 77), and the first elected governor in 1948, *don* Luis Munoz Marin of *Partido Popular Democratico*. The last named struggled to achieve greater self-rule for the island, culminating in the passage of Public Law 600 in 1950 (LXIV US Stat 329), in which Congress authorized the Puerto Ricans to draw an insular constitution. This was approved by Congress, and entered into effect in 1952. The constitution, which is claimed to have been passed "in the nature of a compact," and which could be subject to change with the agreement of both signatories, offers considerable autonomy to the islanders, although in no circumstances can their legislation or government actions violate sections of the U.S. Constitution or Federal legislation. It might also be well-noted that, as we have indicated previously, "The courts have not really even tackled the issue of whether or not an agreement made in 1952 between the Federal government and a regional government is perpetually binding upon the Federal government" (Le Veness and Flanagan, 2008, 548). It must be remembered that all Federal legislation applies to the island unless the latter is explicitly exempted. Well, so much for autonomy.....

As to the economy, as noted above, the early years of the Twentieth Century really brought little change, with a "boom-bust," perhaps now mostly "bust," economy, which was worsened at times by poor governance, the famous hurricane San Felipe, and the Great Depression of the 1930s. Positive notes, however, included a land distribution program (the "500-acre law) which redistributed large unitized or underutilized tracts, the elimination of Federal income taxes for money earned and spent on the island, the contribution of excise and import Federal taxes to the island government, and an improved economy during World War II (though that war, obviously, also took a toll on Puerto Rican youth). With the newly formed Puerto Rican-run insular governments of the late 1940s and beyond, a series of endeavors were initiated, particularly under Governor Luis Munoz Marin, headed by what came to be termed "Operation Bootstrap." Essentially, this was a self-help plan to increase labor-intensive industries on the island, and in fact lead to a major surge in various economic sectors, particularly in manufacturing, as for instance in the garment industry. Tourism was also enhanced, including the development of a government-operated school for training those in the field, and of course, aided greatly by the effective closing of the tourist sector in Cuba to Americans during the 1960s and beyond. Of course, a major problem with most of these plans was the fact that they really required DFI [Direct Foreign Investment], albeit mainly from the U.S. mainland sources. The same was true for tourism, which almost exclusively relied on off-island travelers, and was, therefore, subject to the serious constraints are implied, namely, the source of revenue beyond the island's control. A final note may be made concerning the immigration of Puerto Ricans from the island to the U.S. mainland. As U.S. citizens, Puerto Ricans have the same freedom of movement for work (and other) purposes as any other citizen. As a result, thousands left the island for what was perceived to be better lives on the mainland, though the basic number who were unemployed or underemployed on the island seemed to remain the same. Cindy Y. Rodriguez, citing Federal statistics for CNN, reported that during the 1950s, for example, approximately one-half million left the island, a

trend which has continued, and at times, increased, so that by 2011, there were over a million more Puerto Rican migrants or their descendents living on the mainland than in Puerto Rico (4.9 to 3.7 million) (Rodriguez, 2014)..

As explained earlier in Le Veness/Flanagan (2008, *passim.*), despite the economic growth experienced under “Operation Bootstrap” and beyond, a considerable number of problems continued to plague the island. One crisis concerned the continuing loss of low skilled jobs, as automation eliminated the need for such positions. A second was the limitation of the possibility of moving profits off-island, as for example, to the mainland, without having it subject to Federal income taxation. As time moved on, and the economy of Puerto Rico continued to modernize, and labor expenses continued to rise, it became necessary for the island to rethink its industrial base, and to seek industries such as those of the Fortune 1000 and others which tended to be much less labor-intensive than many of the earlier manufacturing efforts. A major assistance by the Federal government occurred in 1976 with the passage of Sec. 936 of the Internal Revenue Code (Tax Reform Act, 1976, replacing Sec. 931), which permitted mainland firms to repatriate profits from the island to the U.S. mainland without payment of Federal taxation.. There can be no doubt but that this legislation enhanced the island government, and particularly Fomento Economico and PRIDCO, its economic recruitment agencies, in its ability to attract major business to the island, including those in petrochemicals, pharmaceuticals, automobile assembly, and the like. This “boom,” so to speak, lasted for some twenty years, bringing an improved economy to the island, but still not really addressing the issue of chronic un- and underemployment. Typical of this type of dependent relations (patron/client if you will), one of the answers to such unemployment has been immigration from the island (the periphery) to the mainland U.S. (the center), which has somewhat alleviated the immediate unemployment problem, though as with all such cases, has had devastating effects on family (for example, family separation, culture and its retention, and the like!). There were improvements in the economy which were realized, enhanced by continuing advances in the practical education of workers, and in the infrastructure in general, from transportation to electrification, housing, and so forth. However, the “bust” lay ahead (For an excellent in-depth analysis, see Collins, *et al.*, 2006, *passim.*).

MAJOR POLITICAL AND ECONOMIC WOES

Economies are ever-changing, and such most certainly is the case on the island of Puerto Rico. Wages rose, and eventually by Federal legislation were made equivalent to those on the mainland, creating dramatic increases in labor costs. The island, as such, also had to face the usual peripheral problem of high shipping and air costs (for both cargo and passengers) since it was required to only utilize U.S. registered carriers to/from the U.S. mainland, and of course, because of its insular nature. It cannot conclude treaties, including, trade agreements, without the U.S. permission, or conduct any manner of international relations. On the other hand, however, it has the advantage of innumerable Federal services such as defense, currency, banking, postal, health, social security, the U.S. Army Corps of Engineers, (who did so much to lessen vicious flooding, among other projects), and other funding sources..

By 1996, the improvements to portions of the economy which had been gained by Sec. 936 seemed doomed as the U.S. repealed that section of the IRS code. This meant that profits earned in Puerto Rico could no longer be repatriated to the mainland without Federal taxation. Apparently, the main reasons for the change, during a period of U.S. recession, were that it cost the Federal government a considerable loss of income, and that the positions of employment created were too few to be worth the expense (see Bosworth and Collins in Collins, *et al.*, 2006).

This resulted in a shift by many businesses, especially to those with intensive labor needs. They now sought areas further afield for investment opportunities providing significantly cheaper labor costs. Congress built in a twenty year draw down period, so to speak, but by now that has been expired for a decade. The only hope offered by Congress was that U.S. companies investing in the island might qualify for status as Controlled Foreign Corporations, which mean that, although their profits gain on the island would be taxed it repatriated to the mainland, they would not as long as they remained in Puerto Rico, or perhaps, were invested in other company enterprises abroad. As noted by Lisa Jarvis, citing John R. Stewart, the then Deputy Director of PRIDCO:

A company with excess foreign tax credits that operates globally can avoid US taxation of active business income. Alternatively, a company looking to expand its global presence could invest in

Puerto Rico and channel the profits, tax-free, into investments in other countries. Another route would be for a start-up to move to Puerto Rico and set up a corporation, as individuals who are resident of Puerto Rico do not pay tax on their Puerto Rico source income (Jarvis, 2008)..

All this was coupled with the rise of globalization, and various international economic agreements, such as conversion of the GATT to the World Trade Organization (WTO). Regional economic agreements began to abound. Those directly impacting upon Puerto Rico include the North American Free Trade Association (NAFTA) which has recently completed its twentieth year, the Central American Free Trade Agreement – Dominican Republic (CAFTA-DR), and the Caribbean Basin Initiative (CBI). All offer preferential entrance into the United States market for goods produced in the member nations, and/or preferential investment opportunities for U.S. investors, both of which may be viewed as in direct competition with goods produced or might well be produced in Puerto Rico. The Trans Pacific Pact (TPP) is currently awaiting U.S. approval, and it could further impact Puerto Rican productivity. Possible “twin-planting” with Haiti, in which the latter produces the lower-skilled labor, seems rather substantially dashed by natural, political, and economic disasters which have plagued that nation. Globalization, to put it mildly, has had positive effects for most of the central nations, but while it may be beneficial to some on the periphery, it has had a severe negative effect on others, and I would place Puerto Rico squarely in that latter category.

Perhaps the final nail, so to speak, is the current United States rapprochement with Cuba. With the reversal of travel and trade restrictions, a current resurgence of travel and trade is being witnessed. Cuban hotels appear to be virtually full, and U.S. air carriers are applying vigorously for slots to fly between the mainland and Cuba. Can other U.S. investors lag far behind? How will Cuban imports into the U.S. further impact negatively upon the Puerto Rican economy? Much of this remains to be determined, but clearly, it deepens Puerto Rico’s economic crisis. On top of all this is the current health crisis on the island caused by the Zika virus. At any rate, these factors, which will certainly have a heavier impact in the future, are laid upon a tourist industry which during the 2016 Fiscal Year (July-May) had an occupancy rate of only 72%, down slightly from the previous year (RFAFAA, 2016).

THE CURRENT CRISIS

The economy of Puerto Rico has continued in a downward spiral, due in large part to the above noted factors, with the additional factors of what can most certainly be described as the poor policies of the Puerto Rican insular government, added to mainland economic factors such as the downturn of the national economy during the period around 2006. This has, of course, led to an increase in island migrants to the mainland. Rodriguez notes further, again citing government sources, that between 2000-2010, some 300,000 people migrated, the largest group since the 1950s,. Citing Mario Marazza, Executive Director of the Puerto Rican Bureau of Statistics, she added “it’s mainly because of the 2006 recession that is still punishing the island’s economy” (Rodriguez, 2014).

On Christmas Eve of last year, *Caribbean Business* ran an article offering an overview of the island economy, commencing with the gloomy statement that, “[A]s 2015 comes to a close, Puerto Rico’s economy is entering the 10th year of negative or flat growth.” The article argued that 2014 “was characterized by several key events and issues that negatively affected the island’s economy and undermined any changes for growth – both short- and long term” (Carmona, 2015). Interviewing four prominent economists, the author learned that GDP for fiscal 2015 as estimated to be negative 2%, and that the announcement by the island’s governor, Alejandro Garcia Padilla, in mid-year that the island could not pay its bond obligations, led to downgrading those bonds “deeper into junk, or noninvestment grade territory.” The conclusion drawn was that without economic growth, fiscal problems cannot be resolved (Camona, 2015).

Jose A. Cabranes of *The Washington Post*, noted that the governor’s declaration that the public “debt burden” of \$72 billion of Puerto Rican public debt that the governor stated “was ‘unpayable’amounts to more than \$20,000 for every man, woman and child – or roughly 70 percent of the commonwealth’s per capita gross domestic product. It is thus no exaggeration to characterize this as the most drastic fiscal crisis in Puerto Rico’s history” (Cabranes, 2015). Economist, Jose Joaquin Villamil, added:

When an economy goes through what ours has gone through, major structural damage is ex-

perienced. Returning to a positive growth path will require not just marginal changes such as lowering labor and energy costs or improvements in the permitting process, but also major reconstruction of social, public sector and economic structures (cited in Camona, 2015).

Heidi Calero added, “Unless the government perks up and we need between \$11 billion and \$12 billion in investments annually, growth won’t be restored.” However, she added, that “if the Puerto Rico economy were to grow at 1% in real terms, it would take the island 14 years from now to return to the real GNP of 2005.....” (Camona, 2015). Finally, Prof. Carlos A. Colon de Armas indicated that while 2015 had produced both positive and negative figures, of nine key indicators, five had done less well than anticipated, and worse than in 2014, when they had also declined. In October, the unemployment rate was over 12%, and during fiscal 2015 the government collected approximately \$76 million less than the previous year, and “\$604 million less than the estimated revenues for the year” (cited in Camona, 2015).

The Huffington Post so succinctly noted at the start of this year:

Puerto Rico is trapped in a vicious cycle where the very austerity measures it has taken to meet short-term obligations to creditors – such as laying off 30,000 public sector workers and increasing its sales tax from 7 percent to 11.5 percent – have devastated its economy, depleting revenue sources and requiring even more drastic steps just to keep up with payments. One third of the money coming into Puerto Rico’s coffers annually now goes toward paying creditors. (2016)

That same article notes that the island’s overall economic status has declined by one-tenth since the 2006 mainland economic downturn, and the island now suffers from “a poverty rate of 45%.” In addition, the article concludes that “[t]he departure of 300,000 Puerto Ricans for the mainland United States in that time – including 84,000 people in 2014 alone – means that the burden of debt repayments will fall on an even smaller, poorer pool of island residents” (Marans, 2016).

Bloomberg Quick Take (2016) noted that the Sec. 936 phase-out from 1996 to 2006 led “to the loss of 80,000 jobs” and added that since that latter year, the island “economy has contracted every year except one and its poverty rate is now almost double that of Mississippi, the poorest state. The population, now about 3.5 million is shrinking and forecast to reach a 100-year low by 2050” (Kaske and Braun, 2016).

To sort of summarize the situation, the Puerto Rican Government Development Bank, at the end of 2014 declared that 41.2% of families lived below the poverty line in 2013, the unemployment rate for 2014 was 14.3%, government employees comprised 20.6% of the work force with “transportation and other public utilities employing another 4.5%, meaning that slightly over one-quarter of those employed fell into these categories (GDB, 2014). In its 2014 audited report, the Treasury Department noted that despite efforts to reduce the debt, which were having a positive effect, at least in the short-term, the statement indicates “the Commonwealth lacks sufficient funds to meet its debt payment due on July 1, 2016, and further debt payments.” It added: “[T]he 2014 Financial Statements make clear that the Commonwealth currently faces a severe fiscal and liquidity crisis, the culmination of many years of significant government deficits, a prolonged economic recession that began in 2006, high unemployment, record outmigration and high levels of debt and pension obligations.” The conclusion drawn is that “[T]he depth of our debt crisis has been extensively disclosed. Our debt is unsustainable and a broad restructuring of our debt is needed in order to restore fiscal balance and lay the groundwork for the resumption of economic growth.” The Central Intelligence Agency reported that, for 2014, it estimated public debt at 97.2% of GNP, and for 2015 at 105.4%. Even with budgetary cuts already in place, that report indicated the estimate for 2015 of an insular budget of \$8.908 billion, with expenditures of \$ 9.402 billion (CIA, 2016).

In short, in what can only be defined as a classic center-periphery [patron-client] relationship as described so clearly and accurately by dependency theory, the island is dependent mainly upon the mainland for its trade [exports 71.6%; imports 45.4% according to the GDB report noted above], over-dependence on U.S. corporations over the years for investment and employment, much due to Federal tax benefits (e.g., Sec. 936). Reduction and/or elimination of such Federal programs, migration of population to the mainland (which, thought it may well positively affect unemployment, also leads to the classic “brain-drain” loss of talent as well as loss of income and other tax revenue to the Commonwealth, and the need for the insular government to compensate for

the increased unemployment and underemployment through social service programs in almost all aspects of island life, and through increased programs of public employment and public funding.

One summary which appeared in *The Week* and reprinted in *The Fiscal Times*, concluded. in response to the query as to why the insular government ran such debt:

Because it could. For decades, Puerto Rico issued bonds to cover budget shortfalls, and investors snapped them up because the bonds are exempt from federal, state, and local taxes in all 50 states. Then in 1996 the territory hit an economic crossroads. Congress ended hefty tax breaks for U.S. manufacturers operating in Puerto Rico, and American firms began shuttering their operations on the island, causing the economy to slump. Instead of restructuring its economy, Puerto Rico doubled its debt over the next 10 years, and wall Street firms made nearly \$1 billion off the fees. Those bond sales let the territory's bloated government—which employs a quarter of the workforce – meet its budgets without laying people off. But the economy remained stagnant, and the government was soon overwhelmed by its vast debt obligations” (“Everything you.....,” 2016).

THE SHORT TERM ‘FIX’

It appeared to so many that drastic action needed to be taken, and done so quickly if Puerto Rico was not to sink into the abyss of not being able to pay what it owes and continue to function as an effective government organization. For example, “The Government Development Bank has been operating on emergency footing since April 9th. Its biggest retirement programme has just about enough funds to cover 0.7% of future obligations” (“Why Puerto Rico....., 2016).

[A] default by the Government Development Bank, which oversees the island's finances, could set off a far-reaching chain reaction. The bank has guaranteed the debts of numerous other agencies and private companies, and insured hundreds of personal mortgages. Those guarantees and insurance would presumably lose value in a default, hurting the balance sheets of any number of institutions. Analysts have warned that it could take years to sort out the resulting mess, and in the meantime, Puerto Rico would be a pariah, less and less able to protect the safety and well-being of its more than three million residents (Walsh, 2016).

However, with regard to repayment of loans, the issue seems revolve around the question as to whether the island can legally renege upon its debts, i.e., go into bankruptcy, and secondly, whether it should be able to do so. Either way, different groups would feel the financial sting! If bankruptcy could not be declared, then the residents of the island would suffer with massively reduced services provided by its government, and without doubt, a virtual inability to borrow further. If in fact bankruptcy was in the cards, a very significant loss to those who had invested in the island's bonds, and who, it might be noted, had done so at a time and under the assumption that such a declaration was not something that would seem to need to concern them when evaluating the risks of investment. As might well be envisioned, massive political pressure was exerted upon Congress by both camps in the struggle (Mahler and Confessore, 2016).

The battle over the legal possibility of the island declaring bankruptcy stems directly from Congressional legislation passed over the course of the late Nineteenth Century through the Twentieth Century. Theoretically, the issue commences with the provision of the U.S. Constitution which clearly states: “The Congress shall have the power to.....establish uniform Laws on the subject of bankruptcies throughout the United States (Art. I, Sec. 8, Cl. 4). This general provision was first specifically supplemented by the Bankruptcy Act of 1898(30 Stat. 544), also known as the Nelson Act after its Senate sponsor, defined bankruptcy and to which organizations, e.g., business enterprises, it applied. This list included “states,” and also U.S. territories such as Puerto Rico within the meaning of that term (Mihm, 2015). However, Stephen Mihm notes further that the definition survived until the revised Bankruptcy Reform Act of 1978 (92 Stat.2549). “The subset of the code that related to municipalities and public corporations like utilities better known as Chapter 9 – helpfully defined these entities as ‘a political subdivision or public agency or instrumentality of a State.’” While clarifying some points, it apparently confused others, including what the Act considered to be a state, since the law only applied to them. Efforts were made to correct the error, indeed, the entire issue came to a head with the passage of the Bankruptcy Amendments and Federal Judgeship Act of 1984 (P.L. 98-363). In that 1984

legislation, “‘state’ includes the District of Columbia and Puerto Rico except for the purposes of who may be a debtor under Chapter 9 of this title”(cited in Ferre Saduni, 2015). There is much controversy as to why Congress enacted such a provision. It is interesting to note that Matthew D. McGill, Esq., who represented the creditors in the most recent U.S. Supreme Court case (see below), posited that they include the fact that Congress has always either limited insular debt or forced the insular government to do so, that Congress had “tacitly encouraged” the purchase of Puerto Rican debt by investors throughout the mainland, and did not wish to see any future default, and finally, that there was, by that time, a significant debt acquired by the insular government. On the other hand, Christopher Landau, Esq., representing the Puerto Rican government argued that “the legal provisions were being misread, and that Congress had not really intended to shut Puerto Rico out of bankruptcy” (Walsh, 2016).

Basically, that has remained the situation until this very year. In 2014, Puerto Rico “tried to get around that exclusion by enacting its own version of a bankruptcy law (Public Corporation Debt Enforcement and Recovery Act, June 28, Public Law 71), designed for its public utilities, which account for about \$26 billion of the total debt. That attempt ran afoul of yet another provision of the code which says that only Congress can enact bankruptcy laws” (Walsh, 2016).

Meanwhile, creditors took the Commonwealth government to Federal court, arguing that only Congress and the President could enact bankruptcy legislation. The U.S. District Court in February, 2015 and the U.S. Court of Appeals in July of 2015 (805 F.3rd 322, 2015 U.S. App. LEXIS 11594 (1st Cir. P.R., 2015) ruled against the Commonwealth: “....Puerto Rico lacked the authority to pass the new law. Its core reasoning was that the point of Federal bankruptcy law is to create uniform norms across the U.S. To that end, the law pre-empts states from passing their own conflicting bankruptcy codes. Puerto Rico’s proposed Recovery Act conflicted with that uniformity, not only in its specific provisions but also in its very existence” (Feldman, 2015). In a controversial concurrence with the majority, the only Puerto Rican on the appellate court, Judge Juan Rafael Torruella del Valle, did argue that under the U.S. Constitution, bankruptcy laws should be “uniform” throughout the country. Does this mean that Puerto Rico is *not* part of the U.S.? Clearly, U.S. law does not take that position. In addition, the judge argued that there was no solid reason for Puerto Rico’s exclusion from the 1984 act, which he termed “arbitrary,” and maintained that the need for the insular government to ask Congress for legislative change represents “a colonial relationship, one which violates our Constitution and the Law of the Land as established in ratified treaties” (Feldman, 2015).

On June 13, 2016, the U.S. Supreme Court, in “Commonwealth of Puerto Rico, et al., Petitioners v. Franklin California Tax-Free Trust, et al.; Melba Acosta-Fero, et al., Petitioners v. Franklin California Tax-Free Trust, et al. (Nos. 15-233 and 15-255) (see 20016 U.S. LEXUS 3777) issued a ruling written by Justice Clarence Thomas, which held essentially that “Congress’ use of ‘who may be a debtor’ [in existing legislation] was interpreted to mean that Congress intended to exclude Puerto Rico from the gateway provision delineating who was eligible to be a debtor under Chapter 9, and thus Puerto Rico was not a state for the purposes of [that legislation] and could not perform the single function of the states under that provision.” However, Justice Thomas added that “Puerto Rico remained a state for other purposes related to Chapter 9.....and that provision barred Puerto Rico from enacting its own municipal bankruptcy scheme to restructure the debt of its insolvent public utilities companies” (LEXIS, Overview). Justice Sonia Maria Sotomayor dissented, and was joined by Justice Ruth Bader Ginsberg. Their argument essentially that the Chapter 9 provision in the Federal legislation “does, indeed, mean that Puerto Rico can’t use federal bankruptcy law to let its electrical utility go into default. At the same time, they clearly believe the same law should be interpreted to allow Puerto Rico to create its own bankruptcy laws, under which it might be able to do just that” (Feldman, 2016). Thus, the Commonwealth was denied the opportunity of utilizing bankruptcy in his economy, unless specifically granted the right by Congress. Justice Sotomayor ended her dissent in part::

Congress could step in to resolve Puerto Rico’s crisis. But, in the interim, the government and people of Puerto Rico should not have to wait for possible congressional action to avert the consequences of unreliable electricity, transportation, and safe water – consequences that members of the Executive and Legislature have described as a looming “humanitarian crisis” (LEXUS, 2016).

On May 1st, 2016, the Government Development Bank had defaulted on a \$422 million, and the insular governor, *don* Alejandro Garcia Padilla, warned of so much more to come. “The missed payment opens the door to larger and more consequential defaults on general obligation bonds, which are protected by the island’s

constitution. Puerto Rico and its agencies owe \$2 billion on July 1, including \$805 million in GOs” (Kaske, *et al.*, 2016). In a piece of positive news, and the end of June 2016, the Puerto Rico Electric Power Authority (PREPA) reached a settlement with creditors to restructure its debt, and thus eliminating the imminent default of \$415 million (Kaske, 2016)

All this leads to the last part of the short-term story. Operating in crisis mode, the U.S. government passed legislation to endeavor to at least alleviate the prevent crisis, called PROMESA – the Puerto Rico Oversight, Management, and Economic Stability Act. This occurred virtually immediately before the Governor of Puerto Rico planned to have the island default on nearly \$2 billion in debt (July 1, 2016). Originating in the House (H.R. 5278), after considerable compromise and bi-partisan cooperation, the bill passed 297 to 127, and later passed the Senate 68-30. Reuters reported that this “bill provides for a stay, or halt, to any litigation brought against the Puerto Rican government and its debt issuing agencies that is retroactive to December. This provides breathing room for the board to start the process of restructuring and oversee a sustainable budget process”(Cornwell, 2016). Specifically, its “responsibilities include: approving the governor’s fiscal plan; approving annual budgets; enforcing budgets and ordering any necessary spending reductions; and reviewing laws, contracts, rules, regulations, or executive orders for compliance with the fiscal plan.” The bill establishes procedures and requirements for Puerto Rico to restructure its debt and designates the board as the representative of the debtor. The board may instigate a procedure for debt restructuring and submit or modify a plan of adjustment (Congress, 2016).

This bill was designed to create an oversight board designed to restructure Puerto Rico’s debt, and will grant the board the ability to override decisions made by the Puerto Rican government. It may also make suggestions to the insular government concerning pretty much any aspect of economic policy. It will have a membership of seven, four Republicans and the rest Democrats appointed by the President by September of this year. The good news is that clearly such action may well assist the island in restructuring and eventually eliminating debt, which at this point, is clearly no small matter. However, the Council on Hemispheric Affairs, among others, has noted a number of objections to the proposal. The ring of imperialism is in the air as a significant aspect of the future of the Puerto Rican economy is wrested from the hands of its residents. It cites New Jersey Democratic Senator Bob Menendez, who termed the bill, called PROMESA, “blatant neo-colonialism” (Fagan 2016). In addition, author Nelson A. Denis, as reported by COHA, expresses the concern that though the Board may only “suggest” in other areas of the economy, what might be the results of its refusal to accept or cooperate with such suggestions? What power might the Board, or for that matter, Congress exert? (Fagan, 2016). Writing as bill passage was still in process, Evan Fagan of COHA also indicated that debtors might well be paid before money would be extended to cover island pensioners. He, in turn, cited Nick Brown of Reuters, who had indicated that government agencies since 2014 should have paid \$367.6 million to pension funds, but by April of this year, had only paid \$22.7 million. Other issues included environmental concerns particularly over land use in Viequez Island, and the reduction of the minimum wage from the current uniform Federal rate for young workers for a number of years. Citing several sources, Fagan notes that while this would obviously slash labor costs for some businesses and make the island more attractive to them, it would also adversely affect those Puerto Ricans already in poverty, as would a failure to address the major funding crisis in health care, exacerbated by a possible 75% reduction in Federal funding. This, at a time when emigration causes loss of local revenue, and leaves the insular system burdened with a greater percentage of children and the elderly (Fagen, 2016). Whatever the pros and cons, the bill was signed by President Obama on June 30th (remember, default would have occurred on July 1).

AND OF THE FUTURE

This is clearly not the conclusion of the drama. Massive redrawing of not merely the fiscal structure of the island, but of its entire economy, and perhaps its very colonial relationship with the United States needs to be reconsidered. Restructured debt is very helpful as a stop-gap, but there is a desperate need for the island to completely transform its economy for the betterment of its citizenry. Whatever the future, on June 30, under the auspices of Puerto Rico’s Public Law 21, the “[G]overnor issued two executive orders.....that declare a moratorium on the payment of the Commonwealth’s debt and the debt of certain other instrumentalities, implement various cash and liquidity preservation measures and protect the Commonwealth and its

instrumentalities from the exercise of creditor remedies as the commonwealth addresses its fiscal and economic crisis” (GDB, 2016). The next day, the provisions of PROMESA kicked in!

PROMESA will not pacify the people of Puerto Rico as there are still many issues the bill does not adequately deal with or address at all. It will, if successful, keep schools, hospitals, and emergency response programs functioning while also paying off the country’s debt of \$2 billion USD through economic restructuring. However, if there is to be real change and improvement in the lives of Puerto Ricans, more legislation must follow PROMESA.....PROMESA cannot continue to leave the island To fend for itself after its debt is paid. Our citizens deserve more (Fagan, 2016).

Nevertheless, on July 1, the Government Development Bank issued a release which ended, “[T]oday, with these measures and PROMESA’S federal restructuring authority in place, the Commonwealth is finally in a position to return to prosperity” (GDB, July 1, 2016). What will result, only time will tell!

ENDNOTE

¹See, for example, with Samuel C. Sprunk, “Puerto Rico and the Coming Elections/Status Referendum: Real Change or More of the Same and its Impact on Regional and Global Trade,” New York, 2012); “Can Small Island Agriculture Survive: A Case Study of Puerto Rico (Kruger, 2011); “with Patrick Flanagan, “The Economic something of Puerto Rico: The Need for Radical Change” (Madrid, 2008); “Puerto Rico and the Northern Mariana Islands: Models of Political and Economic Development in Associated States (Rome, 2002).

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Nota bene: Bracketed material in quotations added by this author.

COMPLEXITY AND ENTREPRENEURSHIP

Auke R. Leen
Leiden University, The Netherlands

ABSTRACT

We do live in a complex economic world: the emergence of the market order is identified with complexity. Our world is characterized by our incurable ignorance of its workings. Neither the government nor the entrepreneur has the answer to the problem of how to stir the market. The question is: "How to control without a controller"? For the answer, we turn to the impersonal market mechanism of spontaneous order. The idea of the emergence of a complex order out of a decentralized but self-organizing economy sheds light on the proper role of the government and the entrepreneur. In short, we do look at the implications of the notion of spontaneous order of societal development for politics and economics?

Keywords: complexity; fundamental ignorance; evolution and spontaneous order; entrepreneurship

INTRODUCTION

People are worried no one is in control in the present-day society especially in the economic (financial) world. Indeed, in a complex world no one, not even government, is in control and fundamentally also can control the complex economic world we do live in. To be even worse, the economy also has no goals. Though of course there are results such as a growth in wealth and enhanced freedom. Luckily, however, in a market economy, order arises spontaneously without central direction. The two questions we do look at are the following. First, why is a society far too complex to be understood and controlled? In other words, why is it impossible for a government or anyone else to guide us to predetermined goals? Second, what are the proper roles of the government and the entrepreneurs in such a complex world?

We do start with the reasons why we do live in a world of complexity and incurable ignorance. In a sense the highest wisdom we can achieve is "that I do not think I know what I do not know" as was said by Socrates (cited by Boettke, 2002). Next we do look at the answer the spontaneous order, the impersonal market mechanism, gives us. We do record the history of complex systems and the role and (im) possibilities of science in general and statistics in particular to get a grip on complexity. We do end with a look at the proper roles of the government and entrepreneurs in coping with our fundamental ignorance.

COMPLEXITY

Complexity research, in as well the natural as the social sciences, "studies how the interacting elements in a system create overall patterns, and how these overall patterns in turn cause the interacting elements to change or adapt" (Arthur, 2013). Several theories deal with complex phenomena such as general systems theory, cybernetics and chaos theory. Spontaneous order exists throughout the cosmos though no one seems to be able to agree on exactly what that implies (Tucker, 1996). There is even no agreed-upon definition of such a complex term as complexity (Rosser, 1999; cp. Foster, 2005). Complexity research looks at the evolution of human culture and the adaptive learning that goes on within large organizations. Biological and economic systems do work in the same way: the Darwinian metaphor of natural selection and the Adam Smith metaphor of "the invisible hand" fit together. The economy has the properties of a living organism---it runs itself. Friedrich A. Hayek of the Austrian school of economics popularized in economics the term spontaneous order in his 1960

classic, *The Constitution of Liberty* (Buros & McQuade, 2015). He tried to convince people economic planning is impossible. The term, Hayek borrowed, from the Scottish Enlightenment in general and Smith in particular. This, however, has not prevented some economists, especially of the Santa Fe Institute in the U.S., an interdisciplinary center focused on the study of complex adaptive systems, from turning complexity into a rationale for government intervention (Tucker, 1996). That, however, is directly opposed to the free-market conclusions of Austrian economics. In general, however, Austrian economics in general and Hayek in particular are at the cutting edge of complexity theory (Koppl, 2006).

We do start with the two main reasons why our economic order is complex and look at the, nevertheless, resulting order and the science of complexity economics.

Human Diversity, Complex Production and Real Choice

First, it is an open door, but still important to act accordingly in science, to say people are diverse. Just think of all the differences in character, experiences, goals, and wants. Or, more concrete, just think of all their different wishes for clothing: even in China people do not dress in the Mao suits of earlier days. If this is the situation no simple social system fits. A second reason is the complicated production system we do have. The economy is based on an ever-widening labor specialization. All the necessary decisions have to be coordinated in time and space (Lemieux, 2011); dispersed information has to be used to decide what and how to produce. To concentrate all scientific, local and tacit knowledge is impossible. In sum, effective production and the efficient satisfaction of consumer wants needs the coordination of billions of persons and their plans, expectations and knowledge.

Most importantly, real choices are creative. We can come up with something new (Vanberg & Buchanan, 2001). Besides, at the moment of choice we can decide to choose A or B, an often unpredictable choice. To pose, as just said, all knowledge, though dispersed, is available is already saying too much.

The Resulting Order: the Power of Spontaneous Ordering Principles

In a complex order an understanding of the system is not possible through a simple reduction to its component elements. Results are impossible to predict and control. Happily, however, the market organizes itself: the market is complex but self-ordering. This happens notwithstanding the non-linear dynamics in the economy because of various complex feedbacks and mutually self-reinforcing interactions. The recursive loop connects with complexity. Aggregate behavior cannot be understood without recognizing the deep interactions (networks) that occur between actors within an aggregate. Market activities are coordinated by prices. Prices, generated by voluntary decisions based on private property rights, transmit the relevant information to those who need to know. The result is an order without the need of a central planner or a known result. It is a spontaneous order: “the result of human action but not of human design” (Hayek, 1982). The market order can be compared with the order that arises if people do decide to go shopping. It cannot be compared with the order that arises as soldiers do march in a parade. For the latter there is a planner from above. In the first case, everyone is making his or her own choices. No central planner can know, who and in what shop someone will be at a certain moment in time. Someone can be delayed because he meets a friend or for whatever reason (Holcombe, 2014). In short, market order is the result of individuals observing certain rules and adjusting to their specific situation.

In sum, there is a fundamental lack of knowledge of all the specific facts that do lead to a market order but on the functioning off we do depend. “The curious task of economics is to demonstrate to men how little they really know about what they imagine they can design” (Hayek, 1988). Fortunately, a decentralized market makes it unnecessary for anyone to know everything about the entire system. The labor specialization on the market can exist because we do react on the simple impersonal price signals coordinating all our activities. We adapt to the many facts of which we do not know the existence (Hayek, 1978).

Complexity Economics

I look at complexity from the Austrian economics point of view in general and Hayek’s in particular. This since, especially Hayek in his later work did concentrate on the evolution of self-maintaining complex structures (Hayek, 1982). The similarities between the Austrians and complexity economics can be listed by the acronym

BRICE. It stands for **B**ounded rationality (the limits to knowledge due to logical and computational limits), **R**ule following (the way our mind and agents do operate in the economy), **I**nstitutions (as necessary parts of the evolution of social systems), **C**ognition (an understanding of understanding) and **E**volution (evolution as a metaphor for complex systems) (Koppl, 2006, cp. Rosser, 2013). Next there are similarities between Hayek and complexity theory in the use of uncertainty and the emergence of patterns without central intervention: no macroeconomic management is needed. Austrian economics can be summarized with the illuminating epithet of the-economics-of-time-and-ignorance (Koppl, 2006). The twin concepts of a spontaneous order and evolution are for Hayek the main tools for understanding complexity (Hayek, 1982).

Complexity economics is, given the just-said, limited to give “explanations of the principle” when dealing with complex social phenomena (Caldwell, 2000). Complexity economics

“sees the economy not as a system in equilibrium but as one in motion, perpetually ‘computing’ itself--perpetually constructing itself anew. Where equilibrium economics emphasizes order, determinacy, deduction, and stasis, this new framework emphasizes contingency, indeterminacy, sense-making, and openness to change” (Arthur, 2013).

ON THE HISTORY OF COMPLEX SYSTEMS

How has the economy developed itself? It has developed by an evolutionary process of successes and failures by aping successful adaptations. We have started from small tribes with a sort of central leadership (Hayek, 1982). Later on sovereign nations did develop. Whatever was the form of the society, till the end of the eighteenth century there was not much progress. An English laborer from that time was not in a much better position than a Roman slave. Thought he was better off than his French and German fellow laborer. The idea the situation for everyone could improve did not exist. At the most an elite could get a better life (Nasar 2011).

To leave this endless cycle of poverty behind the gradual rise of the market was necessary. The future is not the past but depends on the creative, real choices of individuals who are being confronted with fundamental uncertainty. The most important characteristic of the market is it is based on an extended specialization of the production process. The growth in labor productivity, that accompanies the specialization, is the cause of the increasing wealth. As Paul Krugman (1990) writes:

“Productivity isn’t everything, but in the long run it is almost everything. A country’s ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker”.

The result is that everyone, because of specialization, has to exchange what is produced. The discovery of exchange is one of the most fruitful discoveries in human history. Besides, because wishes among humans do differ peaceful exchange, in which both parties of the trade do gain, is possible---we do not all want to have the same goods (Hayek, 1982). There is no fight of all against all for the scarce goods as Thomas Hobbes in the midst of the seventeenth century still thought necessary. Consequently Hobbes’ all powerful Leviathan is not needed to keep the peace. An order establishes itself in which everyone has the freedom to go for his or her personal goals? A system, however, we cannot understand because of its complexity: indeed, everything depends upon everything else. Of course we can pretend “as if” all but, e.g., two variables are constant. This is the standard practice in microeconomic analysis: Alfred Marshall’s well-known one-thing-at-a-time method. To explicate, however, what we take for constant, the all else being equal, is so complicated that “after the statement of which [the *ceteris-paribus*] the theory would no longer be simple” (Hayek, 1967).

To sum up, Smith’s discovery at the end of the eighteenth century has given way to our modern market economy. It was his insight that by specialization we can increase production and exchange the goods of which we do have too much---and it does not become a chaos: wealth increases (Skousen, 2007). People can live together in peace and serve each other in exchange without agreeing on the ends. In a society we do not have to make an agreed-on list of priorities. This is a great advantage since it gives everyone the freedom to choose his or her own goals. Smith’s discovery has been called, by George Stigler, the “crown jewel of economics” and its

only real substantive proposition (Stigler, 1976). Prices, in a system of competition, do coordinate the individual actions and result in an evolving spontaneous order.

THE ROLE OF SCIENCE

In the relative simple natural sciences, two or three variables are often enough to make predictions and control possible. For the complex social world, however, this is impossible. There are simply too many variables (Hayek, 1967). Complex phenomena do involve a large number of elements. Besides, the character of the elements' interactions and the resulting patterns are fundamental (Gaus, 2006). What we can do is to describe the evolutionary process. We can give an explanation of the principle: generate pattern predictions telling us that in certain general conditions a pattern of a certain kind will appear. This however is enough to tell us what the government and entrepreneur can and cannot do. Of course there is nothing contradictory about a mix of knowledge of principle and fundamental ignorance of what an optimal policy is.

But first, why cannot we explain complexity with the help of statistics as is done in macro economic models? The reason is that in statistics we refrain from all for the market process relevant factors and relations between them (Hayek, 1967). In the models for instance we do look at the general price level, but that figure has no influence on the market process. Suppose we do have a situation of deflation. That does not mean all prices go down in like manner. Some prices go up and others go down and prices react to each other. However, those are precisely the things that do influence the market process. A change in the price level per se tells us nothing about a change in these things. Above all, entrepreneurs do not take prices as data. Instead they do try to sell their products at more favored prices. "[T]he idea of a price that does not reflect and express entrepreneurial judgment and hunch is virtually a contradiction in terms" (Kirzner 1988). This is also the reason prices emergent from the interactions within the market order can not be duplicated by central planning. For our knowledge of the market process just the number of entrepreneurs is also irrelevant. For the last the internal structure is of relevance: some producers compete with each other with substitutes others, however, do produce complementary goods. This is all very different than to measure the latest total number of entrepreneurs. In economics we do measure without the possibility to predict (Koppl, 2010). As opposed to the less complex natural sciences where we can measure in order to predict and control. As Hayek (1967) said:

"No economist has yet succeeded in making a fortune by buying or selling commodities on the basis of his scientific prediction of future prices (even though some may have done so by selling such predictions)".

THE WAY TO COPE WITH OUR IGNORANCE

In the market unintended consequences are paramount. Individuals looking after their own goals cannot know what will be the combined result of their actions. Order is created in a process of competition and success decides who the winner is. Decentralized decision-making has the result we do use more knowledge than a central planner can ever do. The market exploits knowledge the best. The market process is a "dynamic entrepreneurial-competitive discovery process" (Kirzner, 1988). What drives the market is entrepreneurship; what characterizes it is competition; and the several steps in the process are discoveries. So what are the roles of the government and the entrepreneur in the market process?

The Government

An economy can be described by the structure, the rules within which individuals do choose. If we are not satisfied with the results we should focus primarily at the structure of the economy. Attempts to change the results of the market do depend on the fundamental misconception we do understand the complex economic world. In this the Austrians are diametrically opposed to some conclusions, e.g., of lock-in models, of complexity theory (cp. Barbieri, 2013). "Policy conclusions identified by complexity theorists as emerging from their insights are primarily interventionist" (Montgomery, 1999). If people do say the market, capitalism, fails we do not have to change the process of free exchanges within a given structure but the structure within we do has to be changed. The rule of law, several property, competition and a stable currency are the most important

rules and institutions that has brought us wealth, individual freedom and peace (Buchanan, 2001). The ethics of the market has also little to do with solidarity as it is practiced in small societies, e.g., a tribe. We no longer live in a world in which everyone knows everyone else personally and also knows the wants of everybody else. On the impersonal market we do behave ethically if we have acted according to the rules of the market and did not cheat. We cannot go after the wants and needs of all other people.

In short, the government has to set the rules of the market and provide for the referee. This is not an easy task. For James Buchanan, e.g., the crisis of 2008 is mainly the result of the government's lack in stating the rules for the use of new financial products.

Why is the role of the government essential in stating the market rules and playing the role of referee? Can the market not create its own rules? The reason is the rules do have the characteristics of a collective good. The market gives us individual goods. Goods that can be bought and sold; people can be excluded from consumption if they do not pay for them. In principle, buyers and sellers are confronted with all the advantages and disadvantages of the exchange. This is not the case, however, for collective goods. The rules of the market order are for everyone and they do profit of them. People cannot be excluded from consumption. No producer, also, sees any profit in producing them (Vanberg, 1981). No doubt free riders will be there (Buchanan, 2011). To make the rules of the market order, or what Hayek (1982) calls the catallaxy, we do need the government.

Besides, the results based on central planning are dismal. Planning based on our present knowledge, as possessed by the government, does not bring us much farther than we already know. To stimulate demand, in fiscal policy, the government increases its budget. Since the time of Keynes, however, the part of the total government spending in the national product had already been doubled; Keynes has been put upon Keynes---and still it is not enough. In monetary policy, at least in Europe, one cut in the interest rate follows upon the other. It now becomes clear this cannot be done without paying a price. And even if the government keeps its spending in limits, regulation is still all over. In general the creativity in government is more-of-the-same. As a rule, however, by government intervention only some time can be gained. This time is best to be used for strengthening the supply side of the economy. The only policy that really generates growth is to increase labor productivity: to give people the freedom to start doing business.

The Entrepreneur

For the Austrian Israel Kirzner one of the failures of traditional neoclassical (equilibrium) analysis is it assumes equilibrium is actually brought about. The market economy *as an aggregation*, neither maximizes nor minimizes anything. It simply allows participants to pursue that which they value, "subject to the preferences and endowments of others, and within the constraints of general 'rules of the game' that allow, and provide incentive for, individuals to try out new ways of doing things" (Buchanan & Vanberg, 1991). The real problem for modern Austrians, and the way to appreciate the power of spontaneous ordering principles, is to describe the possible realization of a never to be attained equilibrium as the result of "the systematic way in which plan revisions are made as a consequence of the disappointment of earlier plans" (Kirzner, 1962). So how to encourage the elimination of true error in the individual decentralized decisions (Kirzner, 1988). Ludwig von Mises, the founder of modern Austrian economics, described the individual decision unit not only as maximizing but also as finding out the relevant ends-means relationship. This implies that known uncertainty of "given" means and ends is to be distinguished from fundamental uncertainty as far as what are the means and ends in the first place. Fundamental ignorance and hence an ultimate error stands against a situation of given alternatives involving risk (of which we do know the probability distribution of incomes attached to each alternative). For the Austrian, entrepreneurship is defined as the very perception of the end-means framework within which allocation and economizing is to take place (Kirzner, 1973). For the neoclassical, on the other hand, it is defined as combining individual-specific ability with an up-front investment to generate an uncertain return (Gentry and Hubbard, 2000).

The Austrians opened the way for incorporating learning into our understanding of the market process. The logic of choice must be complimented with an examination of how learning takes place within alternative institutional settings (Boettke, 2002). Hayek described the market process as one of learning by discovery---and emphatically not as the result of rational planning. Endogenous change in the ends-means relationship, says

Kirzner (1973), is possible with the entrepreneurial element in each individual market participant: alertness. Alertness is the “propensity [...] toward the fresh goals and the discovery of hitherto unknown resources”. A disequilibrium situation points to market ignorance. From it emerge profitable opportunities 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 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” (Kirzner, 1985). In short, choice is neither the fully expected result of deliberate plans, nor the fortuitous expression of pure luck (Kirzner, 1989); entrepreneurial activity undoubtedly involves uncertainty and the bearing of risk.

CONCLUSION

Because of the market’s complexity, as the result of the division of labor as the source of wealth, planning is impossible. Nobody possesses all the present and future knowledge. Besides, what would be left of real human choices? Complexity theory explains how a complex order spontaneously emerges from the interaction of simple elements. A lack of knowledge about specific results is to be treated as an inherent feature of the market and not as a temporary problem of a lack of knowledge. However, some ideas look so respectable they can fail nine out of ten and still be used the tenth time. Other ideas look so improbably that though they do succeed nine times after each other still the tenth time are not trusted (Sowell, 2004). Government policy to steer the economy obviously belongs to the first class of ideas and the impersonal market process to the second. In short, as far as government policy goes we must distinguish between what sounds good and what works.

Also, why is the government chosen nine out of ten to stir the economy? Is it our fatal conceit: we pretend to know everything (Hayek, 1988)? In other words, is it our belief that just as in the natural sciences in the social sciences, at least in the future, we will succeed to predict and control. All we do need are better macro models and more powerful computers to collect all the necessary information. The market order, however, is far too complex to be understood and stirred. At the center of the market process are the evolutionary forces of spontaneous order. Hayek (1967) speaks about “the twin ideas of evolution and spontaneous order” (cp. Gaus, 2006). The social sciences are opposed to the relatively simple world of the natural sciences. Human beings are no stones who without purpose roll down a hill, or, as Smith said, as pieces on a chessboard:

“[I]n the great chess-board of human society, every single piece has a principle of motion of its own, altogether different from that which the legislature might chose to impress upon it. If those two principles coincide and act in the same direction, the game of human society will go on easily and harmoniously, and is very likely to be happy and successful. If they are opposite or different, the game will go on miserably, and the society must be at all times in the highest degree of disorder” (Smith, 1759).

In short, even a politician who without prejudice serves the general interest and possesses all the knowledge in the world has less creativity than we all together possess. The only government policy that works is to give everyone, and the entrepreneur in particular as the driver of the market process, his or her freedom. If we really want to know how society works we have to study the characteristics of our ignorance and its limits. The great problem of economics is how we can profit of knowledge that only exists in a dispersed form as the, sometimes even conflicting, ideas of all participants (Hayek, 1960). Complexity theory hints at the important role of entrepreneurship in driving the spontaneous evolutionary process of the economy.

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MONITORING AND EVALUATING THE PERFORMANCE OF SCIENCE AND TECHNOLOGY PARKS: AN ACTION-RESEARCH PROJECT

Rafael Magalhães Lyra and Maria Fatima Ludovico de Almeida
Pontifical Catholic University of Rio de Janeiro, Brazil

ABSTRACT

This paper aims to propose a conceptual model for monitoring and evaluating (ME) the performance of Science and Technology Parks (STPs) as the starting point of an action-research project in Brazil. The expected results from the first phase of this project are customized measurement frameworks to STP groups, including performance indicators and metrics, instead of having a generic system of ME. The development of this model took into account STPs' business models and value propositions, objectives and goals, development stage, stakeholder's commitment, and respective governance structures. The paper is structured as follows: firstly, we conceptualize STPs to put into perspective the complexity and multidimensionality of evaluating their performance. In Section 2, we review the literature associated with STPs' performance assessment, covering the period of 1996-2016 and focusing on the dimensions/variables and methods that have been considered in previous works. Further, we explore the typologies of STPs that have been proposed by academicians and practitioners to help the classification of STPs. In Section 3, we describe the methodology of the action-research project involving 20 Brazilian STPs, which will participate in an Executive Program for STP Managers sponsored by the Brazilian Association of Science Parks and Business Incubators (Anprotec). Then, Section 4 presents the conceptual model itself describing the blocks it is composed. Finally, Section 5 summarizes the concluding remarks and recommendations for the next stages of the action-research project.

Keywords: Science and technology parks; STPs; monitoring and evaluation; performance indicators; action-research.

INTRODUCTION

Science and Technology Parks (STPs) play a crucial role in creating an eco-system to promote innovation, new businesses at the local level, transfer of technologies, cooperation with the industry, impacting the development of knowledge economy (Allen, 2007; Ratinho & Henriques, 2010; European Commission, 2013; Albahari *et al.*, 2013; Unesco, 2016). Magalhães & Zouain, 2008).

The official definition divulged by the International Association of Science Parks (IASP, 2002) goes as follows:

“A science park is an organization managed by specialized professionals, whose main aim is to increase the wealth of its community by promoting the culture of innovation and the competitiveness of its associated businesses and knowledge-based institutions. To enable these goals to be met, a science park stimulates and manages the flow of knowledge and technology amongst universities, R&D institutions, companies and markets; it facilitates the creation and growth of innovation-based companies through incubation and spin-off processes and provides other value-added services together with high-quality space and facilities”.

From this definition, Nauwelaers *et al.* (2014) deployed five key elements that can characterise STPs: (i) a localised economic development goal; (ii) a focus on fostering science-industry relationships; (iii) a priority placed on innovative and technology-based activities; (iv) the provision of value-added services to companies;

(v) a property-based initiative. They argue that the difference in priority amongst these elements in STPs' design and operation generates a wide diversity in their models.

In discussing the effectiveness of the STPs, Motohashi (2013) points out that the most important factors to be considered are the geographical proximity to the university, which has been effectively utilized to foster cooperation (Vedovello, 1997; Rodeiro-Pazos & Calvo-Babio, 2012), and the effect of the various services provided by the incubated firms within the STP. Regarding cooperation with universities, he emphasizes the efforts that should be made to incorporate university technologies into industry-academia collaborations. Secondly, he suggests that the cooperation with the university within a STP can involve a wide range of other activities such as the use of university research facilities, the use of university students as interns and the recruitment of university graduates.

Phan *et al.* (2005) argue that STPs' success is a particularly problematical measure given the different objectives of the various types of science parks and incubators. In their words, "there is, therefore, need to take into account the interaction between objectives and the nature of performance. Additionally, need to undertake further explication on the nature of governance and incentives for science parks and incubators" (Phan *et al.*, 2005, p. 167). As a matter of fact, a STP model can be considered a complex interaction of multiple factors of value, which enhance the park's capacity to achieve their goals and objectives. The main factors include governance and organization; knowledge creation, due to close links to universities, research institutes, public and private firms; value added services; attractive environment for tenant companies; creation of start-ups, spin-offs from universities or independent inventors, or also from resident companies; territorial influence in regional development public policies; and networking (Hogan, 1996; Phan *et al.*, 2005; Allen, 2007; Wasim, 2014; Nauwelaers *et al.*, 2014; Vedovello *et al.*, 2006; Wessner, 2009).

From our perspective, it is essential to understand the business model and value propositions of each STP and then evaluate its performance *vis-à-vis* the established objectives and goals, adopting a set of indicators. Additionally, we consider that these indicators must reflect specificities of the STP's development level, stakeholders' commitment, and governance structure. These aspects reinforce the need for a structural contingency perspective that associates the different types of STPs with diverse institutional circumstances and roles (Donaldson, 2001). Thus, we argue that a conceptual model which generates measurement frameworks customized to groups of STPs – with common goals and characteristics – should be in best interest of managers and policy makers. The previous discussions lead to the following central research question, which will guide the whole development of an action-research project covering 20 STPs in Brazil:

"How to monitor and evaluate the performance of Science and Technology Parks (STPs), considering their business models and value propositions, objectives and goals, development stage, stakeholders' commitment, and respective governance structures?"

As an attempt to meet this challenge, this paper proposes a conceptual model as the starting point of an action-research project in Brazil. The expected results from the first phase of this project are customized measurement frameworks to STP groups, including performance indicators and metrics, instead of having a generic system of monitoring and evaluation. The development of this model took into account STPs' business models and value propositions, objectives and goals, development stage, stakeholder's commitment, and respective governance structures. The model distinguishes from the existing systems reported in the literature, because it will allow decision-makers to measure and compare the performance of STPs belonging to a particular group and then prioritize actions which will add the most value to their business and programs, individually.

The paper is structured as follows: firstly, we conceptualize STPs to put into perspective the complexity and multidimensionality of evaluating their performance. In Section 2, we review the literature associated with STPs' performance assessment, covering the period of 1996-2016 and focusing on the dimensions/variables and methods that have been considered in previous works. Further, we explore the typologies of STPs that have been proposed by academicians and practitioners to help the classification of STPs. In Section 3, we describe the methodology of the action-research project involving 20 Brazilian STPs, which will participate in an Executive Program for STP Managers sponsored by the Brazilian Association of Science Parks and Business Incubators (Anprotec). Then, Section 4 presents the conceptual model itself describing the blocks it is composed. Finally, Section 5 summarizes the concluding remarks and recommendations for the next stages of the action-research project.

THEORETICAL BACKGROUND

The theoretical background encompasses the following themes: (i) STPs' performance evaluation, focusing on the methods adopted and analytical grids that have been considered in previous works; and (ii) typologies of STPs.

Performance Evaluation of Science and Technology Parks

A systematic literature search was performed on peer-reviewed articles that were published between January 1996 and July 2016. Some attempts have been detailed below. Guy (1996) presented a comprehensive work that suggests approaches and checklists of potential use to the evaluation of a STP's performance rather than rules and rigid procedures for carrying them out. He proposed a methodology encompassing four stages, as follows: (i) understanding the context (this involves building up a composite picture of the historical, spatial and social context in which the STP is located); (ii) developing an evaluation strategy (this is a focusing stage based on factors such as the timing of the evaluation); (iii) specifying evaluation tactics (this involves careful specification of the evaluation system and its parameters, i.e. the type and nature of the STP to be evaluated; its relationship to the broader environment; the variables which describe its behavior; and the indicators which can be used to measure performance); (iv) establishing an operational agenda (once the evaluation strategy and tactics have been established, plans have to be formulated for the conduct and timing of the evaluation; for the nature, content and timing of deliverables; and for the eventual utilization of the evaluation results and the initiation of follow-on actions).

In his paper "Evaluation of Science and Technology Parks: The Measurement of Success", Hogan (1996) used a simple systems approach to classifying five key variables (input; structures; processes; outputs; and impacts) and enumerating under each of these variables a range of specific indicators. He then focused on the sets of input, output and impact indicators most relevant to the issue of 'success' and defined the necessary data requirements. Staton (1996) described how a technique for building a logical framework of programs could be applied beneficially at various stages in the design process of an evaluation system addressed to STPs. The technique is particularly useful as means of developing a shared understanding of the objectives of all the major stakeholders in the STP, considered a vital precursor to the establishment of relevant evaluation themes. According to Staton, this technique can be profitably applied to some other points in the development life-cycles of parks. The UKSPA survey by Angle Technology (2003) identified two dimensions which need to be taken into account when comparing STPs' impact and performance: (i) the economic performance of tenant firms; and (ii) the innovation and technology commercialization performance of their tenant firms. Economic performance was measured by the following indicators: (i) the companies' employees and job growth; (ii) turnover and revenue; (iii) access to finance. In turn, the innovation and technology commercialization performance was assessed using the indicators as follows: (i) new products launched; (ii) new services launched; (iii) patent applications; (iv) proportion of qualified scientists and engineers; and (v) intensity of investment in R&D as a percentage of turnover. Bigliardi *et al.* (2006) presented a sound and theory-grounded methodological framework to STPs' performance measurement, in the form of a subjective conceptual model and some practical suggestions useful for the design and the implementation of the system. Their major results were that the evaluation criteria should be aligned with STP mission, major stakeholders commitment, regional economic conditions, legal forms, nature of the scientific competence base available within research centers and STP's life-cycle stages. However, their proposed assessment methodology can be viewed as a conceptually subjective assessment model, which lacks objectively quantitative assessment. Monck & Peters (2009) discussed the benefits and problems associated with the evaluation of science and technology parks and proposed a structured approach to measuring and assess STPs' impacts. They introduced an assessment method that contains details and an overall evaluation of main inputs and outputs of the STPs' activities. This method connects the impacts of STPs to the analysis of the challenges and problems they confront. The model also offers detailed information about evaluating the final impact of STPs. They applied such theoretical impact evaluation framework to a specific case of Tamar Science Park, in Plymouth, UK. Dabrowska (2011) gives a general overview of the literature associated with the evaluation of STPs and summarizes outcomes of the 'Workshop on Science Parks' Success' held in Manchester in 2010. Based on the literature, outcomes of the Workshop as well as post-Workshop analysis and comments, she proposed a matrix of key performance indicators, focusing on measuring

the success of third generation STPs, as characterized by Allen (2007). The proposed matrix of indicators was based on the Balanced Scorecard approach (Kaplan and Norton, 1996; 2004) and integrated five perspectives: (i) commercial; (ii) shareholder's perspective; (iii) owner's perspective; (iv) brand and reputation; and (v) internal business processes. In particular, she details a long list of indicators encompassing almost each activity a STP might perform.

Also based on Balanced Scorecard methodology, Hemati & Mardami (2012) proposed a performance appraisal system for improving STPs productivity and demonstrated its applicability through a case study in Semnan Technology and Science Park, in Iran. For a better estimation of STPs' performance, Andreevna (2013) also used Balanced Scorecard, considering two roles of a given STP: (i) as the center of an innovative cluster; and (ii) as a commercial organization. She argues that this approach adapted to STPs contexts allows considering all features of integrative elements of an innovative infrastructure and offers affordable decision for their activity improvement. She presented two lists of key performance indicators, corresponding to each of the mentioned roles, classifying them into the four original perspectives of the BSC methodology (Kaplan & Norton, 1996; 2004). Wang *et al.* (2014) presented a structural evaluation methodology to link key performance indicators (KPIs) into the strategy map of the Balanced Scorecard (BSC) for Chinese STPs. They established the visualized strategy map with the logical links to improve the STPs' performance. Corresponding to the four BSC perspectives (finance, customer, internal process and employee learning and growth), the KPIs for STPs were selected from the literature review. The application for Zhongguancun Science Park (ZSP) was provided as an example. According to the authors, the BSC approach is an objective and feasible way to construct strategy maps for Chinese STPs, based on the consideration of the intricate causal relationships among KPIs, and the analysis of the important strategic improvement paths and proposes the model of assessment of emphasizing the processes rather than outcomes. Nosratabadi *et al.* (2011) designed a fuzzy expert system to evaluate a high number of alternatives with a high number of criteria. For this purpose, the targets and the goals for designing the fuzzy expert system were defined and a numerical example focusing on four STPs demonstrated the applicability of the purposed system. Kbar & Ally (2015) procedure for measuring the effectiveness of Riyadh Techno Valley (RTV) in Saudi Arabia using a set of comprehensive and well known multi-criteria performance indicators. The key performance indicators (KPI) have been identified to align with the 4th generation STPs and were grouped according to four functions, as follows: R&D, business, management, and infrastructure. These KPIs were associated with the main components or activities of these groups. According to Kbar & Ally, the optimum performance value of a STP would be estimated according to survey instrument given to specialists for determining the weight of each KPI. This procedure allows managers to compare the results of the survey to the optimum value, to identify major gaps, and propose recommendations for improvement (operational agenda). Ferrara, Lamperti & Mavilia (2016) exploit a new dataset on Italian Science Parks to provide a pilot study towards the evaluation of STPs that accounts for the endogenous preferences of multiple stakeholders. In particular, they apply Choquet integral based Multi-Attribute Value Theory to elicit stakeholders' preferences on different dimensions of STPs' performances. As the main result, they offer a global index allowing to rank the Italian STPs. According to the authors, "this tool can be used to support the decision-making process of multiple stakeholders looking for best (or worst) performers and allows to account both for subjective nature of the evaluation process and the interactions among decision attributes" (Ferrara, Lamperti & Mavilia, 2016, p.717). Table 1 summarizes the evaluation models and systems reviewed, highlighting the evaluation methods and the analytical grids adopted in these previous works.

Table 1: Models for monitoring and evaluating the performance of STPs

Authors	Methodological approach	Evaluation method	Dimensions/ Variables
Guy (1996)	Ex-ante, mid-term, ex-post.	Case study. Definition of an operational agenda for performance improvement.	Resources; inputs; structure variables; process variables; output variables; and impact variables characterizing the effect outputs have on the broader environment.
Hogan (1996)	Ex-ante, mid-term, ex-post.	Written survey and face-to-face interviews. Statistical analysis of data. KSIs metrics.	Dimensions: inputs; structures; processes; outputs; impacts. Set of 35 indicators (seven per dimension) considered key success indicators (KSIs).
Staton (1996)	Ex ante, mid-term, ex-post.	Goal oriented project planning including the construction of the evaluation logic model. Participative workshop. Consensus building.	Input variables; activities, outputs; and impacts. Sets of input, output and impact indicators.

UKSPA/Angle Technology (2003)	Ex-ante, mid-term, ex-post.	Survey and statistical analysis of data. Indicators' metrics.	Economic performance of tenant firms. Innovation and technology commercialization performance of their tenant firms.
Bigliardi <i>et al.</i> (2006)	Ex-ante, mid-term, ex-post.	Case study. Indicator metrics.	Alignment with STP mission; major stakeholders commitment; regional economic conditions; legal forms; nature of the scientific competence base available within research centers; and STP's life-cycle stages
Monck & Peters (2009)	Ex ante, mid-term, ex-post.	Survey and statistical analysis of data. Indicators' metrics.	Two levels of impact evaluation: (i) direct effects; (ii) indirect and strategic added value (SAV) effects. (i) inputs; activities; gross outputs; outcomes; impacts; (ii) gross outputs; outcomes; impacts.
Dabrowska (2011)	Balanced Scorecard	KPIs' metrics associated to BSC dimensions.	Model for 3G STPS comprising five dimensions: commercial; shareholder's perspective; owner's perspective; brand and reputation; and internal business processes.
Nosratabadi, Pourdarab & Abbasian (2011)	Ex ante, mid-term, ex-post.	Survey and combined multi-criteria decision methods with fuzzy logic.	Constraints; Degree of integration with national or global markets; professionals qualifications; managerial capabilities; stakeholder's interests; size; technological capabilities; maturity of the business; venture capital.
Hemati & Mardami (2012)	Balanced Scorecard	KPIs' metrics associated to BSC dimensions.	Four BSC perspectives: finance, customer, internal process and employee learning and growth.
Andreevna (2013)	Balanced Scorecard	KPIs' metrics associated to BSC dimensions.	Four BSC perspectives: finance, customer, internal process and employee learning and growth. Indicators are associated with the above dimensions, considering two roles of a given STP: (i) as the center of an innovative cluster; and (ii) as a commercial organization.
Wang <i>et al.</i> (2014)	Balanced Scorecard	Case study. KPIs' metrics associated to BSC dimensions.	Four BSC perspectives: finance, customer, internal process and employee learning and growth.
Fernandes (2014)	Ex ante, mid-term, ex-post.	Survey and statistical analysis of data.	Model for 3G STPS comprising six dimensions: primary items (infrastructure; resources and services offered to tenant firms); human and local development; linkages with stakeholders; innovative capacity; financial outcomes; the degree of integration with national or global markets.
Kbar & Ally (2015)	Ex ante, mid-term, ex-post.	Survey and combined multi-criteria decision methods. Case study for validation.	Alignment with the 4th generation STPs. Dimensions: R&D; business; management; and infrastructure. The optimum performance value of STPs can be estimated.
CMI (2015)	Business model generation (BMG)	Participative workshop. KPIs' metrics associated to BMG blocks.	The BMG is a strategic management that is a build-up of nine blocks: customer segments, customer relationships, key partners, key resources, key activities, channels, revenue stream, cost structure, and value proposition.
Ferrara, Lamperti & Mavilia (2016)	Ex ante, mid-term, ex-post.	Survey and Choquet integral based Multi-Attribute Value Theory to elicit stakeholders' preferences on different dimensions of STPs' performances.	The aggregate index allows ranking the STPs. The index aggregates eight indicators associated with two dimensions: (i) innovation; and (ii) entrepreneurship. For innovation the indicators refer to research centers; patents; scientific network; projects. And for the second dimension: growth; employees; entropy; and geoconsistency.

Source: Based on Fernandes (2014); with additions recorded from the systematic literature search performed on peer-reviewed articles published between January 1996 and July 2016.

From the literature review, we conclude that several academicians and practitioners have struggled to overcome the challenge to measure the performance of STPs, by adopting several methodological approaches, with emphasis to surveys and Balanced Scorecard methodology, followed by the use of descriptive statistical analysis or multiple criteria decision-making (MCDM) methods. In fact, it can be a rather complicated task because STPs have not the same goals and objectives and can be in different stages of development. Additionally, their activities can impact multiple stakeholders – from internal and external researchers to local public administration, entrepreneurs, firms, and universities.

Typologies of Science and Technology Parks

The definitions presented in the introductory section do not have clear boundaries. A typology outlines different conceptual types of organizations that may or may not exist, whereas a classification scheme. Some classifications and typologies have been developed to systematically describe the STPs phenomenon (e.g., Escorsa & Valls, 1996; Haselmayer, 2004; Annerstedt, 2006; Anprotec, 2008; Kaczmariska & Gierulski, 2012).

Escorsa & Valls (1996) designed a typology for STPs by an in-depth analysis of 12 parks across Europe. This typology has particular utility regarding ‘system definition’ and its contribution to an enhanced appreciation of the nature of parks. It was structured around two axes: (i) the functions the STPs perform; and (ii) the levels at which parks have an impact (firm, regional and industrial sector or cluster levels). Seven patterns of parks were purposed by the combination of these two parameters. They are: (i) Coordination and Promotion of Regional Development (RegDev); (ii) Company Location (CoLoc); (iii) R&D Activities (R&D); (iv) CoLoc - R&D; (v) RegDev - R&D; (vi) RegDev - CoLoc; and (vii) RegDev - CoLoc - R&D.

In 2008, the Anprotec, commissioned by the Brazilian Agency for Industrial Development and the Ministry of Science and Technology, defined a typology for STPs resulted from the analysis of more than 15 different variables that potentially could be used as main axes of this classification system. The Anprotec typology was structured around two axes: (i) Science and Technology (S&T) base; (ii) Market base. The first took into account the indicators and features of the STP and its surrounding region on the existing knowledge base in the region (universities, S&T institutions, corporate R&D centers, qualified professionals, infrastructure for R&D, educational system, public and private investment in R&D, etc. For the second – “Market base” – the Anprotec considered factors related to the density of innovative business and entrepreneurship, existing innovative culture in the region, the creation of start-ups, the existence of venture capital organizations, revenues generated by innovative companies, internationalization level of business, etc. The Anprotec typology comprises four major groups of STPs, as follows: (i) “Consolidated Park” – presenting ‘S&T base’ and ‘Market base’ at national/global level; (ii) “Scientific-tech Park” – emphasis on S&T base in relation to Market base; (iii) “Market-tech Park” - highlighting the Market base relative to the S&T base; and (iv) “Emerging Technological Park” - presenting both S&T base and Market base at regional level (Anprotec, 2008).

Kaczmarek & Gierulski (2012) present an original methodology of evaluation and classification of STPs on the basis of two key discriminatory factors. These factors are (i) the level of innovative environment development; and (ii) technology level. The selection results from the fundamental tasks assigned to STPs. A specific map in the form of a matrix of ranks is created by the two parameters. This map shows three ranks related to the level of technology (T-I, T-II, T-III), and three ranks related to the innovative environment (R-I, R-II, R-III). Thus nine ranks of development are defined on the map. The authors describe the characteristics of the individual ranks.

Luger & Goldstein (1991, *apud* Dabrowska, 2011) identified three stages of the STP development process: (i) incubation; (ii) consolidation; and (iii) maturation. Likewise, Haselmayer (2004) and Annerstedt (2006) proposed a classification of models of STPs, with an increasing integration of the parks into the local urban areas and into global flows of knowledge, as follows: (i) first-generation science parks – ‘science push’; (ii) second-generation science parks – ‘market pull’; and (iii) third-generation science parks – ‘interactive global flows’. Similarly, Allen (2007) described a science park development or maturation process in three phases: (i) initial planning and development (first generation); (ii) steady growth (second generation); and (iii) mature phase (third generation). The last stage is the recognition of managers and stakeholders that the STP plays a wider role in regional economic development. Since each stage has different expected outcomes, the criteria for measuring success should be associated with them.

RESEARCH METHODOLOGY

The research methodology comprised: (i) literature and documental review on central themes and subthemes from the perspective of measuring the performance of groups of STPs considering their business models, objectives and goals, maturity levels, and stakeholder’s commitment /governance structures; (ii) preliminary conceptual model design as a basis for the action-research project; (iii) planning phase of the action-research project, with participation of representatives of 20 Brazilian STPs; (iv) discussion of the results from the “Planning Phase” and formulation of recommendations and suggestions for the next stages of the action-research project.

The action-research project is depicted as a cyclical process of change (Lewin, 1946; Foster, 1972; Eden and Huxman, 1996) and encompasses three phases: ‘Planning’; ‘Action’; and ‘Results’. The cycle begins with a series of planning actions that will be developed by the authors during September 2016 to December

2016, together with managers and researchers from a sample of STPs located in Brazil and members of the Brazilian Association of Science Parks and Business Incubation (Anprotec). The main elements of ‘Planning Phase’ include a preliminary diagnosis and context analysis, data gathering, feedback of results, and joint action planning. Customized measurement frameworks to STP groups, including performance indicators and metrics, are expected to be defined in this phase.

The second phase also called ‘Action Phase’ refers to the actions for improvement and growth carried out by each STP. This stage also comprises actions relating to learning processes and behavioral changes towards STP’s performance improvement. The change agenda should be developed according to the adaptive planning approach, promoting the gradual articulation of the parts within the whole management system of the STP. In the third phase – ‘Results Phase’ – data should be gathered from the STPs’ areas so that progress could be determined and adjustments by learning could be implemented. In this paper, we deal with the development of a preliminary conceptual model design as a start point of the ‘Planning Phase’ of the action-research project.

THE CONCEPTUAL MODEL AS THE START POINT OF THE ACTION-RESEARCH PROJECT

Development of Science and Technology Parks in Brazil

According to Zouian & Plonsky (2015, p.11), “the innovative entrepreneurship in Brazil has grown significantly in recent decades, with important participation of the innovation habitats in the development and economy of Brazilian regions”. The University of Brasília CDT/UnB (2013) published data concerning this movement, as shown in Table 2.

Table 2: STPs and business incubators in Brazil

Innovation habitat	Data
Science and Technology Parks	94 STPs initiatives
	28 STPs in operation
	939 firms in operation
	32,237 jobs created so far (the majority of the operating parks was less than ten years old)
Business Incubators	384 business incubators
	2,640 incubated firms
	2,509 graduated firms
	1,124 associated firms
	16,934 jobs in incubated and associated firms
	29,905 jobs in graduated companies
	US\$ 266 million in annual revenues from incubated firms
	US\$ 2 billion in annual revenues from firms graduating from incubators

Source: CDT/UnB (2013).

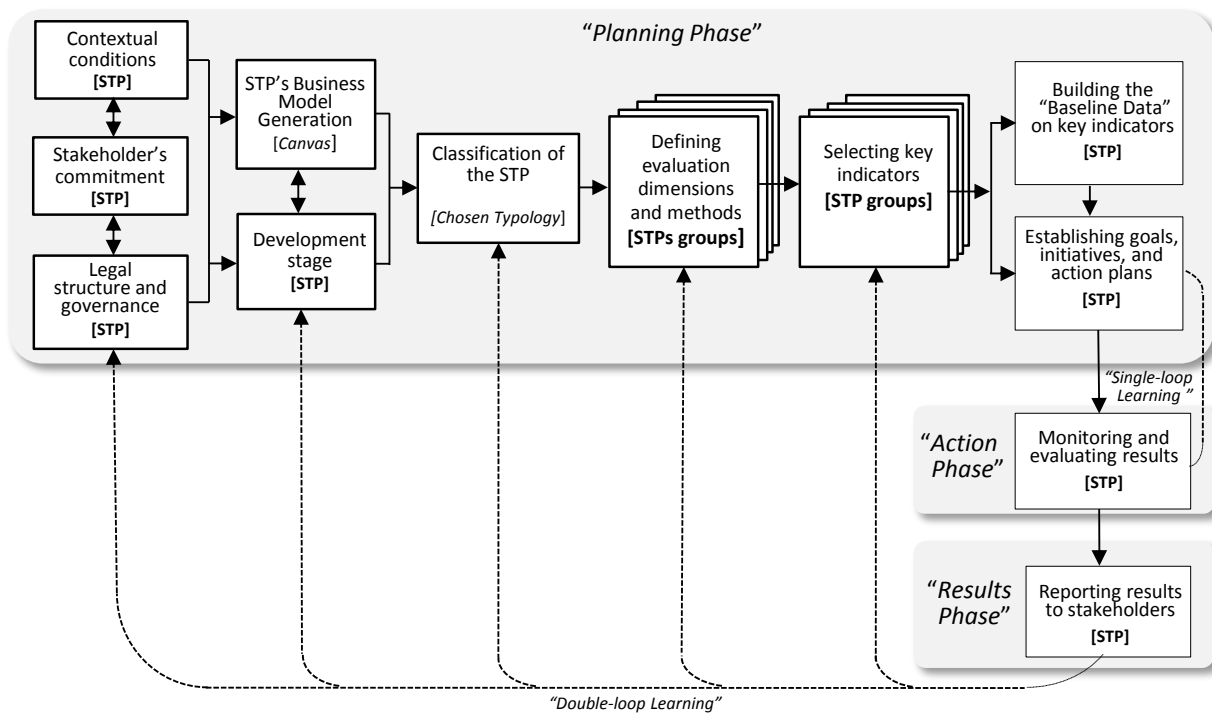
The Brazilian STPs do not follow a single business model. They are embodied through a wide diversity of strategic objectives and formats. However, all models are aligned to the STP’s definitions adopted by the IASP (2002) and by the Anprotec (2013). Based on a review of the Brazilian experience, Zouian & Plonsky (2015, p.1) points out that: (i) STPs in different parts of the country have been actually functioning as laboratories of innovation that generate solutions applicable to urban development; (ii) STPs in an upper-middle-income economy were capable of rapidly becoming hubs of innovation ecosystems in diverse cities and regions. It should be noted that, with only a few earlier exceptions, the widespread emergence of STPs in Brazil is a phenomenon of the 2000s; and (iii) there is an essential need to use tools that assist STPs in the planning and coordination processes, in order to achieve a level of institutional articulation in the city or region that enables innovation ecosystems to lever sustainable urban transformation.

The Conceptual Model for Monitoring and Evaluating the STPs’ Performance

The methods and analytical grids identified during the literature review on models for monitoring and evaluating the performance of STPs embodied the basis for designing a conceptual model, considering STPs' business models and value propositions, objectives and goals, development stage, stakeholder's commitment and governance structures. This model refers to the assessment of a planned, ongoing, or consolidated STP to determine its relevance, efficiency, effectiveness, impact, and sustainability. Monitoring can provide feedback on progress (or deviations) to staff and decision makers, who can use the information in various ways to improve the performance of a given STP. It combines the traditional approach of monitoring implementation (that focus on inputs, activities, and outputs) with the assessment of outcomes and impacts, or more generally of results.

In STPs' context this type of monitoring and evaluating system allows managers to modify and make adjustments to both the theory of change (Kusek & Rist, 2004) and the implementation processes to the achievement of desired objectives and outcomes. That is the central idea of the action-research project involving 20 Brazilian STPs, which will participate in an Executive Program for STP Managers sponsored by the Anprotec. Figure 1 shows the process flow diagram of the model in three phases, corresponding to those of the action-research project.

Figure 1: The conceptual model for monitoring and evaluating the STPs' performance



This process flow diagram focuses on the sequence (or structure) of activities and the flow of components from the point where they enter the monitoring and evaluation system until they leave the system. The flow of components are detailed below, along with the three phases of the action-research project, including the learning processes that take place during the implementation of the model.

Planning Phase

- **Contextual conditions (STP):** it is important to consider the contextual conditions in which the STP operates (Staton, 1996; Guy, 1996; Bigliardi *et al.*, 2006; Fernandes, 2014). Bigliardi *et al.* (2006) refer to the conditions that are often representative of the economic development needs of the specific territory where the STP are located. In their words, "STPs are often born out of the need to re-industrialize an entire territory, of the need to generate new high-tech firms, or with the aim of strengthening, through technology transfer, the existing local firms" (Bigliardi *et al.*, 2006, p. 493).
- **Stakeholders' commitment (STP):** this is a common component in the evaluation frameworks proposed by Bigliardi *et al.* (2006); Dabrowska (2011), Staton (1996), Guy (1996), and Fernandes

(2014). Different players have different expectations: (i) local governments expect the STP to make a significant contribution to the re-industrialization or economic development of the whole territory; (ii) firms that have set up their R&D labs within STP boundaries expect it to foster the innovative processes related to its products or production processes; (iii) universities participate in STPs in order to output patents and take advantage of new business opportunities, etc. Bigliardi *et al.* (2006) conclude that, in consequence, the managers of the STPs must put these expectations on a scale of priorities and must respect them and make them work together.

- **Legal structure and governance (STP):** a determinant of complexity and drawback of performance evaluation systems is the wide variety of legal forms STPs take on (Marinazzo, 1996; Bigliardi *et al.* (2006). The several legal structures include consortia, non-profit associations, parts of university structures, and companies with shared capital. Bigliardi *et al.* (2006) reinforce that the legal form adopted by the STP influences and limits its mission and business model, besides conditioning the governance structure, administrative behaviors and practices (Marinazzo, 1996; Chiochetta, 2010).
- **STP's Business Model Generation (Canvas):** CMI (2015) used business model generation tool (Osterwalder & Pigneur, 2010) to help STPs to describe, design, challenge, invent, and pivot their business models. The BMG is a build-up of nine blocks: value propositions; customer segments, customer relationships, key partners, key resources, key activities, channels, revenue stream, and cost structure. Bigliardi *et al.* (2006) argue that “it seems to be essential to identify the ‘real mission’ and the resulting strategy of the STP. These elements are often hidden by the formal documents of the organization”. The BMG has proven to be a very useful tool for managers to clarify the organization’s current business model and focusing on its ‘real mission’ and value propositions.
- **Development stage (STP):** Complementarily to the business model generation, it is important to identify what level of maturity the STP is, so managers can understand effectively what stage of development the STP’s initiatives and programs have reached (Bigliardi *et al.*, 2006; Looy, 2013; Roglinger & Becker, 2012). The typologies presented by Luger & Goldstein (1991), Haselmayer (2004), Annerstedt (2006), and Allen (2007) can be helpful for this analysis.
- **Classification according to a chosen typology (STP):** we have argued that a conceptual model that generates measurement frameworks customized to groups of STPs – with common goals and characteristics – should be in best interest of managers and policy makers. Thus, the start point is to choose a STP’s typology among the alternatives proposed by Escorsa & Valls (1996); Haselmayer (2004); Annerstedt (2006); Anprotec (2008); Kaczmarek & Gierulski (2012). Once defined the typology to be adopted, each STP should be classified in the respective categories of this typology.
- **Defining evaluation dimensions and methods (STPs groups):** this step refers to evaluation dimensions (or perspectives) that should be considered in the model (Fernandes, 2014). For example, Dabrowska (2011), Hemati & Mardami (2012), Andreevna (2013), and Wang *et al.* (2014) adopted the Balanced Scorecard method Kaplan and Norton (1996; 2004) and respective perspectives (evaluation dimensions) for selecting key indicators
- **Selecting key indicators (STP groups):** once the evaluation dimensions and methods are defined, the next step is to select key performance indicators to monitor progress with respect to inputs, activities, outputs, outcomes, and impacts (Guy, 1996; Staton, 1996; Kusek & Rist, 2004; Monck & Peters, 2009; Imas & Rist, 2009). Indicators can provide continuous feedback and a wealth of performance information. There are various guidelines for choosing indicators that can aid in the process. At last, constructing good indicators will be an iterative process, as preconized in the action-research methodology.
- **Building performance baselines on key indicators:** building performance baselines, with qualitative or quantitative data, can be used by the STP at the beginning of the monitoring period. The performance baselines establish a starting point from which to monitor later and evaluate results (Kusek & Rist, 2004).

- **Establishing goals, initiatives, and action plans (STP):** in this stage, the STP should select results targets (short term, middle or long term goals). Targets can be selected by examining baseline indicator levels and desired levels of improvement or growth. Once the targets are defined, the STP should define initiatives and respective action plans to be implemented (Guy, 1996; Staton, 1996; Kusek & Rist, 2004; Imas & Rist, 2009).

Action Phase

- **Monitoring and evaluating the results (STP):** this stage of the model includes both implementation and monitoring and evaluation of the results by the STP (Hogan, 1996; Guy, 1996; Kusek & Rist, 2004).

Results Phase

- **Reporting results to stakeholders (STP):** the STP should look at ways of analyzing data and reporting results to help own managers or stakeholders' representatives to make the necessary improvements in initiatives, policies, or programs.

Learning process

- Regarding **learning processes**, Argyris & Schön (1978, 1996) identify two distinct types of learning: 'single-loop' and 'double-loop' learning. Their generic model of organizational learning encompasses these types of learning, besides selecting key indicators, establishing goals/ action plans, and monitoring/evaluating their achievements. The situations of 'single loop' learning involve the detection of an error and its correction within a certain set of 'ruler variables' (business model), without modifying it. On the other hand, the processes of 'double loop' learning refer to changes in these variables, and may lead to a fundamental shift in the strategic direction of the STP. The individuals, groups or the STP as a whole can detect and correct the errors, questioning and modifying the values, assumptions, and policies that govern their actions.

CONCLUDING REMARKS

Evaluating STPs' performances are still open problems both for the academicians, practitioners and policy makers. In this paper, an attempt was made to present a conceptual model for monitoring and evaluating the performance of STPs from different types, according to one of the taxonomies presented in this paper (Escorsa & Valls, 1996; Haselmayer, 2004; Annerstedt, 2006; Anprotec, 2008; Kaczmarek & Gierulski, 2012). The proposed model is the starting point of an action-research project covering 20 Brazilian STPs, which will participate in an Executive Program for STP Managers sponsored by the Anprotec. The expected results from the first phase of this project ('Planning Phase') are measurement frameworks, performance indicators, and respective metrics customized to STP groups, instead of having a generic system of monitoring and evaluation. The proposed model distinguishes from the existing systems reported in the literature, because it will allow decision-makers to measure and compare the performance of STPs belonging to a particular group and then prioritize actions which will add the most value to their business and programs, individually. So, to meet these conditions, its design took into account differences in STPs business models and value propositions, objectives and goals, development stage, stakeholders' commitment, and governance structures. Finally, it is important to mention that care will need to be made to achieve an appropriate balance between methods which focus on quantitative metrics and methods for evaluating the value of the STP as an enabling infrastructure with a range of services to support business development and promote regional development.

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THE RELATIVE IMPACT OF BEST PRACTICES ON A BUSINESS PROCESS: A REVIEW OF LITERATURE

Nelson Sizwe Madonsela, Bhekisipho Twala and Charles Mbohwa
University of Johannesburg, South Africa

ABSTRACT

This paper explores the relative impact of best practices on a business process in the service context. The main focus is on the application of best practices to and the assessment of their significance for a business process, especially during the business process redesign. A literature and document review was conducted to put in a nutshell the relative impact of best practices on a business process. The results show that the application of best practices depends on the effective business process management that enables an organization to adapt to business demands and ensures that these processes are aligned with business strategy within the entire organization.

Keywords: business practices, business processes, business process redesign, business process management, service industries, business process improvement implementation

INTRODUCTION

Business processes in the 21st century era are altered by the voice of the customer, which propels organizations to strive to meet customer needs and exceed their expectations. According to Fasanghari, Roudsari and Chaharsooghi (2008, p. 90), this means “the need to be innovative, to be responsive to customers’ needs, to be flexible and adaptive to changing conditions and changing needs”. In response to customer feedback, some organizations continually adopt best practices that enable them to flourish in the marketplace. We believe that using best practices has a direct impact on a business process. Researchers believe that business process improvement and implementation guidelines are lacking (Reijers & Mansar, 2005). These authors believe that there is a lack of understanding about what a process is and what multiple processes from organizations are. Evans and Lindsay (2014, p. 205) put it like this: “*Unless you change the process, why would you expect the result to change?*” Their emphasis is that management must “understand how to design, manage, and improve processes”. A process “is a sequence of linked activities that is intended to achieve some result, such as producing a good or service for a customer within or outside the organization” (Evans & Lindsay, 2014, p. 205). Chmielarz, Zborowski and Biernikowicz (2013) argue, in essence, that process management depends on an organizational culture that reflects best practices. While we subscribe to the view of Chmielarz et al. (2013), we argue that understanding an organization’s entire system derives from a process perspective of mapping its entire activities, which is rooted in process management. To put it in another way, the critical point is that in order for an organization to survive or sustain competitiveness, it must develop a strategic planning approach that is flexible and responsive to the market. In view of the fact that strategic planning is a continual process, it is imperative for an organization to establish the current best practices for addressing the complex environment.

This paper analyses the relative impact of best practices on a business process from the service organization’s perspective, including the view of service sections in the manufacturing sector. Furthermore, it highlights the differing perspectives of best practices and emerging trends. The structure of this paper is as follows: the first section defines best practices and highlights the elements that reflect best practices in business and the relationship between best practices and business process. The second section describes the importance of business process management (BPM). The third section points out the challenges associated with business process redesign (BPR) and best practices in relation to BPR. This section aims to enlighten businesses about the practices that they should pay serious attention to during BPR. The fourth section presents the results and discussion, which briefly summarize the findings of this paper by highlighting the most important facts that

substantiate the significant impact of best practices on a business process and, finally, the last section concludes the paper.

BEST PRACTICES

Researchers maintain that regardless of the product and service offered, best practices are common in the context of business process. Kreitz (2007, p. 4) defines best practices as “practices which are most appropriate under the circumstances, esp. as considered acceptance or regulated in business”. Trees (2012, p. 1) describes best practices as “a particularly powerful form of institutional knowledge in that they take information and data and put it in the context of real people and experiences” and also “help cut through employees’ natural resistance to change”. Trees (2012) claims that businesses do not sustain excellent outcomes when they overlook processes and techniques. Furthermore, the author points out that the internal transfer of best practices is more complicated than merely producing a “process flow chart”. Transfer requires a formal strategy that establishes a transfer process. This introduces the interesting perspective that, as much as best practices have a direct impact on a business process, the transfer of best practices within an organization is a process of its own, while the internal transfer of best practices clearly will affect a business’s processes, culture and resources. Therefore, an appropriate formal strategy and change-management approach are required to maintain stability within an organization. To be more precise, the internal transfer of best practices integrates knowledge management and organizational learning practices because best practices derive from knowledge management. Papavassiliou, Mentzas and Abecker (2002, p. 852) claim that “an approach that explicitly integrates knowledge management activities into the business process environment is missing”. Yet, BPM and business process reengineering (BPR) have gained popularity as a business tool. Clearly disseminating of best practices into the entire business requires knowledge and commitment from upper management to address any challenges such as resistance to change and lack of resources that might be encountered. In 2007, Kreitz observed the following best practices: leadership commitment, diversity as part of an organization’s strategic plan, accountability, succession planning and recruitment, to name but a few. We agree that best practices derive from top management and are disseminated to the entire organization. According to a study by IBM (2007) entitled “A comprehensive best-practices approach to business resilience and risk mitigation”, organizations lack the ability to predict and forecast impending risk. In addition, organizations lack an understanding of the implications of these risks, especially how they will impact the entire organization. Reijers and Mansar (2005) confirm that organizations lack the understanding of what a process is and what multiple processes are in their business. With that inability, it is likely that an organization will have a short vision of a risk’s implications. IBM (2007, p. 2) found that organizations lacked in these following areas:

- a) “Human issues – plans are often inadequate for ensuring communication with, support for and mobilization of employees, decision makers, suppliers and customers, as well as providing the means to protect families.
- b) Infrastructure issues – how will the organization deal with prolonged power failures, travel and transportation restrictions and logistics disruptions? Are there adequate fuel supplier? Are resources such as generators staged in safe locations?
- c) Business issues – the traditional view of disaster recovery has primarily been focused on data and the IT infrastructure, but many of the impacts of a disaster are business-related issues that affect people, business processes, facilities, transportation, communication and regulatory compliance.
- d) Community issues – organizations must not neglect their responsibility to help employees and their local communities and regions recover from major disasters.”

These key areas sensitize organizations to revisit or revise their organizational culture and strategy. In fact, our claim is that these areas can be addressed through one of the main critical best practices: organizational culture. According to the Barry, Helbling, Lord, Miller and Dunn (2012) report, organizational culture is a fundamental business strategy. These authors strongly believe that businesses have ignored the embracing of organizational culture. Meanwhile businesses that have adopted it successfully have shown it in their investment in their people and that it has a direct impact on retention, talent management and recruitment, and, moreover, on attaining business objectives (Barry et al., 2012).

However, these authors further discovered that “there is a lot of variance when it comes to understanding culture and how a well-regarded culture can help in achieving business objectives” (2012, p. 1). According to ConnerPartners (2010, p. 1), “understanding how culture is formed and knowing how and when to take it on are essential foundations to successful strategy execution”. This institute studied the corporate culture and its impact on strategic change; its findings reveal that culture is embedded in the mindsets and behaviors of the employees in an organization. Moreover, it is self-reinforcing in such a way that is vital when it comes to organizational transformation; hence, it serves as a strong foundation for business. Correspondingly, a successful culture change should be structured for sustainability and executed at the right time. Rogers, Meehan and Tanner (2006) investigated techniques of building a winning culture; their findings indicate that culture has a significant impact on competitive advantage and high performance. According to these authors, “culture is the glue that holds a complex organization together. It inspires loyalty in employees and makes them want to be a part of a team” (2006, p. 1). They propose the following five steps for building a winning culture:

- 1) “Set expectations about the necessity change, the type of new culture required and how it will result in success.
- 2) Align the leadership team around a common vision and required behaviors.
- 3) Focus the organization on delivering the business agenda.
- 4) Manage the culture by managing the drivers of culture.
- 5) Communicate and celebrate.” (2006, p. 3)

Researchers maintain that organizational culture is implemented and led by leadership and that BPM heavily depends on the organizational culture (Barry et al., 2012; Chimiela et al., 2013). Chimiela et al. (2013) investigated the impact of organizational structure and culture on BPM and point it out that it is imperative for businesses to understand their business process and how culture supports process practices. In addition, the study revealed that BPM is complementary to project management. The researchers argue that “organizations expect a lot from the process approach and those expectations refer rather to effective planning of the organization wide systems than to solving specific problems” (Chimiela et al., 2013, p. 1086). Summing it up, we have observed that the 21st century corporate culture entails customer focus, customer relationship management and workforce engagement. Building a sustainable competitive advantage propels businesses to invest in their workforces to enhance customer satisfaction and retention. This implies that processes need to be identified and strategized carefully.

BUSINESS PROCESS MANAGEMENT

As mentioned above, according to Evans and Lindsay (2014, p. 205), a process is “a sequence of linked activities that is intended to achieve some result, such as producing a good or service for a customer within or outside the organization”. On the other hand, De Feo (2015, p. 217) defines a process “as a collection of cross-functional activities that are essential for external customer satisfaction and achieve the mission of the organization”. All these authors maintain that a process within an organization cuts traditional constraints such as culture and, consequently, improves organizational performance. It is certain that a process integrates cross-functional teams, which may have different perspectives and may work in isolation rather than working with other teams, to work as a whole to attain organizational goals; in fact, it determines competitive advantage. Foster (2007, p. 9) argues that “as organizational processes become more cross-functional, many of these communications issues will find resolution”. Experience with cross-functional teams has been difficult for many firms because of poor communication skills among team members, while it is true that business process is integrative and has a direct impact on organizational performance. This suggests that it is imperative that the business process chosen is management appropriate and the cross-functional team members are selected carefully. Considering that business results are often based on customer perspective, there is a strong possibility that an organization will be forced to embark on BPR, business improvement implementation or continuous process improvement in an effort to manage its business process for continued sustainability. Equally, to achieve cross-functional resolution, the same approach might be applicable, which is extensively influenced by best practices. If an organization does not believe in using customer feedback or user experience for continual process improvement, this will be an indicator of a bad culture or traditional way of doing business, as the global marketplace is significantly driven by customers.

Recent study shed new light on customer behavior by asserting that customers come to businesses with a preconceived notion of quality product or service, which means that if they are not satisfied with the process then it needs to be redesigned (Evans & Lindsay, 2014). In the BPM context, De Feo (2015, p. 217) describes BPM as “an advanced approach for planning, controlling, and improving the key business processes in an organization by using permanently installed process owners and teams”. To be more precise regarding the relative impact of best practices on a business process, De Feo (2015, p. 217) concedes that “business process management replaces the hierarchical vertical organization with a horizontal view of an organization”, which is a best business practice element. In fact, a hierarchical vertical structure reflects a traditional organizational culture, which has proved to be a drawback in achieving business sustainability. This is why we emphasize the application of BPM as an element of best practice that entails BPR, business process improvement implementation and continuous improvement.

BUSINESS PROCESS REDESIGN

Business Process Redesign (BPR) is also called Business Process Reengineering (BPR) in a business context and over the past few years has become a vital aspect of business. Dumay (2004) defines BPR as “a complex, top-down driven and planned organizational change task aiming to achieve radical performance improvements in one or several cross-functional, inter- or intra-organizational business processes whereby IT is deployed to enable the new business process(es)”. On the other hand, van der Aalst and Hee (1993) define BPR as “the fundamental rethinking and radical redesign of business process to achieve dramatic improvements in critical contemporary measures of performance such as cost, quality and speed”. We view BPR as a strategy of continuous process improvement that enables businesses to incorporate knowledge from customer feedback and user experience to improve existing business process (es) for business sustainability. In 2007, Mansar and Reijers explored best practices in BPR, in particular the use and impact of best practices. Their study shows that businesses fall short of designing a process that radically changes the existing process while best practices propose change of the existing process to enhance business performance. Interestingly, Reijers and Mansar (2005, p. 284) claim that in the BPR techniques they examined, there was a “lack of systematic approach that can lead a process redesign”. As a result, they recommend a BPR framework through advocating that effective BPR adoption should entail “integrating the business strategy, integrating performance measurement, creating business process architectures, involving human and organizational factors and identifying the role of information and technology” (Reijers & Mansar, 2005, p. 304). These authors propose the following approach of best practices embodied in BPR:

1. *“Order types: ‘determine whether tasks are related to the same type of order and, if necessary, distinguish new business processes’.*
2. *Task elimination: ‘eliminate unnecessary tasks from a business process’.*
3. *Order-based work: ‘consider removing batch-processing and periodic activities from a business process’.*
4. *Triage: ‘consider the division of a general task into two or more alternative tasks one general task’.*
5. *Task composition: ‘combine small tasks into composite tasks and divide large tasks into workable small tasks’.*
6. *Evaluation.”* (Reijers & Mansar, 2005, p. 297)

Dumay (2004) breaks down the BPR methodology into five steps: identifying processes, identifying change levels, developing process visions, understating existing processes and, lastly, designing and prototyping the new process. To summarize, best practices are embedded in BPR, which in our opinion aims for continuous process improvement for business sustainability. In fact, BPR needs serious management with regard to coordinating the order of types of tasks and evaluating the existing process capabilities in order to redesign them and integrate the new process with the organization’s business strategy. To put it in another way, the critical point is that best practices are used in involving the workforce, integrating performance measurement and addressing any barriers. BPR challenges organizational culture and competencies in relation to knowledge management expertise and human resources as well as leadership. From a theoretical perspective, there is no doubt that best practices have an impact on business process and that there is a strong relationship between best practices and business process.

RESULTS AND DISCUSSION

This paper focuses on the relative impact of best practices on a business process. On the basis of the literature examined, it is clear that the business environment is constantly changing as are the ways in which businesses conduct their operations. Equally, businesses seek best practices to enhance business performance. These practices impact the business process as businesses discover innovative ways of adapting to their environment in order to respond quickly to customer demand. However, researchers believe that businesses do not articulate a process or multiple processes (Reijers & Mansar, 2005). As a result, we believe that it is imperative to sensitize businesses regarding the relative impact of best practice on business process because “best practice” has a direct impact on business sustainability. Literature revealed that process links activities that are intended to attain outcomes that pertain to the producing of products or services for both external and internal customers in an organization. The findings of the literature review also suggest that the management of process depends on the organizational culture that reflects best practices. Essentially, the argument is that understanding an organization’s entire system derives from a process perspective of mapping its entire activities, which perspective is rooted in process management. Consequently, it is imperative for an organization to establish the current best practices to address the complex environment in which it operates. Hence, experts observe that in the business context best practices are commonly used. Trees (2012) observed that businesses are unable to sustain excellent outcomes because they overlook processes and techniques. Furthermore, the internal transfer of best practices is more complicated than producing a “process flow chart” and requires a formal strategy that establishes the transfer process instead (Trees, 2012). With this in mind, an appropriate formal strategy and change-management approach are required to maintain stability within an organization. A systematic approach to disseminating best practices to the entire business is also necessary because we believe that best practices derive from top management. IBM (2007) found that organizations have issues that concern human resources, infrastructure, business and the community. We maintain that these issues can be addressed through one of the main critical best practices – organizational culture. This implies that businesses need to revisit or revise their organizational culture and strategy. Barry et al. (2012, p.1) discovered that “there is a lot of variance when it comes to understanding culture and how a well-regarded culture can help in achieving business objectives. Correspondingly, a successful culture change should be structured along the lines of business sustainability, which heavily depends on timing of execution.” Our findings show that organizational culture is implemented and led by leadership and that BPM heavily depends on the organizational culture (Barry et al., 2012; Chmielarz et al., 2013). From this notion, we emphasize the application of BPM as an element of best practices that entails BPR, business process improvement implementation and continuous improvement. In brief, the findings indicate that best practices are embedded in an organizational culture, which has a direct enhancing impact on business process (es). We have also noted that businesses need to develop or build a winning organizational culture that is led by upper management. In terms of BPM, we note that businesses should develop a strategic plan on how they will design, implement and monitor the processes for business sustainability and how they will adopt techniques of best practices that embody BPR.

CONCLUSION

The paper explores the relative impact of best practices on business process through defining best practices and highlighting the elements that reflect best practices in business. It also looks at the relationship between best practices and business process. It is noted that best practices reflect leadership commitment, diversity as part of an organization’s strategic plan, accountability, succession planning and recruitment. Furthermore, the paper explains the importance of BPM and points out the challenges associated with BPR and the use of best practices in relation to BPR, such as determining the relationship between the orders of tasks to differentiate new business processes. We believe that best practices enhance a business’s productivity through business process (es) over and above business sustainability. For this reason, businesses need to seek best practices and to have a broader understanding of their impact on business processes.

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MANAGING OPERATIONS IN A COMPLEX ECONOMIC ENVIRONMENT

Nelson Sizwe Madonsela, Bhekisipho Twala and Charles Mbohwa
University of Johannesburg, South Africa

ABSTRACT

The complex economic environment in which businesses operate has become unpredictable and extremely complex and is constantly changing. Businesses need to be able to transform data into real-time information for better decision making to adapt quickly to this environment. This paper presents an investigation into the appropriate approach for managing operations in a complex economic environment. Conceptual research methods were adopted to explore an appropriate theoretical foundation for articulating adequate techniques for managing operations in complex economic environments. Findings suggest that businesses require business intelligence tools and knowledge management in the current economic environment to sustain their competitive edge.

Keywords: operations management, economic environment, business intelligence tools, constantly changing environment, sustainable competitive advantage

INTRODUCTION

The economic environment has become unpredictable, moreover, extremely complex. Consequently businesses are implementing Research & Development (R&D) institutions to respond to this complex environment. Even though, we have observed that the contributing factors are so dynamic in such ways that are not straightforward to be address instantly. This implies that businesses need to have the ability to transform data into real-time information for better decision-making in order to adapt. In actual fact, businesses are propelled to adopt technologies that enable them to gather knowledge to sustain competitive advantage. As well as to re-establish the role of human factor in relation to the development of continuous innovation capability. Azvine, Cui, Nauck and Majeed (2006) noted that the statistical reports become outdated, customer needs and technologies changes when the competitiveness increases in the market, therefore, real-time data is essential for decision makers. At the same time, there is a challenge of vast amount of data to be analyzed. As a result, the managing operations in complex economic environments led to the necessity of real-time business intelligence (BI) (Azvine et al. 2006). We have the same opinion with these authors hence we have observed the increase of BI research as a discipline as well the application of BI tools in various industries and domains such as education, healthcare, financial and agriculture. Kumari (2013, p. 969) defines BI tools as “a type of application software designed to retrieve, analyze, and report data” and “to support better decision-making”. To be more precisely, the “functions of business intelligence technologies are reporting, online analytical processing, analytics, data mining, process mining, complex event processing, business performance management,..predictive analytics...” (Kumari, 2013, p.969). The contention is that these technologies require a procedure for information management, beginning by distinguishing the required information, building up the information warehousing and recognizing the information-mining strategies. In this paper, we highlight the importance of managing operations in complex economic environment; describe the nature of the complex economic environment as well as the drivers. In addition, we describe BI and BI tools whereas discussing the application of these tools. Thereafter, the paper has been outlined as follows, Section 5 presents the method adopted for this paper, section 6 discusses the results , section 7, we propose adaptive approach model for managing operations in a complex economic environment. Section 8 summarizes the conclusion.

MANAGING OPERATIONS

The complexity of the competitive environment has required managers to understand the variables that affect the economic environments in which they work. Acquiring this understanding entails drafting an “operations system, planning and control, and improvement activities that are necessary for production and providing of goods and services to customers” (Horvathova and Davidova, 2011, p.9).

These authors stress that it is imperative for organizations to consider the environment so that they can execute the “transformation process” necessary to sustain their competitiveness. There is clear evidence, however, that managing operations in complex economic environments is challenging. Ross, Weill and Roberson (2006, p.6) argue that there is a lack of alignment in businesses between their “business objectives and IT capabilities”. The findings of the study *Enterprise Architecture as Strategy: Creating a Foundation for Business Execution* (2006, p.5) suggest that in businesses:

- “There are different business processes completing the same activity across the company, each with a different system,
- Information needed to make key product and customer decisions is not available,
- A significant part of people’s job is to take data from one set of systems, manipulate it, and enter it into other systems.”

Jelenic (2011, p.34) offers sufficient evidence that organizations “are forced to innovate and develop new techniques for improving the quality and functionality of products, reduce costs and, of course, the answer to the sophisticated customer’s demands in order to survive in the market”. The argument of this paper is that complex economic environments require BI techniques and tools to simplify the way organizations manage operations. The argument is that BI tools have been proven adequate to transform raw data into real-time information for better decision making.

COMPLEX ECONOMIC ENVIRONMENTS

In 1997, Durlauf asked a critical question: “what should policymakers know about economic complexity?” In answering the question, Durlauf states that “a system is said to be complex when it exhibits some type of order as a result of the interactions of many heterogeneous objectives” (Durlauf, 1997, p.1). Complex economic environments have become extremely difficult to interpret because of the influence of different actors, which are often not easily predicted by economists. Durlauf (1997) observes that economists have also adopted complex systems to acquire broader knowledge of these heterogeneous actors. Therefore, he enlightens policymakers that complex economic systems convey information pertaining to the different actors, which also influence policies. Clearly, such complex environments also challenge the analysis and the alignment of these policies toward adding value to economies and decision making. For Durlauf (1997), the implications of the complexity of economic environments at the national level are national security, inequality, high technology, and evolution versus steady state. In addition, the Organization for Economic Cooperation and Development (OECD, 2012, p.2) states that “globalization, shifting wealth, population growth, environmental challenges and natural resources, and skill-biased technological change” have put economies under tremendous pressure. Interestingly, even China, the third-largest economy in the world, feels pressured by the complex economic environments in which its businesses operate. Fogel (2010, p.13) notes that in order for China to sustain “future economic development”, it needs to “maintain high growth rate, deal effectively with the rural workforce, improve the financial system, continue to reform the state-owned enterprises, establish a social security, improve scientific and educational development, promote better international cooperation, and change the role of the government in the economic system” with the hope of supporting the business environment in China. There is no doubt that economies around the world are paying serious attention to the complex economic environments to sustain competitive advantage. This is evident in the increasing numbers of R&D institutions set up by these economies to investigate the drivers of the economic environments and develop strategies for strengthening the economies to attract foreign investors.

In the business context, complex economic environments have negative repercussions for businesses, which make it necessary to ask: how does a business respond to these complexities? Papulova and Papulova (2006, p.1) argue that “today’s organizations have to deal with dynamic and uncertain environments”. These

authors found that “these changes forced managers to develop a systematic means of analysing the environment, assessing their organization’s strengths and weakness, and identifying opportunities for competitive advantage”. Along the same line, Babatunde and Adebisi (2012, p.24) concede that “in today’s business environment competition is order of the day”. Researchers believe that managing complexity in global business is a challenge because as globalization advances, complexity also becomes more complex (Maznevski, Steger & Amann, 2007). Businesses need to identify the drivers of complexity and understand how they accelerate the competitive advantage (Papulova & Papulova, 2006; Maznevski, Steger & Amann, 2007). In a business context, this implies identifying the main sources of complex business environments in order to develop a strategy for adapting to dynamic and uncertain environments quickly. According Maznevski, Steger and Amann (2007, p.1), the drivers of complexity are:

- I. **“Diversity:** global organizations face a complex set of challenges characterized by diversity both inside and outside the organization – across every aspect of the business itself and its strategy drivers.
- II. **Interdependence:** companies must manage the effect of global interdependence to an unprecedented degree: everything is related to everything else, and the impact is felt more rapidly and pervasively.
- III. **Ambiguity:** the business world today is characterized by too much information with less and less clarity on how to interpret and apply insights. Many businesses find it more difficult to discover what their clear value drivers are.
- IV. **Flux:** as if these three complexity drivers were not enough, managers have to face yet another one, flux or change. Today’s solution may be outdated tomorrow.”

From these perspectives, we can affirm that managing operations in complex economic environments is difficult and decision making can also be overwhelming for managers. To respond to such an environment, businesses need to have the ability to transform data into real-time information for better decision making to adapt quickly to the constant changes. In brief, we are of the opinion that the application of BI tools and a knowledge management approach provide a useful solution.

BUSINESS INTELLIGENCE TOOLS

According to studies by researchers such as Williams & Williams (2003) and Kumari (2013), successful businesses rely on BI tools. Ranjan (2009, p.61) defines the term ‘business intelligence’ “as a business management term used to describe applications and technologies which are used to gather, provide access to analyze data and information about an enterprise, in order to help them make better informed business decisions”. In addition, Fitriana, Eryafrio and Djatna (2011, p.96) describe BI as “a process for extracting, transforming, managing and analysing large data by making a mathematical model to gain information and knowledge to help make decisions in the complex”. Following the above definitions, we are of the opinion that BI technologies are applied in business management to process raw data into information for better decision making in relation to complex economic environments. Ranjan (2009, p.61) also sees BI tools as “technology that enables the efficiency of business operation by providing an increased value to the enterprise information and hence the way this information is utilized”. Nedelcu (2013, p.12) maintains that BI is “an umbrella term that includes the applications, infrastructure and tools, and best practices that enable access to and analysis of information to improve and optimize decisions and performance”. Regardless of which of the above BI tools definitions is used, our argument is that managing operations in complex economic environments requires BI tools; moreover, we stress that it is imperative for managers and businesses to invest in BI tools to build and sustain competitive advantage. Nedelcu (2013, p.13) highlights the following BI applications: “a) Data Mining and Advanced Analysis; b) Visual and Online Analytical Processing (OLAP) analysis; c) Enterprise and Scorecards; d) Dashboards and Scorecards; e) Mobile Apps and Alerts”. These applications enable businesses to predict and identify patterns and analyze complex reports in order to provide vital information to their business (Nedelcu, 2013). Accordingly, we believe that business intelligence tools are developed to provide information to businesses for better decision-making processes, based on the capabilities to predict the innumerable variables that influence the economic environments in which the businesses operate.

METHODS

Conceptual research methods were adopted to explore the appropriate theoretical foundation for articulating the necessary techniques for managing operations in a complex economic environment. Researchers define conceptual analysis as an “analysis of concepts, terms, variables, constructs, definitions, assertions, hypothesis, and theories. It involves examining these for clarity and coherence, critically scrutinising their logical relations, and identifying assumptions and implications” (Petocz & Newbery, 2010, p.126). According to Knobloch (2011, p.2), conceptual analysis allows a researcher to “state what is known, what is not known, what could be known, and how what is learned from current research studies adds to or provides new perspectives to the knowledge base” (Knobloch, 2011, p.2). Knobloch (2011) affirms that conceptual analysis is a systematic approach to investigating a relationship between variables. Following this approach, the paper adopted a conceptual analysis through recent literature to establish the current approach to the managing of operations in complex economic environments.

RESULTS AND DISCUSSION

The results of the study revealed that globalization has enabled institutions to be flexible and innovative in order to respond to the progressive markets as well as survive turbulent economic environments (Ascani, Crescenzi & Lammarino, 2012). We also observed that businesses need to establish the dynamics of business and recognize the emerging trends in order to adapt quickly to the complex competitive environment; such a response depends on real-time information. In fact, the success of a business is based on the use of this information in effective decision making, the integration of this information with existing knowledge and the dissemination of the knowledge to the entire business. The complexity of economic environments has been revolutionized by actors that are political, technological and cultural, among other categories. Therefore, it is important that economies and businesses should be sensitized about managing operations in complex economic environments to seek in-depth understanding of the actors or drivers.

Earlier in this paper, we highlighted that the complexity of the competitive environment has required adequate knowledge from managers to understand the variables that affect the economic environments in which they work. Babatunde and Adebisi (2012) maintain that such an approach to acquiring adequate knowledge requires strategic environmental scanning through a “Political, Economic, Social-Cultural, and Technological (PEST)” analysis. Failure to implement an appropriate strategy might lead a business into more complexity. This makes accurate planning vital for positioning an organization in the marketplace. “Environmental scanning is the monitoring, evaluating, and disseminating of information from the external and internal environment to key people within the cooperation or organization” (Babatunde & Adebisi, 2012, p.26). It is likely that such a process must be executed at the right time and Nedelcu (2013, p.12) puts it that BI has the ability of “getting the right information to the right people at the right time”. In the view of Gollapudi, Jangeti and Kotapati (2012), many businesses lack the appropriate approach to implementing BI tools, which means that these businesses operate without BI tools.

Without BI tools, these businesses face challenges such as a lack of “data availability for analysis; rapid change in market; and real-time reporting & performance” (Gollapudi, Jangeti & Kotapati, 2012, p.408). To summarize, economic environments are constantly and rapidly changing and forecasting in such environments is challenging. Regardless, managers are forced to make executive decisions and these decisions depend on accurate information. Thus, it appears that BI tools enable better decision making in an organization or business. These tools have been proven capable of helping managers to make better-informed business decisions and of enabling organizations to predict and identify patterns and analyze complex reports in order to provide vital information to a business (Nedelcu, 2013). Moreover, BI tools have the capability to identify and predict the innumerable variables that influence economic environments. At this point, we would like to single out the critical findings that can help managers with managing operations in a complex economic environment(s).

The importance of Knowledge Management and Organizational Learning

Based on literature, the success of a business’s operations depends on the knowledge it possess and the ability to learn continuously. Jelenic (2011, p.35) stress the importance of knowledge management in organizations by maintain that these days “the focus is on the data, information and knowledge as the most important organizational resources. This author puts it, “knowledge management is the process through which

organizations generate value from their intellectual capital and knowledge-based assets” and he claim that businesses are not capable to forecast and envision the future without knowledge assets. According Gartner Research (year), businesses waste 80% of collected data pertaining customers; therefore this implies that only 20% was utilized. Managers can not make well informed decision based on 20% data’s information rather with 80%. Could this be that some businesses have not recognize the importance of knowledge management and organizational learning. Whereas King (2009, p.) is of the view that organizational learning is one of the important ways in which the organization can sustainably improve its utilization of knowledge. In drawing these conclusions, we can assume that some businesses have not paid serious attention on knowledge management and organizational learning if 80% of data gets wasted. Consequently, the shortfall escalates to the inability of selection right and getting business value from BI tools. These are the reasons some researchers believe the business value of BI tools are not clear quantified or measured. Based on the progression of BI as a discipline and profession, it can said that BI as an object of research has gain popularity.

The Acquisition and Application of BI tools

According Gartner (2016), “companies that excel in data-driven decision-making are 5% more productivity and 6% profitable than their competitors”. This organization survey revealed that more successful business was enabled by BI environment through ensuring the shortest and most reliable path from data to decision making. Interestingly, when managers were asked about their organizational decision support systems and reports for decision making, the survey results also indicated that;

- a) “Only 25% of CEOs say their reports contain the information they need and want.
- b) 44% of executives say that too many of their critical decisions were based on incomplete or inaccurate data.
- c) 75% of vice presidents surveyed said that they were dissatisfied with their access to the data they need, and 69% were not happy with the speed of information delivery.” (Gartner, 2016, p.4)

Clearly, there are challenges associated with data collection and analysis in businesses. Yet, managing operations in a complex economic environment pressurises managers to make decision based on information rather than on intuition. To do this, businesses are depending on technologies – in business context the BI tools. This study also shown that decision makers need: “data from all relevant sources in one place; real-time data, not having to wait for an analyst to deliver it or wait for IT to respond; data that represents one version of the truth; self-service data and analysis, reducing the reliance on experts; data and analytics that help predict what’s coming” (Gartner Research). In brief, the study advocated that BI tools allow business leaders to view an organization’s operations as a whole in order to make well-informed decisions quickly. Although, Marshall and Harpe (2009) believes that it is still difficult to make decision in BI environment without understanding the elements that hinders the transformation of raw data into information as well as establishing the implications it has on decision making process. These author claim that the “causes that impact the decisions of BI users, including accuracy, inconsistency, understandability and availability of information”. This could be results of lack business intelligence strategy which has been claimed by Garrentt (2012) and the reason that researchers maintain that businesses still need to develop a strategy to adopt and use BI in order to ensure that the BI tool attains the indented investment and adds a business value (Gartenr; Ong, Siew & Wong, 2011). To summarise, the argument is that managing operations in a complex economic environment is challenging and a reality to managers. Therefore, managers are required to develop multiple competencies and capabilities that can enable them to acquire and apply the right BI tools to transform data into quality information for better decision making. From this perspective, we propose a technique for managing operations in a complex economic environment through the lens of BI tools.

TECHNIQUE FOR MANAGING OPERATIONS IN A COMPLEX ECONOMIC ENVIRONMENT

The economic environment can always be expected to show signs of change. Businesses need to be aware of these progressions. On the basis of our findings, we propose an approach to overseeing operations in a complex economic environment. This approach incorporates continuous strategic environmental scanning with knowledge

management. The findings of the study reveal that some organizations do not precisely configure their operational procedures despite the fact that BI tools can be embraced. They also do not articulate the right data to support attaining the upper hand in their business environment. Figure 7.1 presents an adaptive approach that businesses can use to manage operations in complex environments.

Figure 7.1 Adaptive approach to managing operations in a complex economic environment



The application of BI tools derives from a business's knowledge management perspective. Initially, however, managers need to understand their business process activities in order to establish what knowledge the organization possesses and what is required for sustaining competitiveness. The careful selection of BI tools depends on the nature of the business and the required knowledge to be mined. The collected information from the correctly chosen BI tools can be used for better decision making, which will enhance business process activities, which in turn will eventually increase organizational performance and enable the business to sustain competitive advantage. It is important that a business pays attention to other attributing factors that might affect Figure 7.1's elements, such as selecting the right BI tool and clearly articulating business process activities and knowledge management processes, to name but two. Results revealed that knowledge has become the key enabler for businesses to enhance productivity and increase competitiveness, and that employees are forced to learn and develop continuously within an organization for the business to sustain its competitive advantage.

CONCLUSION

In this paper, we have highlighted the importance of managing operations in complex economic environments and have explained the impact of the complexity on businesses. In addition, we have indicated a few issues that businesses are overlooking in relation to the enterprise architecture as strategy and have identified a few drivers of complexity. We have looked at a range of definitions of BI and descriptions of BI tools. In addition, we have identified the shortfalls of implementing BI tools by businesses. Considering that conceptual analysis tends to provide new perspectives on a phenomenon, we recommend the application of BI tools as part of an adaptive approach in managing operations in complex economic environments. In a business context, businesses should acquire knowledge in relation to the acquisition and application of BI tools with techniques and practices that enable them to survive the complex economic environment. We have presented a preliminary model, which requires testing in a further study.

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MOTIVATION THROUGH NON-FINANCIAL STRATEGIES: THE CASE OF UNIVERSITY HEALTH WORKERS

Chengedzai Mafini, Vaal University of Technology, South Africa
Charity Dhliwayo, University of Zimbabwe, Zimbabwe

ABSTRACT

The aim of this study was to explore non-financial incentives that are important in motivating health workers. The study was conducted using data collected from health workers at a public university in Zimbabwe. A qualitative design was adopted in which structured in depth interviews were held with 10 health workers at the institution. After content analysis, five non-financial incentives influencing the motivation of health workers were identified, and these are training and educational continuation, recognition and appreciation, health worker supervision, provision of transport, and provision of housing. The findings of the study could be used by health administrators to initiate strategies for motivating health workers in developing countries.

Keywords: Non-financial incentives, motivation, health workers, training, supervision, recognition

INTRODUCTION AND BACKGROUND TO THE STUDY

International migration remains one of the most apparent features of globalized labour markets in the health care industry (United Nations, 2013). In Africa, South of the Sahara international migration of health care professionals remains a major challenge, and has led to a plethora of challenges facing health care systems (Oyobo & Ejughemre, 2013). Today, although Africa carries approximately 26% of the world's diseases burden, there still remains prevalent staff shortages of health professionals and local health facilities are ineffective, inefficient, unresponsive and inequitable (World Health Organisation, 2015). According to Crisp (2010) international migration is one of the reasons behind this underperformance. This is a cause for concern, since the motivation and performance of health workers is the foundation for any health care system (Lim *et al.*, 2008). In addition to the problem of staff shortages, health systems in Sub-Saharan Africa also face challenges related to poor leadership, distorted incentive structures, ineffective managerial practices and unsatisfactory working conditions resulting in an overworked and demotivated health workforce (Mphatswe *et al.*, 2012). The result of these inefficiencies is unsatisfactory health service delivery to the general public.

Zimbabwe has not been spared by pressures emanating from the widespread and persistent international migration. There is obstinate and considerable out-of-country migration in Zimbabwe with health professionals moving to other better paying countries such as Australia, Britain, Canada, New Zealand and South Africa (United Nations General Assembly, 2012). This has contributed to both the shortage of health professionals as well as poor working conditions in health institutions in the country (Nyazema, 2010). As noted by Stringer *et al.* (2013), financial incentives alone may not be enough to generate internal migration, hence the resultant shortages of health workers in hospitals and clinics. Amoroso *et al.* (2010) add that poorly motivated health workers tend to contribute much to low quality health care especially in low income settings. A recent study by Muzilingi and Gozho (2015) outlined that because health workers are poorly motivated, they invest little effort in conducting their duties resulting in low level of effort per patient. Additionally, although financial incentives are important, the challenge of low salaries should be addressed especially in situations where income is insufficient to meet the basic needs of workers (Bohm, 2012). Nevertheless, it is widely acknowledged that increased salaries

are insufficient to solve the challenge of low employee motivation, which attracts the suggestion of a combination of both financial as well as non-financial incentives (Chimbari *et al.*, 2008).

This research study focused on exploring non-financial strategies implemented by a health department to motivate health workers at a large university in Zimbabwe. The study also sought to establish the effectiveness of these strategies in motivating the health workers. Due to an unstable and unfavourable economic climate in Zimbabwe, remuneration has been below the poverty datum-line for most health workers and financial incentives alone have not been of much help (Muruviwa *et al.*, 2013). Hence, this study was intended to bring forward strategies for the introduction of non-financial incentives to improve the motivation of health workers in an academic environment. Furthermore, the impact of international migration is quite complex both for health workers in the sense that it has also added to push factors for migration of health workers, from both rural areas to urban areas and urban areas to outside Zimbabwe (Government of Zimbabwe, 2014). Hence it is important for the health human resources management departments to improve the motivation of health workers (Sharp, 2008).

THEORETICAL FRAMEWORK

Herzberg's theory for motivation at the workplace or the motivation-hygiene theory was used as the theoretical framework in this study. This theory is premised on the belief that an individual's relation to his or her work is very basic and that it is his or her attitude toward his or her work can very well determine the individual's success or failure (Herzberg, 1953). The rationale behind the two factor theory is that there are positive factors (motivators that are intrinsic) in the place of work that cause job satisfaction, whilst a separate set of factors (dissatisfiers or hygiene factors) cause discontentment (Bohm, 2012). Examples of motivators include achievement, recognition, the work itself, responsibility, advancement and growth, while hygiene factors include company policies and administration, supervision, interpersonal relations and working conditions (Shortell & Kaluzny, 2006).

The relevance of Herzberg's theory in this study is based on its capacity to clarify whether the predicament being addressed is essentially one of job contentment or one of job frustration in the motivation of health workers, and then to select the appropriate human resource management strategies in the motivation of health workers. For instance, it can be argued that attending to salary levels and working conditions alone may primarily reduce job dissatisfaction but may not enhance staff motivation amongst health workers. This implies that in order to improve motivation and thereby increase the performance of health workers, attention should be directed towards motivating factors such as increasing the sense of achievement and recognition. Thus, the two factor theory as used in this study assists in clarifying the complex issues of motivation and demotivation amongst health workers.

METHODOLOGY

This study used a qualitative approach to identify those non non-financial incentives that are deemed important for the motivation of health workers. The study was conducted at a clinic located at a public university located in Harare the capital city of Zimbabwe. The clinic is used by both staff and students. The target population included all health workers at the institution's clinic. The actual sample consisted of 10 health workers who included two doctors, five nurses, one clerk and two clinical technicians. Access to collect data was granted through the assistance of the sister in charge. Data were collected through structured depth interviews, each which lasted for periods ranging between 10 and 15 minutes. The interviews were conducted in May 2015. All interviews were recorded by means of a digital voice recorder. Thereafter, a qualified transcriber was employed to transcribe the data from voice to word format. Thematic content analysis was then employed to analyse responses from participants, based on the information on the word transcripts. Common themes were drawn, based on the information provided by the participants in order to come up with a description of health workers' views about the non-financial incentives important to them. Anonymity of participants was observed during the entire research process; hence the right to participant non-disclosure was adhered to.

RESEARCH RESULTS

This section outlines the themes derived after the data analysis. In total, the study yielded five themes, namely training and educational continuation, recognition, supervision, transportation and housing.

Theme 1: Training and Educational Continuation

Training and continuation of education is a very essential motivational factor as it fosters the personal and professional goals of health workers. Training as a non-financial incentive can serve several critical purposes. For instance, it can enable workers to deal with newly arising job demands and to manage more difficult duties and situations in order to achieve certified goals. These views are supported by the following except from one of the participants:

“Training allows us as nurses to learn about new things and capacitates us with knowledge on how to handle difficult situations and even how to deal with new medical equipment.”

In addition, training in numerous areas such as the treatment of HIV/AIDS and male circumcision is considered to be of great significance to health workers. There is also a need for health workers to be educated on how they can safely work with HIV/AIDS patients through training in counselling, testing and prevention. This was supported by the following excerpts:

“I have worked as a nurse before AIDS was much of an issue. In fact, I had a negative attitude towards AIDS patients, but through training, I learnt how to embrace the patients and to appreciate them and now I have a positive perception”.

“Training significantly changed me in that it made me develop love towards what I do and the patients I take care of and I now have no fear of patients”

“Continuation of education allowed me to gain knowledge in some areas I was lacking and it helped me obtain a promotion as well.”

The above excerpts demonstrate that training may have a direct influence on motivation. Participants repeatedly pointed out that HIV/AIDS related seminars and training workshops provided for capacity building had increased their abilities at work. In other words, education continuation or professional advancement for health workers is an essential non-financial tool which most of the participants considered to be a top priority for health workers as it enhances the knowledge they already have. Hence, overall, training and continuation of education have a strong effect on the motivation of health workers.

However, in as much as training and continuation of educational programs as non-financial incentives are essential in improving health worker motivation, other participants argued that the process of choosing attendees of such programs was biased. Some workers at both clinics complained that the selection process involved favouritism. This demonstrates that health workers realised the importance of training in their careers and they wanted opportunities for further training to be fairly extended to all staff members.

Theme 2: Recognition and Appreciation

Work place and community recognition and appreciation have a great impact on the discharge of duties by health workers, and have the effect of improving their motivation. However while most participants felt that their supervisors were reachable, critiques focused on the lack of reassurance and inadequate consideration of the views and opinions of staff, as health workers did not feel supported and recognised by their superiors as noted below:

“My boss has never; I mean ever recognized or appreciated by any of my work since I started working here six years ago. I doubt he even knows my first name or if I am married or not.”

Recognition and appreciation were viewed by participants as an effective motivational tool that enables health workers to behave professionally and to achieve predetermined goals. Likewise, appreciation from patients motivates health workers to work even harder as noted below from the responses from the participants:

“Appreciation from patients is greatly important because it is passionate and touching”

In addition, participants pointed out that while recognition that comes from patients is necessary, even more important was recognition by supervisors. A married female health worker revealed that she feels wanted and honoured when her supervisors recognise her work as she mentioned on the quote below:

“I feel honoured when my supervisor recognizes, my work and passes encouraging comments for my performance. It makes me want to tell my family all about my hard work and achievements during dinner.”

When asked on the importance of recognition and appreciation, participants firmly stressed on the lack of recognition from their employers, as reported in the except below;

“I have never been recognized by my employers for any achievement. Instead the only recognition and appreciation I get comes from the patients I attend to and a few of my supervisors only.”

The above findings illustrate the significance of strengthening recognition and appreciation as incentives to boost the motivation of health workers, which leads to improved health service delivery.

Theme 3: Health Worker Supervision

Supervision as a formalised human resource management tool intended to correct shortcomings and to support good practice, to improve individual and facility performance, is a very critical non-financial incentive in promoting motivations (Shortell & Kaluzny, 2006). The except below crystallises this view;

“Supervision is very useful and helpful if done properly and with longsuffering supervisors. It reminds us of the work we are supposed to do and it always keeps us on schedule. Similarly, while individual efforts go unnoticed without supervision, but if supervised, efforts made are appreciated, and shortcomings are noticed immediately.”

Despite the importance of supervision, the participants criticised the low regularity and unplanned supervision as well as the autocratic type of management employed by some supervisors. Participants indicated that supervision in the presence of patients is both demotivating and embarrassing. Some participants further revealed that having no information about when the next supervision will be conducted has a positive effect on their commitment to effectively carry out their duties. However, others argued that ignorance regarding supervision schedules makes them nervous and inattentive, hence they prefer to be in the know. The following excerpts capture these views:

“Supervision must be implemented as an encouraging tool and the results of the supervision must be positive and not negative. Supervisors must not take supervision as an opportunity to payback for silly work grudges.”

“Supervisors should return reports in time so that one can adjust to his/her shortcomings basing on the report. Hence supervisors should give feedback in time.”

There is a large potential for improvement in the supervision process, as argued by the participants. Apart from a more frequent, regular, reliable and scheduled supervision, many participants asked for a different approach to supervision in both clinics, because supervision should be encouraging, instructive, more reliable, participatory, need oriented and should provide personal recorded feedback. Therefore, conclusively, supervision that currently exists appears to contribute immensely to the levels of motivation and self- efficacy amongst health workers.

Theme 4: Provision of Transport

Provision of transport to and from work is crucial for health workers mostly during days of transport crises, when public transport is scarce and when the fares are scrambled. This allows workers to arrive early at their workplaces and help workers avoid long and repulsive journeys to work. The provision of transport also help workers to save money. The following except captures this view:

“I don’t have to budget transport fees from town to work because the buses carry us to work and back to town free of charge. This really makes me see what a privilege it is to be provided with transport as an incentive.”

However, some of the participants indicated that the transport is not reliable and some of the buses do not meet the standards of public transportation, and the buses are inconvenient in some cases. Besides, participants argued that the proportion of the buses provided by the university do not meet the number of the commuters available. When asked during the interviews, two participants responded as follows:

"The two buses that transport us to and from work are outmoded and they usually experience mechanical problems and during the rainy season, they leak."

"The transport provided is very limited such that in some circumstances workers travel to work standing all the way and by the time work starts, they will be tired."

Conclusively, considering the perceptions of the respondents on transport, it can be noted that the provision of transport as an incentive is necessary for the motivation of health workers, despite the current setbacks.

Theme 5: Provision of Housing

Provision of housing to health workers emerged as a topic of concern among the health workers interviewed. Participants concurred that the health department at the university should provide them with houses at the campus or at least fair housing allowances so that less amounts of money from their salaries could be directed towards paying for housing. This is reported in the following excerpts:

"They must look into the issue of providing health workers with houses immediately because housing costs are demanding and consume almost half of our salaries"

"Housing is a serious matter for us as employees and it should be addressed as soon as possible; if they cannot provide houses at the campus for us, they really need to top up the housing allowance"

In addition to the above, when asked on the importance of the provision of housing to health workers on what was the most appropriate approach for the university to take, whether the university should provide on campus or outside campus housing facilities or should only increase housing allowances, participants offered divergent responses; as indicated in the following excerpts;

"Myself as an unmarried nurse, I vote that the university should only top up our housing allowances, because staying on campus is not ideal."

"I side that the university provide us with on campus housing, as it will be free and more convenient to work, unlike to have housing facilities on the suburbs around campus as the water and electricity bills around that area are usually high."

"I prefer out of campus housing facilities as staying near students is noisy"

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

The aim of this study was to explore non-financial incentives that influence the motivation of health workers at a public university in Zimbabwe. The study identified five non-financial incentives influencing the motivation of health workers, and these are training and educational continuation, recognition and appreciation, health worker supervision, provision of transport and provision of housing. It was noted that non-financial incentives to a larger extent are helpful, important and effective in improving the motivation of health workers. Moreover, the use of non-financial incentives to improve performance normally requires good supervisory frameworks and trained managers to implement. This calls for the employment and training of suitable managers to capacitate them to motivate their subordinates. The professionalism of health workers should be appreciated by assisting them to attain their goals such as recognition, career development and further education. Health administrators should strive to make substantial improvements in the work environment to empower health workers to meet their personal and organisational goals. Ensuring the ensuring the availability of critical means, materials and provisions as well as equipment could also enrich the jobs of health professionals, leading to enhanced motivation.

LIMITATIONS AND IMPLICATIONS FOR FUTURE RESEARCH

The sample of the present study was drawn from the two clinics at one university in Zimbabwe. The findings cannot then be generalised to the contexts of other university clinics, college clinics, school clinics and community pre-school clinics elsewhere. For the findings of this study to be more valuable, a comprehensive sample needs to be considered which includes larger hospitals and clinics that are not part of any university. Moreover, the study was purely qualitative in nature, which provides room to use a mixed method approach in future studies, in order to capture other non-financial incentives that were omitted from the scope of this study. Future research could also explore financial incentives that are considered as important by health workers.

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SUPPLY CHAIN AGILITY, LEAN SUPPLY CHAIN MANAGEMENT AND SUPPLY CHAIN PERFORMANCE IN SMEs

Chengedzai Mafini and Welby Vandrys Loury-Okoumba
Vaal University of Technology, South Africa

ABSTRACT

The purpose of this study was to examine the influence of supply chain agility and lean supply chain management on supply chain performance in the small and medium enterprise (SMEs) sector in South Africa. A quantitative method was employed in which a four section structured questionnaire was used to gather data from 400 owners and managers of SMEs in the Vaal Triangle region, South Africa. A confirmatory factor analysis (CFA) was employed to test the psychometric properties of the scale and Structural equation modelling (SEM) was used to test hypotheses. The results of the analysis showed that both predictor constructs (supply chain agility and lean supply chain management) exert a positive and significant influence on supply chain performance. Lean supply chain management exerted a greater impact on supply chain performance ($r=0.740$) than supply chain agility ($r= 0.662$). SMEs should therefore direct more effort towards making their supply chains leaner when compared to making them more agile.

Key words: Supply chain agility, lean supply chain and supply chain performance

INTRODUCTION

The concept of Small and medium enterprises (SMEs) has received extensive attention from a number of scholars (Ladzani & Netswera, 2009; Olawale & Garwe 2010; Dlodlo & Dhurup, 2010; Cant, Wiid & Kallier, 2015) who have provided empirical evidence of its importance and critical role as a contributor to economic development. SMEs have been identified as essential to employment creation, with their input in that respect estimated at around 56% and 36% to the gross domestic product (GDP) (Pellissier & Nenzhelele, 2013). Ayanda and Laraba (2011) posit that SMEs play a central contribution in improving the growth of a country's economy through both job and economic development. However, despite the common consensus of the significant role that the SME sector has worldwide, and in the South African economy in particular, it appears that most SMEs do not attain the required maturity stage (Cant, 2012). This is due to a number of factors that include uncertainty of the economic environment as well as stiff competition (Ebersole, 2014). This assessment has been well-documented and endorsed by a number of scholars (e.g., Von Broembsen, Wood & Herrington, 2005; Cant & Wiid, 2013). In order to reduce the failure rate of SMEs, it is important for SMEs to become conscious of the gains realised by directing a special emphasis to supply chain management practices such as developing lean and agile supply chains.

The aim of this study was to investigate the influence of supply chain agility and lean supply chain management on supply chain performance. The study was conducted in the context of South African SMEs. Although some previous studies have examined similar issues (e.g. Gligor, 2014; Yusuf et al., 2014), little is known on the influence of both supply chain agility and lean supply chain management practices as predictor constructs to supply chain performance in the South African SMEs sector. The current study aims at addressing this research gap. The results of the study could be useful to small business owners and other entrepreneurs, notwithstanding its importance in broadening the scope of supply chain management literature in developing countries such as South Africa.

LITERATURE REVIEW

Supply chain agility

Supply chain agility is a firm's ability to quickly adjust and adapt to its operational strategies within its supply chain network (Gligor, Holcomb & Stank, 2013). Moreover, common characterisations of supply chain agility revolve around the aspects such as quick response to sudden change in demand and supply (Gligor & Holcomb, 2012), adequate mitigation or management of interruption/disruption of supply (Li *et al.*, 2008) and flexibility/speed/integration as well as customer orientation (Gligor, 2014). According to Blome, Schoenherr and Rexhausen (2013) organisations whose supply chain networks have demonstrated efficient levels of agility are able to portray characteristics such as flexibility and quickness in their ability to reconfigure their strategies in maintaining a certain level of competitiveness. Furthermore, agile supply chain management enables firms to adequately and efficiently adapt to any market related changes and this is in relation with customer demand as well as supply (Mishra, Datta & Mahapatra, 2014). Sukati *et al.* (2012) add that supply chain agility is one of the prerequisite strategic factors to any firms' survival aspirations. This therefore provides significant support to the relevance of this construct as the backbone to effective supply chain performance appraisal.

Sound logistical capabilities have been identified as a key facilitator to effective agile supply chains (Gligor & Holcomb, 2012). This is significant since an efficient logistics function's readiness to meet changes in customer demands underlines the speed with which a supply chain network is able to handle the unpredictability of its market (Swafford, Ghosh & Murthy 2006). Liu *et al.* (2013) established that Information technology (IT), flexibility and assimilation are antecedent factors of efficient supply chain agility. These are essential in that they enable supply chain networks to systematically provide adequate and relevant timely feeds and information to each chain of units, thereby responding promptly to customers' orders. Agile supply chains have proven to be beneficial to firm performance since they enhance operational activities, which also play an active part in cost reduction (Sambamurthy, Bharadwaj & Grover, 2003). This subsequently correlates to increases in profit margins (Agarwal, Shankar & Tiwari, 2007). Eckstein *et al.* (2015) advocate that supply chain agility enables organisations to better coordinate their supply and demand at both hands of the supply chain network, resulting in the reduction of costs associated with inventory and transport. Still, effective and efficient supply chain agility is a critical factor in ensuring sound and proper performance objective since it enables the supply chain network to be more flexible to changes in demand (Hendricks & Singhal, 2005). Moreover, agility as related to operation/manufacturing side, contributes significantly to improved and more stable performance outcomes such as lower costs, quality and delivery (Blome *et al.*, 2013). In view of the aforementioned literature, it is hypothesised that:

H₁: Supply chain agility has a positive influence on supply chain performance amongst South African SMEs

Lean Supply Chain Management

The concept of lean supply chain management has received significant review from a number of supply chain management scholars (e.g. Agus & Hajinoor, 2012; Hajmohammad *et al.*, 2013). Lean supply chain management is been associated with effective waste reduction as well as minimising and maximising low and high value added activities, in the objective of enhancing firm performance appraisal (Womack & Jones 1996; Buyukozkan, Kayakutlu & Karakadilar, 2015). This conceptualisation is endorsed by Cabral, Grilo and Cruz-Machado (2012) and further stretched through its influence on sound and efficient supply chain activities such as 'Zero inventory' and Just-in-Time (JIT) adoption (Fan, Xu & Gong, 2007; Wu, 2009).

According to Behrouzi and Wong (2011) supply chains that are characterised by lean practices are more flexible and agile, which results in higher productivity and improved competitive advantage. Lean supply chain practices can also enable organisations to reduce their lead-time operations, which facilitates more effective and efficient customer services in terms of delivery as well as meeting customer needs and requirements (Duarte, Cabrita & Machado, 2011). Yang, Hong and Modi (2011) concluded that lean supply chain practices are vital in ensuring customer satisfaction since they boost an organisations' ability and capability to provide fast response rates in terms of order processing. Agus and Hajinoor (2012) identified shorter lead-times as well as higher

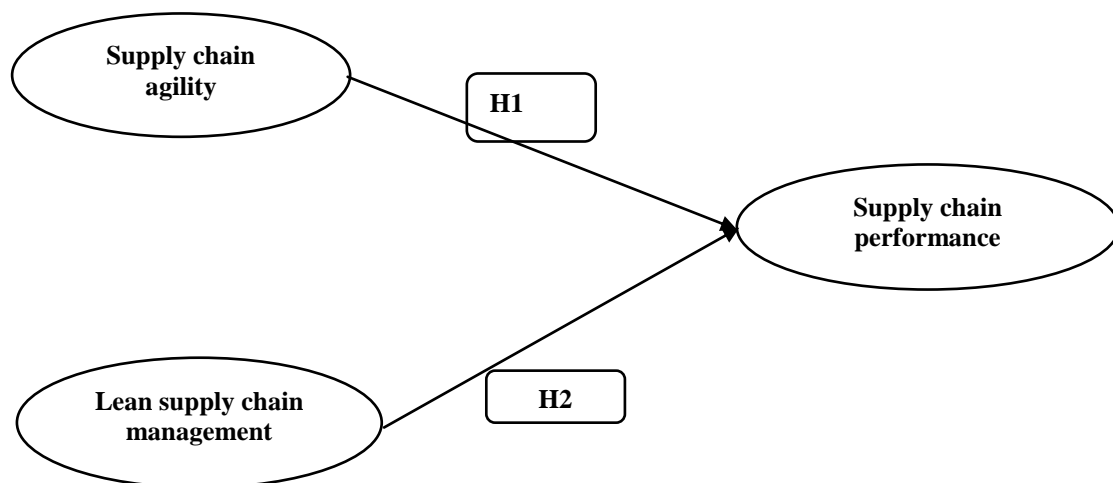
production and continuous improvement as key outcomes of effective lean supply chain production. Cabral *et al.* (2012) identify lean supply chain management as one of the prerequisite factors to achieving competitiveness in a supply chain network. Moreover, Soltand and Mostafa (2015) argue that supply chain networks which demonstrate satisfactory lean practices result in better delivery performance in terms of speed, reliability, lower production costs and sound quality of products. Based on the foregoing empirical evidence, it is posited that:
H₂: Lean supply chain management has a positive influence on supply chain performance amongst South African SMEs

Supply Chain Performance

According to Avelar-Sosa, García-Alcaraz and Castrellón-Torres (2014) supply chain performance refers to the ability of a firm's supply chain to provide the right products and services, at the right quantity and quality whilst incurring minimum cost. The key attributes and characteristics of effective supply chain performance include reliability of delivery (Croom & Johnston, 2003) responsiveness (Presutti, 2003) lower costs (Eng, 2004) lead-time (Eng, 2006) adherence to requirements/specifications (Srinivasan, 2004) continuous improvement (Behrouzi & Wong, 2011) and time-to-markets (Panayides & Lun, 2009). In their study on e-procurement and supply chain performance, Chang, Tsai and Hsu (2013) observed that information sharing between supply chain partners as well as supply chain integration and partner relationships are important antecedent factors of supply chain performance achievement. Furthermore, supply chain partners that portray collaborative working behaviour and effective institutional trust are key determinants to adequate performance outcomes (Gadden, Marshall & Cao, 2013; Cheng & Tang, 2014). Supply chain performance is also supreme in determining effective customer satisfaction because a well performing supply chain focuses more on customer needs and requirements (Estampe *et al.*, 2013). Estampe *et al.* Djelloul (2010) further opine that supply chain performance plays a crucial role it plays in ensuring competitive advantage. Hence, supply chain performance is a significant concept within the field of supply chain management.

CONCEPTUAL FRAMEWORK

In light of the afore-stated hypotheses, a conceptual framework illustrated in Figure 1 was developed to establish and test the identified relationships.



The framework in figure 1 indicates that there are two predictor constructs, namely supply chain agility and lean supply chain management which influence supply chain performance. The association is supported by two hypotheses (H1 and H2).

RESEARCH METHODOLOGY

Sample

The study was mainly focused on SMEs within the Vaal Triangle (Vanderbijlpark, Vereeniging and Sasolburg) area in Southern Gauteng, South Africa. The sample of the survey consisted of 400 respondents who were selected through the non-probability convenience sampling method. The results of the demographic analysis yielded interesting results, as it appeared that the majority of the selected companies are private (n=255; 64%), with the rest being sole proprietor (n=88; 22%) and partnerships (n=57; 14%).

Measurement Instruments

The study collected data using a structured questionnaire which was divided into four sections. Section A elicited general information on the background of the SMEs companies. Section B measured supply chain agility using a six-item scale adapted from Gliogor, Holcomb and Stank (2013). Section C measured lean supply chain management using with four-items adapted from Hajmohammad *et al.* (2013). Sections D measured supply chain performance using a six-item scale derived from Croom, Johnston (2003), Eng (2004), Presutti (2003) and Tan, Lyman and Wisner (2002). All items in this questionnaire were measured on five-point Likert-type scales that were anchored by 1= strongly disagree to 5= strongly agree to express the degree of agreement.

Data Collection Procedures

Questionnaires were administered by the researcher between the months of October to November 2015. Questionnaires were returned after a period of four weeks. From the 450 initial questionnaires, 446 were returned, with 44 that were incorrectly answered and two that were not properly completed.

Demographic Profile of Respondents

Table 1 provides information pertaining to the profile of SMEs companies that participated in this investigation.

Table 1: Profile of SMEs

Variable	Categories	N	n	%
Nature of business	Manufacturing	400	178	45
	Retail	400	222	55
TOTAL				100
Gender of respondent	Male	400	298	75
	Female	400	102	25
TOTAL				100

The majority of SMEs were in the retailing industry (n=222), which represented 55% (n=222) of the total respondents; with 178 (n= 178) belonging to the manufacturing sector. With regards to gender representation, it could be observed that 75% (n=298) of respondents (owners or managers) were male and 102 (n=102) respondents from a sample of 400 (N=400) were female.

Psychometric Properties of Scales

Confirmatory factor analysis was conducted to determine three psychometric properties, which are reliability, validity, and model fit. The findings of these tests are reported in Table 2.

Table 2: Accuracy analysis statistics

Research Constructs			Descriptive Statistics		Reliability Test		C.R.	AVE	Factor Loading
			Mean	SD	Item-total	α Value			
Supply chain agility	Sca ₁	3.012	1.54	0.742	0.721	0.757	0.42	0.69	
	Sca ₂			0.731				0.73	
	Sca ₃			0.702				0.70	
	Sca ₄			0.687				0.76	
	Sca ₅			0.679				0.75	
	Sca ₆			0.701				0.78	
Lean supply chain	Lsc ₁	3.126	1.01	0.771	0.794	0.798	0.57	0.80	
	Lsc ₂			0.618				0.62	
	Lsc ₃			0.691				0.81	
	Lsc ₄			0.766				0.79	
Supply chain performance	Scp ₁	3.001	1.73	0.674	0.802	0.723	0.43	0.74	
	Scp ₂			0.713				0.69	
	Scp ₃			0.625				0.71	
	Scp ₄			0.876				0.62	
	Scp ₅			0.712				0.91	
	Scp ₆			0.687				0.77	
Note: SCA= Supply chain agility; LSC= Lean supply chain; SCP= Supply chain performance; C.R.: Composite Reliability; AVE: Average Variance Reliability Scale: 1= Strongly disagree; 2=Disagree; 3= No Opinion; 4=Agree; 5= Strongly Agree									

The Cronbach's alpha was used in this investigation to determine the reliability of the measurement scales. A value equal or above the threshold of 0.7 suggests adequate degree of reliability (Bagozzi & Yi, 1988; Nunnally & Bernstein, 1994). All the respective measurement scales used in this study were reliable since they all had values of exceeding the 0.7 minimum threshold. Just like the Cronbach alpha, the Composite Reliability (C.R) index value must be equal to or above 0.7 (Hair *et al.*, 2006). The results tabulated showed that all scales were in line with the required CR threshold. In addition, the value of AVE estimate must be above 0.4 to ascertain the adequacy of internal consistency (Fraering & Minor, 2006). All AVE values were 0.40, thereby confirming the reliability of all individual scales.

Convergent validity was assessed through factor loadings; acceptable values must equal or above 0.5 in order to the items to be valid (Anderson & Gerbing, 1988). As reported in Table 2, all factor loadings were above the 0.5 benchmark, leading to the conclusion that all scales were acceptable and converging well on the respective constructs that they were supposed to measure. Discriminant validity on the other hand, was assessed using the parametric Pearson Correlation Coefficient. The results of the correlation analysis are reported in Table 3.

Table 3: Correlations between constructs

Research Construct	Construct Correlation		
	SCA	LSC	SCP
Supply chain agility (SCA)	1.000		
Lean supply chain management (LSC)	0.788**	1.000	
Supply chain performance (SCP)	0.689**	0.757**	1.000
** Correlation is significant at the 0.01 level (2-tailed)			

Table 3 shows positive correlations ranging between ($r=0.689$; $p<0.01$) and ($r=0.788$; $p<0.01$) between all three constructs. The fact that these inter factor correlations for all paired latent variables were below the required 1.0 serves as evidence of satisfactory discriminant validity in the measurement scales (Dunn, Seaker & Waller, 1994).

Model Fit Analysis

Model fit was assessed by assessing the chi-square value divided by the degrees of freedom (χ^2/df), the result of which must be confined between 1 and 3 (Schreiber *et al.*, 2006). The values of the Goodness-of-Fit Index (GFI), Comparative Fit Index (CFI), Incremental Fit Index (IFI), and Tucker-Lewis Index (TLI) must be greater or equal to 0.90 (Bollen, 1990; Hu & Bentler, 1995; Chinomona, 2012), and the Root Mean Square Error of Approximation (RMSEA) value be equal to or lower than 0.08 (Browne & Cudeck, 1993). The outcomes of the analysis of model fit read as follows: Chi-square value over degree-of-freedom of was 2,903 ($\chi^2/\text{df}=630.018/217$) and GFI, CFI, IFI, NFI and RMSEA were 0.982, 0.963, 0.917, 0.944, and 0.071, respectively. This indicates that all values met the required threshold, which signifies that the data does fit the model.

Structural Equation Modelling Results

As with the previous analysis, the model fit of this section was determined through the use of the same indicator values. And the results of the analysis revealed the following results: the chi-square over degree-of-freedom, must be lower than 3, of which the result showed the value of 2.717 ($\chi^2/\text{df}= 611.330/225$). GFI, CFI, IFI, NFI and RMSEA provided ratios of 0.90, 0.97, 0.92, 0.90, and 0.07, which indicates that all the indicators met the acceptable thresholds. The results of the hypotheses tests are reported in Table 4.

Table 4: Results of structural equation model analysis

Path Coefficients	Hypothesis	Factor Loading	Decision
Supply chain agility \rightarrow Supply chain performance	H ₁	0.662 ^{***}	Accepted
Lean supply chain \rightarrow supply chain performance	H ₂	0.740 ^{***}	Accepted
Structural model fits: $\chi^2/\text{df}=2.717$; GFI=0.90; IFI=0.92; CFI= 0.97; NFI=0.90; RMSEA=0.07			
Significance level <0.05; * significance level <0.01; *** significance level <0.001			

Table 4 demonstrates that path coefficients for all three hypotheses were significant at a level of $p < 0.01$. The forthcoming section will provide discussion of these results.

DISCUSSIONS AND CONCLUSIONS

The purpose of this study was to investigate the influence of supply chain agility and lean supply chain management on supply chain performance in South African SMEs. Hypothesis (H₁) which indicated that supply chain agility has a positive influence on supply chain performance was supported in this study. This result was acceptable due to the positive and significant association between the two constructs ($r = 0.662$; $p < 0.01$). The result denotes that effective adoption of agile practices is paramount in achieving improved supply chain performance. This result is line with the results of a study conducted by Gligor and Holcomb (2012) which found that agile supply chain practices are critical elements in the attainment of superior performance objectives and reaching acceptable levels of competitive advantage.

The second hypothesis (H₂), which stated that lean supply chain has a positive influence on supply chain performance was also supported and accepted in this study. This is because of the positive association observed between lean supply chain management and supply chain performance in the hypothesis tests ($r = 0.740$ $p < 0.01$). This result signifies that lean supply chain management is an important factor that contributes significantly to the improvement of supply chain performance. This result finds support in a study conducted by So and Sun (2010) which also concluded that lean supply chain practices are crucial in achieving continuous performance improvement.

Overall, the results of this investigation could be fruitful and insightful to both supply chain practitioners and decision-makers in SMEs. This is essential in light of the critical nature the constructs examined which are important factors in the daily operations of SMEs. Furthermore, it is important for SMEs to use these results in developing and implementing their strategic plans based on the critical nature of the associations found in this study. The results of this study could also be used as diagnostic tools in SME supply chain performance challenges, with the potential of mitigating the failure rate of SMEs in South Africa. Another important result is that lean supply chain management exerted a greater impact on supply chain management

than supply chain agility. By implication, in the bid to increase supply chain performance, SMEs should direct greater attention to enhancing their lean supply chain practices.

LIMITATIONS AND IMPLICATIONS FOR FURTHER RESEARCH

The relevance of the results obtained does not set aside some limitations that have impaired the study in some ways. One of the main issues that could have been addressed properly is related to the actual sample size. The inclusion of a broader sample size could have presumably provided better and more inclusive results. Inclusion of SMEs drawn from the main cities of the Gauteng province could have offered proper reading. Since this study examined a direct causal relationships between only three constructs, a more elaborate framework with the addition of two or three more supply chain management constructs could have been insightful and provided better results. The study could also be replicated, with reference to either specific industry sectors such as manufacturing, mining and retail, or other larger industries apart from SMEs.

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UNDERSTANDING INTEGRATED GOVERNANCE, RISK AND COMPLIANCE: STAKEHOLDER PERCEPTIONS

Norman Maliga and Alfred Thaga Kgopa
Tshwane University of Technology, South Africa

ABSTRACT

The purpose of this study is to investigate stakeholders' understandings and perceptions that create barriers to the effective implementation of Governance, Risk and Compliance (GRC). The factor that led to the conception of this study was a struggle for the studied company to fully utilise GRC solution. The methodology used has been case-study based, gathering relevant data using interviews of participants identified by a 'snowballing' approach in order to address the aim of this research. The key findings were complexity of GRC, lack of involvement, inadequate resources, lack of business support, lack of ownership by management, lack of understanding and ineffective project approaches. It is imperative for future studies to focus on other stakeholders within other departments since there is not much work done at this stage in this field.

Keywords: Governance, Risk Management, Compliance, GRC, GRC Solution

INTRODUCTION

There have been ongoing interests to understand what GRC is all about and the reasons for its existence. Over the last decade, companies have increasingly focused on governance, risk and compliance (GRC) solutions because of the escalating risks in the business environment, corporate scandals and increasing regulations. Racz et al. (2010, p.106-117) have mentioned that PriceWaterhouseCoopers (PwC) noted that GRC is not a new term and its various elements have always been a concern to leaders in governance, risk management and compliance roles. However, the framework of an integrated approach to GRC is new, and when applied holistically, it can provide competitive advantage and add value to an organisation. Here, this integrated approach will be referred to as the 'GRC' or the 'GRC solution'.

It remains a major challenge for organisations to fully understand the integrated approach of GRC. Full awareness and understanding of the concept among people is often low and inadequate. Racz et al. (2011, p.155-170) note that in 2007, the Open Compliance and Ethics Group (OCEG) conducted a study where most companies revealed that their GRC convergence is not yet fully implemented or achieved. Some other concerns raised include duplications of operational efforts, unfulfilled audit requirements, policy enforcement, fraud prevention and the inability to achieve an integrated approach across a business because of inconsistent strategies, processes, and conflicting stakeholder's expectations of GRC outcomes and capabilities.

GRC convergence (or the GRC solution) combines three distinct disciplines that in the past existed in silos within organisations, namely: governance, risk management, and compliance. Rasmussen (2012) defines these three GRC terms as follows:

'Governance' refers to the culture, laws, and policies that characterise the way in which companies are managed. 'Risk Management' is defined as a coordinated set of organisational activities aimed at minimizing negative potential events while realising opportunities for achieving a company's objectives. 'Compliance' is the act of conforming and showing adherence to certain laws, policies, and regulations.

GLOBAL CHALLENGES

Since the 2002 Enron scandal, the US government has forced listed companies to comply with tighter regulations such as the Sarbanes Oxley (SOX) law. With the emergence of new regulatory interventions, GRC has become more popular and is a more effective solution for companies to ensure compliance. However, many companies are still facing challenges in successfully implementing and using an integrated GRC solution (Tiazkun & Borovick, 2007, p.1-9), hence the potential benefits of GRC solutions have yet to be fully realised.

LOCAL CHALLENGES

South African based companies have to comply with various regulatory mandates in order to mitigate risks associated with them. Complying with each regulation across the business has always been complicated, costly and a lengthy procedure. Risks are not effectively managed; new threats inherited from new technology are difficult to track. It is difficult to enforce compliance to policies and standards, because they are manually managed. This has led to the misuse of organisational resources, and a loss of accountability within the organisation. Processes are sometimes not followed, which makes it more difficult for management to make informed business decisions, hence the need for an integrated GRC platform became obvious (Investopedia 2014).

The company used for this study also provides consultancy GRC services to some of its clients that are in need of GRC expertise. They have consultants that have good experience and are knowledgeable; however, they are working externally for the client, not supporting the internal implementation of GRC. The external consultants have limited knowledge of the GRC solutions of their employer as they are preoccupied with external clients. As a result, the internal GRC system appears to be only supported by internal employees (with limited knowledge) and is not fully effective.

PROBLEM STATEMENT

Company audit reports are repeatedly identifying shortcomings in corporate governance, inadequate risk management and compliance breaches. From these audit reports it seems that these events result in loss of earning, theft of company resources and damage to staff morale and company reputation. In addition to these downsides, it appears that these failures deny the company the opportunity to capitalise and benefit from the positive outcomes which effective GRC can provide.

Therefore, it can be argued that organisations, like the IT Company, are struggling (if not failing) in their efforts to implement effective integrated GRC solutions, it is likely that stakeholders' perceptions or understanding of GRC is a significant factor.

This study, therefore, enquires into the views of stakeholders that are likely to create barriers to effective implementation of GRC. These barriers, as the case study will show, include problems of misunderstanding, and adverse perceptions giving rise to various forms of resistance to implementing GRC.

AIM OF THE RESEARCH

This research aims to look at implementation of GRC solution, not only from a technological perspective but through a behavioural lens to understand what might enhance the ownership and adoption of the solutions by relevant stakeholders. Given the existing challenges discussed on the problem statement, the aim is to identify understanding and perceptions of stakeholders to the implementation of the GRC solution. Stakeholder's awareness, understanding, perceived behaviours, threats and involvement will be the main areas to be investigated in order to find out any possible barriers preventing stakeholder ability to fully implement the GRC solution.

REVIEWED LITERATURE

A PwC study done by Menzies et al. (2007) showed how an Enterprise Resource Planning (ERP) system such as SAP could support companies towards GRC convergence and processes. It was found that companies are able to derive benefits through integrated reporting functionality and replace the burden of duplicative compliance, because it lays out a holistic approach. This study was conducted at a high level but does not identify the role played by stakeholders. It only provides an overview of the GRC role.

Another study conducted by Spanaki and Papazafeiropoulou (2013) analysed the GRC implementation process. Interviews were conducted among stakeholders. The idea was to produce the implementation plan and highlight the area where stakeholders should pay attention during the implementation process. However, this study only focused on the stakeholders that are directly involved in the GRC implementation process. It failed to engage other personnel that are administering the solution and are critical to achieving the GRC solution and implementation success on a daily basis.

Another study by Racz et al. (2010) analysed how integrated GRC is perceived by GRC professionals in large organisations. A survey was used to collect data and it was found that GRC was an ongoing topic that requires more research. It found that there is a lack of common forum for professionals to communicate and share experiences of GRC outcomes. The study used a survey method to access the understandings of professionals. However, this did not allow stakeholders to express their views in detail and it focused on organisations from industries other than IT.

Another study done by Wiesche et al. (2011) sought to understand the impact of GRC on an accounting business. Observation of the data through control coherence and automation revealed that the GRC initiative contributes to a more effective control system. The literature only focuses on the impact of GRC on an accounting business at high level, not addressing stakeholders' impact.

According to Corestream (2013), there is no 'one size fits all' in applying GRC but there are common threads that can drive GRC to success. Corestream (2013) defines GRC as a combination of practice, programme, and culture. Employees who understand the value and importance of GRC are more likely to embrace it than just complying passively. Mandating policies can create a desired culture; however, it can also create segregation between business stakeholders and the enforcer (risk management team/auditors). Hence adoption is sometimes encouraged by giving incentives to all stakeholders, top to bottom.

Corestream (2013) proposed a framework that can assist in promoting the right culture within the organisation (see Figure 1). This model illustrates two sides:

- On the right side, the board has to initiate the incentives strategy and push it down to management whose role will revolve around educating their employees until they embrace or understand the 'big picture' and where they fit in.
- On the left side, the meaningful management information that comes after employees embrace the change, allowing management to make informed decisions which then results in the board being satisfied and assured.

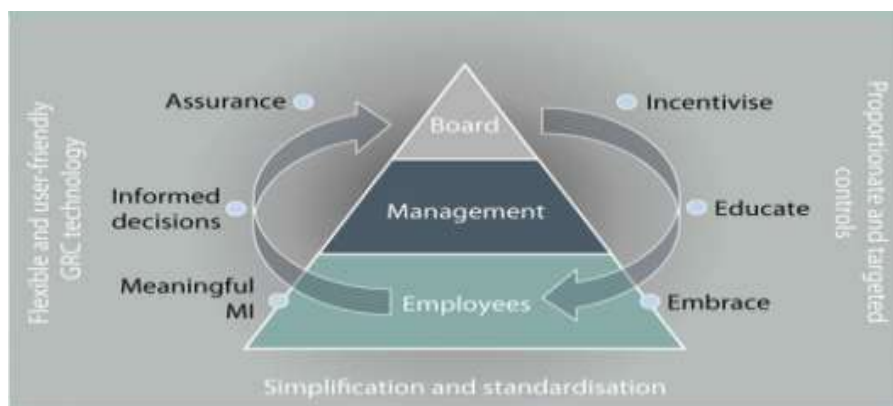


Figure 1: Stakeholders Culture's Mode (Source: Corestream, 2013)

According to Humphries (2014), GRC should not be viewed as policing because people will always find a way around policies and rules. People should be empowered so that their mind-set changes to support the initiative. GRC should not be considered as just another project, but a key cultural change process.

RESEARCH DESIGN AND METHODOLOGY

This study followed the interpretive research paradigm. This paradigm suits this study, as it interprets the reality through understanding and exploring human experience. According to Smith and Heshusius (1986,p.4-12), the interpretive paradigm is about observing people in their natural working environment to understand and interpret how they create and maintain their social world which in this case is to understanding stakeholder's perceptions of GRC in a South African IT company. This approach was used to understand the perspectives of stakeholders within the IT organisation and their approach to implementing a GRC solution.

Further to the research paradigm of interpretive, this study also deployed a qualitative research approach. This approach was appropriate to this study as stakeholder's opinions and behaviours were found during data collection, and they found to be highly relevant to the research questions. Qualitative data was collected in the form of Interview and observations then analysed and interpreted in the form of case study strategy.

PARTICIPANTS DEMOGRAPHICS

A total of six participants were interviewed as part of this research. All participants have more than 5 years' experience in their respective fields, of which three have direct experience working with GRC within the company identified for this research. Four were part of the implementation when the GRC project started, while two participants have worked on a GRC project in other companies previously. Five participants were interviewed in person while the other was interviewed telephonically as this research participant is based externally on a client site.

Participants signed the informed consent before the interview. Anonymity was discussed and it was confirmed that data will be treated with confidentiality. Participants were invited to ask any questions before the interviews were conducted. In the course of the interviews, follow up questions were asked and prompted for clarifications, based on the information the research participant volunteered. In certain cases, where it was deemed necessary based on the importance and relevance to the topic discussed, information shared by one participant was introduced to another, to clarify further understanding from that participant especially where a particular participant did not mention this. At the end, participants were requested to recommend the next person to be interviewed based on their experience.

RESEARCH FINDINGS AND DISCUSSIONS

During the thematic analysis technique the following seven themes were identified during the interviews:

1. **Involvement:** Some participants mentioned their lack of involvement, so they did not believe they could provide useful insights or assist.
2. **Resources:** Participants working on GRC confirmed that they are short staffed, making it difficult to implement GRC successfully and quickly.
3. **Business/Management Support:** some participants reported a lack of activities that represent the support from senior management towards the GRC solution.
4. **Ownership:** Participants identified that business managers consider GRC to be merely an IT tool hence they do not take ownership, whereas IT teams set it as a business tool.
5. **Complexity:** GRC is believed to be a big challenge and expensive, requiring a specific approach and skilled resources.
6. **Project Approach:** GRC often lacks proper project planning if it is being done to address auditor's reports without a proper plan to fully embark on the implementation and engage all stakeholders.

7. Understanding: There is a conflict between how GRC is understood to be and what its real capabilities are.

Table 1: Participated stakeholders

Participants	Age	Position	Experience (Years)
Participant 1	41	Administrator (End-user)	10
Participant 2	55	Administrator (SAP Administrator)	15
Participant 3	57	Internal Consultant (SAP Manager)	16
Participant 4	53	Internal Consultant (Business Analyst)	20
Participant 5	39	External Consultant (GRC Office)	8
Participant 6	61	External Consultant (GRC Consultant)	18

LACK OF INVOLVEMENT

Three participants are directly working on GRC projects. Participant 3 is partially involved, stating that he only gets pulled into a project now and then when his expertise is needed. He does not understand, but he never worries about it as he is engaged with his day to day work. Two participants are minimally involved. Participant 1 noted that her knowledge is limited and she does not play a role in it but that it is a pity because she thinks she should be involved. She has discussed this with the managers and she hopes things will change in the near future. Participants additionally mentioned that the involvement in GRC is with the consultants and IT managers, and they understand that they are qualified to be working on the solution. Participant 2 mentioned that he does not really see himself being involved in anything related to GRC. He stated: 'I don't think they will give me a role to do' although he would like to play a role. Participants 4, 5 and 6 stated that they are overwhelmed with work which prevents them from adequately focusing on GRC to the extent required. 'I have lots of work which requires me to work at home sometimes after work,' Participant 5 stated. This may be because of the shortage of staff.

It is clear from the comments made by some of the participants that even though their roles within the organisation should play an active role in the implementation and maintenance of GRC for the organisation. GRC is not made an active role and responsibility of their respective job description and, therefore, their involvement is on an ad hoc basis and they are disengaged in the process of effectively managing GRC within the organisation. They remain focused on their respective jobs with less or no concerns for GRC.

LIMITED RESOURCES

The second theme that was found in the study related to shortage of staff. Participants mentioned the lack of resources in the case study company's GRC. Participant 1 claimed: 'I just don't think consultants are regularly available. This is a very specialised field which requires people with certain qualifications'; meaning that such a specialised project like GRC demands resources to be dedicated to it and to be available always. Participant 4 added saying every time he tries and work on GRC, his work remains behind and there is no one covering for him and GRC takes him time as he has limited knowledge which needs him to conduct lots of research.

Participant 3 stated: 'If there are guys and systems doing what GRC can almost do, why the company should invest resources in GRC which is expensive?' He further claimed that the bottom line is that GRC costs money and he wouldn't want to make an argument for it. Participant 5 says the current resources used on GRC project are not dedicated to it. They are borrowed from their day to day responsibilities.

Participant 4 said at some stage the company lost dedicated GRC resources and they never replaced them. Participant 6 emphasised the importance of a budget when acquiring resources. She says the company would rather cut down and use the already available resources than spend money hiring new GRC resources. This begs the question as to whether management supports the GRC solution.

It is clear that there have not been dedicated resources to work on GRC implementation. Stakeholders claim that they are too busy with their respective jobs which limit their availability. However, there are no signs or interest in hiring dedicated GRC staff that can permanently focus on GRC.

INSUFFICIENT MANAGEMENT/BUSINESS SUPPORT

The third theme identified from the data was business support which will be discussed below with its sub-theme of Ownership.

Participants were asked how the company recognises GRC and their view around it. Most participants were very keen to express their views on this issue. Participant 1 noted: 'I don't think it is a necessity or priority for them, they look less interested'; and she continued saying: 'It's a shame because it's such a powerful tool.' Participant 2 reaffirmed saying: 'I don't think they are interested and there seems not to be any sort of pressure from anyone to focus on GRC.' Participant 6 went on to state that the only time that he hears of GRC is when the company is about to be audited, otherwise there are no activities that reflect GRC's existence throughout. It is like GRC is in the background or non-existent, until auditing period. That is when everyone starts working together panicking to ensure that GRC is working fine.

It is clear that there is limited support to the GRC project. The business seems not to understand the benefits of GRC, hence it is not supporting this initiative. They understand its capability but do not have any factors compelling them to prioritise it. With no support from management, it becomes difficult for other stakeholders to take ownerships of any GRC responsibilities.

LACK OF OWNERSHIP

Participant 3 claimed that while his IT team is only responsible for administering the data for the business, the business must take ownership of GRC. He believed that unfortunately the business thinks it is only an IT responsibility. On the contrary, Participant 1 and 2 believe the ownership of GRC does or should belong to IT. Participant 4 pointed out that there are no clear project owners to take charge; however, those who are willing to accept the responsibility do not take proper ownership because they do not understand what it means let alone its activities, given that GRC is new.

Participant 5 said: *'Managers are not going to accept GRC because they do not want it and there are no signs of promoting it. They just want people to sit and do their work, not nitty gritty stuff.'* She believes they don't want to take responsibility and would rather put the responsibility on others. However, she thinks IT understands the importance of GRC and is not doing well in selling GRC to them. However, this might be because of the complexity of this solution.

Responsibilities are unclear among stakeholders, which raises misunderstandings and unnecessary conflicts. No one is willing to completely accept GRC responsibility because they do not even understand what it entails. This made stakeholders to be uncertain of what they need to do.

HIGH COMPLEXITY

The fifth theme that surfaced was complexity. Participant 1 noted that GRC is not common knowledge and that it is a highly specialised field. 'Even if one asks some colleagues around here they wouldn't know what GRC is all about; however, the company paid a whole lot of money for it,' she said. Participant 5 admitted that he would have preferred to see a team of skilled consultants working on this implementation. However, he claimed there is no budget to hire skilled GRC consultants as they are very expensive because GRC is a complex solution.

Participant 3 says currently they don't see how an investment in GRC returns the value to them. He believes the company should have not invested in it from the beginning if they are not prepared to go all out in order to make it work. Participant 4 noted GRC is very new and with the changes that come after the first implementation, it makes it very difficult for the company to follow up and keep on implementing improvements - hence there is a problem with proper implementation or usage. Whenever new functionalities are available, this needs to be updated and it should be ensured that changes are documented. However, it is difficult if there is no proper project approach.

Stakeholders agreed that GRC is complex and that the company should have conducted a proper research and ensured that there are resources to support it.

LACK OF PROPER PROJECT APPROACH

This theme is tightly coupled to lack of common understanding. Participant 5 mentioned that after joining the GRC team, there were no substantial documents to direct on how the project was to be undertaken. She found she had to ask people who have been involved from the beginning of the implementation in order to gain most of the information needed about the project. Participants 6 mentioned that the documents that are available have not been maintained. Also, the training documents available were from a previous client's implementation project so they were not directly relevant to the case study business itself. It was observed that there was no central place to share GRC documents in order to help everyone to understand what GRC is all about. Participant 4 mentioned that no one seems to know what they are doing with GRC. Everyone seems to be confused. They have no plans, and whatever approach is being used is not working. Now and then external consultants are brought in to clarify things but after that everything just starts falling apart, with no follow-ups on maintaining and improving this solution. Because of the different consultants with different views, this creates more confusion to GRC understanding. Most stakeholders noted the lack of a proper project approach when implementing GRC; however, this was a result of negligence and lack of insufficient resources and tools.

LACK OF UNDERSTANDING

The fifth theme noted how the participants understand GRC. They were asked what GRC means to them and their perception of how people understand the definition of GRC. Participant 1 described GRC to be a structure governance tool mainly used for reporting and she mentioned that it also had a link to authorisations in the SAP system. She also mentioned that they are doing it because it is a new technology. Participant 3 thought GRC was being promoted as a 'must-have tool' that every company is implementing. Participant 2 did not understand it well and he does not think others understand GRC because it is not completely working. Participant 4 understood it to be an auditor's tool because he only hears about it when the company is about to be audited. Participant 5 described it as a tool that is not working properly but a potentially useful tool to deploy going forward. He lamented the approach used which resulted in inadequate management, and people not being included in the project from the start. All participants seem to see it as an auditor's tool or an authorisation tool and focused on the technical side of how they see it working within the company, but noted that there are already other programmes that do what GRC can do. Stakeholders shared a different understanding of what GRC is all about. They were some certain instances where participants' understanding was misguided and not a true reflection of GRC. The responses of the participants show that the GRC solution is under-utilised, largely because of the issues discussed above.

RECOMMENDATIONS AND CONCLUSION

When looking at the age group of people working on a GRC in this case study, it was found that most of them are nearing retirement age, hence they were more inclined to continue using old in-house solutions rather than paying any interest in the benefits of a GRC solution. It is recommended that the company develops proper succession planning to ensure that the up and coming younger people who are likely to appreciate latest technology learn about the required systems from more experienced stakeholders.

It is found that when stakeholders understand the solution and have been part of the solution from the start, they are likely to support it and see the positive benefits of it. So it is recommended that the company implement formal annual GRC roadshows to convey the benefits of GRC and its effective implementation. This will include sharing latest developments and highlighting the positive examples which have been provided by GRC.

It is also recommended that the company addresses all internal issues associated with GRC and draw a roadmap as to where the GRC solution is going. This can be best achieved by establishing a dedicated team to support the introduction and maintenance of GRC.

Markus (1983:p430-444) provides some guidelines to avoid resistance:

- Involving users at a design phase
- Gaining top management's support
- Ensure the system is user friendly
- The system must be able to improve user's functions
- The benefits must outweigh the cost of the system.
- The researcher considers these guidelines to be equally applicable to the broader context of GRC implementation.

The main purpose of the study has been to identify stakeholders' understanding and perceptions that create barriers to the effective implementation of GRC. It was found that there are a number of people-centred reasons for the existence of these barriers.

The literature indicates that GRC success is dependent on various key components (processes, strategy, technology and people) and how each organisation tends to prioritise them. From this study, it can be deduced that the 'people' component plays as important a role as other GRC components. The literature also indicate that avoidance, adoption, communication, politics and culture are five categories that create potential barriers to effective adoption and implementation of GRC solutions.

This study has analysed this 'people factor' by identifying stakeholders' perceptions as common factors that are affecting GRC's implementation and utilisation. Several key Themes were also identified and discussed. These key themes are involvement, resources, business support, ownership, complexity, project approach and understanding. The study also shows that understanding the GRC solution from the stakeholders' perspective may help identify impediments to implementation and, in turn, assist the company to be more efficient and effective and increase accountability within the organisation.

The researcher hopes the recommendations of this study will enhance the current understanding of opportunities offered by the GRC solution and these can be achieved by addressing the issues noted in this study. The ultimate objective is that the companies will be able to understand GRC through their stakeholders' eyes and implement the right methods to improve their GRC activities and processes.

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RESOURCE-BASED VIEW MODEL OF AN EXPERT SYSTEM FOR KNOWLEDGE SHARING IN AN SME IN GAUTENG

Stevens Phaphadi Mamorobela
Tshwane University of Technology, South Africa

ABSTRACT

Knowledge plays a significant role as a source of sustainable competitive advantage in organizations. ICT solutions such as KMS are utilized by many organizations to achieve sustainable competitive advantage. However, the pace of KMS adoption by SMEs in South Africa is still very slow. Given the potential of Expert systems to improve knowledge sharing, and the significance of the SME sector to the economy of the country, it is important for SMEs to consider the adoption of Expert systems for their sustainability. In this paper, the RBV model is developed to facilitate knowledge sharing through an expert system in one SME in Gauteng. Data was collected through questionnaires, interviews and literature. Data and methodological triangulation was used for validation. The case study analysis was conducted in five phases: (1) Data analysis; (2) Data synthesis and interpretation; (3) Data validation; (4) Analysis through RBV; and (5) Development of a model for expert system implementation in knowledge sharing and sustainable competitive advantage.

Keywords: Knowledge sharing, Expert system, Resource-based view, Competitive advantage, SME

INTRODUCTION

Knowledge serves as an intangible product that includes ideas, processes, information and it is taking a growing share of global trade (Emarald, 2011). Knowledge is located within the human's mind (Oeberst *et al.* 2016) and its management is often difficult for organizations. Most big corporation adopt Information and Communication Technology solutions (ICTs) to properly manage knowledge in order to improve business performance and sustain competitive advantage (Razaq, 2010; O'Brien and Marakas, 2008; O'Brien, 2002). However, in the Small to Medium Enterprise (SME) sector where there is a lack of access to capital, lack of internal ICT skills, as well as lack of management support to ICT initiatives, these favoured approaches bring with them a huge challenge.

An SME in the context of South Africa is a business entity that generates an annual turnover of R150 000 to R5 000 000, employs a maximum number of 150 people and is not a subsidiary of any public limited company (Falkena *et al.*, 2002). In the developing country such as South Africa where there is a high rate of unemployment, the SME sector plays a huge role with its potential for job creation, innovation, long-term growth and development with a substantial contribution to the GDP of the country (Rwigema and Venter, 2004; Sha, 2006). Ferreira (2007) also adds that the majority of economically active enterprises are the SME population; as a result, the South African government regards the SME sector as a strategic partner for job creation and poverty eradication.

There is a lack of formal knowledge sharing practices in the SME sector. Because of the minimal staff turnover, the majority of the organizational knowledge resides in the minds of very few experienced individuals (Modimogale and Kroeze, 2011). Losing one or more of these experienced individuals to rival companies means losing the majority of the SMEs knowledge (Modimogale and Kroeze, 2011), which results in the SME being at

a disadvantage when faced with the competition. This often leads to SMEs closing down, resulting in an adverse effect on the overall economy of the country (Ayyagari *et al.* 2011; Beck and Cull, 2014; Fatai, 2011; Ekwem, 2011).

Since the SME sector is part of the global economy and plays a significant contribution to economic growth (Razaq, 2010), organizations in the sector are therefore expected to compete with big corporations. The rivalry among organization of the same industries requires a continued investment in innovative ways to manage knowledge for business sustainability. Although there are several Knowledge Management Systems (KMS) available, the SME sector is still reluctant to adopt them due to lack of funding (Beck and Cull, 2014) among other issues. One domain that holds huge potential, yet not explored enough in the context of knowledge management and sharing is that of the use of “expert systems”. Expert systems have been around since the 1970’s as a form of artificial Intelligence application (Jackson, 1998). They are cost effective information systems that are capable of facilitating the knowledge sharing process through capturing the knowledge of a human expert and making it readily accessible within the organization (Turban *et al.*, 2011; Tsui *et al.*, 2000; O’Brien and Marakas, 2008; Coffey *et al.*, 2002). It is important to recognize the potential of expert systems in the SME environments because there is often a lack enough capital to fund costly ICT initiatives for competitiveness.

Related studies in the field include a study by Ruiz-Mezcua, *et al.*, (2011) which investigated the insurance assistance expert system which was developed to centralize the knowledge so that the sales people could be able to access sales related information through the internet in order to derive appropriate quotations

The aim of this paper is to develop a resource-based view (RBV) model for use of an expert system for knowledge sharing in an SME in Gauteng. The paper primarily addresses the knowledge sharing practices in one SME in South Africa and suggests a model for sustainability. Knowledge constitutes a common core for SMEs, hence it’s sharing and management is vital. The methodology described in this paper is intended for SMEs in the similar context

RESEARCH METHODOLOGY

This paper applied a phenomenological research as an underlying philosophy to assist in the proper selection of methods in order to avoid inappropriate use. According to Collis and Hussey (2003), a phenomenological research aims to gather deep information and perceptions through inductive, qualitative methods and present the findings from the perspective of the research participants. The type of research used in this paper is qualitative which utilized inductive methods such as open-ended questionnaires, interviews and peer reviewed academic literature.

One particular SME in the insurance industry in Gauteng, South Africa, was used as a unit of analysis; therefore a single case strategy was adapted. This was done with the aim to understand the perceptions and views of participants regarding the use of expert systems as a knowledge sharing solution in the SME. Because the study focuses on one unit of analysis (one SME), the study qualifies to be a single case study (Yin, 2003). Purposive sampling was used to select the eligible participants. According to Cooper and Schindler (2003), purposive sampling is a procedure that involves a sampling unit that was chosen on the basis of some of their characteristics. The participants included the CIO; the Business Support manager; the Underwriting manager; Accounts manager; and HR managers, as well as IT experts with an average of 10 years (or more) experience in the insurance industry. The total number of participants of the study was eighteen ($n = 18$).

The data collected was elicited through interviews, questionnaires and literature reviews. A combination of multiple choice and open-ended questions were used in the questionnaire. The results of the multiple choices in the questionnaire were captured and normalized into spread sheet in Microsoft Excel for analysis. One-on-one interview sessions were conducted with each participant soon after the questionnaires were returned. The results of the interviews we then compared with those of the questionnaire to create themes needed for analysis. Peer reviewed literature studies were also used extensively in the data collection process to ascertain the status quo of knowledge sharing in the SME sector. To avoid overlooking relevant publications, the search strategy used various keywords. The search strategy yielded articles that were then reviewed based on their abstract and titles.

Only papers that referred to the themes identified were considered. The collected data was categorized into quantitative and qualitative for ease of data analysis.

Data analysis process involves bringing order, structure and meaning to the mass of collected data (De Vos *et al.* 2002). The process aims to help the researcher to identify patterns within the collected data in order to develop a model that would help understand the phenomena (Stake, 2000). Data analysis process for this study consisted of five phases; Phase 1, data collected through quantitative and qualitative methods was categorized, organized and prepared for analysis; Phase 2 involved coding, creating themes and making sense out of the organized data in order to understand its meaning to help in answering the research questions; Phase 3, method and data triangulation was used to ensure accuracy and reliability of the results. The themes were constructed to produce key elements of qualitative analysis needed to develop the model; Phase 4, the elements of Resource Based View (RBV) theory (Robinson, 2008) such as value, rarity, inimitability and organization were used to evaluate the competitiveness of knowledge and the expert system as key resources for sustainability in the SME; and Phase 5, based on the findings of the RBV in Phase 4 and the data analysis from various analysis steps, a suggested model for expert system adoption in knowledge sharing and sustainable competitive advantage was developed.

FINDINGS

Findings from data collection instruments (questionnaires, interviews and literature)

It was important to understand the level of awareness and understanding of the participants regarding expert system technology:

- Findings from the questionnaires revealed that majority (78%) of the participants confirmed to have some knowledge of the expert system and they agree that an expert system can improve knowledge sharing in the SME. A total of 16% of the overall respondents indicated that they are not sure, while only 6% indicated that they completely disagree. These results show that the level of awareness about expert system capabilities is high in the SME.
- Interview findings revealed that participants have confidence in the expert system technology and its capability to not only improve knowledge sharing processes but the overall performance of the organization in terms of faster turnaround time; efficient work flow; high efficiency and improved service delivery to keep clients happy.

It was also important to consider the hurdles that could hinder the implementation of an expert system for knowledge sharing in the SME. Literature findings from the studies of Connelly *et al.*, (2011); Larrabure (2007); Estrin *et al.*, (2003); and Tusubira *et al.*, (2001), revealed the following as common challenges with knowledge-sharing mechanisms and were plotted in the questionnaire for participants to choose:

- a. Changing people's behaviour from knowledge hoarding to knowledge sharing
 - b. A lack of understanding of knowledge management and its benefits
 - c. Determining what kind of knowledge to be managed and making it available
 - d. Justifying the use of scarce resources for knowledge management
 - e. A lack of top management commitment to knowledge management projects
 - f. Overcoming technological limitations
- Given the above challenges in the questionnaire, the majority (94%) of the respondents indicated the lack of understanding of the knowledge management project as one highly common challenge. A total of 83% indicated that changing people's behaviour from knowledge hoarding to knowledge sharing; and determining the kind of knowledge to be managed and shared are also common challenges. 72% of the participants indicated justifying the use of scarce resources for knowledge management, while 56% indicated overcoming technological limitations and lack of top management commitment.

- Findings from the interviews revealed that the majority of the participants confirmed that people's behaviour is one biggest challenge when implementing solutions for knowledge sharing in the SME. One participant responded as follows:

"The main challenge is the people themselves. They are not being supportive at all when it comes to such initiatives. Most of the staff here are too comfortable with the current working methods and easily feel threatened by new initiatives ...,"

It is evident that the benefits of the knowledge sharing project needs to be clearly understood by staff members for the project to be successful. Management of the SME needs to ensure that there is adequate training and awareness for staff to understand the importance of sharing the knowledge. Overall, peoples' attitude towards knowledge sharing projects needs to change. These results uphold to those of the literature of Connelly *et al.* (2011); Larrabure (2007); Estrin *et al.*, (2003); Tusubira *et al.*, (2001) which concluded that people mostly prefer to keep information within themselves because they simply don't trust their colleagues and they want to protect their own interest.

Findings of the resource-based view (RBV) theory

The RBV was used to analyse and interpret the data found through qualitative and quantitative methods in order to develop a model for expert system adoption for knowledge sharing and sustainable competitive advantage in the SME. RBV measures value, rarity, inimitability and organization of a resource in order to determine whether or not a particular resource leads to sustainable competitiveness in the organization. Knowledge and the expert system were identified by research participants as the most critical knowledge resources in the SME.

Knowledge

- Knowledge as a valuable resource:** It was discovered that the knowledge of identification of customer needs; risk identification; identification of critical resources; proper financing of IT systems; knowledge of allocation of resources; risk assessment; financial management; and investment in critical resources, is very important for the success of the insurance SMEs. Thus knowledge is valuable in the SME.
- Knowledge as a rare resource:** The skills and talent used by knowledgeable staff to identify and assess "risk" to provide the best insurance to the customers are unique and rare. This knowledge is leveraged to identify new customer needs and business opportunities that can guide innovation activities in the SME. Having such rare knowledge is vital for the stability and sustainability of the SME.
- Knowledge as an inimitable resource:** The SME's reputation among its suppliers and customers as well as relationship to partners is imperfectly imitable. This is because of the social complexities that exist among these relationships. These types of relationships cannot be imitated by competitors.
- Knowledge as an organized resource:** Each manager in the SME has the responsibility to retain knowledgeable staff with critical skills within their respective departments. The SME offers incentives on a regular basis to the employees that go an extra mile to do well, as well as to ensure that knowledgeable staff members remain in the SME for a long time. Therefore, having such knowledge in the organization for a long duration of time may lead to long term sustainability of the SME

Expert System

- Expert system as a valuable resource:** The expert system assimilates replicates and diffuses knowledge and expertise of insurance premium calculations that is valuable, scarce and developed over a long time in the SME. Its value is seen when it uses its rare expertise to gather all the relevant information necessary to calculate and provide insurance policy premiums. Since these expertise can

usually be expensive to procure, having them internally in the SME results in a considerable savings in costs. Therefore much more value is achieved from the use of an expert system in the SME.

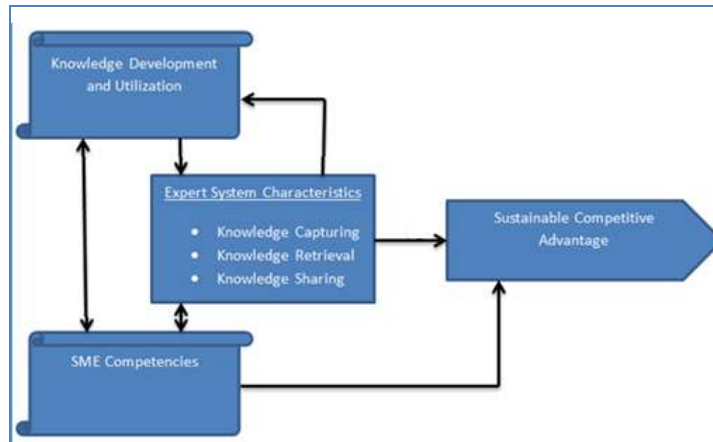
- **Expert system as a rare resource:** Expert systems cannot generally be considered rare resources since they are largely developed using common programming languages that can easily be bought off the shelf. However, the uniqueness of the expert system helps the SME to stand out as it was developed using the expertise found only internally within the SME. The knowledge base of the expert system contains unique and rare human expertise. Therefore due to the rareness of the expert system, the SME stands a good chance of competitive advantage.
- **Expert system as an inimitable resource:** The expert system is unique to the SME. Its structure and domain specific knowledge is very difficult to imitate by the competition. It is very difficult for competitors to imitate how the SME's expert system performs its functions of collecting customer information and offering the best insurance solution the market has to offer.
- **Expert system as an organized resource:** The expert system can be largely exploited in many arrears of the SME. It was discovered that the SME recognises the benefits of exploiting the expert systems to process a considerable amount of data to calculate insurance policy premiums and offer solutions for best policy cover to the customers. Because the expert system is very critical for the sustainability of the SME, the structure of the SME is organised in such a way that only staff members with technical knowledge of the expert system have exclusive access to the system. This is to ensure that the expert system being the most critical resource in the SME is protected at all times so that the SME can still be able to make the best use of it for a long period of time.

It is evident from the attributes above that knowledge and the expert system have the potential for sustainable competitive advantage in the SME since they meet the RBV criteria of value; rarity; inimitability; and organization. Management needs to initiate workshops to demonstrate the importance of the Expert system in the SME. If staff members are not aware of the existence of the expert system and its potential, it could be difficult for management to advocate its use in knowledge sharing practices.

DISCUSSIONS

By adopting the RBV model and taking into account the distinctive characteristics of the SME in the study, the expert system implementation environment in the SME is conceptualised in terms of four domains. Based on model proposed by Lado and Zhang (1998), the four domains are knowledge development and utilisation; organizational competencies; expert system characteristics; and sustainable competitive advantage. The proposed model in Figure 2 was adapted from Lado and Zhang (1998) where the four domains in which expert systems potentially generate competitive advantage are explored. The relationships among the four domains are denoted by arrows between them.

Figure 5: A conceptual model for expert system adoption Source: Lado and Zhang (1998)



A discussion of the four domains as presented in the conceptual model in the Figure 2 is as follows:

Knowledge development and utilisation

The knowledge development and utilisation domain requires that a knowledge-management team of experts in the SME be established to be responsible for ascertaining the kind of knowledge that currently exists in the SME, as well as that which is mostly needed in each division of the SME. Another element is to train staff on how to interact with the expert system. The tasks of the team will be very critical to ensure that the proposed knowledge-sharing process is always aligned with the business objectives of the SME to achieve sustainable competitive advantage.

The accumulated organizational knowledge and expertise from the past form the basis of expert systems development and sustainable competitive advantage (Dima *et al.*, 2010; O'Brien and Marakas, 2008). The team will ensure that there is always a relationship between the knowledge generated in the SME and that which is stored in the expert system so that the system contains the most recent knowledge at all times. Hence we posit a two-way relationship between knowledge generation/utilisation and expert system domains in figure 2.

SME competencies

According to Lado and Zhang (1998), organizational competencies need to be consistently upgraded and replenished to generate sustainable competitive advantage. The findings have revealed that the SME has dedicated staff members who are capable of updating the knowledge of the expert system on a regular basis to ensure that new knowledge is always available in the SME. This task should be carried out by the knowledge management team for the knowledge sharing project to succeed.

Because competencies are arguably the driving force for organizational competitive advantage (Bani-Hani and Faleh, 2009), there should be a direct relationship between SME competencies and competitive advantage (*cf* Figure 2). In keeping with Bani-Hani and Faleh (2009), we suggest that the SME's existing stock of competencies may constrain the process of upgrading the expert system and transforming it into a rent-yielding core competence. This will require the SME to place information systems issues at the center of its strategic mission and vision. Top management should support and champion expert system related innovations. They should also be able to predict the economic value from expert systems more accurately and better than the competition.

Organizational competencies should always be synchronised with the current knowledge and expertise in the SME. Therefore, we provide a two way relationship between knowledge generation and SME competencies (*cf* Figure 2). The knowledge management team will also ensure that the internal competencies in the SME are also captured in the knowledge base of the expert system so that it also forms part of the newly generated knowledge. Training and awareness strategies should be implemented to improve the current

competencies of staff and to keep the expert system updated. According to Lado and Zhang (1998), expert systems are effective in achieving sustainable competitive advantage when synergically and reciprocally integrated with organizational competencies. We therefore posit a two-way relationship between the expert system characteristics and SME competencies (*cf* Figure 2)

Expert system characteristics

The features and characteristics of the expert system need to be defined and designed to work according to the expectations of the users. The main characteristics of a knowledge sharing expert system should be to capture, retrieve and share the knowledge in the SME. The knowledge management team should ensure that the characteristics of the expert system are measurable and there are records of who accesses and contributes to the system. These records will provide a guide to measure the value of the information and the corporate population that shares knowledge through the expert system. These measurements will assist management to have a clearer perspective of the effectiveness of the use of the expert system for knowledge sharing practices in the SME. They may also be useful in implementing incentive strategies to encourage the contribution of knowledge to the expert system to achieve sustainable competitive advantage.

Based on the synthesis of expert systems literature, where expert systems can directly attain sustainable competitive advantage, the SME should recognise the direct effect of the expert system on competitive advantage. The link between expert system characteristics and sustainable competitive advantage (*cf* Figure 2) is seen through the potential of an expert system to contribute to the firm's efforts to achieve sustainable competitive advantage through its role of fostering the on-going generation and utilisation of organizational knowledge, and in facilitating the upgrading of existing stock of organizational competencies (Lado and Zhang, 1998).

The expert system has the potential to host multiple mechanisms of knowledge representation to permit the extraction of knowledge and expertise from multiple domain experts and users (Lado and Zhang, 1998). Through this potential, it can facilitate the development of knowledge that is firm-specific, tacit and socially complex. This fosters a stronger link between organizational knowledge and sustainable competitive advantage (Dima, 2008). We posit a direct relationship from an expert system domain to knowledge generation/utilisation domain (*cf* Figure 2).

Sustainable competitive advantage

Knowledge and the expert system have been explored in the RBV model of the current study as resources with the potential for sustainable competitive advantage. We suggest that by integrating organizational skills and competencies with newly generated knowledge in the SME, the expert system will likely generate sustainable competitive advantage. This is demonstrated by the relationship between SME competencies and sustainable competitive advantage as well as the relationship between the expert system characteristics and sustainable competitive advantage in Figure 2.

CONCLUSION

Knowledge sharing is a growing practice in business environments today. SMEs are not immune to knowledge sharing practices and it is vital for SME management to consider the use of expert system in their knowledge sharing endeavors. Management needs to develop policies to enforce the knowledge sharing practices and raise an awareness of the effectiveness of expert systems in the knowledge sharing domains. Consequently, a systematic approach to knowledge sharing through expert systems is of primary importance for the sustainability of SMEs. Such an approach is especially important for SMEs because while they are better candidates to benefit from knowledge sharing approaches through expert systems, they are also at a high risk of losing their businesses to rivals resulting from failed knowledge sharing endeavors due to lack of resources, funding, expertise and methodology to achieve effective and efficient knowledge sharing practices.

Expert systems are proving to have the potential for sustainable competitive advantage when used for knowledge sharing in SMEs. Even though there are challenges associated with new technology adoption in SMEs, this paper presents a model for knowledge sharing through expert system technology. The model provides a relationship among the expert system, knowledge development/utilisation, organizational competencies and sustainable competitive advantage as a dynamic process for long-term sustainable competitive advantage. The knowledge development/utilisation domain requires that a Knowledge Management (KM) team of experts be established to oversee the overall knowledge sharing practice; KM team will organize the organizational competencies domain which serves to update the knowledge of the expert system on a regular basis; KM team will ensure that features and characteristics of the expert system are defined and designed to work according to the expectations of the users; and finally, the KM team will ensure that organizational skills and competencies are integrated with newly generated knowledge in the SME to yield sustainable competitive advantage.

The implication of the findings of this study is very important to SME management because knowledge plays a critical role for sustainable competitive advantage in SMEs. This study provides a broader understanding of the potential of expert systems in facilitating knowledge sharing to achieve sustainable competitive advantage. Because expert systems are explored to have the potential to improve knowledge sharing and sustainable competitive advantage, potential areas for further research may include delving into the practical development and implementation of expert systems for knowledge sharing practices particularly in the SME sector. This is an area that needs attention for future research in the field on knowledge management.

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VISUAL MERCHANDISING AND CONSUMER BUYING BEHAVIOR: COMPARISON BETWEEN TWO PRODUCT CATEGORIES

Neha P. Mehta, L. J. Institute of Management Studies, India
Pawan Kumar Chugan' Institute of Management, Nirma University, India

ABSTRACT

Buying behavior of customers for different product categories varies because of different factors. This research was intended to find impact of visual merchandising on consumer buying behavior for two different product categories. The two product categories for study were apparel and furniture. Dimensions of visual merchandising taken for study of this topic were window display, store front, mannequin display, floor merchandising, merchandise display, store layout and organization, creative style and trend co-ordination, signage/graphics, store atmosphere. It is found that few dimensions of visual merchandising do affect buying behavior. Window display affects buying behavior for both product categories. Mannequin display is important visual merchandising dimension is found to impact customer's apparel buying behavior. While, store front, shelf display (in merchandise display) and creative combination of colour (in creative style and trend co-ordination) giving new design ideas for home impacts customer's buying behavior for furniture category.

Keywords: Visual Merchandising, Buying Behavior, Window Display, Storefront, Mannequin Display, Floor Merchandising, Merchandise Display, Store Layout and Organization, Creative Style and Trend Co-ordination, Signage/Graphics, Store Atmosphere.

INTRODUCTION

Customers' of today's competitive world demands differentiation of market offerings. Differentiation in merchandise and buying atmosphere is something that a customer expects today. The similarity of merchandise in the different product categories forces the industry to utilize visual merchandising to improve the desirability of the product, differentiate their product and enhance the impulse buying behavior and create differential advantage to the retailers. This study is hence, conducted to find the effectiveness of visual merchandising on consumer impulse buying behavior for two different product categories.

The Indian retail market is estimated at US\$ 520 billion (E&Y-Rai, 2014). But organized retail is estimated at only US\$ 8 billion. Organized retail, which constitutes 10% of total retail market, will continue to grow much faster such that will reach at the growth of 20% by 2020 (E&Y-Rai, 2014). India's overall retail sector is expected to reach 1.3 trillion USD by 2020. India stands on 20th rank in Global Retail Development Index (Kearney, 2014). It has slipped by nine ranks from the last year. Contribution of modern retail is maximum 10%, in fashion and clothing segment it is 33% of the total retail sector. In January 2012, Government approved reforms for single-brand stores welcoming anyone in the world to innovate in Indian retail market with 100% ownership (Chugan and Mehta, 2014). This development in retail creates fierce competition in the industry. In such case, the retailers need to differentiate themselves from others.

LITERATURE REVIEW

Visual merchandising is the total store ambience including merchandise display, store design and image, mannequins display, props and materials, lighting, and signage influences product sales and store image in the

retail setting (Diamond & Diamond, 2003). It not only makes store merchandising appealing and attractive but also accessible, engaging and enticing to shoppers. Products' arrangement influences consumers' feeling about the product (Mehta & Chugan, 2014). Hence, it is used as a strategic tool to arouse consumer's interest about products and services and stimulate them to buy more products (Walters, & White, 1987). Visual merchandising is very important in retailing as about 60 to 75% of the information collected about the environment is done with the help of eyes. Visual merchandisers add value to a retail outlet by making shopping an experience rather than a chore. Effective visual merchandising will increase the amount of pleasure a consumer receives from their shopping experience.

Visual merchandising encompasses more than just window displays; it involves the creation of the store look or image through the design of the retail environment, including both the interior and exterior elements and features of a store...Store exteriors, especially window displays are the first impression of the store hence, should be persuasive (Diamond & Diamond, 2003). The store exterior includes signs or logos, banners, exterior design, window display, retail premises and façade. Interior display refers to the decoration of a store, including color, display cases, counter, and the creative showing off the merchandise. Store layout is the position given to the interior display elements. It is vital for a layout to provide easy access and flow throughout the store so consumers feel invited to search the entire store...Consumers desire to browse or to make a purchase was influenced by a store's interior (Kerfoot, et al, 2003).

Consumer behavior has long been a study of interest for the researchers. The definition of consumer behavior "the behavior that consumer display in searching for, purchasing, using, evaluating and disposing of the products and services that they expect will satisfy their needs" (Schiffman and Kanuk, 2007). Consumer decision-making process is influenced by the consumer's interaction and exposure to various exchange processes via these external and internal factors. The external factors influencing information search of consumers are marketing activities taken up by the company. They are exposed to advertising incidentally or deliberately, depending on the motivation to search information (Schiffman and Kanuk, 2007). The internal factors are personal sources in which consumers can search for information from their family, friends, colleagues, etc. There are various dimensions of products based on which consumers make decision of purchasing it or not, like features, price, benefits, etc. Impulse buying behavior is consumer's experience which is sudden, powerful and persistent urge of buying something immediately which was not planned to be bought (Jeffrey and Hodge, 2007). "Impulse buying has been considered as a pervasive and distinctive phenomenon in American lifestyle and has been receiving increasing attention from consumer researchers and theorists (Youn and Faber, 2000)". Impulse buying behavior is the purchase that is made without much consideration of alternatives, with insufficient information about the product of interest, or prior intent of purchase (Tversky and Kahneman, 1981). Consumer decides to purchase the product on the spur of moment, without any previous recognized need or problem (Piron, 1991).

RESEARCH OBJECTIVE AND METHODOLOGY

The objective of this study is to compare impact of visual merchandising on consumer buying behavior between two different product categories. The research design was divided into two parts, the first part was exploratory in nature and the second part was descriptive. In the exploratory part, visual merchandisers and marketing managers of lifestyle retail outlet were interviewed to understand the dimensions of visual merchandising (Mehta and Chugan, 2015). The study intended to focus on the impact of visual merchandising on the retail formats for two different product categories namely apparels and furniture. The impact of the critical factors was studied in the second part of the study which is descriptive in nature. As a part of the descriptive research leading retail outlets of Ahmedabad belonging to the above mentioned product categories were identified for the survey which was on the basis of a questionnaire having close ended questions. The sampling technique was mall intercept method. The 77 customers who walked out the retail outlet were surveyed for 8 days in order to generate the required sample size. The sample size for the research was 385 for each product category. For apparel stores - Ahmedabad Central, Pantaloons, Westside, Shoppers Stop and Brand Factory were included in the study. While, for furniture stores namely @ Home, Home Town, Housefull, Godrej Interio and Durian were part of the study. These stores are the only lifestyle retail outlets in Ahmedabad city, hence were used for the study.

VARIABLES AND HYPOTHESIS

- H1:** Customers who purchase on impulse are influenced by window displays for apparel category.
- H2:** Customers who purchase on impulse are influenced by in-store form/mannequin display for apparel category.
- H3:** Customers who purchase on impulse are influenced by floor merchandising for apparel category.
- H4:** Customers who purchase on impulse are influenced by promotional signage for apparel category.
- H5:** Customer's purchases are influenced by window displays for furniture category.
- H6:** Customer's purchases are influenced by storefront furniture category.
- H7:** Customer's purchases are influenced by merchandising display furniture category.
- H8:** Customer's purchases are influenced by store layout and organization furniture category.
- H9:** Customer's purchases are influenced by creative style & trend co-ordination furniture category.
- H10:** Customer's purchases are influenced by signages/graphics furniture category.
- H11:** Customer's purchases are influenced by store environment furniture category.

For both the product categories i.e. apparel and furniture, the variables of visual merchandising used for study are as follows:

Table 1: Variables for Apparel Category

VARIABLES	QUESTIONS	
1.Impulse Buying	1. I go shopping to change my mood.	1, 2, 3, 4&5 (Youn & Faber, 2000).
	2. I feel a sense of excitement when I make an impulse purchase. (Dependent Variable)	
	3. After I make an impulse purchase I feel regret	
	4. I have difficulty controlling my urge to buy when I see a good offer.	
	5. When I see a good deal, I tend to buy more than that I intended to buy.	
2. Influence of Window Display	6. I feel compelled to enter the store when I see an interesting window display	6, 7 (Diamond & Diamond, 2003).
	7. I tend to enter the store when I am attracted by an eye-catching window display (WD)	
3. Influence of In-store form/Mann equin Display	8. When I see clothing featuring a new style or design on display I tend to buy it	8, 9, 10, 11 (Kerfoot, et al, 2003).
	9. I get idea what to buy after looking through in-store or mannequin display	
	10. I tend to rely on store displays when I make a decision to purchase clothing	
	11. When I see clothing that I like on in-store or mannequin display I tend to buy it (MD)	
4. Influence of Floor Display	12. I tend to try on clothing that catches my eye when I pass by	12, 13, 14 (Kerfoot, et al, 2003).
	13. When I see clothing that catches my eye I tend to try it (FD)	
	14. When I walk along the isle I tend to look through clothing close to me	
5. Influence of Promotiona l Signages	15. When I see a special promotion sign, I go to look at that clothing	15, 16, 17, 18 (Youn & Faber, 2000)
	16. If I see an interesting promotional offer on in-store signs I tend to buy (PS)	
	17. Sales sign entice me to look through the clothing	
	18. I am more likely to make an unintended purchase if the clothing has a sale sign	

Source: (Mehta and Chugan, 2012 and 2013)

Table 2: Variables for Furniture Category

VARIABLES	QUESTIONS	REFERENCE
Purchase Behavior	1 .I made a purchase from the store. (Dependent Variable)	Self-Developed
Window Display	2. Window display is so attractive that it leads customer into the store. (WD)	Bakarne, 2008
Storefront	3.Storefront is attractive. (SF)	Schneider, et al,

	4.Storefront motivates customers to enter the store.	2009
Merchandise Display	5. Merchandise arrangement is attractive.	5, 6 (Davies and Ward, 2002), 7, 8 (Walters and White, 1987)
	6. New items are presented noticeably to draw the customers' attention.	
	7. Merchandise is neatly arranged. (MerD)	
	8. The store offers good variety of merchandise.	
Store Layout & Organization	9. Walking space in the store is not crowded.	9, 10, 11, 12, 13 (Kerfoot, et al, 2003)
	10. The way through the store is well-structured so that consumers have no difficulty finding their way.	
	11. Shelf space is appropriately occupied (proportionately arranged). (SS)	
	12. Room setting arrangement or mock-ups are attractive.	
	13. The store makes me feel like exploring it.	
Creative Style & Trend Co-ordination	14. The presentation of merchandise gives inspiration on how to furnish my own home.	14, 18, 19, 20 (Seock, 2013), 15, 16, 17 (Gajanayake et al, 2011)
	15. Creative combinations of colors give new design ideas for home. (CC)	
	16. Color coordination creates an appealing store atmosphere.	
	17. The presentation of merchandise is creative and unique.	
	18. The store offers new idea for my home decoration or furnishings.	
	19. The store displays newest styles of home furnishings.	
	20. The store offers useful and accurate information about current trends and items.	
Signages/Graphics	21. Signages of directions are so good that it does not require help of	21, 22, 23, 24, 25 (Seock, 2013)
	22. Price tags are so good that it does not require help of salesperson. (S/G)	
	23. Signages are clearly visible.	
	24. Discount or clearance items are displayed together in a specific area of	
	25. Signs clearly identify items on sale.	
Store Environment	26. The store offers comfortable shopping environment.	26, 27, 28, 29 (Seock, 2013)
	27. The store offers an enjoyable shopping environment.	
	28. The store offers shopping ease. (SE)	
	29. The store offers a pleasant shopping environment.	

Source: (Mehta and Chugan, 2014)

ANALYSIS AND FINDINGS

Reliability test for questionnaires of both the product categories - the Cronbach alpha was 0.709 and 0.960 respectively. Hence, the questionnaires of both product categories were reliable. After reliability test, factor analysis was run on the variables of both the product categories. The KMO and Bartlett's test was found higher than 0.5 for all sections hence, factor analysis could be undertaken on variables of both apparel and furniture categories. The most reliable and important variables that were found after the analysis for apparel category are WD, MD, FD and PS. While, those of furniture are SF, MD, SS, CC, S/G and SE. These variables were used further to find out relationship with purchase behavior. Correlation and step-wise linear regression was used to find out relationship of visual merchandising variables with purchase behavior for both product categories.

Table 3: Correlation with Impulse Buying Apparel

Variables	Pearson Coefficient	Significance (p)
Window Display (WD)	0.425	0.000
In-Store Form/mannequin Display	0.193	0.005
Floor Merchandising (SF)	0.099	0.152
Promotional Signage (PS)	0.175	0.011

Source: (Mehta, 2016)

Table 4: Step-wise Linear Regression Model Summary Apparel

Model	R	R Square Co-efficient	Adjusted R Square	Intercep	Slope	p-value	T Value
1	0.306	0.093	0.091	2.431	0.336	0.000	5.964
2	0.368	0.136	0.131	1.835	0.213	0.000	4.100

Source: (Mehta, 2016)

The model summary table shows the correlation between the variables included in the regression (WD and MD) and impulse buying. With the model two in table 4, 13.1% of the variation in the dependent variable can be explained using the independent variable listed below. In the value of R^2 , which tells that .093 or 9.3% of the variance for 'I feel a sense of excitement when I make an impulse purchase' was explained by the regression on 'WD' and 'MD'. R^2 always increases with inclusion of additional predictor variables. Adjusted R^2 takes account of the number of predictor variables and also the number of cases. The statistics is intended to allow comparisons between different variables or regressions fitted to different sets of data. Predicted impulse purchase for model 1 = $2.431 + 0.336 * WD$. Predicted impulse purchase for model 2 = $1.835 + 0.293 * WD + 0.213 * MD$.

Table 5: Correlation with Buying Behavior (Furniture)

Variables	Pearson Coefficient	Significance (p)
Window Display (WD)	0.743	0.000
Store Front (SF)	0.727	0.000
Merchandise Display (Merchandise are neatly arranged) (MD)	0.572	0.000
Store Layout and Organization (Shelf Space) (SS)	0.596	0.000
Creative Style & Trend Co-ordination (Creative Combination)	0.463	0.000
Signages/Graphics (Signages of Price Tags) (S/G)	0.476	0.000
Store Environment (Shopping Ease) (SE)	0.449	0.000

Source: (Mehta, 2016)

Table 4: Step-wise Linear Regression Model Summary (Furniture)

Model	R	R Square Co-efficient	Adjusted R Square	Intercept	Slope	p-value	T Value
1	0.743	0.551	0.550	0.653	0.790	0.000	20.290
2	0.781	0.610	0.608	0.257	0.416	0.000	7.084
3	0.801	0.642	0.639	-0.023	0.213	0.000	5.469
4	0.806	0.649	0.645	0.098	-0.123	0.000	-2.579

Source: (Mehta, 2016)

The model summary table shows the correlation between the variables left in the models and dependent variables. With model four in table 6, 64.5% of the variation in the dependent variable can be explained using the independent variables. In the value of R^2 , this tells that .551 or 55.1% of the variance of 'WD'. The largest change in R^2 was from model 1 to model 2, with R^2 change of 0.059 from 0.551 to 0.610. While from model 2 to model 3 is 0.032 and from model 3 to model 4 is 0.07. R^2 always increases with inclusion of additional predictor variables. Adjusted R^2 takes account of the number of predictor variables and also the number of cases. The statistics is intended to allow comparisons between different variables or regressions fitted to different sets of data. Predicted impulse purchase for model 1 = $0.653 + 0.790 * WD$. Predicted impulse purchase for model 2 = $0.257 + 0.478 * WD + 0.416 * SF$. Predicted impulse purchase for model 3 = $-0.023 + 0.415 * WD + 0.333 * SF + 0.213 * SS$. Predicted impulse purchase for model 4 = $0.098 + 0.421 * WD + 0.374 * SF + 0.262 * SS - 0.123 * CC$.

LIMITATIONS AND FUTURE RECOMMENDATIONS

A few limitations got realized, which may be taken care of during future research. This study was only restricted to Ahmedabad city of Gujarat of state of India. Researchers may carry out research on this topic for various cities of India. Qualitative or causal tools of research may also be used for this kind of study, which may bring significant results. This study was cross-sectional where data were collected at a specific point of time. It may also be conducted as longitudinal research where data or observations are collected repetitively of the same variable over the period of time. It will also help to find out growth of visual merchandising. There are many

different product categories other than apparel, furniture and electronics for which this research may be carried out like footwear, FMCG, cosmetic, etc. even for that matter movies. In future more product categories may be explored for studying this area of research. Also this research may be undertaken to study purchase behavior of customers from organized and unorganized markets to compare visual merchandising techniques used in both. In this research all the dimensions of a variable (combined dimensions) of visual merchandising were included to find out impact on purchase behavior. In future studies individual dimension or visual merchandising technique may also be used to study impact of it on purchase behavior for more in-depth analysis. For example, in apparel segment, window display and mannequin may be studied separately. Impact of signage on different product categories may be studied separately. Hence, for future research there is lot of scope for researcher to study. Individual demographic characteristics also may be studied in this type of research. In terms of apparel category, there are several fashion retail players that have entered market in single or multi brand retail. So, this research may be carried out with these retail stores also. In future, researcher may also find out which retail outlet customers perceive to be good in terms of visual merchandising and connect it with the sales of the store.

CONCLUSION AND IMPLICATION

Visual merchandising in India is at its nascent stage and less developed. Except floor merchandising, all the variables of visual merchandising show relationship with impulse purchase. While, in step-wise linear regression on window display and mannequin display has weak relation with impulse purchase. For furniture category, window display, store front, shelf display and creative combination of colour are found to have significant relation with buying behavior. Both the product categories have one variable in common that influences purchase behavior of consumer i.e. window display. Window display is the ticket to enter store. If window display of store is attractive and eye-catching, more customers would be tempted to enter the store. Merchandise that are displayed in store window and storefront should be changed twice in month at least to keep these two aspects live and fresh. Also window and storefront should be neat and tidy and lightings should be appropriate. Retailers must design the window display in such a way which gives customers knowledge regarding new products available in the store, new fashion trend, various ways of apparel coordination and style. Hence, the store window has to be very unique and most attractive to fetch customers inside. When the merchandise is displayed on mannequin, customers' look at it and empathize, feeling that the particular dress is being designed for them only (Kerfoot, et al, 2003).

Visual merchandising of furniture product is very difficult comparing to apparel category; retailer has to constantly innovate designs aesthetics of home décor, latest trend, etc. Customers these days are very particular about furniture they buy as it is product that not only gives usage or storage comfort, but also provides status symbol. The way a house is decorated and arranged unveils one's lifestyle, class and status. A retailer has to be more creative in display and has to understand nuances of the same. In furniture outlets the merchandise arranged in storefront gives an idea of kind of stuff the store has. More attractive a store front will generate more footfalls in store (Schneider, et al, 2009). People seldom (based on need) buy furniture, but furnishing is often bought. Hence, it should be displayed in a way that customers' eye reaches the product arranged on the shelf. *Shelf position, display space and special fixtures all of these will make it more or less likely that a shopper will buy a particular product.* Lastly, colour combination of different things in the house with each other and with the colour applied on wall is a huge task. If the store display is arranged in such a way which gives customer idea of colour combination will make customers' task easier (Gajanayake et al, 2011). Display of apparel category can be made more creative and innovative. There is lot of scope to come up with unique display techniques for this category.

For both the categories signage used must easily visible and readable. There should be proper signage for directions towards different segment, price tags, offers, brands, sections, etc. Store atmospherics needs to be maintained as soothing and pleasant. Effect of lighting in the store should assist customer with the exact colour of apparels. The music played in the store should help customer enjoy shopping. The clothes arranged should be clean, neat and tidy. Overall effectiveness of different dimensions of visual merchandising does not emerge, other than window display and mannequin display for apparel and window display, store front, shelf display and creative combination of colours for furniture. Visual merchandisers should come up with better creative ideas for planning the display that impacts customer's purchase. This constant innovation in display shall also help marketers or retailers to enhance store's image as it shall be perceived positively by customers. It will also help

retailers to create unique differentiation and positioning of store in mind of customers. Good visual merchandising techniques will lead to more and better impulse buying experience. As the competition from online retailers increases, traditional retailers can use visual merchandising as an effective tool to increase customer purchases.

Note: Authors have written a few papers on visual merchandising for the product categories like apparels, furniture, electrical /electronic items, etc. (Mehta and Chugan 2012, 2013, 2014, 2015 and Mehta 2016). Therefore, some of the references and data have been taken from the earlier papers. This paper, however, is based on a comparative analysis for two different product categories and describes the impact of visual merchandising in a relative manner of two product categories viz. apparels and furniture.

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SYSTEM APPROACH IN THE ARTISANAL MINING AND SMALL SCALE PROCESSING OF SANDSTONES

Mokwalo Monareng, A. Mulaba-Bafubiandi and J. F. Agwa-Ejon
University of Johannesburg, South Africa

ABSTRACT

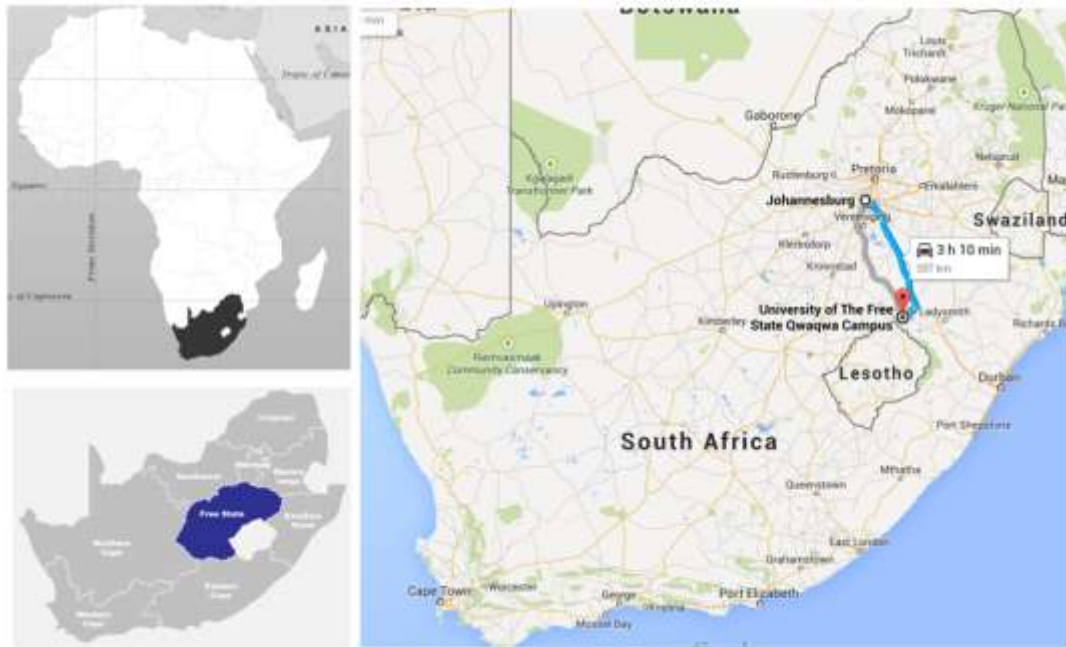
Artisanal and small-scale mining (ASM) activities are often linked to problems such as unregulated operations and lack of modern systematic work processes. As a result some ASM critics and scholars argue that these quarrying activities are unsustainable. However, research has revealed that ASM is an economic activity with a potential to provide sustainable livelihoods in rural communities. This paper introduces the application of systems approach as a mechanism for improving processes in the artisanal mining and processing of sandstones, in QwaQwa, Free-State, South Africa. Systems approach provides comprehensive techniques which can enhance processes and result in system efficiency and effectiveness, thereby improving both productivity and profitability. The design and methodology used in this paper is based on a case study involving the observed challenges of ASM as well as the different approaches used in the quarrying of Sandstone in QwaQwa. A descriptive character of systems approach, a comprehensive overview on the state of knowledge for systems approach as well as the important opportunities for systematic efficiency improving measures were identified and summarized. The paper also discusses the systems thinking practices and emphasizes the importance of process optimization and continual improvement. The target audience are mainly in the arena such as the mining officials and Government planning officers.

Keywords: System approach; Artisanal mining; Small scale mining; Sandstones.

INTRODUCTION

The development of system approach has its origins mainly in the engineering specialty. Theoreticians realized that mechanical components does not exist in total isolation but are normally interrelated; and therefore developed the idea of a system. The Systems thinking methodology, has become a widely used technique described and embraced differently by various people and trades. An understanding of a system by a computer scientist may differ considerably from a mechanical engineer who might relate systems to a physical object or activity running in a well-coordinated manner. According to Zexian (2010), systems are divided into four categories namely; the natural system, the engineered system, abstract system and human activity systems (p.140). The different systems therefore are defined based on the relationship and the kinds of activities highlighted in its operations. In this paper, a system is defined as the interacting relationship between technical components and humans. It is basically the integration of engineered system and human activity system resulting in a quantified output. This description provides an understanding that system components are intended to interact with each other to produce specified outcomes. The systems approach methodology has been implemented in various projects across a number of sectors and further continues to attract interest due to its exceptional process approach and philosophy. This paper explains the systems thinking methodology for the operations in artisanal mining and small scale processing of sandstones, with particular attention to three small-scale mining activities in QwaQwa, Free-Sate, South Africa. Just like many artisanal and small-scale mining activities globally, the setting of artisanal mining in QwaQwa is in a rural location with minimal access to technological advancement and technical skills. QwaQwa is located in a rural area east of the Free-State province and approximately 237 kilometers from Johannesburg the commercial hub of South Africa as shown in Figure 1 below. QwaQwa has immense rock deposits, of which sandstones sediments forms the biggest part of these deposits.

Figure 1: Maps of Africa; South Africa; and Free State showing the location of QwaQwa



Source: Agwa-Ejon J.F, Mulaba-Bafubiandi A. F & Pretorius J.H (2015)

An increasing number of QwaQwa residents are exploiting the large deposits of sandstones by venturing into artisanal mining of these stones as a way to improve their income. Artisanal and small-scale mining (ASM) is often associated with informal; unregulated; undercapitalized and under equipped operations, where technical management skills are lacking (Lungu, 2006). The current trend indicates a growing demand for the development and introduction of more sustainable practices and technologies to mitigate the various socio-economic and environmental challenges faced by the ASM industry. The introduction of an operating management system for the three identified cases will lead to formalized working operations for sandstones quarrying activities and most importantly serve as a contribution to the call for development and enhancement of the ASM industry. In developing an operating management system the researches must first identified the sandstone production processes and their interactions, and then developed a mechanistic flow process system to guide daily productions activities.

Artisanal small-scale mining (ASM) activities in South Africa like many in other developing countries across the world are considered to be subsector of the large scale mining (LSM) and do not fall within the mainstream economy. Nevertheless ASM activities are as important as (LSM) activities because of the important role it plays in reducing poverty, enhancing local economic growth and providing income opportunities for involved communities. Though the difference between the financial revenue between ASM and (LSM) is vast, ASM activities makes a difference when it comes to the livelihood of miners. In 2004 Mintek, a Small-Scale mining and beneficiation establishment estimated that the number of miners involved in ASM in South Africa is in the excess of 30 000. No recent figures are available, but given the growing demand for some ASM products, coupled with increased un-employment, it is justifiable to assume that the number of miners in ASM activities has increased considerably over the years.

Sustainable development and modernization of ASM activities in South Africa requires concerted collaborations between all significant role-players (i.e. academia/research institutes, government and miners/communities). The application of systems thinking methodology on the production activities in the QwaQwa sandstone mining site would therefore explore an area of interest to a variety of parties. In today's world, systems are developed with high technological advancement to meet specific customer and regulatory requirements. Continuous systems reviews contribute to enhancement of systems development, and makes systems function more efficiently. Systems evaluation is one of the key components which enable a business to reassess its processes and procedures and develop strategies to meet customer and statutory requirements. The sustainable development of

South African ASM activities will enable miners to produce products that can compete fairly in the global arena. Systems approach is therefore an enabler of critical and technical assessment of an organization's needs and strategic objectives. This aspect can be achieved by performing a gap analysis before an operational system is developed.

LITERATURE REVIEW

Von Bertalanffy (1972) developed a theory on open systems in the mid-twentieth century which became universally acceptable to most general systems. The General systems theory (GST) expanded its horizon to include larger family of system approaches such as system engineering, system analysis, system dynamics and total system intervention. (p.407). The same argument was also supported by (Karzner, 2009) who stated that systems can be described as a management approach that attempts to integrate and unify scientific information across many fields of knowledge. He explained that the integration involves a group of elements, either human or non-human, that may be organized and arranged in such a way that the elements can act as a whole toward achieving some common goal, objective or end. Systems have evolved over time from manual based systems to world-class technology integrated systems. Mindful of the above, it is worth mentioning that the main aim of this paper is to explore the application of a modern technology based system approach and where possible apply the same techniques to the artisanal mining and processing of sandstones, with key emphasis to the three sites visited in QwaQwa, Free State, South Africa. Some of the tools the miners use in the extraction of sandstone is shown in figure 2 below.

Figure 2: The Observed Artisanal tools used by miners in QwaQwa, Free State.



There are varying views on the distinctions between “artisanal mining” and “small-scale mining”. According to (Hentschel, Hruschka, & Priester; 2002) artisanal mining is purely manual and on a smaller scale, whilst small scale-mining is more mechanized and on a much larger scale. In other countries however, the two phrases are used interchangeably to mean the same thing but in South Africa, structures and legislation has been set-up under the Department of Mineral Resources to address artisanal and small scale mining activities. The Mineral and Petroleum Resources Development Act of 2005. (Cawood, 2004) safeguards the interests of artisanal and small scale miners (Dolly, 2007). During the visit to the sandstone artisanal mining site in QwaQwa, the miners were seen to be using hammers, picks, and shovels to extract sandstones sediment from the rock bed. The stones are then loaded onto a trucks and transported to the factory for further processing and filtering. This process seems to be followed in most of the South African ASM sector.

A wide range of commodities, in different regions on the country are mined, the most popular minerals being gold, diamonds, coal and construction material (e.g. sand, clay, sandstones, slate, granite etc.). (Mutemeri, Sellick & Mtegha, 2010). Figure 3 below shows the geographical locations of the various mineral deposits mined

in South Africa. Mining activities for the different areas indicated above are largely dependent on availability of mineral deposits, ease of mining, processing, extraction and access to markets. According to (Mutemeri, & Peterson, (2002), it is estimated that the South African ASM sector has in excess of 40 000 miners and these numbers keeps on raising steadily. (p. 286).

Figure 3: The geographical distribution of the most popular minerals mined in South Africa

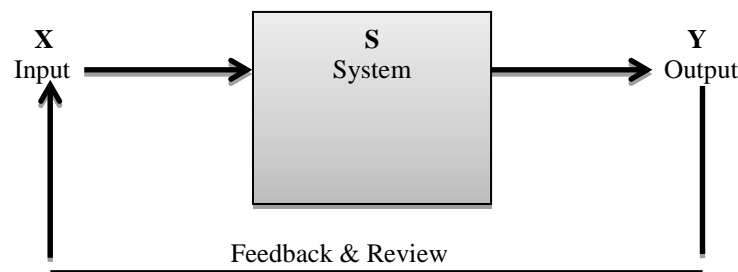


Source: Google Maps: www.south.african.geological.maps.co.za. Retrived: 10th August 2016.

Sandstones deposits in QwaQwa

Sandstones are sedimentary rocks consisting of lithified sands most sandstone consists mainly of quartz sand or a mix of quartz and feldspar sands with a combination of interstitial cementing materials. Common cements include calcite, clay, iron oxides, and silica (Mubiayi, 2012). The lithification process results in a hard, dense material that takes on the color of its components, most commonly tan to yellowish or tinted pink to dark red due to varying levels of iron oxide in the specific area. In QwaQwa different forms of sandstones are available namely the yellowish, blackish, reddish, greenish, greyish and whitish. (Agwa-Ejon; Mulaba-Bafubandi & Pretorius. 2015). Buxton, (2013), also added that Sandstones have always been used mainly in the construction industry for flagging, ashlar and partially squared pieces as well as rough blocks for building and construction. According to University of Tennessee Center for Clean Products (2010), sandstone production typically has two phases, namely; quarrying and processing. Figure 4 below, discusses a systems approach in relation to sandstone. Generally all systems has basic characteristics that are connected and organized in a manner that seeks to achieve specified objectives. For the purpose of this paper, a system refers to an integrated composite of people, products, and processes that provide a capability to satisfy a stated need or objective. In this case, X is an input vector representing the extraction factors in mining and Y is an output vector denoting the various minerals mined.

Figure 4: The diagrammatic representation of the mining system.



The system has a four point process, consisting of input, actual processing, output and evaluation. Input (X) energizes the operation for a given processing phase (s) in order to produce a final outcome which is output (Y) (Sas, Schmidt, & Patel, 2001). The evaluation phase examines outputs to objectives in order to determine any non-conformances and possible corrective and preventive actions to improve the system. (Wang, Lu & Li, 2015). They also emphasized the importance of getting a clear understanding of a system, and the need to consider system framework, particularly for process planning and scheduling. They named two essential considerations, used in generating optimized process parameter and determining operational sequence for a production processes. Process sequencing and set up operations are important in ensuring that the correct productivity criterions and quality control techniques are in place to ensure desired outcomes are achieved.

Systems Approach is described as the application of sound scientific and engineering principles in the design of an efficient and logical manufacturing sequence of operations. The systems approach methodology uses a number of well thought out problem solving and decision-making tools, which aggravate a sense of questioning and innovative thinking. Systems approach is essentially effective when all key stakeholders in the business enterprise work together by providing inputs to system development and review. This is important, as it follows the saying that “more heads are better than one”. Most importantly, involving numerous stakeholders throughout the organization also encourages people to “buy into” the process more readily, as their involvement through various inputs creates a sense of ownership. Additionally, work processes and their interaction will be better understood if employees are involved. Systems approach is a generic methodology which has been successfully applied in many sectors for sustainable process improvement. In a case study on the application of systems approach framework in Barcelona, Spain, Tomlinson et al (2011) states that the findings of their study revealed that through the application of systems approach framework the ecosystem products and services were improved and complex processes were highlighted. This was achieved by amongst others participatory approach in which stakeholders played a significant role in system formulation through provision of vital information during the data collection process. In another study, by Sas; Schmdit & Patel, (2001). systems approach was applied on communication processes for an online community. The tri found that systems approach was the most appropriate way for studying communication, as the methodology overcame the inherent drawbacks of the linear model of communication. They further stated that using systems thinking model for human communication allowed a greater degree of equality between participants in the communication process. Stasinopoulos, Smith, Hargroves & Desha (2013) also explained the importance and relevance of a whole systems approach to sustainable design in addressing pressing environmental challenges of the 21st century.

METHODOLOGY

The methodology used in this case study is based on systems approach as applied to ASM in QwaQwa. The core focus was on identifying opportunities for process improvement. The success of the process and subsequent improvement was heavily reliant on the community commitment and miners involvement across all work areas. The involvement of key stakeholders was vital as it created a sense of ownership and minimize resistance to the introduction of a new or improved systems. In implementing systems approach the three methodological steps listed below was followed.

These steps were used as a foundation for assessing and implementing a systems approach in the three sites in QwaQwa. Quality system initiatives was also incorporated during the assessment criterion in order to introduce the available technological advancements. These approach enhanced the processes and productivity levels. Modern quality systems advocate for process approach in the development, implementation and maintenance of the organizations quality management system. This therefore meant that all activities of on the sites had to be managed in a systematic manner and continual improvement as a cornerstone for the systems effectiveness. The Plan-Do-Check-Act (PDCA) model was used in creating a sustainable quality system.

The development of the System Workflow process and procedures

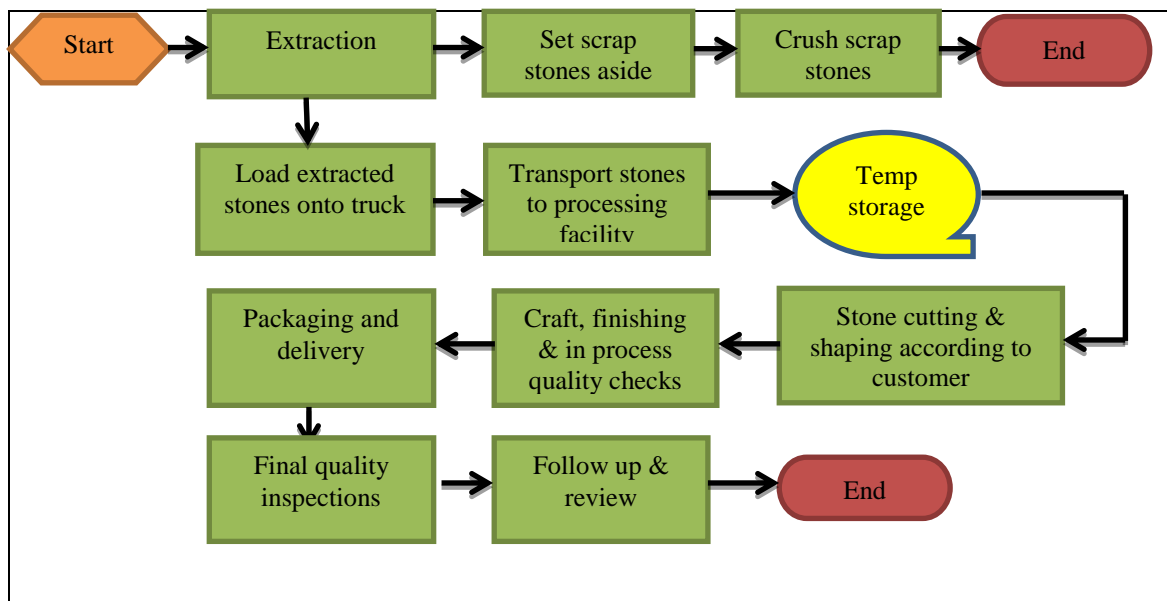
The assessment and observation during field trip to the quarrying sites in QwaQwa, enabled the researcher to develop the process flowchart for the mining and processing of sandstones as shown in figure 5 below. The flowchart shows the main activities of the quarrying and processing of sandstones in QwaQwa. The operational

activities depicted in the flowchart had the supporting procedures developed and formalized with the miners. Where necessary the documented procedures had additional supporting documents such checklist, quality control documents etc, incorporated. to help and guide miners in their respective work areas.

Table 1: The steps taken in assessing the System approach to Artisanal and Small-Scale mining in QwaQwa

Steps used in the implementation of systems approach ASM in QwaQwa	Actions associated with implemented steps
Step 1: A clear understanding of the process and system currently used in the mining operations.	<ul style="list-style-type: none"> Developed flow process charts to ensure better understanding of flow of information, resources, activities etc. Main processes was linked to the supporting processes Treated outsourced processes/services (e.g. transport) as supporting systems Determined “significance” of each process and select opportunities to improve the process
Step 2: Analyze, Plan and implement a program to improve the every process.	<ul style="list-style-type: none"> Created project teams and ensure all miners are involvement at all levels Developed objectives and targets with timelines Miners were assisted to use quality management tools such as: root cause analysis, solutions and preventive measures, evaluation of the most effective solution, communication of systems solution, implementation of the best solution, advised to continually review the system currently developed.
Step 3: Drive continuous improvement by measuring true performance	<ul style="list-style-type: none"> Conduct system audits periodically, Conduct customer survey assessment, Use system data to determine the systems effectiveness, Implement corrective actions Monitor corrective actions and assess its effectiveness Adopt other process approach methods (i.e. PDCA, lean, six sigma etc.)

Figure 5: Process workflow for quarrying and processing of sandstones in QwaQwa



CONCLUSION

The study scrutinized the detail activates involved in the artisanal and small scale mining of sandstone and assessed the processes. After close observation, interviews and discussions with the community and miners. A flowchart was developed which assisted in improving the operational procedure and processes. In designing the flowchart and its operating procedures the focus was centered on the system approach and methodology which now integrates the elements of human systems, operational systems and the classical systems. Based on the brainstorming and discussions with all the stakeholders it was realized that the underlying success of systems approach lies in the consistent application of the theory's principles and the buy in of the workers themselves. It may also be noted that systems approach can be applied in any sector of an organization. It is the believe of the researcher that the mining site visited are now Managed in a much better way.

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CHRONIC RISK ASSESSMENT OF MASS CONCENTRATIONS OF BENZENE, TOLUENE, AND XYLENE IN AN URBAN AIR

Oyewale Mayowa Morakinyo, Matlou Ingrid Mokgobu and Murembiwa Stanley Mukhola, Tshwane University of Technology, South Africa

ABSTRACT

Benzene, toluene, and xylene (BTX) are environmental priority pollutants that can constitute a threat to public health and economic loss to a nation. This study, assessed the non-carcinogenic and carcinogenic risks of exposure to BTX in an industrial area in Pretoria West, South Africa. Annual average concentration ($\mu\text{g}/\text{m}^3$) of benzene, toluene and xylene were 0.9 ± 0.9 , 2.2 ± 2.5 and 0.8 ± 0.6 respectively, with higher concentrations during winter months. The HQ indicated no likelihood of adverse health effects on children and adults. The lifetime cancer risk of exposure to benzene among children (4.4×10^{-7}) as well as adults (1.8×10^{-6}) were lower than the 1×10^{-5} and 1×10^{-6} tagged “acceptable” by the WHO.

Keywords: benzene, toluene, and xylene; risk assessment; carcinogenic and non-carcinogenic risks

INTRODUCTION

Urban air pollution is an increasing environmental problem in many cities of the world, with attendant effects on ecosystems and of the natural and the built environment (Brauer *et al.*, 2012; Kim *et al.*, 2013). Health outcomes observed from exposure to even relatively low levels of air pollution in indoor and outdoor environments have been of public health concern. The World Health Organisation (WHO) reported that globally, an estimated 3.7 million premature deaths was ascribed to urban outdoor air pollution in the year 2012 (WHO, 2014). Residents of low-and-middle-income countries unduly experience the effects of outdoor air pollution with 88% of the 3.7 million premature deaths occurring in these countries (WHO, 2014).

Benzene, toluene, and xylene (BTX) are examples of volatile organic compounds (VOCs) that have been identified as environmental priority pollutants in different countries (Dutta, 2009). Exposure to BTX can be occupational (ATSDR 2007), ambient from high stack industrial emission sources and vehicular exhaust emissions from automobile (Duffy *et al.*, 1999). BTX have the potential to persist in the environment and bi-accumulate in the food chain thus making them hazardous to public health (Weichenthal *et al.*, 2012). Of recent, exposure to BTX has been reported to have both chronic non-carcinogenic and carcinogenic effects (Tieyu *et al.*, 2014). Chronic non-carcinogenic effects include sensory effects, liver, kidney, central nervous system damage, asthma and other respiratory effects (Rumchev *et al.*, 2007). Recent findings from literature indicated that exposure to airborne BTX is associated with alterations of female hormones balances, increased spontaneous abortions, low birth weight, premature births and congenital malformations of the offspring (Ciarrocca *et al.*, 2011; Lupo *et al.*, 2011).

In the recent past, different international agencies, including the United States Environmental Protection Agency (USEPA), the United States Food and Drug Administration (USFDA), and the World Health Organization (WHO), have utilised quantitative risk assessment as regulatory decisions for air pollutants (Ramirez *et al.*, 2012). Human health risk assessment (HHRA) is a process planned to estimate the risk of exposure to a given target system or population (IPCS, 2004). It is a set of procedures used in evaluating risks and injuries from exposure to a chemical pollutant (IPCS, 2004). An assessment of a population's exposure to a known pollutant is essential for determining the likely association between pollution levels and health effects.

Researchers have utilised the HHRA in different countries (Bortey-Sam *et al.*, 2015), however, only a few inhalation risk assessment studies have been carried out in South Africa (Matooane and Diab, 2003; Muller *et al.*, 2003; Oosthuizen *et al.*, 2015; Thabethe *et al.*, 2014). Nevertheless, no information currently exist on the chronic non-cancer and cancer risk assessment for specific age groups that is related to environmental BTX pollution sources in Pretoria West, South Africa. This present study, therefore, assessed the non-carcinogenic and carcinogenic risks of exposure to ambient concentration of benzene, toluene and xylene in the metropolitan air near an industrial area in Pretoria, South Africa.

METHODS

Study area

The study was conducted in an industrial area located in the Tshwane Metro known as Pretoria West. The area accommodates a coal-fired power station, metallurgical industries such as a coke plant and a manganese smelter, fuel stations and a fuel tank farm. Various main roads feeding into the industrial area accommodate road transport to and from the city and the sampled area.

Data collection and analysis

The methodology of the study comprised two parts, namely ambient air monitoring and the application of the Human Health Risk Assessment (HHRA). Data was collected from a sampling station that is part of the ambient air quality monitoring network of the City of Tshwane. This study utilised secondary air quality data obtained from the South African Weather Service (SAWS) through the South African Air Quality Information System (SAAQIS) and the Environmental Management Services Department of the City of Tshwane. Permission was obtained to use the data for this study. The hourly ambient concentration of BTX for the months of January to December 2014 was collected from a stationary ambient air quality monitoring station located at Pretoria West (study area) at longitude 28.146108, latitude -25.7555 and 1329 m above sea level. The sampling equipment commissioned to conduct the sampling was Syntech Spectras GC955 series 600.

Ethical consideration

Human subject was not used in this study. However, the study was approved by the Tshwane University of Technology Senate Committee for Research Ethics, with reference number FCRE 2015/11/006 (SCI).

Health Risk Assessment Framework

The HHRA framework used in this study has four components: hazard identification, dose-response assessment, exposure assessment and risk characterisation.

Hazard identification

Hazard identification involves identifying which adverse human health effects are likely to occur following both acute and chronic exposure to hazardous substances. Benzene, toluene, and xylene were identified as harmful in this study through review of literature (Ciarrocca *et al.*, 2011; Lupo *et al.*, 2011).

Dose-response assessment

The dose-response assessment identifies the relationship between exposure level or dose and the severity of the health effects that is likely to occur. Benchmark values derived from quantitative studies such as epidemiological studies or toxicological studies on animals and/or humans are usually used. The benchmark values used in this study are presented in tables 1 and 2.

Exposure assessment

The exposure assessment identifies the population exposed to the hazard, the magnitude, and duration of exposure to the hazard. This study assumed inhalation as the route of exposure to BTX. The populations living in Pretoria West are likely receptors of airborne benzene, toluene, and xylene. The population constitutes 23.2% young (0-14 years) persons, 71.9% of working age (15-64 years) and 4.9% of elderly (65+ years) persons (Statistics South Africa, 2015). The study population was grouped in two: children (0-15 years) and adults (>15 years), following differences in their behaviors and respiratory systems (Hu *et al.*, 2012). Based on the supplemental guidance for inhalation risk assessment (Part F) (US EPA, 2011b), exposure concentration (EC) of BTX was estimated using equation 1 as follows:

$$EC = \frac{C \times ET \times EF \times ED}{AT} \quad (1)$$

Where: C: concentrations of benzene, toluene and xylene in ambient air ($\mu\text{g}/\text{m}^3$); ET: exposure time (24 hours day^{-1}); EF: exposure frequency (350 days year^{-1} , based on the assumption that each population group will spend at least two weeks every year away from the study area); ED: exposure duration (6 years for children and 24 years for adults); AT: averaging time (for non-carcinogen = $ED \times 365 \text{ days} \times 24 \text{ hours} \text{ day}^{-1}$; for carcinogens, $AT = 70 \text{ year} \times 365 \text{ days} \text{ year}^{-1} \times 24 \text{ h}$).

Risk assessment

The non-cancer risks for BTX were calculated using the hazard quotient (HQ), which indicates the presence or absence of adverse health effects due to exposure to a chemical pollutant. (US EPA, 1998; Muller *et al.*, 2003). The HQ for each pollutant was calculated by dividing the EC (expressed in $\mu\text{g}/\text{m}^3$) by its corresponding Reference concentrations (RfCs, in $\mu\text{g}/\text{m}^3$) as used by the US EPA integrated Risk Information System (IRIS) (IRIS, 2011). The RfCs for BTX used in this study are shown in Table 1.

$$HQ = EC / \text{RfCs} \quad (2)$$

An HQ of 1.0 is considered to be the benchmark of safety. An HQ that is < 1.0 indicates a negligible risk i.e. the pollutant is not likely to induce adverse health effects, even to a sensitive individual. An HQ > 1.0 indicates that there may be some risks to sensitive individuals (US EPA, 1989).

The combined non-carcinogenic effects of exposure to more than one chemical, known as the hazard index (HI) is the sum of HQs of each chemical (equation 3). An HI that is < 1 suggests no significant risk of non-carcinogenic effects while an HI > 1 indicates a possibility of non-carcinogenic effects occurring. The probability of which increases as the value of HI increases (US EPA, 2011b).

$$HI = \sum HQ (\text{Benzene} + \text{Toluene} + \text{Xylene}) \quad (3)$$

Cancer risk is the likelihood of an individual having a type of cancer from lifetime exposure to carcinogenic pollutants (Hu *et al.*, 2012). The lifetime cancer risk (LCR) for inhalation exposure to benzene was calculated by multiplying its inhalation unit risk (IUR) by the exposure concentration (EC) (equation 4).

$$LCR = IUR \times EC \quad (4)$$

The IUR of benzene (see Table 1) relates to the excess LCR obtained from its continuous exposure at a concentration of $1 \mu\text{g} \text{ m}^{-3}$ over a lifetime of 70 years (IRIS, 2011).

Table 1: Non-cancer reference concentrations and cancer unit risk of BTX

VOCs	Non-cancer		Cancer	
	RfCs ($\mu\text{g}/\text{m}^3$)	Source	IUR ($\mu\text{g}/\text{m}^3$) ⁻¹	Source
Benzene	9.6	ATSDR	6.0×10^{-6}	WHO
Toluene	5000	IRIS	-	-
Xylene	217	ATSDR	-	-

RfCs (Reference concentrations) (IRIS, 2011); *IUR* (Inhalation unit risk) (WHO, 2000); *ATSDR* (Agency for Toxic substances and disease registry) (ATSDR, 2011); *IRIS* (Integrated risk information system) (IRIS, 2011); Source: adapted from Ramirez *et al.*, 2012.

An LCR of between 1×10^{-5} and 1×10^{-6} was tagged “acceptable” by the WHO while the US EPA recommend as acceptable, a level below 1×10^{-6} (Demirel *et al.*, 2014). With reference to a study conducted by Sexton *et al.*, (2007), VOCs with LCR $> 10^{-4}$ was considered as “definite risk”, between 10^{-5} and 10^{-4} as “probable risk” and between 10^{-5} and 10^{-6} as a “possible” risk (Ramirez *et al.*, 2012).

RESULTS

Results are reported in two sections namely the statistical representation of the sampling data and the non-carcinogenic and carcinogenic risk via inhalation exposure. Table 2 summarises the mean, standard deviation and the range of the concentrations of benzene, toluene, and xylene measured at the study site. An annual mean of $0.9 \mu\text{g m}^{-3}$ (benzene), $2.2 \mu\text{g m}^{-3}$ (toluene) and 0.8 (xylene) were recorded.

Table 2. Mass concentration ($\mu\text{g/m}^3$) of BTX in ambient air from January to December 2014

Pollutant	Annual		Summer	Autumn	Winter	Spring	NAAQS
	Mean \pm SD	Range	Mean \pm SD	Mean \pm SD	Mean \pm SD	Mean \pm SD	
Benzene	0.9 ± 0.9	0.001-6.5	0.4 ± 2.7	1.1 ± 0.9	1.6 ± 1.2	0.4 ± 0.3	10.0
Toluene	2.2 ± 2.5	0.32-44.6	1.2 ± 0.7	2.6 ± 2.4	2.7 ± 3.4	0.9 ± 0.6	-
Xylene	0.8 ± 0.6	0.005-3.7	0.5 ± 2.3	0.7 ± 0.5	1.4 ± 0.7	0.9 ± 1.2	-

NB. Summer (1 December to 28/29 February), autumn (1 March to 31 May), winter (1 June to 31 August), spring (1 September to 30 November) (South African Weather Service, 2016); NAAQS (National Ambient Air Quality Standards for South Africa) (DEA, 2009).

The non-carcinogenic and carcinogenic risks of BTX are listed in Table 3. The hazard quotients (HQ) calculated for each of benzene, toluene and xylene showed no likelihood of adverse health effects occurring at this level of exposure for a child and adult ($\text{HQ} < 1.0$). Children rather than adults are less likely to be affected by chronic exposure to BTX. The integrated (HI) non-carcinogenic effects of exposure to the addition of the measured concentrations of benzene, toluene and xylene were < 1 for both children ($0.094 \mu\text{g/m}^3$) and adults ($0.38 \mu\text{g/m}^3$). This indicates that there is no significant non-carcinogenic health risk to a child or an adult that is exposed to the combined effects of the concentrations of BTX in the study area.

The carcinogenic risks from exposure to benzene are also presented in Table 3. The LCRs of exposure to benzene among children (4.4×10^{-7}) and adults (1.8×10^{-6}) were lower than the 1×10^{-5} and 1×10^{-6} tagged “acceptable” by the WHO and the US EPA respectively. This value indicates that chronic inhalation exposure to benzene poses negligible risks to children and adults in the Pretoria West industrial area.

Table 3: Non-carcinogenic and carcinogenic risk via inhalation exposure

Pollutant	EC ($\mu\text{g m}^{-3}$)		Non-carcinogenic (HQ)		Carcinogenic (LCR)	
	Children	Adult	Children	Adult	Children	Adult
Benzene	8.6E-01	3.5E+00	9.0E-02	3.6E-01	4.4E-07	1.8E-06
Toluene	2.1E+00	8.4E+00	4.2E-04	1.7E-03	-	-
Xylene	0.8E-0.1	3.1E+00	3.5E-03	1.4E-02	-	-

EC (Exposure concentration), HQ (Hazard quotient), LCR (Life time cancer risk)

DISCUSSION

Researchers have over the years confirmed from epidemiological and toxicological studies that exposure to air pollutants from natural and anthropogenic sources resulted in severe health effects. Thus, an assessment of a

population's exposure to air pollution is crucial for a suitable determination of the possible link between pollution levels and adverse health effects. The health risk assessment has become a useful wide-reaching procedure for estimating the possible carcinogenic and non-carcinogenic adverse health effects of exposure to a pollutant. Globally, researchers have carried out alike studies on the risk assessment of exposure to ambient concentrations of benzene, toluene and xylene in Turkey (Demirel *et al.*, 2014), Spain (Ramirez *et al.*, 2012), South Africa (Muller *et al.*, 2003). The concentration of BTX recorded in this study indicated a low air pollution since these values were lower than those reported elsewhere (Lioy *et al.*, 2011).

Findings from this study also revealed that the values of BTX fluctuate during the year with greater means during winter than summer months. Though, the average concentration of benzene recorded did not exceed the 5 µg/m³ recommended by the National Ambient Air Quality Standards for South Africa. This is in agreement with literature that concentration of airborne pollutants tends to increase in winter rather than in summer months (Thabethe *et al.*, 2014). More emissions from residential coal burning and central heating (Mantis *et al.*, 2005), harsh climatic conditions and dust from unpaved roads (Omar *et al.*, 2006) may be responsible for elevated levels of BTX concentrations in winter months. In summer, whilst pollution of the atmosphere from anthropogenic sources is continuous throughout the year, reduced concentration of pollutants are frequently reported mostly due to non-use of fossil fuels for heating, washout effects of pollutants from the atmosphere and wet deposition to a lesser extent (Thabethe *et al.*, 2014).

The carcinogenic, non-carcinogenic, as well as the integrated non-carcinogenic risks from BTX in this study, were within acceptable limits. This suggests that the carcinogenic, non-carcinogenic and integrated non-carcinogenic risks posed by BTX to children and adults via inhalation are acceptable and may not be injurious to a sensitive individual. The carcinogenic, non-carcinogenic as well as the integrated non-carcinogenic risks from BTX in this study were less for children than adults and were also within an acceptable limit. This study also demonstrated that adults rather than children have a higher chronic risk of exposure to BTX emissions. This is at variance with the general belief that children have a higher susceptibility to environmental pollutants than adults. They are considered a risk group for numerous reasons including their relative higher amount of air inhalation, their not fully developed immune system and lungs (Wargocki and Wyon, 2013). Further studies are needed to substantiate our findings.

CONCLUSION

This study is reflecting the carcinogenic and non-carcinogenic health risks posed by exposure to ambient concentrations of BTX by children and adults. The annual concentrations of BTX recorded in this study were within the limits stipulated by the European Union and the National ambient air quality standard for South Africa, though these concentrations fluctuate across seasons. The low concentration of BTX recorded in our study may be a pointer to the carcinogenic, non-carcinogenic, and integrated non-carcinogenic risks for different age groups being within acceptable limits. A similar study is required to determine the health risk associated with inhalable particulate matter and other gaseous pollutants in the study area.

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MARKET MAVENS IN ONLINE CUSTOMER COMMUNITIES: EXPLORING E-WOM MOTIVATORS

Mercy Mpinganjira
University of Johannesburg, South Africa

ABSTRACT

The purpose of this study is to examine factors that motivate market mavens' participation in online customer communities. Data used in the analysis was collected from 180 market mavens participating in online customer communities. Version 23 of SPSS was used to analyse the data. The findings show that market mavens are motivated by both intrinsic factors including the joy of helping and concern for others as well as extrinsic factors including affection seeking and status seeking. The findings can be used by marketers to inform strategies for gaining greater multiplier effect from information sharing using market mavens.

Keywords: Extrinsic motives, intrinsic motives, market mavens, online customer community, South Africa.

INTRODUCTION

Companies around the globe spend billions of dollars each year promoting their products and services to customers. Statistics on 'adspend' i.e. spend on advertising shows that in South Africa alone brands spent a total of R36.7 billion on advertising in 2014 (Maggs, 2015). Forecasts on advertising spend show that South Africans' total advertising revenue is expected to reach R52.1 billion in 2019 (PricewaterhouseCoopers, 2015). The high advertising revenues are not only as a result of growth in number of adverts but also growing costs of advertising. Increase in number of adverts means that consumers are constantly being inundated with promotional messages from companies. This poses a risk of company messages not being able to cut through the clutter and having the impact that it would ordinarily have. Coupled with increased cost of advertising and growing competition in market place, the need for well targeted promotional efforts cannot be over-emphasised.

Clark and Goldsmith (2005) pointed out the need for marketers to appreciate the fact that as objects of targeted marketing communications, some consumers are more valuable than others. They specifically noted that one important factor that determines how valuable some consumers are in relation to others is the extent to which they influence consumption decisions of others through interpersonal communication. Walsh and Elsner (2012) stated that companies that want to maximise the lifetime value of their customers need to proactively manage the sales potential of customer referrals. Doing so requires that companies know customers with high potential to influence sales through their interaction with other customers. While any customer has the ability to influence other people's purchase decisions, marketing literature recognises market mavens as a special type of customers that hold disproportionately high levels of influence on sales (Gauri et al. 2016).

The concept of market mavens is relatively new in marketing literature. It was introduced by Feick and Price (1987) after noticing that there are some individuals who tend to be highly knowledgeable about many products and happenings in the market (Goldsmith et al. 2012). They defined market mavens as "individuals who have information about many kinds of products, places to shop and other facets of markets and initiate discussions with consumers and respond to requests from consumers for market information" p. 85. Kiani et al. (2016) described market mavens as "among the most active and influential agents who actively share market information and opinions with other customers" p. 1120. Zhang and Lee (2014) observed that market mavens actively seek retail marketplace information including information about stores, product variety and services,

prices including sales as well as advertisements, from mass media as well as personal sources. Apart from accumulating knowledge, market mavens are also interested and enthusiastic about sharing information with others including recommending specific products as well as places to shop (Goldsmith et al. 2012).

Market mavens need to be of special interest to marketers considering that customers in general tend to be sceptical with promotion efforts coming straight from companies than they are with recommendations coming from fellow customers. With growing use of social media platforms for communications, the potential influence of market mavens has become more pronounced. One important social media platform that customers and companies are making increased use of are online customer communities. An online customer community exists within computer mediated environments and consists of individuals who come together as a result of interest in a particular brand and/or market. Just as with offline line communities, members of online customer community communicate and exchange information about brands and other market related information with each other (Mpinganjira, 2016). This study aims at examining factors that motivate market mavens' participation in discussions in online customer communities.

The paper is structured such that the next section presents the research problem and the specific objectives of the study. This is followed by a review of literature, discussion of the research methodology and presentation of findings respectively. Thereafter findings are discussed and their managerial implications outlined before concluding.

RESEARCH PROBLEM AND OBJECTIVES

While market mavens are acknowledged to play influential roles in accentuating customer referral value, not much is known about the factors that motivate them to engage in active sharing of information with other customers (Kiani et al. 2016). A good understanding of market mavens has the potential to help marketers allocate marketing resources targeted at referral groups more effectively (Walsh and Elsner, 2012). The growing potential of market mavens impacting on a lot more customers using social media than was traditionally possible, makes it more imperative for marketers to understand this group of customers in the context of social media activities. The current study aims at examining factors that influence market mavens' participation in online customer communities. The specific objectives are (a) to examine the extent to which market mavens are motivated by intrinsic and extrinsic factors in their participation in online customer communities (b) to investigate the relative influence of intrinsic and extrinsic factors motivating market mavens' participation in online customer communities and (c) to recommend strategies for enhancing market mavens' participation in online customer communities.

LITERATURE REVIEW

Motivation theory

Theories of motivation argue that people do things in order to gain what they want and/or to avoid what they do not want (Lin and Lu, 2011). Needs and/or wants are thus considered central to understanding behaviour. These needs can be categorised in different ways. For example Abraham Maslow in his 1943 paper entitled "the theory of human motivation" argued that human needs can be categorised in 5 main hierarchical groups. These were physiological needs, safety needs, love and belonging needs, esteem needs and self-actualisation (Maslow, 1943). While Maslow's theory is one of the most cited theories on motivation, one of the major criticisms levelled against it relates to the assumption that certain types of needs have to be satisfied before an individual can think of satisfying other types of needs. Consequently other researchers have come up with other theories on motivation that categorise needs not in hierarchical terms. One of these theories is the cognitive evaluation theory of motivation attributed to the work of by Deci (1975) as well as Deci and Ryan (1985). The theory argues for the important role that social and environmental factors play in facilitating or undermining motivation. The theory also suggests that people are motivated by needs that correspond to two types of motivators, namely intrinsic motivators and extrinsic motivators. With online communities being environments that foster social interaction, the cognitive exchange theory can be useful in explaining behaviour of members on such platforms.

According to Cerasoli et al. (2014) intrinsic motivators refers to the type of motivators that come from within an individual and thus does not depend on expected rewards from others. For example in a social context, some people may be motivated to help others simply because they enjoy being helpful and takes pleasure in being so not because of expectation to be acknowledged by others or be seen favourably. Cerasoli et al. (2014) noted that extrinsic motivators on the other hand refer to motivators that depend on others particularly the rewards to be gained. They further pointed out that the main difference between intrinsically and extrinsically motivated behaviours is that intrinsically motivated behaviours are engaged in for their own sake while extrinsically motivated behaviours are engaged in because of the instrumental gains or loss associated with the behaviour. Intrinsic motivation originates from the task in itself while extrinsic motivation originates from externally derived rewards and not from the task by itself (Yoo et al. 2013). Rewards are positive outcomes resulting from an individual's performance. These rewards can be tangible or intangible. An example of a tangible reward is cash received for performing an activity. Intangible rewards can be psychological in nature including recognition. In looking at the motivators, this study focused on joy of helping and concern for others as the intrinsic motivators and affection seeking and status seeking as the extrinsic motivators.

Intrinsic factors and Market Mavenism

Joy of helping and concern for others are attributes that are closely related to the concept of altruism. According to Hsu and Lin (2008) altruism refers to "the degree to which one is willing to increase other people's welfare without expecting returns". It is about being selfless in one's dealings with others. Individuals acting on altruism are known to volunteer themselves to contribute their knowledge on online platforms without expecting direct rewards in return (Cheung and Lee 2012). Altruism can be driven by concern that one may have towards others and/or the sheer enjoyment that people derive from helping others. Individuals can help others out of varied reasons including feelings of empathy. Joy of helping is characterised by feelings of happiness in helping others. It carries with it elements of hedonism i.e. pursuit of pleasure for its own sake. When associated with helping behaviour, one undertakes the behaviour as a way of gaining pleasure.

While joy of helping is hedonic in that pleasure seeking is a major driving force, concern for others carries with it the utilitarian aspect. In this case one's concern for others coupled by the belief that they can be of help to others avoid problems becomes the driving force of behaviour. Prior studies on word of mouth including Wasko and Faraj (2000) have emphasised the fact that concern for others as well as pleasure of being helpful plays a significant role in influencing customer engagement in helping behaviours. In a study on online communities by Wasko and Faraj (2005) concern for others was found to have significant influence on members' readiness to respond promptly to queries for help from other members. Taking cognisance of the influence that intrinsic factors particularly enjoyment that some people derive from helping as well as concern that they have on others, this study aims to uncover the extent to which these intrinsic factors are associated with market mavens' participating in online customer communities as well as the relative influence of the two factors.

Extrinsic factors and market mavenism

Zhang and Lee (2014) observed that sometimes people are unwilling to spend time and effort to help others unless there is direct benefit to themselves. Interpersonal engagement through interpersonal communication enables people to meet different interpersonal needs including the need for inclusion, affection and power (Ho and Dempsey, 2010; Zhang and Lee (2014). Affection captures emotional feeling of fondness, intimacy, warmth and liking (Ho and Dempsey 2010). Risser (2013:26) defined affection as "feeling of friendship one member of the network has towards another". Through sharing activities, one can signal to others that they are a helpful member of the community and this can make them appealing to other members. This is because participating in online community is an observable activity as it involved sharing of eWOM with members of one's in-group. People are often attracted to those that they find helpful. Yang (2013) in a study conducted among Chinese consumers, noted that young Chinese exhibit market mavenism on the internet because of the belief that this will assist them create and sustain the social capital of affection with others.

Apart from affection seeking, social networks also provide opportunities for individuals to enhance their status. Through sharing information, one may be able to rise to the position where they are able to command respect from others. The internet can be a good channel to use for those seeking recognition. This is because on

the internet one's actions are able to attract the attention of many more people in a short period of time than is often the case offline. Zhang and Lee (2015) observed that opinion leadership is known to be positively influenced by the need to win respect and gain social influence.

Exactly how these factors are related to market mavens is not known. This study examines if there are significant differences in the extent to which market mavens' participation in online customer communities is influenced by intrinsic and extrinsic factors. The study posits that there are significant differences in the extent to which market mavens' participation is influenced by different factors. The specific hypotheses put forward are outlined below:

- H1: There are significant differences between levels of intrinsic motivation and extrinsic motivation among market mavens participating in online customer communities.
- H2: There are significant differences in levels of status seeking and levels of joy of helping among market mavens participating in online customer communities.
- H3: There are significant differences between levels of status seeking and levels of concern for others among market mavens participating in online customer communities.
- H4: There are significant differences between affection seeking and joy of helping among market mavens participating in online customer communities.
- H5: There are significant differences between levels of affection seeking and levels of concern for others among market mavens participating in online customer communities.
- H6: There are significant differences between levels of altruism and levels of concern for others among market mavens participating in online customer communities.
- H7: There are significant differences between levels of status seeking and levels of affection seeking among market mavens participating in online customer communities.

METHODOLOGY

This study is part of a larger study focusing on members of online customer community conducted in Gauteng, South Africa using a structured questionnaire. The study thus followed a quantitative research design. Convenience sampling technique was used to select respondents in the study.

Constructs of interest in this study were measured using scales adapted from past studies. Joy of helping was specifically measured using items adapted from Cheung and Lee (2012) and Wasko and Faraj (2005). Concern for others was measured using items adapted from Hennig-Thurau et al. (2004). Affection seeking was measured using items adapted from Hill (1987) while status seeking was measured using items adapted from Wasko and Faraj (2005) and Zhang and Lee (2014). All items were measured on a 7 point scale that ranged from 1 = very strongly disagree to 7 very strongly agree.

Since the focus on the study was on market mavens who were members of online customer communities, the market mavens scale adapted from Yang (2013) was used to identify the qualifying respondents. The specific items used were: I like introducing new products/services to my friends; I like helping people by providing them with information about many kinds of products/ services; People ask me for information about products, services, places to shop, or sales; If someone asked me where to get the best buy on several types of products/services, I could tell him or her where to go; My friends think of me as a good source of information when it comes to products/ services or sales. Taking 4 as neutral i.e. the mid-point for a seven point scale, respondents who had a mean score of 5.5 and above were included in the analysis as market mavens. Zhang and Lee (2015) observed that market mavenism represents a continuum and that consumers can allocate themselves at different points on this continuum. Scores of 5.5 and above meant that respondents strongly agreed with market maven indicator statements. Of those identified market mavens 81 (45%) were males while 99 (55%) were females. In terms of age 87 (48.3%) were between the ages of 18 and 29; 59 (32.8%) were aged between 30 and 35 while 34 (18.9%) were above 35.

Version 23 of Statistical Package for Social Science (SPSS) was used to analyse the data. All constructs were tested for reliability using Cronbach's alpha coefficients. Table 1 presents the results of the analysis. According to Hair et al. (2010) construct reliability is evidenced by alpha coefficients of 0.70 and above. The

results of the reliability tests in this study show that all the constructs were highly reliable. The alpha coefficients ranged from .749 to .875. Descriptives including means and standard deviations as well as dependent sample t-tests were the main statistical techniques used to analyse the data. Dependent sample t-test was specifically used to test the hypotheses posited in the study.

RESULTS

The results in table 1 show that market mavens are motivated by both intrinsic factors as well as extrinsic factors in their participation on online customer communities. This is evidenced by the fact that the overall mean values of both intrinsic and extrinsic factors is around 6 which denotes 'strongly agree' on a 7 point Likert scale. It is however important to note that while both intrinsic and extrinsic factors are significant motivators, the overall mean for intrinsic factors was higher than that of extrinsic factors. A rank order of the individual factors show that the factor with the highest mean was joy of helping followed in order by affection seeking, concern for others and status seeking.

Table 1: Measurement Scales, Reliability and Descriptives

Constructs and items	Alpha coefficient	Mean	Standard Deviation
Intrinsic Factors – Overall		6.18	.678
Joy of helping	.875	6.30	.779
Concern for others	.749	6.07	.790
Extrinsic Factors - Overall		6.03	.674
Affection Seeking	.859	6.09	.824
Status Seeking	.861	5.97	.849

Paired simple test was conducted in order to determine if the differences in mean values of motivating factors are significantly different from each other. Results of the analysis are presented in table 2. The results show that the overall mean value of intrinsic motivation is significantly higher than that of extrinsic motivation ($p = .001$). Based on these results, hypothesis 1 which states that there are significant differences between levels of intrinsic motivation and extrinsic motivation among market mavens participating in online customer communities is hereby accepted.

Table 2: Paired Sample t test

	t	df	Sig. (2 -tailed)	95% Confidence Interval Difference	
				Lower	Upper
Intrinsic ---- Extrinsic	3.236	179	.001	.059	.245
Status seeking --- Joy of helping	-4.780	179	.000	-.461	-.191
Status seeking --- Concern for others	-1.275	179	.204	-.231	.050
Affection seeking --- Joy of helping	-3.683	179	.000	-.327	-.099
Affection seeking --- Concern for others	.326	179	.745	-.113	.157
Status seeking --- affection seeking	-1.530	179	.128	-.259	.033
Concern for others – Joy of helping	-3.998	179	.000	-.351	-.119

In order to uncover the specific intrinsic and extrinsic factors that are contributing to the differences, a series of t-tests were run to examine differences between each of the intrinsic factors and each of the extrinsic factors. The results, presented in table 2, show that there were significant differences between status seeking and joy of helping; affection seeking and joy of helping as well as between concern for others and joy of helping. As the mean value for joy of helping was higher than that of the three others factors, the results show that joy of helping is a statistically significantly stronger motivator of participation by market mavens in online customer community discussions than the other three factors. Based on these results hypotheses H2, H4 and H6 which states that there are significant differences in levels of status seeking, levels of affection seeking as well as levels of concern for others respectively and joy of helping are hereby accepted.

While the intrinsic factor of joy of helping was found to be a statistically stronger motivator of participation of online customer community discussion, the findings in table 2 show that the intrinsic factor of

concern for others was not statically different from extrinsic factors of status seeking and affection seeking. Based on these results hypotheses H3 and H5 which states that there are significant differences between levels of status seeking as well as levels of affection seeking respectively and levels of concern for others are hereby not accepted. Paired sample t-test was also done to examine if there were significant differences in levels of extrinsic factors of status seeking and affection seeking among market mavens participating in online customer communities. The results in table 2 show no significant differences. H7 is accordingly not accepted.

DISCUSSION AND IMPLICATIONS

The findings in this study show that market mavens are motivated by both intrinsic and extrinsic factors in their participation in discussions on online customer communities. An examination of the extent to which market mavens are motivated by the different factors shows that intrinsic factors have significantly stronger influence on market mavens' participation than extrinsic factors. The differences were found to be attributable mainly to the intrinsic factor of 'joy of helping'. Joy of helping was found to be a statistically stronger motivator of participation than concern for others, affection seeking as well as status seeking. These results are consistent with assertions by the cognitive exchange theory that people may be motivated differently by different factors. Considering that market mavens serve as important sources of market information and have the potential to exert significant influence on other people's consumption related decision making, the findings in this study are of significant managerial implications as discussed below.

Managerial implications

The findings in this study can be used by marketing managers in their efforts aimed at maximising effective use of market mavens in their marketing efforts particularly those involving use of online customer community platforms.

- It is important for marketing managers to identify market mavens in their product category particularly those sharing information online as this information has the potential to not only reach many people but also to reach them very fast. Having identified them, marketing managers need to find ways of closely working with or involving market mavens in their product and service promotional efforts. Gauri et al. (2016) pointed out that market mavens invest a lot of time in searching for information. Having identified market mavens, marketing managers can assist in reducing investments made by them in information search activities by regularly sharing with them marketing related information including information on prices, product range, retailers etc.
- Managers need to bear in mind that market mavens share different types of information, some of which may be negative and some may be positive. It is in the marketing managers' interest to ensure that market mavens are used to disseminate positive information about their company products and services. One way of making them more likely to disseminate positive information is by sharing positive information about the company. Marketing managers can also explore the possibility of making some of the market mavens part of their brand ambassadors. In any case, when choosing brand ambassadors, market mavenism needs to be a key consideration.
- Marketing managers need to look for specific ways of directly appealing to market mavens' motivations for participation in online customer community sites. The findings in this study show that intrinsic factors have strong influence in terms of motivating participation. One way marketing managers can appeal to this need is by passing on information that would be useful in protecting other consumers from unscrupulous traders on the market. For examples marketers can use market mavens to warn other customers of counterfeit brands, dealers of counterfeit brands as well as how to check for brand authenticity. Getting market mavens involved in such communication efforts would help invoke inner pleasure associated with being helpful as well as help them engage in acts that show concern for others.
- Apart from leveraging intrinsic motivators, it is also important for marketing managers to look for ways of leveraging extrinsic factors as these too are significant motivators of market mavens' participation in online discussions. In order to appeal to the need to be noticed and find affection as well as to enhance one's status through reputation enhancement, marketing managers can explore different avenues including placing

market mavens in a select group of customers mandated with providing product and/or service reviews to the company and sharing information on new developments with other customers.

CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

Heightened interest by market mavens in market happenings and ready willingness to share market information with others, make them a group with high potential lifetime customer value to any company. The ability of any marketer to successfully unleash the potential positive impact of market mavens for their company depends on ability to identify such customers and factors that influence their behaviour. This study contributes to this knowledge by uncovering intrinsic and extrinsic factors that motivate market mavens' participation in online customer communities.

While the study helps shed some light on market mavenism, it is not without limitations. One of the limitations relates to the fact that the analysis focused on market mavens participating in online customer communities in general. In so doing it is not possible to uncover differences that may be there among market mavens participating in discussions focused on specific types of products. Future studies should consider examining such differences. Another limitation of the study relates to the fact that the sample is drawn from a limited geographical area, thereby limiting the generalisability of findings. Future research should consider replicating the study in other areas so as to validate the findings.

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PERCEIVED EMOTIONAL AND INFORMATIONAL SUPPORT AND VOLUNTARY PERFORMANCES IN ONLINE HEALTH COMMUNITIES

Mercy Mpinganjira
University of Johannesburg, South Africa

ABSTRACT

The paper investigates the influence of perceived informational and emotional support on voluntary performances, specifically expressiveness, attentiveness and recommendation, in online health communities. Data was collected from 361 respondents using a structured questionnaire. Version 23 of SPSS was used to analyse the data. The results show that both perceived informational and perceived emotional support exert significant positive influence on voluntary performances of expressiveness, attentiveness and recommendation. The findings point to the need for managers of online health communities to focus on enhancing perceived levels of informational support and perceived levels of emotional support to stimulate the examined voluntary performances.

Keywords: Online health community, informational support; emotional support, voluntary performance.

INTRODUCTION

Proliferation in use of information and communication technologies (ICTs), the internet specifically, is having significant bearing on role of patients in healthcare services. Vennik et al. (2015) observed that health service provision is in the modern environment characterised by growing use of patient oriented ICT applications. They further noted that this is resulting in transformation of the role of the patient in health care provision from that of being a passive actor to being a highly active one. Online health community websites are one such applications that are attracting large numbers of users (Goh et al., 2016). Zhao et al. (2015) described online health communities as “a special type of social network in which members interact in health or wellness related virtual communities to seek information, emotional support and communication opportunities” p. 73. As noted by Johnston et al. (2013) dealing with ill health can often be an emotionally demanding and challenging process. This is more so when one lacks knowledge about the condition and how best to manage it. What makes the process more challenging is the fact that often information from health specialists does not come in comprehensible formant and/or does not adequately meet the needs of patients and their care givers (Johnston et al. 2013). This results in patients looking for other sources of information to satisfy their need for knowledge. Online health communities through community website provide patients and their care givers a potential source of needed information.

Goh et al. (2016) observed that while health communities are associated with significant potential benefits, not much is known, based on empirical research, about the extent to which these benefits are realised by members. This study aims at advancing knowledge on online health communities by examining perceived benefits derived by individual members from online health communities and the influence of these on members' level of care towards others as well as their voluntary performance. Voluntary performance refers to “helpful, discretionary behaviours that support an organisation's service performance and quality” (Rosenbaum & Massiah 2007 p. 257). Voluntary performances under focus in this study are expressiveness and attentiveness in

one's engagement on online health community sites as well as recommending of an online health community to non-members.

The paper has been structured such that the next section presents the research problem and objectives. This is followed by a review of literature and an outline of the study's methodology. Thereafter findings are presented followed by conclusions drawn from the findings, limitations of the study and suggestions for future research respectively. The article ends with presentation of managerial implications of findings and recommendations.

RESEARCH PROBLEM AND OBJECTIVES

The ability of patients to access informational and emotional support is a significant determinant of online healthcare service outcome (Zhao et al. 2015). Johnston et al. (2013) noted that unlike other online community groups, the stakes in online health communities can be high as health issues can at times be matters of life or death. Hosting and management of such platforms is often driven by the need to ensure that as many people as possible get their much needed help. While this is so, not much is known, based on empirical research, on users' perceptions of benefits derived from online health community sites and the impact of these on community members (Goh et al. (2016). While voluntary performance has attracted considerable research attention in employer-employee relations, the applicability of the arguments advanced in such literature in other contexts particularly in the context of online health communities requires more research. This study aims at contributing to knowledge in this area by addressing two key questions:

To what extent do individuals derive informational and emotional support from online health communities?

What influence does informational and emotional support derived from online health communities have on members' voluntary performance

The primary objective of this study is to examine levels of informational and emotional support derived from online health communities and the influence of this on members' voluntary performance.

The specific objectives of the study are:

- (a) To investigate levels of informational and emotional support derived from online health communities
- (b) To examine the relationship between informational support derived and voluntary performance
- (c) To examine the relationship between emotional support derived and voluntary performance
- (d) To examine the relationship between informational and emotional support and feelings of empathy and
- (e) To examine the relationship between feelings of empathy and voluntary performance.

LITERATURE REVIEW

Voluntary Performance

Voluntary performance is about what members of a social group engage in, without being forced, that is beneficial to the group (Rosenbaum & Massiah 2007). Core to the concept of voluntary performance is the recognition of the fact that there are some behaviours that members of social groups engage in, that are beneficial and need to be nurtured but that cannot be forced. Individuals thus engage in such behaviours voluntarily. As noted before, of interest in this study are following performances – expressiveness, attentiveness and recommendation. Each of these performances and its importance in relation to health communities is elaborated below.

Expressiveness – Expressiveness in the context of this study is about being articulate in one's contributions. Captured in it are issues of clarity and detail. According to Yoo et al. (2014) expressiveness is a widely accepted health communication competence skill. Expressive communication helps to ensure that meaning of information is clear to the receiver of information. This is because expressive language entails use of words that help to adequately explain concepts and objects (Spitzberg, 2006). In online health communities, expressive communication would help enhance satisfaction with quality of information accessed by those in

need and consequently satisfaction with the community as a whole. According to Xu et al. (2013) quality of information available online exerts significant influence on perceived service quality.

Attentiveness – According to Froehle (2006) attentiveness is about taking special interest in another person’s statements on issues of concern and their psychological or emotional state. Attentiveness is considered a valuable cognitive communication skill that helps engender trust and reinforce empathy and responsiveness (Froehle, 2006). In the context of health communities, being attentive to what other people are sharing as well as their state can be critical to ensuring sensitivity in responding to issues. Attentiveness in health service provision is known to have positive influence which can consequently influence on satisfaction with service provider (Atallah et al. 2013). Attentiveness in health communities is thus likely to have positive influence on members’ satisfaction with the community.

Recommendation –In the context of this study recommendation refers to engagement in positive word-of-mouth about an online health community by private parties. Service recommendation is a voluntary act in that customers cannot be forced to engage in it. Recommendation of online health community by community members can be beneficial to managers of such communities as such acts can help bring in more members. Chen et al. (2008) noted that research evidence show that recommendations exert strong influence on consumer choice. This is because fellow consumers are often considered more trustworthy sources of information than service providers due to lack of direct benefit to themselves as a result of recommending a service.

Antecedents of voluntary performance – proposed model

The primary role of online health communities is to serve as social spaces where members can access health related informational and emotional support from other members. This study posits that voluntary performance in online health communities will be influenced by level of satisfaction derived from the core sources of value associated with use of such sites i.e. informational value and emotional value. This argument is consistent with the social response theory which argues that the extent to which individuals engage in helpful behaviour depends on the extent to which they themselves have been recipients of similar acts (Zimmer et al. 2010).

Commenting on social response theory in relation to social networking sites Huang and Lin (2011) argues that the theory points to the expectation that individual users of social networking sites will positively respond to group level social capital embedded in group interactions. Hajli (2014) identify information and emotional support as important sources of social capital in social organisations. Taking expressiveness, attentiveness and recommendation as voluntary performances of significant value in online health communities, this study proposes a conceptual model, refer figure 1, which posits that the extent to which members engage in these performances is influenced by level of informational and emotional support derived from the community.

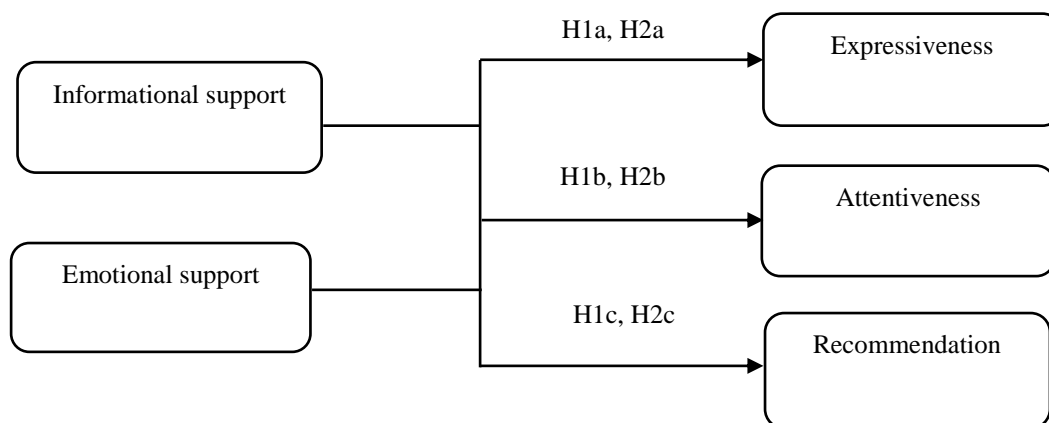


Figure 1: Conceptual model: Informational and emotional support and voluntary performance

Informational support and voluntary performance

Information support in the context of this study is about the extent to which users of online health community perceive community sites to be useful sources of advice and knowledge. Information is key to good management of health conditions. Access to information such as treatment regimes can help patients and their carers make informed decisions on treatment options based on a good understanding of associated risk. Most medical procedures carry with them a degree of risk (Mahmood, 2005). Access to information can assist patients and carers avoid taking unnecessary risks. The best source of health related information apart from professionals are individuals who have faced similar health problems. This is because information shared by such individuals comes from real life experiences. Online health communities provide a forum where individuals can easily meet other people who have or are still living with health conditions of concern. In line with social response theory, the study posits that informational support in online health communities exerts significant positive influence on voluntary performance. The specific hypotheses put forward are that:

- H1a: Perceived informational support has significant positive influence on members' expressiveness in an online health community.
- H1b: Perceived informational support has significant positive influence on members' attentiveness in an online health community.
- H1c: Perceived level of informational support has significant positive influence on members recommending to others an online health community.

Emotional support and voluntary performance

Provision of emotional support in health contexts is associated with many benefits. It is known to help minimise the likelihood of patients or carers getting into a state of depression (Househ, 2014). It helps sufferers adapt better psychologically and cope with necessary treatments. Emotional support can be provided through taking a keen interest in the feelings of others, validating and respecting the feelings. Online health communities have the ability to serve as good sources of emotional support. This is because on such communities one is likely to easily find people who have gone through first-hand experience with similar emotions that one may be currently be going through. Such people are likely to have a better understanding of the kind of emotional needs one has during such times and also a better appreciation of words that are likely to positively impact on one's emotions. Consistent with the social response theory which argues for positive relationship between engagement in helpful behaviour with benefiting from similar acts by others this study posits that:

- H2a: Perceived emotional support has significant positive influence on members' expressiveness in an online health community.
- H2b: Perceived emotional support has significant positive influence on members' attentiveness in an online health community.
- H2c: Perceived emotional support has significant positive influence on members recommending to others an online health community.

METHODOLOGY

This study is part of a large study on online health communities. The study followed a quantitative research approach. The study's target population were users of online health community sites. The data was collected in Gauteng, South Africa. Due to lack of readily available list of users on online health community sites that could be used as a sampling frame, non-probability sampling using convenience sampling technique was used to collect data. Convenience sampling entails collection of data from participants that are readily available and willing to participate.

A structured questionnaire was used to collect data. All constructs of interest in this study were measured as multi-item scales. Items used to measure the constructs were sourced from past studies and adapted for this study. Informational and emotional support was specifically measured using items adapted from Liang et al. (2011). Expressiveness and attentiveness was measured using items adapted from Spitzberg (2006) while recommendation was measured using items adapted from Anaza (2014) and Groth (2005). All items were measured using a seven-point Likert scale that ranged from 1 = very strongly disagree to 7 = very strongly agree. Trained research assistants were used in administering the questionnaire. At the end of the data collection period, a total of 361 usable responses were received.

The data was analysed using version 23 of SPSS. The study's proposed hypotheses were tested using regression analysis. All scales used in the study were tested for reliability using Cronbach's Alpha coefficient. Factor analysis was used to test convergent validity of constructs.

RESULTS

According to the results in table 1, all constructs in the study had alpha coefficients above the recommended minimum value of 0.70 (Hair et al. 2010). The actual values were .870 for information support; .817 for emotional support; .786 for attentiveness; .820 for expressiveness and .774 for recommendation.

Descriptive statistics presented in table 1 show that respondents in the study derived significant informational and emotional support from their online health communities. This is evidenced by mean values of 5.96 for informational support and 6.01 for emotional support on a 7 point scale. The results also show good levels of engagement in voluntary performances. The mean for expressiveness was 6.20, while attentiveness and recommendation has mean values of 6.07 and 6.22 respectively.

Table 1: Reliability and descriptives

<i>Construct</i>	<i>Alpha coefficient</i>	<i>Mean</i>	<i>Std. Dev.</i>
<i>Informational support</i>	.870	5.96	.809
<i>Emotional support</i>	.817	6.01	.713
<i>Attentiveness</i>	.786	6.07	.688
<i>Expressiveness</i>	.820	6.20	.690
<i>Recommendation</i>	.774	6.22	.673

Table 2: Regression analysis – Informational support and its voluntary performances

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.431	.186	.183	.624		
2	.449	.202	.200	.615		
3	.401	.161	.158	.617		
Model	independent variable	Unstandardised coefficients		Standardised coefficients	t	Sig.
		B	Standard Error	Beta		
1	(Constant)	4.002	.245		16.365	.000
	Informational Support	.368	.041	.431	9.949	.000
2	(Constant)	3.791	.241		15.711	.000
	Informational support	.382	.040	.449	9.527	.000
3	(Constant)	4.231	.242		17.503	.000
	Informational support	.333	.040	.401	8.294	.000
Notes: Predictor variable – Model 1, 2 and 3: Informational support						
Dependent variables: Model 1 – Expressiveness; Model 2 – Attentiveness; Model 3 - Recommendation						

Presented in table 2 are results of regression analysis done in order to test the influence of perceived informational support on voluntary performances. The results show that perceived information support has significant influence on expressiveness ($p = .000$; $\beta = .431$), attentiveness ($p = .000$; $\beta = .449$) and on recommendation ($p = .000$; $\beta = .401$). Accordingly hypotheses 1, 2 and 3 are hereby accepted.

Presented in table 3 are results on the influence of perceived emotional support on voluntary performances. According to the results perceived emotional support exerts significant positive influence on expressiveness ($p = .000$; $\beta = .373$), attentiveness ($p = .000$; $\beta = .377$) and on recommendation ($p = .000$; $\beta = .431$). Based on these results hypotheses 4, 5 and 6 are hereby accepted.

Table 3: Regression analysis – Emotional support and its voluntary performances

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.373	.139	.137	.641		
2	.377	.142	.140	.638		
3	.445	.198	.196	.603		
Model	independent variable	Unstandardised coefficients		Standardised coefficients	t	Sig.
		B	Standard Error	Beta		
1	(Constant)	4.021	.287		14.010	.000
	Emotional Support	3.62	.047	.373	7.627	.000
2	(Constant)	3.881	.286		13.590	.000
	Emotional support	.364	.047	.377	7.715	.000
3	(Constant)	3.697	.270		13.701	.000
	Emotional support	.419	.045	.445	9.407	.000
Notes: Predictor variable – Model 1, 2 and 3: Emotional support						
Dependent variables: Model 1 – Expressiveness; Model 2 – Attentiveness; Model 3 - Recommendation						

DISCUSSION AND IMPLICATIONS

This study examined factors that influence voluntary performances of expressiveness, attentiveness and recommendation in online health communities. To the author's knowledge, this paper presents the first empirical attempt to examine in a single study voluntary performances of expressiveness, attentiveness and recommendation and their precursors in online health community. Anaza (2014) bemoaned lack of studies focusing on understanding unsolicited, voluntary behaviours in online environments. He argued that a good understanding of such behaviours and their precursors is important because such behaviours can be used to benefit an online service provider. In the case of online health communities, such benefits may include being able to attract and retain more active members and grow a vibrant community. Mpinganjira (2016) note that findings ways to attract active members of online communities is a matter of great concern to managers of such sites.

The findings in the study show that expressiveness is positively influenced by informational support as well as emotional support. Attentiveness was also found to be significantly influenced by informational and emotional support. Note should be taken of the fact that informational support was found to have more influence on expressiveness as well as attentiveness than emotional support. Recommendation on the other hand, was found to be influenced more by emotional support than informational support. The fact that all three voluntary performances were found to be significantly influenced by level of support derived from the community validates the applicability of the social response theory in online health communities.

Managerial implications

The findings in this study are of significant managerial implications.

- Firstly it is important for managers of such sites to find ways of gaining insight into levels of informational and emotional support that users associate their online health communities with. Managers can do this by running user satisfaction surveys with communities that they host. In order for managers to benefit more from efforts aimed at gauging user satisfaction, it is important for such surveys to be designed in such a way that they can help managers uncover and evaluate users' specific needs other than just capturing overall perceptions.
- Secondly, apart from assessing perceived levels of informational and emotional support received, managers of online health communities need to also assess voluntary performances including expressiveness, attentiveness and recommendation. These voluntary performances are important if online health communities are to live up to their purpose and succeed. Expressiveness can specifically contribute to ensuring that users have access to more usable information. This is because expressiveness is associated with detail and clarity in communication. Attentiveness is important because it can help reinforce empathy and engender trust while recommendation is useful in member recruitment. It will assist in ensuring that more people are aware of a community.
- Lastly, the findings in the study show that apart from directly monitoring levels of support and levels of voluntary performance, managers can explore the two together. The positive relationship found between voluntary performance and informational as well as emotional support, specifically mean that managers can make use of perceived levels of support to explain voluntary performances. Equipped with this knowledge, managers can focus their efforts on stimulating the right type of support that may be missing in the community.

CONCLUSION

Based on the findings in this study a number of conclusions can be drawn. The findings show that informational support and emotional support are significant antecedents of voluntary performances of expressiveness, attentiveness and recommendation. The results also point to the fact that while both informational and emotional support influence voluntary performances, the extent of influence may differ depending on the voluntary performance under consideration.

While the findings in the study have significant managerial implications, they are not without limitations. One limitation relates to the fact that the findings are based on data collected from a non-probability sample. They findings can thus not be generalised to a wider population. Future research should consider making use of probability samples. Another limitation relates to the fact that the study only focused on two precursor variables of voluntary performances. Future studies should consider examining additional precursor variables.

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ASSURANCE AS MOST CRITICAL DIMENSION TO DELIVER HEALTH CARE SERVICE QUALITY IN A DEVELOPING CONTEXT

Stanley Mukhola, Johan W de Jager and Therese Roux
Tshwane University of Technology, South Africa

ABSTRACT

The purpose of the paper is to examine the level of importance as well as the perceived performance of the assurance related services rendered by a public health care facility in a deep rural community of South Africa. The focus of the study is on the assurance related construct as that was pointed out as the most important service quality construct amongst six constructs. A distinction has been made between in- and outpatients and significant differences between the two groups are measured. The most important variable as well as the best perceived variable in the assurance construct were both communication in a language that I can understand. No statistical significant difference exist between the two groups.

Keywords: Health care, service quality, assurance

INTRODUCTION

The growing importance of delivering quality health care is reflected in the large number of studies conducted in hospitals across Europe and the United States (Aiken et al., 2012, Fenton et al., 2012, Manary et al., 2013) as well as within various medical specialties and subspecialties units such as emergency medical services (Rising et al., 2014), paediatric and gynaecology specialties (Dickson et al., 2015; Martinez & Leland, 2015), orthopaedic (Graham et al., 2015) oncology (Gupta et al., 2013). Most studies are conducted in a developed context, while not enough efforts have been devoted to developing countries in Africa (Macdonald, 2013). Some recent exceptions are patient- and healthcare provider perspectives on quality of care in private and public hospitals in South Africa (Coetzee, 2013), clinics in Nigeria (Iloh, 2013) and patients with HIV in South Africa (Bogart et al., 2013, Osborn & Obermeyer, 2016) and Kenya (Odeny et al., 2013). Still, these studies do not offer insight on the satisfaction with assurance delivered at in rural areas. In the light of the above discussion the focus of this article on services quality in public hospitals. Conceptual back ground is provided by offering some perspective on health care quality and measurement and previous studies on health care service quality in developing countries. Thereafter the methods used to design the study and the results will be presented. Finally, the article provides conclusions, summarises the limitations and recommends areas for future research.

PERSPECTIVES ON HEALTH CARE QUALITY AND MEASUREMENT

Some different perspectives on health care quality is reviewed in this section in order to understand potential approaches and methods guiding the measurement thereof. A reactive perspective to health care implies responding to sickness or perceived departures from healthiness, and identifying those deviations in terms of clinical concepts and categories-diseases, professionally defined (Carthey, 2001; Mayzell, 2015). When following this reactive perspective, definitions of health implicit in the behaviour of the health care system is a negative concept emphasizing the absence of disease or injury. Evidence of this reactive perspective can still be seen in developed countries where far more is spent on cardiovascular disease, cancer, and diabetes than prevention (Fani Marvasti & Stafford, 2012), as well as developing countries where the largest part of the scarce resources are spend on costly personnel and equipment to fight diseases of poverty often amendable by pro-

active treatment and even prevention when dealt at an early stage (Macdonald, 2013). The perspective is in consequence often regarded, usually by its opponents but not unfairly, as a sickness care system (Evans & Stoddart, 1990; Fani Marvasti & Stafford, 2012). This interpretation of health was purposely rejected by the World Health Organization (WHO) more than 60 years ago, by suggesting that health care should aim at complete physical, mental and social well-being and not merely the absence of disease or infirmity in its constitution (World Health Organization, 2016). It is thus important to define the quality of healthcare in terms of its efficiency, cost effectiveness and social acceptability. The focus on this paper is specifically on healthcare efficiency, and more specifically to measure functional quality rather than technical quality using the SERVQUAL scale.

Efficiency of health care quality can be determined by functional quality (patients' own assessments of quality of service delivery) and/or technical quality (objective measures of the accuracy of the diagnosis, prescribed procedures and outcomes) (Donabedian, 1988; Mohan & Rani, 2015). There are some contradictory findings and views regarding the suitability of functional quality for assessment. Some studies suggest that patient-experience measures at best have no relation to the quality of delivered care and at worst are associated with poorer patient outcomes. Conversely, other studies have found that better patient experiences - even more than adherence to clinical guidelines - are associated with better outcomes (Manary et al., 2013). Critics are concerned about the use of patient-reported measures, particularly those assessing patient satisfaction with functional quality. Those challenging patient-reported or patient satisfaction measures raise three key concerns. Firstly they suggest that patient feedback is not credible since patients do not have the required medical knowledge or expertise (Sohail, 2003). However empirical studies do not support this claim. For example Glickman (2010) conducted a longitudinal study to examine clinical data of patients with acute illness treated at hospitals across the USA. They found that higher overall patient satisfaction is associated with clinical adherence to treatment guidelines and lower inpatient mortality rates, suggesting that patients are good discriminators of the quality of health care they receive.

Secondly it is believed that patient-experience measures could be obscured by factors not directly associated with the quality of processes. For example, some argue that patients are largely influenced by their opinion on their health status (e.g. unhealthy or healthy), irrespective of the quality of health care delivered (e.g. high-quality or low-quality). Though, if measures are determined by outcome, there should be no correlation between patient-experience measures and outcome when analyses control for clinical adherence. Yet several studies have revealed such correlations in various data sources in relation to numerous disease conditions, which implies that patient-experience measures don't simply reflect clinical adherence-driven outcomes but also represent a different dimension of quality that is otherwise difficult to measure objectively (Manary et al., 2013).

Thirdly patient-experience measures may reflect realization of an underlying reason or desire rather than on actual outcomes— for example, their request for specific medication or treatment, regardless of their benefit delivered. If that explanations were valid, then findings that higher satisfaction is linked to better outcomes would indicate that patients can better judge the best course of treatment compared to medical professional. This implication is counterintuitive, and not consistent with empirical evidence. For example, studies have shown that patient-experience measures and the volume of services ordered are not correlated; in fact, increased patient engagement leads to lower resource use but greater patient satisfaction in the long run (Wouters et al., 2008).

Furthermore several others have also advocated and confirmed the value of patient-reported measures. Sajid and Baig (2007) strongly oppose the exclusive and unilateral use of technical criteria, such as mortality and morbidity when assessing the competency of public health providers. They claim that the satisfaction of the patient should be the most important criterion when assessing the effectiveness of all public healthcare systems worldwide. In this context, Andaleeb and Millet (2010) warn that this is usually not the case in developing countries, where the service experience of patients has – to date -- been largely ignored by healthcare providers. This is problematic because patients' perceptions of healthcare service quality are likely to influence their usage of the available healthcare, as well as their trust in, and attitude towards treatment. These perceptions might even result in patients avoiding the public healthcare system or availing themselves of such services, only as a measure in last resort. Although patient satisfaction should not be the only criterion when evaluating service quality, it offers valuable information associated with customer retention and patients' wants and needs.

The authors of this paper follow a pro-active perspective which acknowledges that there is much more to health care than simply a collection of negatives or a state of not suffering from any designated undesirable condition and that quality healthcare service does not imply delivering the highest quality of care to all patients, but rather to meeting the needs of those patients most in need, and in a safe and effective way

The most widely known and debated scale for measuring service quality from the service recipient point of view is SERVQUAL. It consists of a set of structured and paired questions designed to assess customers' expectations of service provision and the customers' perceptions of what was actually delivered to them. After subsequent testing five, service quality dimensions were identified, namely:

- Tangibles: physical facilities, equipment, and appearance of personnel;
- Reliability: ability to perform the promised service dependably and accurately;
- Responsiveness: willingness to help customers and provide prompt service;
- Empathy: caring, individualised attention provided to customers; and
- Assurance: knowledge and courtesy of employees and their ability to inspire trust and confidence (Parasuraman et al., 1988).

This article does not offer a complete review of the SERVQUAL scale for the sake of conciseness, but some further discussions on the reliability and validity of the scale (Parasuraman *et al.*, 1985, 1988, 1994) as well as critique on this model are available (Buttle, 1996; Babakus & Boller, 1992). Numerous studies on service quality in the health care industry utilised and adopted the SERVQUAL instrument with diverse findings on the dimensions identified (Kilbourne et al., 2004; Sohail, 2003).

All five SERVQUAL dimensions were measured for the public hospital include in this study. However the focus of this paper will be on assurance as critical service quality dimension. This dimension and previous findings will be discussed in the next section.

ASSURANCE AS VITAL DIMENSION TO DELIVER HEALTH CARE SERVICE QUALITY IN A DEVELOPING CONTEXT

The assurance dimension of service quality refers to the confidence of the patients in the qualifications and competence of the medical staff (Sajid & Baig, 2007). The assurance perceived by customers is an important dimension of service quality in any industry (Parasuraman et al., 1988), but even more so in the health care industry where customers associate quality with perceptions of human factors (Kilbourne et al., 2004).

Assurance becomes especially vital where trust and confidence in the service provider are crucial and is thus clearly also pertinent to the health care sector (Macdonald, 2013). Assurance and the assessment thereof should thus clearly be an integral part of health care delivery strategy.

Previous studies on health care service quality in developing countries reveal diverse findings with regard to assurance related service issues. Bogart recently (2013) conducted qualitative research to explore barriers to care among people living with HIV in South Africa. It was found that patients reported negative experiences specifically with regards to disrespect from health care providers in this context and stigma-related issues due to the discrimination if their identity were disclosed to employers or seen visiting clinics in their community. Patients perceived providers to be unsympathetic since they regard the overcoming of stigma-related issues the sole responsibility of patients. Providers seemed to disregard the effects of these barriers on patient dissatisfaction.

Wouters, Heunis, van Rensburg and Meulemans (2008) also evaluated patient satisfaction with antiretroviral (ART) services at primary health-care facilities in South Africa in a longitudinal study. The results produced two factors of patient satisfaction: satisfaction with the general services and satisfaction with ART-related services. It revealed a disconcerting disparity between the large demand and insufficient human resources available and resulting lower patient satisfaction with assurance related issues such as information provided by

nurses on HIV/AIDS and ARV, opportunity to ask questions, language used during consultations and treatment with dignity and respect.

Some potential solutions to facilitate greater patient satisfaction and effective resource allocation might be the integration of HIV departments within health facilities which are usually better staffed and equipped than departments offering non-HIV (Odeny et al 2013) and improved communication and understanding between patients and service providers (Bogart et al., 2013).

Upal and Hani (2008) assessed the service quality and satisfaction in suburban public hospitals in Bangladesh. They adopted and applied SERVQUAL to measure the difference between patients' expectations and their perception of the service that was actually delivered according to the following dimensions of service quality: responsiveness, assurance, communication, discipline (adherence to rules and regulations) and baksheesh (additional compensation). It was found that the majority of suburban public hospitals do not meet the patients' expectations on all these dimensions. This inevitably results in dissatisfaction. In the following sections, the purpose, methodology and findings of the research are described.

PURPOSE OF THE RESEARCH

The purpose of this study is to examine the level of importance of assurance related services rendered by a health care facility (public hospital serving a rural community) and to determine whether there are statistical significant differences between in-patients and out-patients in a public hospital in South Africa. The specific objectives of the study are as follows:

- To determine which of the five service quality dimensions is regarded as most important.
- To determine if equality exists between in- and out-patients for the service provided to patients in a public hospital in South Africa regarding the most important dimension (assurance).
- To determine which of the five service quality dimensions is regarded as best perceived.
- To determine if equality exists between in-and out-patients for the service provided to patients in a public hospital in South Africa with regards to the best perceived dimension (assurance).

RESEARCH METHOD

A quantitative strategy of enquiry in the form of survey research was used for this study. A structured questionnaire that was used in a similar survey was distributed to patients in a public hospital in the Limpopo province where the survey took place. Environmental Health Practitioners based in the hospital administered the questionnaires by distributing them to selected respondents. All the respondents that were able to participate in the survey were then approached to complete the survey. The response rate was not satisfactory in the first round and two full time field workers from the local community were appointed to administer the questionnaire to assist respondents who could not read or write. It is during this round where a total of 569 questionnaires were completed by both in- and out-patients. The attitudes of the patients were tested regarding certain pre-identified service quality aspects related to services rendered in health care. Only the assurance service related variables are entertained in this paper.

Measuring instrument

The measuring instrument as indicated before was used on a previous occasion for a similar research in public health hospitals around Gauteng hence there was no need to pre-test it. Therefore this instrument enabled the researchers to test the formulated hypothesis based on the formulated assumptions. The relevant aspect for this article will be reported, namely:

- Level of expectations with various services in the public health facility
- Perception of patient with regards to the performance of the hospital in rendering various services

The two dimensions represented a mirror-image of each other. A five -point Likert type scale was used to measure the levels of perceived performance of the hospitals as well as the expectation levels of the patients.

Respondents were asked to indicate their evaluation in both out-patient facilities and in-patient facilities of the hospital on the scales in which 1 = very important (excellent), 2 = important, 3 = not important nor unimportant, 4 = not important and 5 = not important at all (not good at all).

The validity of the questionnaire was based on previous surveys in which the same instrument was used though with minor adjustment to suite the local environment (rural hospital). The original 22 variable SERVQUAL questionnaire were adjusted to cater for the South African situation and a total of 35 items were used to measure the service quality of the hospital. An item analysis was carried out to test the validity and the reliability of the questionnaire and an overall Cronbach coefficient Alpha of 0.9453 and 0.9122 were measured for expectations and performance respectively.

Sample and data collection

A total of 600 questionnaires were distributed amongst in- and out- patients in a public health care facility in Limpopo, one of the nine provinces in South Africa. A total of 569 useable questionnaires were obtained which represent 95% of the total number of questionnaires distributed. This high response rate could be attributed to the use of professional environmental health practitioners and two trained field workers who performed similar studies in the last year. Permission to conduct the survey was obtained from the provincial health department and all respondents gave their consent before administering the questionnaire. Patients were interviewed about their expectations of health care service elements as well as the perceived performance of the public hospital. An attempt was made to select out-patients at randomly. However this was impossible due to the number of patients who visited the hospital on a daily basis. This survey was carried out during a period of six months. Therefore purposive sampling was applied for both inpatient and outpatient respondents during the six months field workers visited the health facility.

DATA ANALYSES AND FINDINGS

Data was captured by a trained assistant and analysed using the SPSS version 21 statistical package. Data was analysed after grouping the list of 53 pre-identified service related variables into five service related groupings. Only the assurance related service variables are considered for this study as it was overall regarded as the most important service variable.

The assumption of normality was assessed through the Kolmogorov-Smirnov test. Tests for normality were also assessed through a visual examination of histograms and normal probability plots. It showed that the data deviate to a great extent from a normal distribution. Consequently, a non-parametric test, the Kruskal-Wallis test was done to test the null hypothesis and the alternative hypothesis of the three hypotheses.

The demographic profile of the respondents looks as follows. Ninety five percent of the respondents do not belong to a medical aid. The majority of the sample (63%) are in possession of a secondary qualification (grade 8-12). Over 70% of the respondents were females. Most of the respondents were both in the age category 18-30 and 31-45 years of age (33% respectively). The majority of the patient's main reason for visiting the hospital is due to a serious illness. The majority of the patients are visiting that specific hospital because friends or family referred them there.

Of the six service quality variables that were measured in terms of importance, assurance was pointed out as the most important construct. Therefore assurance is emphasized and further analyses in this paper. No significant differences between in- and outpatients were measured. Regarding the perceived performance, the same phenomenon was observed and assurance was also measured best perceived construct.

Table one reflects the assurance related service variables that were investigated. Overall, communication in a language that can be understood was rated as the most important variable in this construct. It was also rated first by in as well as outpatients distinctively.

Table 1: Level of importance of assurance related service items

Assurance	Inpatient		Outpatient		Total		Results of hypothesis test
<i>Item wording</i> <i>Average</i>	<i>Mean</i> <i>1.39</i>	<i>SD</i> <i>0.49</i>	<i>Mean</i> <i>1.40</i>	<i>SD</i> <i>0.51</i>	<i>Mean</i> <i>1.40</i>	<i>SD</i> <i>0.50</i>	
Treatment with dignity and respect by staff	1.36 5	0.49	1.30 1	0.46	1.32 2	0.47	p-value = 0.19 Conclusions: Ho accepted
Friendliness and courtesy of staff	1.64 8	0.53	1.70 8	0.53	1.68 8	0.53	p-value = 0.15 Conclusions: Ho accepted
Confidentiality of treatment	1.40 7	0.50	1.36 3	0.49	1.37 5	0.49	p-value = 0.27 Conclusions: Ho accepted
Communication in a language that I can understand	1.31 1	0.46	1.30 1	0.46	1.30 1	0.46	p-value = 0.74 Conclusions: Ho accepted
Communication at a level that I can understand	1.33 2	0.47	1.37 4	0.49	1.36 3	0.49	p-value = 0.43 Conclusions: Ho accepted
Personal safety	1.33 2	0.47	1.37 4	0.49	1.36 3	0.48	p-value = 0.36 Conclusions: Ho accepted
Safety of facilities	1.35 4	0.48	1.41 7	0.71	1.39 7	0.64	p-value = 0.46 Conclusions: Ho accepted
Safety of personal belongings	1.37 6	0.48	1.37 4	0.48	1.37 5	0.48	p-value = 0.971 Conclusions: Ho accepted

Lower level = rating

Table 1 indicates that overall the most important variable in this construct is communication in a language that is understood. It was also regarded as most important by the in- and out-patients distinctively. Treating by staff with dignity and respect has been rated second most important variable in this construct. While it was rated first by out-patients it was rated fifth by in-patients. Overall, in third most important position is communication at a level that can be understood. In-patients rated it second while it was rated fourth by out-patients. No statistical significant differences were measured between in- and out-patients. The least important variable in this construct is the friendliness and courtesy of the staff members. No statistical significant differences were measured between in- and out-patients.

Table 2: Level of perceived performance of assurance

Assurance	Inpatient		Outpatient		Total		Results of hypothesis test
<i>Item wording</i> <i>Average</i>	<i>Mean</i> <i>1.95</i>	<i>SD</i> <i>0.78</i>	<i>Mean</i> <i>1.80</i>	<i>SD</i> <i>0.56</i>	<i>Mean</i> <i>1.86</i>	<i>SD</i> <i>0.65</i>	
Treatment with dignity and respect by staff	2.08 7	0.60	1.97 7	0.46	2.0 7	0.52	p-value = 0.02 Conclusions: Ho rejected
Friendliness and courtesy of staff	2.19 8	0.67	2.12 8	0.55	2.15 8	0.60	p-value = 0.17 Conclusions: Ho accepted
Confidentiality of treatment	1.79 2	0.83	1.59 1	0.62	1.66 1	0.72	p-value = 0.02 Conclusions: Ho rejected
Communication in a language that I can understand	1.75 1	0.77	1.64 2	0.62	1.68 2	0.68	p-value = 0.15 Conclusions: Ho accepted
Communication at a level that I can understand	1.81 3	0.76	1.71 3	0.62	1.75 3	0.68	p-value = 0.20 Conclusions: Ho accepted
Personal safety	1.95 4	0.80	1.77 4	0.52	1.84 4	0.64	p-value = 0.03 Conclusions: Ho rejected
Safety of facilities	2.01 6	1.06	1.81 5	0.57	1.88 5	0.79	p-value = 0.06 Conclusions: Ho accepted
Safety of personal belongings	1.98 5	0.73	1.84 6	0.47	1.89 6	0.58	p-value = 0.09 Conclusions: Ho accepted

Table 2 indicates that the overall best perceived variable in the assurance construct is confidentiality of treatment. It was rated first by out-patients and second by in-patients. Statistical significant differences were

measure between in- and out-patients. The overall second most important variable in this construct is communication in a language that can be understood. While out-patients rated it best perceived variable it was rated second by the out-patients. The overall third best perceived variable is communication at a level that can be understood. No statistical significant differences were measured between in- and out-patients for the last two variables. The least best perceived variable in this construct is the friendliness and courtesy of staff.

CONCLUSION AND RECOMMENDATIONS

The paper sought to measure service quality and specifically assurance by applying the SERVQUAL measuring instrument. The gap between expectations and perceived performance is not dealt with in the paper due to space limitations. However the most important and best perceived variables were highlighted in the paper. The assurance dimension was pointed out as the most important construct of all five the constructs dealing with service quality. The assurance dimension was also best perceived by the patients amongst all the service quality dimensions. The instrument was adapted for the South African situation to address the critique against this approach. Hospital administrators and health care marketers seeking to improve service quality in their hospitals should recognise the critical role that assurance can play in the delivering of patient satisfaction in a developing context.

The results of the investigation hold important implications for future planning and development in the South African healthcare industry and more specifically, public hospitals in the rural context. Service managers should take cognisance of the most important service quality dimensions (in this case, assurance) and consequent issues identified in this investigation. In this regard, (in terms of the most important expectations within the assurance construct) for patients in general were: *communication in a language that is understood* and *treatment by staff with dignity and respect*. Consequently, it is important to communicate these findings to the respective individuals or groups that take responsibility for satisfying customer needs, in particular public hospitals. Further measurements of the assurance dimension revealed that confidentiality of treatment and communication in a language that can be understood were overall best perceived variables in the assurance construct.

This study concentrated specifically on healthcare efficiency and functional quality while ignoring technical quality as advocated by some authors (Donabedian, 1988; Mohan & Rani, 2015). A worthy future research agenda could therefore be to measure the quality of healthcare also in terms of its cost effectiveness and social acceptability as suggested by the World Health Organization (WHO, 2016). It would be valuable to objectively measure the accuracy of the diagnosis, prescribed procedures and outcomes in rural hospitals. And finally, it would be valuable to conduct empirical research on the relation between functional quality of delivered care and technical quality to clarify contradictions in previous studies (Glickman, 2010; Manary et al., 2013).

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THE USE OF VIDEO ASSIGNMENT AS A TOOL TO ENHANCE STUDENT MOTIVATION IN COURSE WORK AND INCREASE MODULE PASS RATE – CASE OF OPERATIONS MANAGEMENT 1:2015

Sambil Charles Mukwakungu and Charles Mbohwa
University of Johannesburg, South Africa

ABSTRACT

The primary purpose of this study is to present the role a video assignment played in motivating students at the University of Johannesburg to want to learn more about Operations Management 1 during the 2015 academic year. A survey was conducted to establish whether students' exposure to work environment where principles of Operations Management were applied would benefit in enhancing their motivation to want to learn more about the course. A total of 392 students responded out of 494 registered for the module at the University of Johannesburg, South Africa. The findings indicate that although 68% of the students did not choose the qualification offering Operations Management 1 as any of the two choices to study at the University of Johannesburg, and that 68% of students who took part in the survey indicated that they did not have any prior knowledge of operations management before registering to the course, 74% of respondents stated that they were motivated to want to learn about the course after completing the assignment. The study also highlights the positive impact the video assignment had in the relationship between students' drive to succeed and the increase in the module pass rate during 2015 academic year, compared to previous years.

Keywords: Assessments, Pass Rate, Motivation, Video Assignment, Operations Management

INTRODUCTION

The increasing need for education in South Africa has led to students becoming desperate to secure registration at tertiary education institutions for any qualification regardless of whether they know anything about the it or not. The shortage of space available at first year level at universities in South Africa to accommodate high school leavers coupled with the overwhelming accepted study applications led institutions of higher education to resort to placing students in qualifications experiencing low registration than planned within their respective faculties. As reported in an IOL article, according to the South African Department of Basic Education, the 2013 National Senior Certificate (NSC) was written by 562112 full-time and 92611 part-time candidates; 171755 of the pupils got a bachelor pass, qualifying them to study at university (Mtshali, Jansen, & van Schie, 2014). The 2014 NSC results posed challenging decision making in terms of enrolment quota at the University of Johannesburg (UJ). In a statement posted on the university's website (Mtshali, Jansen, & van Schie, 2014), Professor Marie Muller, the UJ's Registrar at the time, indicated that the university was only able to admit between 10500 and 10800 undergraduate first year students in 2014, in accordance with the formal Enrolment Plan approved by the Department of Higher Education and Training. Professor Marie Muller (Mtshali, Jansen, & van Schie, 2014) further stated that it was of vital importance to apply early to study at UJ in 2014 in order to avoid disappointment, because preferred courses would be unavailable. As a result many students who applied late and were accepted at UJ had to be placed in courses where there was still space available. The year 2015 was no different. The study observed two particular courses, namely National Diploma Operations Management and Management Services, that have students registering for them by default due to lack of space in their preferred qualifications, with close to 74% of the students indicating that the course they have registered for was not any

of their choices. This practice mostly creates students who lack motivation in the course for which they have registered and this challenge is transferred to the lecturer. In this case, the lecturer is responsible for the module Operations Management 1 A (offered in the first semester) and B (offered in the second semester). Both modules are offered to both qualifications within the Faculty of Engineering and the Built Environment (FEBE) at first year study level, and within the Faculty of Management at third year study level, UJ.

This paper explores the use of a video assignment format as a tool to enhance student motivation in course work related to the module Operations Management 1. This is a module is an introductory module preparing students majoring in Operations Management, as well as students whose curriculum require them to register for this module. The module is offered on three campuses of the UJ, namely the Auckland Park Bunting Road Campus (APB), Doornfontein Campus (DFC) and the Soweto Campus (SWC). All three campuses are located in Johannesburg, South Africa. The module consists of a one hour thirty minutes lecture per day, twice a week, for fourteen weeks per semester. It also includes a tutorial component of one hour thirty minutes session once a week. The first author being the lecturer of this module on all three campuses. The structure of this paper is as follows: the introduction forms part of the first section of the paper, whereby the challenges of lecturing first year students, as well as the challenges of lecturing unmotivated students are presented. The purpose as well as value of the paper are also presented in the introduction. The second section covers the research methodology. It presented the selection process of the participants and describes the surveys used in order to collect and analyse the data for the study. The third section covers the discussion on the study findings. In this particular section, the findings of the study are presented in relation with the surveys based on the topic of the paper. The last section covers the conclusion and the way forward. The last section provides the closing words based on the findings and paves the way for future research.

Lecturing First Years: The Challenge?

First year lecturers are tasked with a very important responsibility of nurturing young students who have come from different environment prior to their first experience of the university world. These students have to emotionally adapt to this new environment, and this is the first challenge first year lecturers face. It is argued that people generally feel emotionally less secure in a new or strange environment. (Shertzer & Shelley, 1976). This challenge is further elaborated by Bojuwole who adds that this is particularly the case with students just coming to the university environment for the first time and becoming members of an institution (Bojuwoye, 2002). In his book, Hamblin indicated that such newly admitted students may feel confused, tense, threatened, anxious, and even helpless (Hamblin, 1986). For lecturers, it becomes even more challenging when one faces students who in addition to emotional insecurity have to find convincing reasons to attend courses they did not initially choose to study. As noted by Naong, Zwane, Mogashoa, & Fleischmann (2009) transition from a high school to a university environment has the potential to become a daunting task for first-year students, therefore the demands on the lecturer for achieving success with this group of students, is equally as challenging. For first year students, the most dramatic changes occur during this period whereby they have to adapt to a different environment which presents them with various set of challenges. These challenges are due mostly to the need for support through the transitory process from high school to tertiary education in a series of particular issues: (1) First year students require new skills, (2) First year students need to adopt a new style of learning, (3) First year students have a diversity of needs, experiences and backgrounds, (4) First year students show high drop-out and failure rates, (5) First year students display poor class participation and (5) First year students are typically under prepared. In light of the challenges listed by (Angelo & Cross, 1993), it is evident that lecturers should at least develop teaching approaches to help students cope in their new environment. This is mostly challenging for modules with high enrolment numbers as it is the case for this particular modules.

Lecturing Unmotivated Students, the challenge?

Modules with high enrolment numbers make it challenging to the lecturer to identify students who lack the motivation to learn and perform well academically. Unmotivated students are challenging to identify, and as well as challenging to motivate. From various researches conducted on the issue of unmotivated students, here are some reasons why students are unmotivated: (1) the student is unmotivated because he or she cannot do the assigned work, (2) the student is unmotivated because the 'response effort' needed to complete the assigned work seems too great, (3) the student is unmotivated because classroom instruction does not engage, (4) the

student is unmotivated because he or she fails to see an adequate pay-off to doing the assigned work, (5) the student is unmotivated because of low self-efficacy—lack of confidence that he or she can do the assigned work, and (6) the student is unmotivated because he or she lacks a positive relationship with the teacher (Wright, 2012). The size of the class affects the teacher's ability to engage with students outside the class environment, which causes the students to only perceive the teacher as the authority in class only.

The above reasons of the unmotivated student clearly suggest that no matter the interest shown by the lecturer to have the student participate in the class work, the students will not fully do so, consequently leading to poor performance from the student which in turn will ultimately result in poor module pass rate.

Purpose and Values of the Study

The need for the study also arose when the teaching strategy for Operations Management 1 had to be shifted from active learning which is defined by Meyers & Jones (1993) as:

learning environments that allow students to talk and listen, read, write, and reflect as they approach course content through problem-solving exercises, informal small groups, simulations, case studies, role playing, and other activities -- all of which require students to apply what they are learning, to mobile communication integrated active learning which consider incorporating the use of mobile communication technology such as laptops, mobile phones as well as tablets in the teaching and learning process. (p. 19).

The reason for the shift came about when it was established from an initial survey conducted at the beginning of 2015 academic year that as low as 7% of the 492 students who responded to the survey had chosen the Diploma they were registered for as a first choice as opposed to 74% of the students who did not choose their current Diploma as any of the two choices when applying to study at UJ. Additionally, from that initial survey conducted in February 2015, it was also established that more than half of the respondents used some form of mobile communication device with 23% of the 435 students who responded to the initial survey claiming to be in possession of smart phones with Internet access and 52% of respondents claiming to have more than a smart phone with Internet access, but a laptop computer as well. The initial questionnaire indicated that as high as 65% of the students who responded did not feel motivated to learn more about the module, as early as the beginning of the 2015 academic year.

All of above provided an opportunity to integrate the use of the technology currently available to students in the design of assessments, particularly a video assignment in the first semester of Operations Management 1, therefore the need for the study. The following research questions is being addressed in this study:

- *To what extent can the use of video assignment increase the motivation of students to want to learn more about a course that was initially demotivating?*

The study presents evidence with regards to the integration of mobile communication technology, the use of video technology in particular, in order to improve students' motivation in the learning process.

METHODOLOGY

The study used a quantitative method in nature and followed a descriptive and exploratory research design, using two surveys to collect the data. The survey tools were developed by the researcher, who is the lecturer of the module at the centre of this study, and they were in the form of two short questionnaires. The first questionnaire was an initial questionnaire made up of 4 questions aimed at establishing (1) the choice of study when students first applied at the university, (2) the type of mobile device used by the students and (3) the level of motivation students had at the beginning of the year to want to learn about Operations Management 1. The second questionnaire comprised of two sections. The first section established the campus where the students attended the course, and whether they had any previous knowledge of Operations Management as a field of study. The second section of the second questionnaire comprised of 9 closed-ended items. A five-point Likert rating scale was used to assess the responses to the items on the second questionnaire in Section B, and the responses varied from "a Strongly Disagree = (1)" to "Strongly Agree = (5)". The second questionnaire investigated students'

perception toward the video assignment designed as a result of the first questionnaire in relation to a change in motivation to want to learn about the module after undertaking the assignment.

Selection of Participants

As part of the teaching strategy of the module, an initial survey is conducted, using a convenient non-probability sampling approach, mostly due to the fact that the subjects being selected were full-time registered students of Operations Management 1. A total of 494 students registered for Operations Management 1 attended on three different campuses, namely the APB, DFC and SWC. Students who took part in the surveys are first year students at the Faculty of Engineering and the Built Environment, and third year students at the Faculty of Management. Although the module is offered at both first year and third year simultaneously, it is still a first year module. The response rate was 88% for the first questionnaire (n = 435) and 79% (n = 392) for the second questionnaire. The difference in response rate is mostly due to the fact that the first questionnaire was administered two weeks after the start of the first semester, and the second questionnaire was administered after students undertook the video assignment three months within the first semester.

It is important to note that because the study was performed on such a relative small scales for both surveys (n = 435, first questionnaire) and (n = 392, second questionnaire), for a restricted period of time and within a restricted context, only students registered for Operations Management 1, therefore this study is not claiming any generalisation of its findings, but provides only indications on trends and propensities as alleged and conveyed by students. Out of the 494 students registered for the module the response rate was 100% for APB (n = 44 students, for 44 students registered on the APB), 86% for the DFC (n = 323 students, for 374 students registered on the DFC), and 89% for the SWC Campus (n = 68, for 76 students registered on the SWC). The first and second survey both describe the choice of study when applying at UJ students who have registered by default because their respective choices were unavailable mostly due to the fact that those courses were already full by the time students were registering. Table 1 shows that from both the first and second

Table 1: Information about Choice of Study When Applying at UJ

SURVEY 1		
Q2 PLEASE CHOOSE THE CORRECT OPTION DESCRIBING YOUR CHOICE WHEN APPLYING TO STUDY AT UJ		
	Responses	% Response
Operations Management was my 1st choice	30	7%
Operations Management was my 2nd choice	83	19%
Operations Management was NOT any of my choices	322	74%
TOTAL	435	
SURVEY 2		
Q2 PLEASE CHOOSE THE CORRECT OPTION DESCRIBING YOUR CHOICE WHEN APPLYING TO STUDY AT UJ		
	Responses	% Response
Operations Management was my 1st choice	26	7%
Operations Management was my 2nd choice	75	19%
Operations Management was NOT any of my choices	291	74%
TOTAL	392	

survey while only 7% of respondents applied for Diploma in Operations Management as their first choice of study, and 19% of respondents chose Diploma in Operations Management as a second choice of study, whereas 74% of respondents did not chose Diploma in Operations Management as any of the study choice while applying at the UJ. The issue with such an enrolment characteristic is that the 74% who did not select the Diploma in Operations Management as any of their study choices have been enrolled to the course by default.

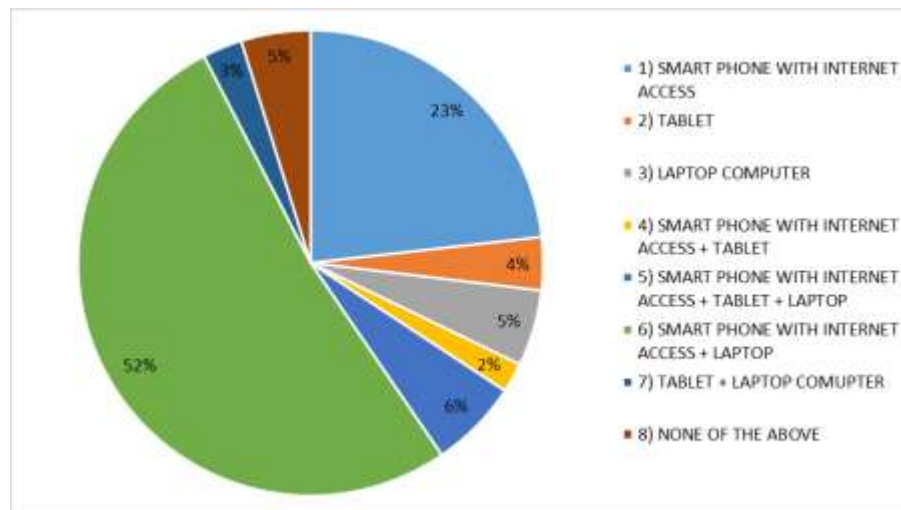
DISCUSSION ON THE STUDY FINDINGS

Survey 1

The paper argues that with high enrolment numbers for such module as Operations Management 1, characterised with high number of registered students not having chosen the Diploma in Operations Management as either their first or second choice of study, it is clear that students will not be interested in the course as it was never their study interest to start with. The first survey establishes that students who responded to the questionnaire were not motivated to learn about Operations Management 1. The first survey results indicate high level of lack of motivation to study the module as early as the start of the semester, with 65% of respondents indicating that they were not motivated to learn about the module.

The lack of motivation presented an opportunity to the lecturer to implement a new teaching strategy which would integrate the use of mobile communication technology in the assessment process. This strategy was supported by the last finding of the first survey. It is important to indicate that the first survey needed to establish which mobile communication device students were using. From the first survey, it was found that only 5% of students who responded to the question related to the type mobile device in their possession did not possess any of the types listed in the questionnaire, which enable them to conduct the video assignment. Figure 2 present the findings related to the types of mobile communication devices in students' possession.

Figure 2: Types Mobile Communication Device in Students' Possession



Although 5% of students who responded to the questionnaire did not possess any of the mobile communication devices listed in the questionnaire, they would not find themselves at disadvantage when it came to completing the assignment, as the assignment was a group work.

Survey 2

While the first survey established the need for a shift in teaching (assessment) strategy, with findings that clearly indicated that (1) majority of students did not choose Operations Management as any of the two choice when applying to study at the UJ, therefore students were registered by default to the module, (2) students presented a very high lack of interested to learn about the module from as early as the beginning of the 2015 academic year, and (3) only a small percentage of students, 5%, did not possess any of the mobile communication devices listed in the questionnaire. The second survey, investigated students perception of the video assignment as well as students' motivation to want to learn about the module. Table 2 summarises the response from survey 2. It is evident from the data on the table that students' perception of the module change after the video assignment. 95% of the respondents agreed that the assignment helped them understand the inputs, transformation and output

of a business process. The lecturer made the assignment interesting by integrating a technology used by students – their mobile communication device to capture on video business processes and document the whole assignment – something they never did before, and 93% of responded agreed.

Table 2- Survey 2 Summary

Survey Scale: 1=Strongly Disagree 2=Disagree 3=Neutral 4=Agree 5=Strongly Agree									
Course Evaluation Survey	% 1's	% 2's	% 3's	% 4's	% 5's	n	MEAN	MODE	SEM
1. The assignment helped you understand what the inputs to a transformation process are, what that business transformation process is, what the output of that business transformation process is	2%	1%	3%	35%	60%	392	4.51	5	<u>0.040</u>
2. You were motivated to do the assignment because it was an interesting challenge you never did before as a university student	2%	3%	3%	41%	52%	392	4.37	5	<u>0.040</u>
3. The lecturer fairly assessed us (the students) by giving us an exciting assignment that was based on the work covered in class	2%	6%	11%	41%	41%	393	4.13	4	0.050
4. I learned something new, not necessarily related to Operations Management	8%	14%	7%	44%	27%	393	3.67	4	0.060
5. The assignment motivated me to want to learn more about Operations Management 1	1%	14%	12%	39%	35%	393	3.93	4	0.050
6. The assignment was challenging in terms of creativity	2%	10%	11%	38%	39%	393	4.01	5	0.050
7. The fact that we were working in groups helped in dealing with the challenge in more constructive way	3%	15%	17%	33%	32%	393	3.77	4	0.060
8. I would like to see more of this type (video assignment) of assignment in other modules as well.	8%	13%	15%	40%	24%	393	3.60	4	0.060
9. I really enjoyed doing the video assignment	7%	3%	8%	33%	49%	393	4.14	5	0.060

The most important information the above table provided the researcher with is that Question 5 which deals with the motivation to want to learn more about the module showed that 74% of respondents agreed. Whereas, the first survey indicated that 65% of respondents at the beginning of the year were not motivated to want to learn more about the module. Of equal importance is the fact that 82% of respondents really enjoyed the video assignment, and 64% of respondents would love to see more of the same type of video assignment in other modules.

CONCLUSION

This study is first conducted on the effect a video assignment has on students' motivation to want to learn more about a course module, in this case Operations Management 1. It is evident that this study has not been conducted in depth as it will be required to conduct a thorough statistical test to establish the degree of relationship, if any, between the assessment strategy and students' motivation. However, the present study has managed to establish that today's generation of students is in touch with advanced mobile communication technology, therefore it is in the best interest of the lecturer to integrate that technology in the teaching and learning process in order to motivate students to want to learn more about the course module.

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THE CULTURE OF CONTINUOUS IMPROVEMENT AT A SOUTH AFRICAN SHORT-TERM INSURANCE COMPANY – STATE OF AFFAIRS ON THE EXTENT OF THE USE OF LEAN’S TOOLS FOR CONTINUOUS IMPROVEMENT

Sambil Charles Mukwakungu and Charles Mbohwa
University of Johannesburg, South Africa

ABSTRACT

The South African Short-term Insurance industry contributes more than 15% to the South African economy and employs more than 17000 people on a permanent basis, positioning itself as one of the major sectors in the country. It is in the insurance companies’ best interest to continuously improve their processes leading to the improvement of service offerings, and eventually higher customers’ satisfaction. The industry faces some major challenges on the technological aspect as well as regulatory front, which put some stringent pressure on companies to find ways of continuously satisfying their customers as well as shareholders. Subsequently, it is in the insurance companies’ best interest to continuously improve their processes leading to the improvement of service offerings, and eventually higher customers’ satisfaction. As a result, this paper explores the state of the culture of continuous improvement at this local short-term insurer based in Johannesburg, South Africa. The paper presents the extent to which this short-term insurer has embraced a culture of continuous improvement in its drive to improve its processes as well as services. The literature has shown that continuous improvement has proven to be a very effective approach to achieving higher customers’ satisfaction when embraced by organisations as part of their organisational culture. Findings from the data collected through questionnaires distributed in Value Added Products and Services (VAPS) division at the short-term insurance company indicate that this particular short-term insurer places high interests in satisfying the needs of their customers, although continuous improvement has yet to be adopted as a divisional culture and organisational culture at large. It is proposed through this paper that the company prioritises the effective use of continuous improvement tools by empowering its employees through training and development geared toward internal as well as external customers’ satisfaction.

Keywords: Continuous Improvement, Lean Operations

INTRODUCTION

South African’s Insurance Short-Term Insurance Sector – Background and Challenges

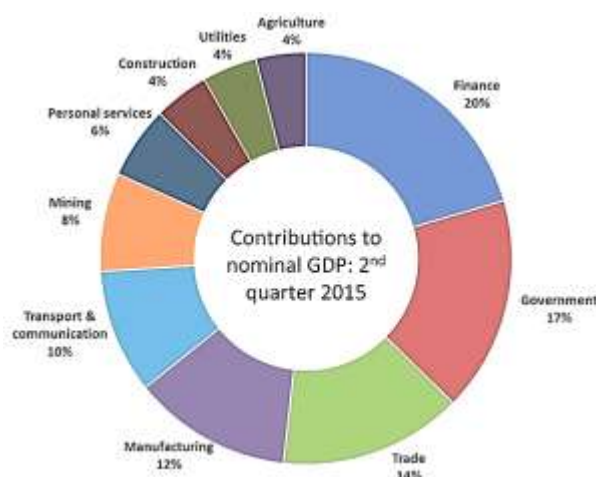
The South African insurance industry can be described as the most developed sector in the entire African continent. Its market is well developed, well established and very comprehensive in terms of short-term insurance. Consumers’ high level of confidence in the local insurance service, supported by the country’s sophisticated financial sector and presence of competition, ensure the insurance industry’s high penetration rate in South Africa (KPMG, 2015). When a company encompasses all types of insurance policies except life insurance, this company is referred to as a short-term insurer. Short-term insurers in South Africa provide a variety of short-term insurance policy covers such as vehicle, household, medical, personal liability, travel and

business insurance. “The reason why these policies are classified as short term insurance is because your insurance needs in this regard will change over time.” (“What is Short Term Insurance”, 2016). According to the Short-Term Insurance Act No 53 (1998) a short-term policy is explicitly defined as:

“an engineering policy, guarantee policy, liability policy, miscellaneous policy, motor policy, accident and health policy, property policy or transportation policy or a contract comprising a combination of any of those policies; and includes a contract whereby any such contract is renewed or varied;” (xviii) (p. 12).

In South Africa, the short-term insurance industry falls under the Financial Sector and contribute with more than 15% to the total revenue of that sector. The short-term insurance sector employs more than 17000 people on a permanent basis. On a national level, the Financial Sector has positioned itself as one of the major sectors in the country, contributing to more than 20% of the country’s GDP as depicted in Figure 1 below (le Cordeur, 2015).

Figure 1 - Contribution to nominal GDP



Source: <http://www.fin24.com/Economy/SA-GDP-contracts-by-13-in-second-quarter-20150825>, August 22, 2016

The industry services 12.5 million short-term policy holders in South-Africa who are being insured by companies categorised as follows: (1) Typical insurers, (2) Niche insurers, (3) Cell-Captive Insurers, (4) Captive Insurers, (5) Reinsurance Companies (6) Insurers in Run-Off (Carole, 2016). The typical short-term insurance value chain is made of intermediaries, assessors and claim adjustors as the key role players.

The short-term insurance industry faces some major challenges on the technological aspect as well as regulatory front, which put some stringent pressure on companies to find ways of continuously satisfying their customers as well as shareholders. Table 1 below summarises the challenges the short-term insurance industry faces:

Table 1 – Summary of challenges the short-term insurance faces (MERCER, 2014)

Challenge	Brief Description
Technology and big data	Turning the promise of new technology and big data into commercial successes. This includes capitalizing on the opportunities in mobile and web-based services, using big data and predictive analytics effectively, and overcoming the problems associated with legacy technologies.
Growth	Low growth in mature economies combined with the potential for high growth in emerging economies.
Customer focus	The need to create better, more comprehensive customer relationships and make it easier for customers to do business with insurance companies.
Regulation	Operating under multiple regulatory jurisdictions and complying with changing rules with regard to such things as capital requirements, transparency and reporting, and customer interaction.
Alternative investments	Managing more complex portfolios with non-traditional assets in a low interest rate, low economic growth environment

Despite the above challenges, it is in the insurance companies' best interest to continuously improve their processes leading to the improvement of service offerings, and eventually higher customers' satisfaction.

Continuous Improvement (CI) and Lean – Literature Review

A brief review of the literature shows that continuous improvement (CI) has proven to be a very effective approach to achieving higher customers' satisfaction when embraced by organisations as part of their organisational culture. When referring to CI, one should remember that continuous is endless, therefore the need to institutionalise it as a company's culture should be a critical strategic as well as operational decision. Although defined for the first time in the USA (Schoeder and Robinson 1991; Rijnders and Boer 2004) through the work of Shewhart on statistical reasoning (Deming 1986; Zangwill and Kantor 1998) as indicated by Young (2011), from the literature, it is evident that Toyota is one company that successfully institutionalised CI as part of its organisational culture through its Famous Toyota Production System which has two basic strategic notions (1) customer orientation and (2) continuous improvement through people (Ohno, 2012). Boer et al (2011) defined CI as 'the planned, organized and systematic process of ongoing, incremental and company-wide change of existing practices aimed at improving company performance' as cited by Rijnders and Boer (2004, p. 283) (Young, 2011). While looking at the organisational learning and continuous improvement of health and safety in certified manufacturers, Granerud and Rocha (2011, p. 1032) defined CI as "a management approach that systematically incorporates employees' suggestions regarding the incremental development of different aspects of the production process". From the above definitions of CI, it is clear that it is organised around people and it is a form of human system within the organisation. With that in mind, continuously improving processes leads to processes that become customer focused which is the aim of lean. Womack, Jones, and Roos (1991) stress that lean is term that describes systems that consumed fewer resources and delivered superior results with a primary focus on the reduction or elimination of waste (unproductive effort that does not create value for the end customer).

Lean originated from the manufacturing industry where it was implemented successfully in order to drive out waste and focus on adding value to the final product as per customer's requirement. In the service industry, as it is the case with this study, successful as well as challenging implementation of lean have all been investigated. Vinas (2004), Chaneski (2005), Wallace (2006), Piercy & Rich, (2009), and LaGanga (2011) have all written on cases where lean was implemented in the service sector. In their effort to create clarity of the lean concept, Arlbjørn, Freytag, & Haas (2011) divided lean into three levels of abstraction, with the first level being the one where tools and techniques are listed. The tools used in lean implementation listed by Arlbjørn et al. (2011) are: value stream mapping, 5S, Kanban, pull production, reduced change over time (Single digit minute exchange of die), group layout, tact time, total preventive maintenance, bottleneck and constraint management, poke yoke, information boards, performance management, continuous improvement (kaizen), cause and effect analyses, production levelling (Heijunka), overall equipment effectiveness (OEE), etc.

Purpose and Values of the Study

This paper explores the state of the culture of continuous improvement at this local short-term insurer based in Johannesburg, South Africa. The paper presents the extent to which this short-term insurer has embraced a culture of continuous improvement in its drive to improve its processes as well as services. As shown in the literature, CI involves the human aspect of an organisation, and a company's increasing and improved ability to continuously satisfy its customers. The paper intends to bring to light issues related to the human aspect of continuous improvement efforts at this short-term insurer. The study's contribution is a direct impact on future direction the company will take in its drive to implement continuous improvement exercises. While it positively affect the company, it might have adverse effect on its efforts to continuously improve its processes, as shown in the survey conducted for the purpose of the study, staff members at this short-term insurance company still have doubts on management ability to support the whole effort by providing continuous backing although positive results are expected from its staff. Therefore, the study is aimed at this insurer's management's perception of its

efforts in the implementation of CI. The study also provides insight on the field of CI in the service sector, particularly in the short-term insurance sector.

METHODOLOGY

The study was conducted at a short-term insurance based in Johannesburg, South Africa. The study was narrowed down to the VAPS division at the short-term insurer because it is the biggest division in terms of division size, and operational budget. Findings from the data collected through interviews of management team of 13 managers from the VAPS division at the short-term insurance company have been coupled with the results obtained from questionnaires distributed in the same divisions to 104 employees, in order to form a clear picture regarding the extent to which the division, from the management structure to employees, have embraced CI as culture to improve customer's satisfaction. The division involved in the study is the Value Added Products and Services (VAPS) composed of Admin, Customer Care and Claims department and populated as per Table 2.

Table 2 – Demographic of VAPS Division

VAPS Division	Management			Employees		
	Male	Female	Total	Male	Female	Total
Admin	2	5	7	9	36	45
Customer Care	0	2	2	14	18	32
Claims Department	2	2	4	6	21	27
TOTAL	4	9	13	29	75	104

Data was collected using a questionnaire developed to assess the extent to which the company has embraced CI as a cultural approach to improve its processes. For that purpose, the study has adopted Mixed Methods approaches. Mixed Methods combine both Qualitative and Quantitative research methods which is known to be a profoundly comprehensive technique for research in social sciences through integration of thematic and statistical data (Tashakkori & Teddlie, 1998).

Table 3 – Mixed Methods Types

TYPE I	Confirmatory Investigation Qualitative Data Statistical Analysis	TYPE II	Confirmatory Investigation Qualitative Data Qualitative Analysis
TYPE III	Exploratory Investigation Quantitative Data Statistical Analysis	TYPE IV	Exploratory Investigation Qualitative Data Statistical Analysis
TYPE V	Confirmatory Investigation Quantitative Data Qualitative Analysis	TYPE VI	Exploratory Investigation Quantitative Data Qualitative Analysis

Jogulu and Pansiri (2011) state that management research has become increasingly complex and intricate, requiring new techniques for examining research problems and analysing data to explain and clarify social phenomena. Tashakkori and Teddlie (1998) indicates the use of Mixed Methods approach allows the counterbalance of the potential limitation of one method by the strength of the other. Tashakkori and Teddlie (1998) developed a framework of six types of mixed methods studies as represented in Table 3.

The use of Mixed Methods in this study allows qualitative findings to explain quantitative results thereby enhancing the validity and reliability of the study. For this particular study, a TYPE III Mixed Methods has been used. It is important to indicate that a TYPE III is an exploratory study without predictions or hypothesis (Tashakkori & Teddlie, 1998). This type of research design can employ both qualitative and quantitative data collection and data analysis (Rocco et al. 2003).

Questionnaire

The questionnaire was designed to provide insight regarding: (A) *participant particulars* (Gender, age, education level, and years of experience at the company), the assessment of (B) *CI implementation at the company* at (B-1) divisional level (B-1.1) *leadership implication in CI effort*, (B-1.2) *the involvement of information analysis*, (B-1.3) *strategic quality planning*, (B-1.4) *human resource involvement*, (B-1.5) *quality results*, and (B-1.6) *monitoring of customer satisfaction level* were assessed, at employee level through (B-2) self-assessment of (B-2.1) *perception of change management*, (B-2.2) *strategic planning impact on CI from employees' view point*, and (B-2.3) *knowledge management*, and with regards to (B-3) the frequency of use of lean tools in the CI efforts. The questionnaire was developed using a five-point Likert scale with responses varying from “a Strongly Disagree = (1)” to “Strongly Agree = (5)”, and distributed to all 117 participants.

Interviews

Interviews were conducted only with managers at VAPS Division. A total of 13 managers were interviewed and their views on CI were gathered using a semi-structured questionnaire. The data from the interviews were analysed in accordance with qualitative content analysis, which as defined by Mayring (2000) and Schreier (2012) as a method for systematically describing the meaning of qualitative data while reducing the data and adding flexibility in the analysis.

DISCUSSION OF THE STUDY FINDINGS

The participants to the study, across the VAPS Division, exhibited the following characteristics in terms of gender of participants (Figure 3) and age of study participants (Figure 4):

Figure 3 – Gender of Study Participants

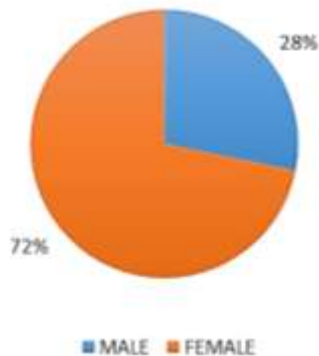
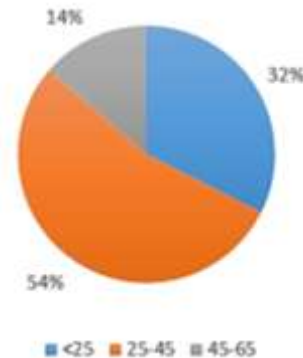


Figure 4 – Age of Study Participants



In terms of gender, 28 percent of participants were male, while 72 percent were female. With regard to the age of participants across the VAPS Division, 32 percent of participants were aged below 25 years old, 54 percent of participants were in the age brackets between 25 and 45 years old, and lastly, 14 percent of participants are aged between 45 and 65 years old. No participants were above 65 years of age. Below is a representation of educational level of the participants. It is important to indicate that Table 4 shows that 37 percent of employees who participated in the study only have matric, and 31 percent of managers have that same level of education:

Table 4 – Education Level of Study Participants

Education Level	Management		Employees	
	Freq	% Freq	Freq	% Freq
1.No matric (High School National Leaving Certificate)	0	0%	13	13%
2.Matric Only	4	31%	38	37%
3.College	2	15%	19	18%
4.Degree	1	8%	31	30%

5.Master	2	15%	1	1%
6.Other (Training certificate provided internally or externally)	4	31%	2	2%
Total	13	100%	104	100%

From the analysis of the questionnaire distributed to employees in the VAPS Division (Excluding management), 82 percent of participants indicate that (B-1.1) leadership plays an important role CI efforts, 75 percent of participants agreed that while (B-1.2) information is managed according to internal policy on information management and adherence to regulatory guidelines is observed, it is also used to foster CI efforts. It has been indicated that when it comes to the involvement of employees in (B-1.3) strategic planning in terms of employee participation in setting priorities for quality improvement, being considered in key role playing in setting priorities for quality improvement, 65 percent of employees who participated in the survey do not agree with the statements. The questionnaire also shows that 73 percent of employees in the VAPS Division who took part in the study do not agree that there is an effective system in place for employees to make suggestions to management on how to improve quality, with relation to (B-1.4) the utilisation of human resources in CI. Although 68 percent of employees who took part in the study agree that (B-1.5) quality results play a vital role in CI efforts, 53 percent did not agree that (B-1.6) customer satisfaction reports were being considered by management when planning strategies for CI. From the questionnaire, it was found that change management played a vital role in implementing CI. 46 percent of employees who took part in the survey agreed that (B-2.1) change management was important in the implementing CI. Regarding (B-2.2) strategic planning, 54 percent of employees who responded to the questionnaire do not agree that the company's CI goals are well communicated, and that personnel at every level has a good understanding of the CI requirements and performance. The analysis of the questionnaire responses found that 46% of respondents did not agree that the insurer supplies sources where best practices or lessons learned can be accessed to achieve CI, as well employees can easily file a best practice or a lesson learned. On the use of lean tools toward the implementation of CI, 56 percent of respondents to the questionnaire indicated that that the company rarely made use of them. Managers through interviews indicated that the company embraced the drive of CI implementation, but there were challenges employees faced. Managers pointed (1) meeting targets while acquiring the skills and knowledge necessary to use the tools needed to implement CI, (2) employees unwillingness to change their daily routine in order to implement CI, (3) managers inabilities to manage information from customers satisfaction survey due to the large amount of data received and in need of in-depth analysis, and (4) employees unwillingness to improve their qualifications, as challenges affecting their ability to implement CI division wide.

CONCLUSION AND RECOMMENDATIONS

It is proposed through this paper that the company prioritises the effective use of continuous improvement tools by empowering its employees through training and development geared toward internal as well as external customers' satisfaction. The insurer's executives as well as managers should consider continuous improvement transformation in the aim to generate profits in the short-term, make these gains sustainable in the long-term and render the organisation more competitive. Properly implemented with the intent to increase customer satisfaction and improve employee morale, CI will do just that. This study set the stage for further research in the field of CI in the short-term insurance industry, and insurance industry as whole.

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THE SOCIAL CONSTRUCTIONIST VIEW IN ENTREPRENEURSHIP RESEARCH: A THEMATIC-CONTENT ANALYSIS

Mazanai Musara and Natasha Katuta Mwila
Monash University, South Africa

ABSTRACT

Entrepreneurship is considered as a social construct through a thematic content analysis of twenty-five (n=25) articles that were selected on the basis of 'markers of qualitative goodness'. There are variations in the literature relating to the social constructionist view of entrepreneurship. The majority of the reviewed literature leading the selected articles were found lacking in terms of research rigor, sincerity and meaningful coherence. This paper therefore recommends the consideration of these elements in research studies and entrepreneurship education. The value of this study lies in its exploratory utility in guiding future research in the fields of entrepreneurship and entrepreneurship education.

Keywords: Social Constructionism, Entrepreneurship Research, Entrepreneurship Education, Thematic Content Analysis, Qualitative Goodness

INTRODUCTION

For many years, the field of entrepreneurship has been faced with lack of conceptual clarity and lack of direction (Alvarez, 2005; Brownson, 2013). The interdisciplinary nature of entrepreneurship makes it very difficult for researchers, scholars, academics and scholars to come to a consensus regarding the concepts, processes and many other dynamics in entrepreneurship praxis (Neck & Greene, 2011). The multitude of theoretical perspectives that underlie the disciplines that inform entrepreneurship are loaded with assumptions that present the challenge of conceptual clarity and direction as noted by a number of scholars. Furthermore, compared to other established fields such as economics, sociology, and anthropology, among others; the field of entrepreneurship is in its infancy. The infancy stage of entrepreneurship calls for exploratory studies. As a consequence of the lack of conceptual clarity, direction and infancy of the field, there are a number of disagreements including a lack of consensus on the definition of the entrepreneurship and the entrepreneur as a phenomenon (Mokaya, Namusonge & Sikalieh, 2012). Where there seems to be agreement however is in the notion that entrepreneurship is a contextual phenomenon and that entrepreneurship and the entrepreneur as a phenomenon are best studied in context (Boettke & Coyne, 2009; Sheth, 2010; Welter, 2011). Context is characterised by a number of aspects including the social. We are presented with a modest opportunity to enhance our understanding of the field and its development from this generally agreed perspective of social-contextual nature of entrepreneurship. This perspective is not nuanced to this study and has been represented in the works that are covered. It is envisaged that a thematic content analysis of these studies will culminate in a useful understanding of an important aspect of entrepreneurship which may be the key to developing our understanding of the field and the utility of research conducted in the field.

It is important to recognise a few of the studies that have been conducted specifically looking at social construction in entrepreneurship in order to establish the departure point of this study and the intended contributions thereof. Pittaway (2000) investigated the social construction of entrepreneurial behaviour. Lindgren and Packendorff (2009) elucidated the basic assumptions and consequences for theory and practice of social

constructionism in entrepreneurship research. The purpose of this study is to build on the foundation laid by Pittaway (2000), Lindgren and Packendorff (2009) by examining studies of entrepreneurship that appear to uphold the basic assumptions of social construction. A thematic content analysis conducted for this purpose will yield information regarding the social constructionist view of entrepreneurship currently held and represented in the literature i.e. to what extent the basic assumptions indicated in Pittaway's (2000) and Lindgren's and Packendorff's (2009) studies are upheld in the social constructionist studies of entrepreneurship. Furthermore, the thematic content analysis may lead to the identification of which questions in the social constructionist approach to entrepreneurship have already been answered (to contribute to present understanding) and which questions are yet to be answered (to inform the direction of future research).

Theoretical Propositions

Boghossian, (2001) states as follows:

To say of something that it is socially constructed is to emphasize its dependence on contingent aspects of our social selves. It is to say: This thing could not have existed had we not built it; and we need not have built it at all, at least not in its present form. Had we been a different kind of society, had we had different needs, values, or interests, we might well have built a different kind of thing, or built this one differently.

This paper proposes the adoption of the social constructionist perspective in entrepreneurship theory and praxis. This paper surmises Boghossian's (2001) interpretation and applies it to entrepreneurship as follows. Adopting the perspective that entrepreneurship is socially constructed implies that how entrepreneurship emerges and what it means depends on a society; entrepreneurial activity is man-made action and does not exist independently of purposeful economic and social activity; the points of diversion in research and practice are simply an outcome of different kinds of society where the dynamics of opportunity, necessity, innovation and luck exist in different proportions. A brief exposition of these assumptions and assertions is presented here with a view to create shared understanding of the espoused viewpoint.

A number of studies (Lechler, 2001; Giannetti & Simonov, 2009; Larsen, Lima, Olsen & Teneva, 2013) found that, social interaction may be a precursor to entrepreneurship and its quality a possible determinant of entrepreneurial success. The argument is supported that the entrepreneur and their activities do not function in a vacuum but that rather the entrepreneurs depends on interactions with others (entrepreneurs, consumers, institutions or other social contexts). The joint construction of understanding of entrepreneurs and entrepreneurship may thus be enhanced by studying the interactive relationships that inform and govern the entrepreneurial function. This is to say that entrepreneurship is socially constructed and emerges from social interaction (Granovetter, 2000) and can be interpreted through social interaction (Lindgren & Packendorff, 2009). The meanings and values attached to entrepreneurship can also be found in social interactions. Social interaction embeds entrepreneurship in a social context by creating a reciprocal relationship between social contexts and entrepreneurship with both phenomena influencing one another. Social interactions in entrepreneurship translate into the creation of entrepreneurial social identities as well as the creation of social value. The espoused view and analysis in this study lends itself to shared assumptions on and co-construction of social value, entrepreneurial identities, and entrepreneurship models as well as the institutionalisation of knowing about the entrepreneur and entrepreneurship.

Delineation of the Study

The study considered qualitative studies that focus on and/or provide perspectives on the social constructionism in entrepreneurship; published between the years 2005 and 2015. There was no consideration of the context and place in this study, therefore the generalisability and/or lack thereof of the study's findings should be approached with this in mind. Only articles that were within the reach of the researchers at the time of the study were considered for possible inclusion in this study. Admittedly, the list of studies employed in this study is therefore not exhaustive, however the views and findings expressed in this study remain important in guiding current as well as future research and scholarly development.

Thematic Content Database

A Google Scholar search using the terms “social constructionism/social constructivism in entrepreneurship” yielded 15 500 results for the period between the years 2005 and 2015. These articles were evaluated for inclusion in the study using Tracy’s (2010) criteria for evaluation of quality in qualitative research. Specifically, the criteria of relevance, research rigor, sincerity, credibility, resonance and meaningful coherence were used to determine the suitability of the article for inclusion in the study. The criteria of *relevance* are evaluated on the basis that a study addresses issues of social constructionism/social constructivism in entrepreneurship. The richness and variety of theoretical constructs, data sources, contexts and samples used by a study was employed as quality marker for the criteria of *research rigor*. Self-reflexivity, transparency on the methods employed, limitations and challenges were used as markers for *sincerity*. Concrete details, thick description, multivocality and crystallisations as well as in-depth illustration that explicate culturally situated and tacit meanings were used as markers for *credibility*. The potential influence and effect of the article on other researchers and academics in entrepreneurship determined the article’s *resonance*. Lastly, *meaningful coherence* was assessed on the basis that a study achieves its stated objectives through meaningful interconnections between literature, research questions/foci, findings, and interpretations (Tracy, 2010).

Twenty-five (25) articles satisfied the criteria for inclusion in the study. Other articles that could have been included in the analysis might have been missed, for example, due to the fact they are not available on Google Scholar or might have been missed due to human error. However, rigorous efforts were placed to ensure that all relevant articles (to the best of the researchers’ ability) are evaluated for possible inclusion.

THEMATIC-CONTENT DATA ANALYSIS

From a thematic content analysis of the twenty-five (25) articles on social constructionism in entrepreneurship used in this study, five sub-themes emerged. These themes and their corresponding codes are presented in Table 2.

Table 1: Thematic content Analysis

THEME	Social Constructionism in Entrepreneurship				
Sub-themes	Social embeddedness of Entrepreneurship	Social construction of Entrepreneurship	Entrepreneurship development	Meanings and Concepts	Values
Codes	<i>Social interaction; Social immersion; Social structures; Social exchange; Relational; Communally constituted</i>	<i>Social construction of entrepreneurial opportunities; Social construction of the entrepreneurial identity; Social reality; Recognition vs construction of entrepreneurial opportunities; Creation of entrepreneurship models and frameworks</i>	<i>Entrepreneurial education and entrepreneurial learning; Policies; Creation vs discovery; Community development; Social development; Development of individual entrepreneur</i>	<i>New business creation; The entrepreneurial identity; Myth and metaphors; Social value creation; Heroic views of the entrepreneur</i>	<i>Individualistic vs collectivist values; Self - enrichment vs social value; Long term vs short term identity; Masculinity vs femininity</i>

Social Embeddedness of Entrepreneurship

Social embeddedness of entrepreneurship implies that entrepreneurship is a product of social interactions and exchange, social immersion and social structures. These codes resonate in 52% of the articles that were analysed in this study, the articles being McKeever et al., 2015; Refai et al., 2015; Anderson et al., 2012; Haghighi and Lynch (2012); Korsgaard and Anderson (2011); Alvarez and Barney (2010); Lindgren and Packendorf (2009); Steyaert, (2007); Fletcher (2006); Downing (2005); Pittaway (2005); Rae (2005) as well as in Ulhøi (2005). For example McKeever et al. (2015, p. 50) pointed the social situatedness (also see, Korsgaard & Anderson, 2011) of entrepreneurship when they argued that, “...entrepreneurs are embedded in networks, places and communities which socially frame resources and opportunities”. Similar sentiments were also echoed a decade earlier by Downing (2005) who clearly articulated the social embeddedness of entrepreneurship through a critical narrative analysis. In the work of Korsgaard and Anderson (2011), the social embeddedness of entrepreneurship is expressed by acknowledging that, “...the social conditions of entrepreneurs, as well as the social nature of

opportunities, affect the entrepreneurial process”. The social embeddedness of entrepreneurship follows a fairly equally distributed trajectory during the period between 2005 and 2015. The lack of attention to the social embeddedness of entrepreneurship in a number of recent publications, especially empirical studies, is a cause for concern.

Social Construction of Entrepreneurship

Resounding in 60% of the articles analysed for this study, the theme on social construction of entrepreneurship emerged through expressions relating to the social construction of entrepreneurial opportunities, social construction of the entrepreneurial identity, the social reality of entrepreneurship, debates on whether entrepreneurial opportunities are recognised only or are consciously created as well as through the social creation of entrepreneurship models and frameworks. These expressions are found in McKeever et al. (2015); Refai et al., 2015; Ramoglou and Zyglidopoulos (2015); Tuominen et al. (2015); Ollila and Middleton (2013); Anderson et al. (2012); Bjursell and Melin (2011); Alvarez and Barney (2010); Vaghely and Julien (2010); Chell (2010); Wilson and Tagg (2010); Lindgren and Packendorf (2009); Steyaert (2007); Fletcher (2006); Downing (2005); Pittaway (2005) and Ulhøi (2005). Dominating in the articles presented in this study are issues on co-creation/construction of entrepreneurial opportunities and the entrepreneurial figure. Co-creation is not only limited to new venture creation but also co-production of knowledge and understanding of the entrepreneur and the entrepreneurship phenomenon as manifested in various and competing models and frameworks on entrepreneurship (for example see, Refai et al., 2015). Moreover, the entrepreneurial identity stems from relational dialogue and exchanges between various stakeholders including family, other community members, customers, suppliers, competitors and many others including government agencies. Thus, the social reality of entrepreneurship and the entrepreneurial figure is irrefutable.

Entrepreneurship Development

The development of entrepreneurship as a field of study and as a profession emerged through expressions on entrepreneurial education and learning; paradoxes on creation versus discovery of entrepreneurs and/or entrepreneurial opportunities; policies to develop and promote entrepreneurial endeavours; community and social development through entrepreneurial initiatives as well as development of individual entrepreneurs within a collective. These expressions reverberate in 52% of the articles analysed in this study, including McKeever et al. (2015); Suddaby et al. (2015); Refai et al. (2015); Ramoglou and Zyglidopoulos (2015); Tuominen et al. (2015); Ollila and Middleton (2013); Haghighi and Lynch (2012); Alvarez and Barney (2010); Vaghely and Julien (2010); Lindgren and Packendorf (2009); Löbler (2006); Rae (2006); Pittaway (2005) as well as in Rae (2005). The enormous interest placed (by many governments, academics and many other stakeholders) on the development of entrepreneurship both as a profession and field of academic inquiry places the phenomenon at the centre of the social constructionist ideology. For this reason, there is a need for collective efforts to develop the field.

Meanings and Concepts

The meanings and concepts attached to entrepreneurship are expressed in 64% of the articles presented in this study. These meaning and concepts consist of new business creation; entrepreneurial identities/characteristics; myths and metaphorical presentations of the entrepreneur and the entrepreneurship phenomenon; social value creation as well as the heroic views of the entrepreneur. The social meanings and concepts of entrepreneurship resonates in Tuominen et al. (2015); Haghighi and Lynch (2012); Korsgaard and Anderson (2011); Bjursell and Melin (2011); Alvarez and Barney (2010); Chell (2010); Lindgren and Packendorf (2009); Dodd and Anderson (2007); Steyaert (2007); Fletcher (2006); Löbler (2006); Rae (2006); Downing (2005); Nicholson and Anderson (2005); Pittaway (2005) as well as in Ulhøi (2005). The youthful and interdisciplinary nature of entrepreneurship subjects it to multifaceted meanings and concepts. Therefore, reaching a consensus on the definitive aspects and meaning-making in entrepreneurship remains a critical challenge.

Values

Values associated with entrepreneurship resonate in 44% of the reviewed articles. Dominating the values in entrepreneurship were elements of individualism versus collectivism, self-enrichment, social value, long term versus short term orientation, identity as well as masculinity versus femininity values in entrepreneurship. These values are expressed in Tuominen et al. (2015); Korsgaard and Anderson (2011); Alvarez and Barney (2010); Lindgren and Packendorf (2009); Dodd and Anderson (2007); Steyaert (2007); Rae (2006); Downing (2005); Nicholson and Anderson (2005); Pittaway (2005) as well as in Ulhøi (2005). Also owing to the meanings and concepts attached to entrepreneurship, entrepreneurship is undeniably a value-laden phenomenon.

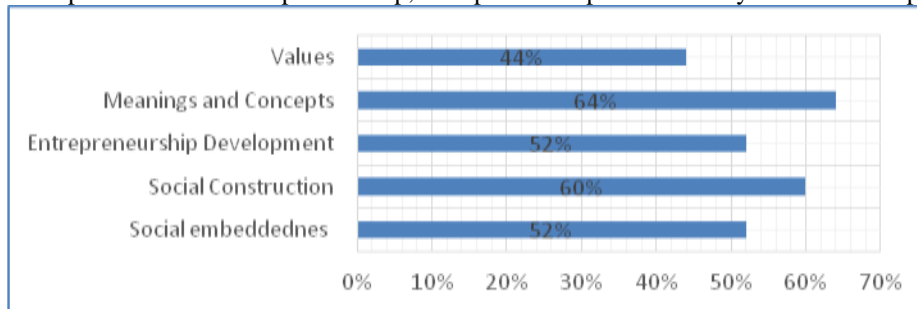


Figure 1: Proportional representations of themes

A fairly distributed representation of sub-themes in the articles analysed for this study can be observed. There however appears to be an increasing emphasis on the meanings and concepts of entrepreneurship in literature. The lower representation of values in this study does not imply its lack of importance but rather to caution the need for more studies that express the importance of values in entrepreneurship, especially when one considers the fact that entrepreneurship is a contextual phenomenon and that contexts are characterised by distinct values (Alvarez & Barney, 2010).

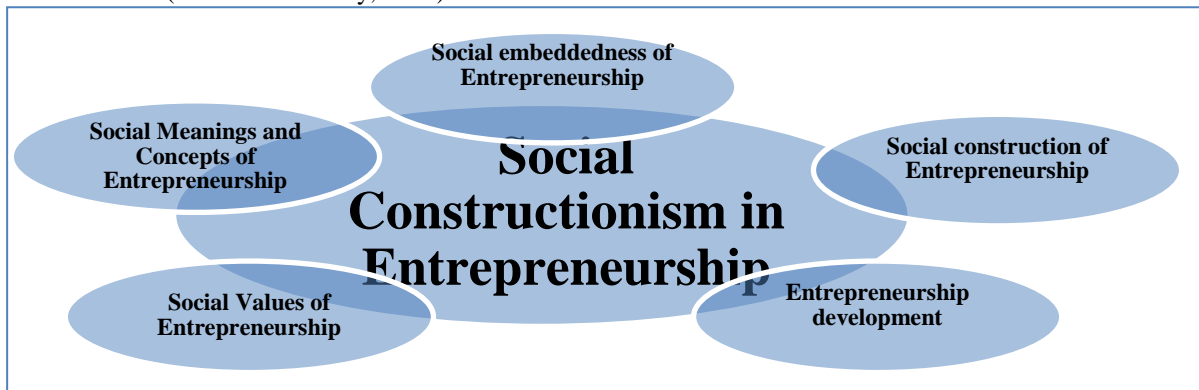


Figure 2: Thematic Diagram

DISCUSSION, CONCLUSIONS AND IMPLICATIONS

Viewing entrepreneurship through a social constructivist lens paves way for a holistic perspective on entrepreneurship as a profession and a field of academic enquiry. Social constructivist inspired theory and praxis is building momentum within the interdisciplinary field of entrepreneurship. In arguing for the social constructionist approach to entrepreneurship, it can be noted that entrepreneurship emerges out of dynamic social embeddedness through upbringing, local as well as national culture, inspiration from role models, support and resilience, among other social aspects (Lindgren and Packendorf, 2009). In fact, the social embeddedness of entrepreneurship implies the co-construction of the entrepreneur as a person, entrepreneurial opportunities and the entrepreneurship process. This means that entrepreneurs emerge from social structures, social exchange, social immersion and social interactions between various stakeholders.

The emergence of entrepreneurship as some socially embedded phenomena has implications on the development of the field. Firstly, viewing entrepreneurship as a socially embedded phenomenon implies the need to develop socially inclined methodologies for further academic inquiry on entrepreneurship. This includes a

paradigm shift from positivist methodological approaches that currently dominate entrepreneurship research. Thus axiological, ontological and epistemological assumptions currently held in entrepreneurship research, especially in empirical investigations, have serious implications on the lack of breakthrough and/or consensus on research in the field of entrepreneurship. Secondly, the complexity and dynamics of the entrepreneur as a social animal and entrepreneurship as a social construct means that caution should be exercised in making generalised and conclusive research based arguments. This leads us to the conclusion that entrepreneurship and entrepreneurs should be viewed as communally constituted and as products of complex relational structures, interactions, exchanges and immersion.

Social construction of entrepreneurship stems from the social embeddedness of entrepreneurship. The views expressed in our study suggest the co-construction of the entrepreneurial identity as well as that entrepreneurial opportunities espouses the social reality of entrepreneurship. These views should steer debates from the notion that entrepreneurial opportunities are recognised and not constructed. Furthermore, the creation of entrepreneurship models and frameworks as basis for empirical investigations in entrepreneurship should encapsulate the social nature of entrepreneurship.

The findings of our study also have implications on the development of entrepreneurship. Bearing in mind the social constructionist approach in entrepreneurship, attention need to be paid to the pedagogy and curriculum development and the learning thereof in entrepreneurial education. Furthermore, policies informed by the social constructionist perspective have the potential to steer entrepreneurship development in a positive direction, for instance a holistic community, social and individual development approach to entrepreneurship is likely to bear more fruits for the entire community, including individual entrepreneurs themselves.

Problematic in the current debates on entrepreneurship research and praxis is the lack of consensus on the conceptualisation and meaning-making on various, multidimensional and interdisciplinary elements of entrepreneurship. The attachment to the “new business creation” conceptualisation of entrepreneurship overshadows a holistic picture of the nuances and meaning placed on the entrepreneurship process and the entrepreneurial figure. Moreover, the metaphorical and mythicism in entrepreneurship cast shadows on the entrepreneurial identity and views about entrepreneurship. Metaphors and myths are a best understood within the social constructionist perspective (Nicholson and Anderson, 2005).

The examination of entrepreneurship as a social construction presented in this study should add to our understanding of entrepreneurship and provide direction to guide entrepreneurship research and praxis.

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AFRICAN CULTURAL IDEOLOGIES AND ECONOMIC DEVELOPMENT: A SOCIAL CONSTRUCTIONIST –CRITICAL REALISM PERSPECTIVE

Mazanai Musara, Monash University, South Africa
Caleb Gwaindepi, ProductivitySA, South Africa

ABSTRACT

This paper explores the linkages between African cultural ideologies and economic development (and/or lack thereof) within the African context from a philosophical perspective in an exploratory review of literature. Furthermore, theories of economic development are explored in relation to their applicability and potential effects (both negative and positive) on economic development in Africa. The central proposition in this paper is that theories that were prepared for the European context are devoid of the contextual relevance, clarity on their applicability and their true effects in the African context is questionable. This paper adopts a social constructionism perspective within the ambit of critical realism to question Eurocentric theories of economic development and advance the discourse to adopt African cultural ideologies as central to true economic development in Africa. Thus, respecting and honouring African cultural ideologies, be it in ownership of resources, sharing of resources and distribution of intellectual wealth (education and economic rights) should be at the centre of the economic development agenda in Africa.

Keywords: African Cultural Ideologies, Economic Development, Meta-Analysis

INTRODUCTION

Economic growth, the traditional objective of development policy, is concerned with increasing the output of goods and services, in the expectation that this will improve welfare and reduce poverty. Early classical economics such as Schumpeter (1934) identified economic development with economic growth in industrialised countries. Schumpeter (1934) distinguished between growth and development when he suggested that economic growth is associated with the gradual extension of the capital apparatus which lead to increases in production. On the other hand, development occurs when new and efficient production techniques as well as new products or means of organizing production are produced (Schumpeter, 1934). Meier (1989) further associated development with increases in the real per capita income at the same time reducing poverty and inequality in a specific society. The measurement of both economic growth and economic is however contentious. For examples measuring economic growth and development is premised upon measurement of key variables being above certain minimum levels, for example output growth, savings and investment rates, poverty levels and human capital growth levels. However, the determination and object of these levels is a contested territory.

The debate to explain Africa's development impasse has been on-going for decades. Explanations have been multidimensional with economists and development theorists coming up with different views to explain the conundrum behind the impasse. Explanations include the colonial experience (NEPAD, 2001; Rodney, 1972), the primary dependency trap (Collier, 2001), political instability and bad governance (Ayittey, 2005), and ill-informed economic policies (World Bank, 1981) among others. Other philosophers however argue that the impasse is a cultural issue and view culture as an important variable in the economic development agenda (Ajei, 2001; Harrison & Huntington, 2000; Porter, 2000; Manguellé, 1990). Griffin (1999) posit that there has been an

increasing incorporation of culture into the debate. This is because human beings do not live in isolation but band together in groups extending from nuclear family to transnational institutions and this constitute a way of life. However, economists have not given much consideration to cultural endowments as they believe that economic decisions are a product of rational individual choices and preferences by economic agents.

Specifically, positivist views which dominate neo classical economics view economic agents as objects who inhabit a culture free society. Economics is by definition a social science dealing with how human beings in a social system organise resources to satisfy their needs and wants both material and immaterial. Unlike physical sciences, human behaviour does not subscribe to natural laws or universal truths. Economics is governed by assumptions, tendencies, fallacies and suppositions that are subjected to wide variations in different geographical and socio-economic environments, cultures and times. However orthodox and neo-classical theories are accepted as unquestionable truths guiding economic growth and development. This is despite the fact that economic and development policies which have been successful in other parts of the world have failed to bear fruit in Africa, although they have been viewed as universal approaches to economic development.

Throsby (2001) even argues that economics itself is a cultural milieu, in large measure, as it endows economic goods and activities with meaning and presents people with the matrix of constraints and opportunities within which they develop themselves. Therefore a social constructionism perspective within the ambit of critical realism is adopted in this paper to investigate how African cultural values affect economic development on the continent. This research will deal with the philosophy of economic development and since it is a philosophical consideration of the issue of Africa's economic development, the research method will be a critique.

THEORIES OF ECONOMIC DEVELOPMENT AND AFRICA'S DEVELOPMENT THUS FAR

Modernisation, Dependency and Neo-Liberalism are some of the theories rooted in the Euro-American ideologies that have held sway over the development agenda in Africa (Ajei, 2007). African inspired development agendas such as Lagos Plan of Action, and The New Partnership for African Development (NEPAD) were later developed in a bid to introduce new development paradigms. These are discussed in relation to their potential for real development in Africa.

Modernisation

The key dimension of modernisation is free trade (Ajei, 2007). According to Ajei (2007) modernisation theory is based on the fact that a country will only prosper in a competitive market based on its exports commodities for which it had a comparative advantage. Furthermore, it is suggested that developing nations will only achieve modernization if it absorb Western values and resources in the form of investments (portfolio and foreign direct investment), loans and aid. The basis for modernisation is the Classical and the Keynesian view of economic growth. Classical economists like Adam Smith emphasized the critical role of specialisation, accumulation of wealth, investment and the invisible hand of markets on economic growth. In addition, Ricardo's views of economic growth and development as being a product of technological advances leading to the theory of comparative advantage are expressed. Keynesian economics on the other hand gave an upper hand to government intervention as way of managing aggregate demand. This gave justification to the expansion in government expenditure and deficits thereby justifying government borrowing from multilateral agencies to finance key investments in the form of infrastructure and other capital projects (Ajei, 2007).

The view of modernism gave rise to scholars such as Rostow (1960) who viewed economic development as coming in stages, the least being traditional society and most advanced being high consumption stage. Parsons (1991) also highlight the move to economic convergence of countries as Third World societies advance to catch up with the First world gradually as they continue to modernise. Thus this strand of thought regards economic development as modernisation which becomes essentially an Americanization/Europeanization process. Development is also seen as irreversible and as transformative process where traditional cultural values and economic development are mutually exclusive.

The question now is how did this school of thought on development influence the approach taken by African governments in trying to develop their economies and raise the living standards of their citizenry? From the 1960s rose the prominence of views supporting investment, especially foreign direct investments funded by private capital. Much of these investments were done by multinational companies and focused on natural resource extraction rather than development of the host country. Justification by host governments was that this would generate the needed capital for industrialisation. There was and continue to be widespread exploitation of Africa's natural resources. This is despite widespread research by economists such as Poelhekke and Ploeg (2012) which indicate that resource based foreign direct investment particularly, point based natural resources negatively impacts on economic growth by creation of adverse rent seeking activities and crowding out of non-resource foreign direct investment. In Southern Africa, exploitation of resources remains a continuously continent-wide dilemma (Ajei, 2007).

The other view stemming from the modernist view on economic development that traditional values, standards and ethos are an impediment to economic development can be open to criticism. For example, Bella (1957) in the history of Japan, the Samurai's value of loyalty to the emperor was easily transformed to loyalty to the firm, helping to enhance productivity and to reduce the turn-over rate of employees in Japanese firms (Bella, 1957).

Dependency theory

This view on economic development originated from the Prebisch-Singer hypothesis. Prebisch (1950) and Singer (1950), premised that specialization in primary commodities, combined with a relatively slow rate of technical progress in the primary sector and an adverse trend in the commodity terms of trade associated with trade in such commodities on the world market, has caused developing economies to lag behind in economic growth and development. The authors believed that the terms of trade deterioration were the result of low price and income elasticities of world demand for primary commodities; continuous technological progress that economizes on the use of primary raw materials; technological superiority and the control exercised by developed countries over sophisticated manufacturing technology; and the monopolistic structures in developed markets contrasting with competitive structures in commodity markets. Against these conditions, countries relying on primary commodities for export revenues are prone to declining relative income, which constrain their long-term economic growth and socio economic development. Farfan (2005) viewed relative primary resource abundance as leading to some kind of negative primary commodity trap that is self-perpetuating due to terms of trade deterioration, negative externalities and, institutional and socio-political weaknesses. This makes it impossible for developing countries to save for productive investment, and trade was no longer perceived as the engine of economic growth and development. Added to trade dependence is also aid dependence by developing countries as this was deemed to bridge the budget deficits for developing countries and also provide the necessary capital for economic development. Aid dependence subjected African economies into a subordinate position in the global economy in which a polarized global economy consisting of the core (developed economies) and the periphery (developing economics) was enacted (Ajei, 2007).

The World Bank (1981) attribute Africa's development conundrum to the misaligned domestic policies which give rise to overvalued exchange rates, inward facing industrial policies (protectionism), price and quantitative controls, and unnecessary government intervention in the market. This was used as a rationale and justification for interventions in African economies by the Bretton Wood institutions (IMF and World Bank) in the form of Structural Adjustment Programmes in the last two decades of the 21st century. However, these SAPs were an ill-advised intervention programme as instead of correcting the fiscal imbalances in the name of privatisation and austerity measures, they ended up creating foreign exchange crises and higher poverty levels because of the resulting high unemployment. African countries did not have social protection programmes to deal with the resulting unemployment therefore sinking their economies into further oblivion. Many African manufacturing industries were still in their infancy stages, lacked competitiveness and characterised by low productivity levels such that they were not yet in a position to compete with established global multinationals, who, with massive state subsidies and support by their governments created an uneven terrain which made competition impossible and trade unbalanced. It should be noted that at this stage African economies lacked the capacity and technical knowhow to compete globally and this was also compounded by the complex web of

market barriers multinationals erected using WTO rules of origin. So the introduction of the SAPs signalled the death of the African manufacturing industries, leading to a foreign exchange crises and further perpetuation of poverty and economic exclusion of African economies from the epicentre of economic activity, except as consumers.

The Lagos Plan of Action

The Lagos Plan of Action for the Economic Development of Africa was drafted and adopted by the Organisation of African Unity (OAU) in 1980 as a vision to make development self-sufficiency for African economies and to do away with the problem of aid and commodity dependency (Ajei, 2007). This was viewed as a blueprint to economic emancipation, achieve sustainable economic and social development, and promote regionalism as a development vehicle and to overcome the persistent problems of underdevelopment. The plan also sought in its development approach to make use of African paradigms, epistemologies, frameworks, tools and common purpose to reflect adequately indigenous sociocultural values in order to reinforce its cultural identity.

In 1999 the Bretton Woods institutions provided another prescription again, the Poverty Reduction Strategies, whose approaches and key economic premises were not different from the Structural Adjustment Policies (SAPs). These policies did not originate from African methodologies, were not indigenously owned and therefore were not identified with the African people. The SAPs and Poverty Reduction Strategy (PRSs), are premised on the universal applicability of classical, neoclassical and liberal economics which the Eurocentric paradigms are based on (Ajei, 2007). This neglects the concrete analysis of culturally specific interrelations in particular societies thereby impairing the ability of countries to effectively alleviate poverty and achieving economic growth (Nyamugasira and Rowden, 2002).

New Partnership for African Development (NEPAD)

It is a partnership of African countries with the governments and owners of capital in the Western world (Ajei, 2007). Success at this trans-continental partnership is desirable for two reasons. First it is meant to rid the continent of the dependency syndrome of aid and secondly to mobilise and generate the much needed capital flows to African economies. NEPAD diagnoses the challenge for Africa to be one of understanding the fact that development is a process of empowerment and self-reliance. Africans must not be wards of benevolent guardians; rather they must be the architects of their own sustained development. Thus NEPAD took the role of an African- owned and African- led development programme. However, the success of NEPAD as an African home grown solution to African development challenges is limited to the economic spheres as there is little role for indigenous cultures in its emphasis and this has limited its appeal and ability to address local needs and secure local ownership and support.

A key component of the understanding of development as not only implying economic growth but also persistent and measurable social improvements for the poor and resource-weak groups in society is imperative. Principally, these must be improvements of the range of poverty associated symptoms. Such improvements would constitute the provision of basic needs, and help the poor to exit the vicious circle of poverty (Ajei, 2007). There is need for food, shelter, clothes and other necessities of daily life; secondly, access to public services such as drinking water, sanitation, health and education; and thirdly, participation in, and ability to exert influence on, community and national political decision making (Ajei, 2007). However, issues like colonialism have had impacts beyond economic well-being of African societies. Proficiency in African languages has been declining on the continent because Africans have been forced to embrace Western languages, culture and civilisation. This has caused alienation for indigenous people who cannot speak foreign languages and as a result led to economic exclusion.

ARE WE IN PATH TO TRUE ECONOMIC DEVELOPMENT IN AFRICA?

Africa's development has been hampered by catastrophic events and decisions such as colonialism, apartheid and the adoption of Eurocentric development agenda which sought to exploit Africa for the benefit of the non-Africans. African economies continue to be exploited by the former colonial masters, even several decades after political independence. In fact, many African countries continue to be under colonial siege since the majority of its unprocessed resources still find their way to the former colonisers. As a result, African countries continue to be dependent on their former colonial masters whose agenda has never been Africa's development but rather to exploit its resources, both natural and labour. Moreover, a large proportion of the industrial sector continue to be owned by foreign corporations, and the profits of foreign exchange being repatriated instead of being reinvested. This continued primary commodity dependency is an indication that Africa is not in the right path to real economic development if one considers the dependency theory of development. Yet in its state the dependency theory lacks pro-African elements.

Increasingly, Africans continue to be exploited by nations such as United States, China, Japan, Russia, India, Turkey, Israel, South Korea and Brazil among other competitors for Africa's riches. It is not surprising that all of these nations make use of state supported corporations, transnational corporations, non-profit organizations, foreign aid, loans, diplomacy and military intervention to pursue their home nation's agenda. The African development agenda is a therefore at the messy of the politico-economy ideology of capitalistic state adopted by Eurocentric economists. This politico-economy ideology has never been and will never place Africa's development at heart. Attempts to map Africa's economic development agenda such as in the LPA and the NEPAD policies has proved fruitless so far. The fundamental reason is that these theoretical agendas follow borrowed ontological and axiological positions which rely heavily on generalisations based on oftentimes manipulated mathematical calculations (Hogdson, 2001). The LPA has its origins in Latin America which has a different historical and cultural context thus making the approach a seedling transplanted in a new and different climatic condition. Similarly, the neo-classical theory of economic development held in the NEPAD is dependent on mathematical methods which are believed to be universal (Yonay, 1998; Hogdson, 2001), this positivist view divorces these theories from Africa's reality, its cultural beliefs and values. The continued and increasingly growing underdevelopment specifically in terms of poverty and inequity while these neo-classical theories has proven successful elsewhere but not in Africa is proof that the universality view held in these theories is not true for Africa. African economists and policymakers working on development models like NEPAD seemingly did not take into account what people believe and value as a foundation of the economic development (Todaro, 1994). People participation is valued in any economic policy for their development thus making participation that mediates between plans of economic development and what people believe and value, and thus translates the universal conception of economic development into its local feasibility.

Shin (2005) posit that the seemingly wide applicability and predictive power of orthodox economic development theories is groundless in as much as it does not take cognisance of locational factors and temporal characteristics of economic agents such as their culture, norms and value systems. Pillars that make up neo-liberalism and neo-classical theories of economics such as perfect markets, automatic price adjustment, efficient allocation of resources, and economic rationality are not compatible with African economies which have varying ideological orientations, diverse cultural backgrounds, very complex yet similar economic problems which usually require new ideas and novel approaches.

In African economies more often than not, economic decision making is dominated by political and social priorities such unifying the nation or preserving religious and cultural values. At the individual level, family, clan, religious, or tribal considerations may take precedence over private, self-interest utility or profit-maximizing decisions" (Todaro & Smith, 2009, p.8).

THE ECONOMIC DEVELOPMENT AGENDA FOR AFRICA BY AFRICANS

In deciding on the paradigms and approaches to designing policies for Africa's economic growth and development Sen's capability approach must be given consideration. This is because the approach is not centred on any particular cultural values as Sen (1999) defines development in terms of "the ability of people to lead the life they value and have reason to value", "agency", as well as "the expansion of the real freedoms people enjoy.

This particularly fits with the African values as espoused by the concept of Ubuntu. The three important stakeholders to the development namely the state, the people and market should be intertwined via a participatory approach of public reasoning. The African economic development agenda should be underpinned by aspects that are compatible with African value and clear considerations of Africa's historico-cultural background. Therefore, real Africa's development lies in the hands of the Africans and Afro-centric economists to come with theories of economic development which hold philosophical, axiological and episteme that is in consonants with Africa's historico-cultural background.

The Africa development agenda should have evidence of inclusion of African cultural ideologies that are constructionist in nature, particularly in distribution, sharing and ownership of resources. Local indigenous knowledge and values must be a foundation for people centred economic development. African values can contribute to good governance, wealth creation, better standards of living, poverty eradication and economic justice. This is in contrast to neo-liberal and neo-classical economics views which value African culture and values as a cultural capital via tourism not as the fundamental value system guiding economic development. Thus culture tends to be valued more in terms of a basket of economic goods to be traded rather than a system that constitutes the foundation of economic pursuits and that can lead to a whole society's economic development (Ntibagiriwa, 2012). Adedeji (1991) argued that there is a need for a New African transformation ethic based on a human-centred development paradigm which puts the people at the centre of the development process, on the driving seat as it were and is predicated, above all, on the rational proposition that development has to be engineered and sustained by the people themselves through their full and active participation. Hence economic development should be the natural outcome of a people's value system and endeavours which would ensure the satisfaction of their needs and wants.

The modernists view (Rostow, 1960; Weber, 1971) that Africa's underdevelopment is because its traditional beliefs and values are not compatible with economic development is in fact counter-development for Africa. Such is a result of the publicly held belief that African ideological values are unscientific because they are in tandem with classical view of imposed rationality and reasoning. In fact authors such as Rostow (1960)'s view on underdevelopment in Africa sought to play a blame game on Africa's culture specifically because despite the adoption of economic development theories with European origins, Africa continues to be in the downward trend in terms of economic development. In fact, exploitation of Africa's resources, sanctioning of African nations whose economic view opposes the economic superpowers and imposition of alien values on African countries is the reason why Africa is in the state of economic shamble that it is in today. According to Ajei (2007) any framework of economic development for Africa that disengages from the aspirations of the African masses cannot hope to succeed in application. This is because of the excluded factor in the discourse on development philosophy and theorizing, especially as it pertains to Sub-Saharan Africa, namely African traditional ideology. Accordingly, Oduor (2002) concludes that "you cannot shave a person's head in his absence"

CONCLUDING REMARKS

Consideration of Africa's cultural ideological values in both theory and praxis of economic development should be central, specifically in Africa. Demonising and disregarding Africa's histo-cultural ideologies have not done justice to development in Africa thus far. This paper therefore for the inculturation and democratization of economic development to African economic values so that it translates into enlarged range of economic and social choices for the African citizenry. African development agendas and policies should desist from adopting ontological and axiological positions whose roots are in the Eurocentric agenda that never had Africa's real development at heart. This does not imply that Africa must not learn from others. Its important to adopt advanced modern technological systems from advanced economies but they should be frame worked and modelled to suit the African value system. As Morishima (1982) argues, in Japan, the economic success was achieved by a combination of Western technology and the Japanese values and ethos. Thus this paper calls for Africanising Africa's development agenda as the only panacea to the current developmental challenges facing Africa. A clear agenda that hold the spirit of sharing, redistribution and restorative justice, ownership and control of resources of Africans by Africans is paramount if real development in the sense of taking out Africans out of inequity and poverty is to be achieved.

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CONSUMER CREDIT LAW AND DEBT MANAGEMENT IN SOUTH AFRICA

Olubunmi Olukemi Obioha
Sol Plaatje University, South Africa

ABSTRACT

It is recognised that an increasing rise in household debt is one of the key drivers of slower economic growth. Recent surveys in the credit market conducted in South Africa indicate an upward surge in household debt. This concern of over-indebtedness by consumers in the country informed the promulgation of legislative framework to regulate the credit market. Against this background this paper situates to discuss the extant credit law and regulations in South Africa. Based on secondary data sources, this paper provides a succinct overview of the rationale for the regulation of the credit market, credit agreements and modalities of operation, interpretation and applications of the outlined laws. It further elaborates on the roles and functions of various institution and bodies set up by law to facilitate the credit repayment system. This paper also articulates on the economic factors, social factors and lifestyle in addition to lack of financial literacy by consumers as the major drivers of mounting consumer debt in the country. Various measures adopted to manage the situation by consumers and credit institutions are also discussed. In conclusion, while the existing laws and regulatory framework are generally adequate, there are challenges in the implementation of procedures and mechanisms laid down by law.

Keywords: Credit, Consumer, Legislation, Debt Management, South Africa

INTRODUCTION

It is recognised that an increasing rise in household debt is one of the key drivers of slower economic growth (Mian *et al.*, 2015; OECD 2012). Consistent with this view, Andre (2016) aver that rapid increase in household debt is suggestive of upcoming adverse economic and financial developments. Currently there is an increasing concern over an upsurge in household debt, largely produced by credit, among various economies. In the United Kingdom, household debt to income ratio is reported at over 140 percent (Cecchetti *et al.*, 2011). The same upward trend was evident in the United States which recorded a rise to over 105 percent. Similar results were recorded in Asia with Thailand and Malaysia having a household debt to income ratio of 121 percent and 146 percent respectively. Emerging economies such as Estonia, Hungary, Latvia and Lithuania also recorded historic highs in household debt (IMF, 2012). These adverse developments raise questions about the adequacy of the existing regulatory policies and law governing the credit market in the respective jurisdictions and the dire need to design an appropriate framework that will improve outcomes.

Consistent with the global trend, recent survey reports in South Africa also indicate a build-up in consumer debt (NCR). Data from the Statistics South Africa over the past three to four years indicate an average household debt to income ratio of 78.6 percent (Figure 1).

Figure 1.



(Source: South African Reserve Bank, 2015)

Compared with data from advanced economies, this figure appears not to be critical, however, complemented with a recent data from the National Credit Regulator (Rand Daily Mail, 2016) which indicate that 10.3 million of the population are struggling to meet up with their monthly repayments points to a high vulnerability of consumers to varying economic scenarios like rise in interest rates, general price increases in consumables, high unemployment and job losses. Mutezo (2014) avers that high level of debt may curtail spending in the future and consequently slow down economic growth. Apart from these negative outcomes, a high household debt indicator also suggests a weak ability of consumers to repay the loans they acquired which in turn poses a risk to financial institutions and the wider economy (OECD, 2012).

In South Africa, there are existing laws and regulations governing credit agreements, the fact that the debt levels are still high in spite of these inform the inquiry into the functioning of the law and institutions created to oversee the proper administration of the credit market. This paper addresses these by providing an overview of various existing credit laws and regulation in South Africa. It provides a succinct overview of the rationale for the regulation of the credit market, credit agreements and modalities of operation, interpretation and applications of the outlined laws. It further elaborates on the roles and functions of various institution and bodies set up by law to facilitate the credit repayment system. This paper also articulates on the economic factors, social factors and lifestyle in addition to lack of financial literacy by consumers as the major drivers of mounting consumer debt in the country. Various measures adopted to manage the situation by consumers and credit institutions are also discussed.

METHODS AND SOURCES OF DATA

This paper relied mainly on the secondary sources of information, where desk work was utilized. No empirical fieldwork aimed at data collection was carried out in the process of generating data. However, the researcher's informed knowledge and guesses about the subject matter and the areas of coverage represents a veritable source of information. Secondary data utilized for this paper include gray literature, National Credit Act, government publications, periodicals and text books. Data extracted from these sources were sorted through content analysis and critically contextualized in a manner that they became useful in the write-up of this paper.

RATIONALE FOR THE REGULATION OF THE CREDIT MARKET

The rationale for regulation of the credit market has been suggested as lack of information by consumers to make quality choices or information asymmetry (Ramsey, 2000). Consumers are perceived as lacking the necessary information to make informed choices in the selection of products offered in the credit market. Creditors on the other hand are perceived to have stronger bargaining power and as a result tend to abuse such. The high

incidence of exploitation of consumers therefore led legislature to protect consumers. In the words of Millin J in *Smit and Venter v Fourie and another*,ⁱ the purpose of regulating credit agreements is to protect buyers against their own improvidence and folly and against terms that are harsh and unconscionable. However, some legal writers are of the view that the interests of the two parties in a credit agreement should be considered and hence state that in addition to protecting consumers, untrustworthy consumers also should not be allowed to abuse the credit made available to them (Aronstam, 1979). The effect of this is that both the interest of the consumer and creditor should be protected. The essence of regulation of credit market is therefore to address market failure and foster distributive justice amongst the market participants.

CONCEPT AND LEGISLATION ON CREDIT AGREEMENT IN SOUTH AFRICA

The term “credit” is defined in the NCA as a deferral of payment of money owed to a person, or a promise to defer such a payment. It is also defined as a promise to advance or pay money to or at the direction of another person. Credit Agreements include a credit facility, credit transaction, a credit guarantee or any combination of these.ⁱⁱ Credit agreement involves deferment of payment of the good after delivery by the seller. To determine if the NCA applies to a credit agreement under dispute and its extent of application, the courts apply the strict classification as it is provided in the Act, namely, whether an agreement is a credit facility, a credit transaction, a credit guarantee or a combination of the aforementioned. Thus, in *Voltex (Pty) Ltd v Chenleza*ⁱⁱⁱ, it was held that an agreement of sale that provided for the purchase price to be paid in full within thirty days of delivery of the goods or within thirty days of the date of a statement, or within a reasonable time of delivery, and where no fee, charge or interest was payable, did not constitute a credit agreement falling within the scope of the NCA because the court found there was no deferment of payment as the entire debt was payable on or before the specified date. This defeated the defendants claim that the agreement between himself and the plaintiff was a credit facility and thus the provisions of the NCA did not apply.

The prevailing statute on the regulation of credit agreements in the Republic of South Africa is the National Credit Act 34 of 2005 (NCA).^{iv} The NCA repealed two former credit laws, namely, the Credit Agreements Act 75 of 1980 and the Usury Act 73 of 1968 which are different pieces of legislation. The National Credit Act was therefore promulgated by the government to protect the interests of consumers and to prevent exploitation of consumers by financial institutions and credit providers (creditors) who lured consumers into credit contracts that were not in their best interest (Rossouw 2008).

The National Credit Act is believed to be based on a model that came from Canada. South Africa had a similar experience to Canada of exploitation of consumers by creditors resulting from credit agreements and therefore had to regulate the use of terms and conditions in contracts (Aronstam, 1979). Courts were also granted the power to strike down unconscionable contractual provisions. The National Credit Act aims at regulating the credit market by introducing measures that allow consumers to make informed choices before buying on credit.^v The central focus in the National Credit Act is on “credit agreements”, thus it is imperative to discuss this concept in terms of the Act.

ROLES AND FUNCTIONS OF CREDIT INSTITUTIONS SET UP BY THE NATIONAL CREDIT ACT

The NCA establishes various administrative bodies and institutions whose purpose is to regulate credit in South Africa to ensure that the provisions of the NCA are complied with. These are discussed below:

I) National Credit Regulator

The National Credit Regulator (NCR) is a juristic, independent body established by the Act with jurisdiction within the Republic of South Africa. It came into being on the 1st of June 2006. The functions of the NCR include registration of creditors, performance of inspections and generally overseeing compliance with the Credit Act.^{vi} The Regulator is required to resolve complaints against creditors where their conduct contravenes the

provision of the NCA, refer matters to appropriate institutions and to pro-actively investigate systematic market conduct problems and violations of consumer rights. Other functions of the NCR are stated in the Act..^{vii} In addition, the regulator is tasked with promoting consumer education with a purpose to make consumers aware of the terms and conditions in the proposed credit agreement, so as to enable them to make rational choices in the selection of credit products offered. The NCR further establishes a network of accredited debt counsellors with the additional responsibility of providing the required training for them.

II) The Consumer Tribunal

The National Consumer Tribunal is a juristic person with jurisdiction throughout the Republic^{viii}. It was set up to ensure quick and effective redress for consumers. The main tasks of the Tribunal are to adjudicate on applications made to it in terms of the Act and on complaints of prohibited conduct. In practice, the Consumer Tribunal has its advantages which include a cost effective means of resolving dispute. However, despite offering these benefits, the National Consumer Tribunal has a record of a backlog of applications that have not been addressed. It receives approximately over 1 600 debt review cases on a monthly basis and has still to address a backlog of about 11 000 cases (Debtfree Digi Magazine, 2016). This challenge slows down the adjudicative function of the Tribunal and also delays assistance to debt stressed consumers. Further, the Act also requires registration of certain bodies to ensure that the purpose of the NCA is realized. These bodies are credit bureaux and debt collectors.

III) Credit Bureaux

These play an important role in the credit industry in the sense that they provide information on consumers which can be utilized by creditors in assessing the indebtedness of a consumer and prevent reckless granting of credit. This information is obtained from the consumers themselves when making formal applications for the granting of credit. These persons, other than the creditor are required to register with the Credit Bureau. In the course of registration therefore, the consumer information is stored in the data bank of the Credit Bureau. Consumer credit information as held by credit bureaux include information regarding a person's credit history, income, assets, debts, patterns of payment and defaults, credit agreements to which he is or was a party, personal and professional details. It is a requirement that anyone who wishes to register as a credit bureau must do so with the National Credit Regulator and needs to submit the prescribed forms as provided in the regulations^{ix}.

IV) Debt Counsellors

The NCA introduces Debt Counsellors as an intermediary between the creditor and consumer. They help to renegotiate debt commitments on behalf of consumers in order to provide relief in cases where clients are over indebted. The use of debt counsellors has its advantages such as assisting over-indebted consumers to work out a repayment plan, proposing smaller instalments over a longer period of time, protect over indebted consumers from aggressive creditors who are quick to take legal action. Creditors benefit when a repayment plan is renegotiated because they avoid taking expensive legal action to recover their debts. Besides, some debt counsellors offer financial education and budget counselling for free. In spite of the above advantages, there are disadvantages of having debt counsellors. The use of debt counsellors has been criticized to further add to the debt burden of consumers because of the fee they charge for counselling. Once consumers have applied for debt counselling, they are prevented from accessing further credit to meet other household needs until their records are cleared.

DRIVERS OF INCREASING CONSUMER DEBT IN SOUTH AFRICA

Generally, there are two sides to the granting of credit by a creditor to the consumer. This is so because whilst credit allows access to products or services that may not be available to a consumer out of his or her monthly income, it can also be a dangerous element that can lead to high levels of debt and indebtedness.^x According to Cecchetti *et al.* (2011), at moderate levels, debt is good because it improves welfare and enhances economic

growth but at high levels it can be damaging. A debt spiral is said to result when a consumer becomes increasingly indebted, to the extent that the debt becomes unserviceable. Besides from the negative impact of rising debt on the economy in the form of higher inflation and slower economic growth, over indebtedness also has an adverse effect on families and even in the workplace such as a lack of motivation, absenteeism and even a propensity to commit theft (Eghbal, 2007). It can also lead to a complete breakdown in labour relations illustrated by the recent 2012 Marikana crisis in the country where over-indebtedness of workers was found to be the driving force behind the protest for wage increase (Bond, 2012). For these and other related reasons, it has become pertinent to investigate the causes of consumer over indebtedness. Some of the findings from studies done are summarized below:

(a) Economic factors

A consumer can begin to experience debt problems by a sudden loss of employment or a reduction in income. According to Gilmour (2007), before the global crises in the year 2007, consumers were confident about employment prospects. This was demonstrated in the increase in home ownership during that period. However, when the economic shock occurred, it led to a massive job loss which affected consumers' ability to service their long term debts on houses and cars as well as short term debts.^{xii} The current economic conditions in South Africa is characterised by a high unemployment rate, rising prices of consumption goods and increasing interest rates. The repo rate for example increased from 5.75% in July 2015 and grew to 7% in March, 2016. These adverse conditions has implications on the cost of living and financial wellness of consumers. Consumers are facing more pressure as a result of increase in interest rates in particular, demonstrated by a difficulty in debt servicing and a weak repayment ability. Data from research published by UNISA (Ziady, 2016), indicate a low Consumer Financial Vulnerability Index (CFVI), suggesting that consumers are highly concerned about debt servicing mainly from the effect of economic conditions.

(b) Social factors and lifestyle

In the context of South Africa, studies on consumer culture is an emergent field (Iqani and Kenny, 2016). Literature providing insights to consumption make attempts to explain it through the lens of agency, freedom and aspirations of individuals (Posel, 2010; Chouliaraki, 2008). In line with this, especially with the availability of access to credit, the desire to achieve a certain standard of living has an influence over the spending patterns of most consumers. A recent release of qualitative data indicate consumers buy items that could hide their actual financial position. Chief economist, Mike Schussler (Moneyweb, 2016) aver that South African households buy more from the rest of the world that they are able to sell. There is a tendency to acquire items in order to exhibit class or status or to be recognised in society. Other consumers argue that purchasing clothes, even if it is on credit, serves as a means of asserting dignity. In contrast, social attitudes to saving and borrowing is generally low. Lorgat (2003) argues that South Africans lack a generalised savings culture. Currently, data from Statistics South Africa (2016) indicate that the household savings ratio is -0.8%. This marks an increase when compared to the last three years. However, in comparison to other emerging economies like Brazil and India with positive savings ratio, a lot still has to be done to improve the savings ethics.

(C) Lack of Financial Literacy

Alongside the factors enumerated above, contributing to the rise in consumer debt is lack of financial literacy. Finmark Trust's Report^{xiii} indicated that a lack of financial literacy can lead to poor financial choices. Financial literacy is defined as the ability to understand financial terms and concepts and the ability to translate that knowledge into behaviour.^{xiii} The inability to understand financial terms and concepts and the ability to translate such knowledge into behaviour ultimately lead to consumer debt. In the South African credit market, a high consumer indebtedness is closely related to a low level of adult literacy and financial literacy in particular. In support of this view, Pireu (2016) states that there is a general ignorance amongst consumers on the additional holding costs of debt which tend to make them place more attention on the affordability of monthly repayments and underestimate administrative and debt servicing fees. For instance, there is a lack of understanding of other charges levied alongside the loan such as initiation fees and insurance charges which makes repayment higher than what they anticipated. Thus lack of financial literacy puts consumers at a disadvantage exhibited in some

instances as over-borrowing and inability to select the most appropriate choices available to them (Kotze & Smit, 2008).

(d) Loose Lending standards

Prior to its amendment, some credit providers applied the provisions of the NCA in regard to affordability assessments using an overly optimistic approach. Section 81 of the NCA places an obligation and the steps to be taken by the credit provider to ensure a prospective consumer has the means to repay the loans applied for. It further details out the evaluative mechanisms and procedures that should be used in the next section (Section 82), allowing the credit provider to determine for itself the appropriate affordability assessment it considers suitable as long as it results in fair and objective assessment. This way is interpreted and applied differently by credit providers depending on their attitude to risk taking and as a result, different outcomes in terms of debt burdens on consumers were produced. Those credit providers that were lax in assessing affordability in regard to loan applications contributed largely to the pool of over-indebted consumers. To substantiate this position, the reports from South African Reserve Bank indicate a high household to income ratio between the years 2007 to 2009 after which it began to decline. The steady descent of the debt to income ratio could be attributed to the introduction of the National Credit Amendment Act which came into effect in the year 2015 giving a more prescriptive approach to credit providers on the manner to conduct affordability assessments.^{xiv}

(e) Increased access to unsecured Lending

Since the National Credit Act came into effect in 2007, unsecured credit has risen at an astronomical rate. Reports released by the National Credit Regulator (2012) indicate a growth of more than 53% between year 2010 and 2011. Mutezo (2014) corroborates this position by stating that unsecured borrowing has risen faster than household disposable income. Unsecured credit is basically loans granted to consumers without being secured by an asset or collateral. Notable examples are credit card lending, personal loans, students' loans and loans from pay day lenders (Harari, 2016). At a global level, the recent rise in unsecured lending was a response to the global financial crises where financial institutions became reluctant to offer mortgage loans and preferred the less regulated unsecured loan industry. In South Africa, taking a cue from the experience of the global mortgage crises, more stringent measures were adopted for home loans consequently forcing borrowers into the unsecured market. This, coupled with the profit margins prospects from financial institution informed the evolution of the nature and size of unsecured loans from a microloan market into a large credit business (Leriba Consulting, 2013). Notwithstanding efforts to curb the upward rise in unsecured lending, the National Credit Regulator reported an increase of 13.28% within a year to the last quarter of September, 2015. Given the fact that the middle and lower income categories of households constitute a bulk of unsecured borrowers, the default rates is expected to be high.

CONSUMER DEBT MANAGEMENT MODALITIES BY CREDIT PROVIDERS

The National Credit Act (NCA) has set out guidelines and a harmonised system of debt recovery by credit institutions. According to the NCA, a consumer is over indebted when the preponderance of available information indicate that the particular consumer is or will be unable to satisfy in a timely manner, all the obligations under all the credit agreements to which he is a party, having regard to his financial means, prospects, obligations and his probable propensity to satisfy the obligations as indicated by his history of debt repayment^{xv}. In order to enforce a debt, the creditor is limited to the procedures specified under the NCA which are stated in Part C of the Act as follows:

i) Delivery of a notice of default to the consumer.^{xvi}

The creditor must send a notice of default to the consumer before he can be entitled to institute legal action to collect a debt. The notice must be in writing and in the notice he may propose that the consumer refer the credit agreement to a debt counsellor, alternative dispute resolution agent, consumer court or ombudsman with

jurisdiction. This is proposed by the creditor with the intent that the parties resolve any dispute under the agreement or develop and agree on a plan to bring the payments under the agreements up to date. Failure on the part of the creditor to do so, would bar him from instituting any legal action.

The NCA however has no prescribed method as to how this notice of default should be delivered to the consumer. There is a mixed opinion on how notice must be received by the consumer before it can constitute a valid notice that would entitle the creditor to approach the court for an order enforcing the debt. In *Firststrand Bank Ltd v Dhlamini*,^{xvii} the court supported the approach that actual knowledge of the default notice must be given to the consumer. It was of the view that delivery or service of the notice in the technical sense was not sufficient, but that the notice must be brought to the actual attention of the consumer (that is, that the consumer physically received the notice). On the other hand, the court in *Munien v BMW Financial Services (SA) (Pty) Ltd and Starita v ABSA Bank Ltd*^{xviii} was of the view that “actual notice” to the consumer sets an unrealistic high requirement. It stated that although the word “delivered” was not defined in the NCA, it was defined in the Regulations and therefore actual receipt of the notice was not required, but merely that the notice was sent to the consumer’s chosen postal address. These two divergent views on the interpretation on notice of default of consumer by the creditor are some of the limitations on debt enforcement under the NCA.

ii) Notice to terminate a debt review

A consumer may apply to a debt counsellor to have himself or herself declared over indebted.^{xix} The creditor may give a notice to have the debt review terminated to the consumer or the debt counsellor or the National Credit Regulator.^{xx} However, at least sixty business days must have elapsed from the date the consumer applied for the debt review before a creditor can give notice of termination. The creditor may then proceed with enforcing the agreement in terms of Part C of Chapter 6 of the Act. However, a Magistrate’s court hearing the matter has discretion to order resumption of the debt review on any conditions the court considers to be just in the circumstances. It was held in *Standard Bank of South Africa Ltd v Kruger*^{xxi}, that once a debt counsellor has referred the debt review to a magistrate court with recommendations for consideration in terms of the NCA,^{xxii} it became a rearrangement conducted by a magistrate court^{xxiii} and as a result, the creditor can no longer terminate the debt rearrangement process. In this case, the court held that Standard Bank could not terminate the debt reviews of consumers as their respective debt counsellors had already referred the review with recommendations to the magistrate’s court for consideration. Standard Bank’s termination of the debt review was therefore held to be invalid and of no force and effect. The Act further provides that where at least 10 business days have elapsed since the creditor delivered a notice of default or a notice of termination of debt review and the consumer fails to respond to that notice or refuses to accept the proposal made by the creditor, the consumer may then approach the court for an order to enforce the agreement.^{xxiv}

Apart from these statutory mechanisms, credit institutions in South Africa should be more stringent in assessing a borrower’s repayment ability especially with regard to unsecured loans. This minimises the risk of credit granted being declared reckless with the attendant consequences. Consideration should therefore be based on the totality of the effect of principal loan repayment and debt servicing fees on income of the consumer to avoid default.

CONSUMER’S DEBT MANAGEMENT MEASURES

There are statutory provisions in the National Credit Act that are available to the consumer in managing their debt. A consumer can seek assistance from the debt counselling voluntarily when they begin to experience difficulty in repaying their debts^{xxv}. The debt counsellor upon assessment of the extent of the debt will take the appropriate steps ranging from drawing up a repayment plan or a budget, debt consolidation to rescheduling repayment of the outstanding loan with the credit provider. Consumers are also admonished to engage the services of debt counsellors early to obtain appropriate solutions to their financial problems.

Further, the NCA provides for a voluntary surrender of goods purchased under credit agreement by the consumer. This is provided for under Part B, chapter 6 of the NCA. The consumer, after realizing that he can no longer keep up with the monthly instalments, can send a written notice to the creditor to the effect that he or she intends to return the goods to the creditor.^{xxvi} The good is usually returned to the place of business of the creditor

during working hours. The creditor thereafter makes arrangement to sell the goods and based on the proceeds, a consumer account may be credited or debited. The consumer's account is credited where the amount received on sale exceeds the total of an expert's valuation of the good together with the permitted expenses of the creditor. However where the sales proceed is less than expected, the consumer's account is debited. The NCA requires that a written statement of the sale and associated costs should be sent to the consumers.^{xxvii} Creditors in the automobile industry especially favour this method because it is said to be a faster means of debt recovery.

Alongside these statutory debt management measures, other effective means found in practice can be used by the consumer to minimise their debt burdens. Some of these include drawing up a monthly budget to curtail overspending, giving repayment priorities to debt with the highest interest and avoiding the use of further credit until repayment goals have been realised.

CONCLUSION

This paper has given an overview of the law regulating credit agreement in South Africa, the bodies created by statute for its implementation and enforcement, the reasons for indebtedness of consumers and household debt management measures. Rising household debt is of a great concern in any economy due to the potential dangers associated with it. Previous experience from advanced economies has shown that before the occurrence of financial crises in any economy, there is always a build-up of household debt, the higher the level, the more the severe the crisis. Also, high household debt add to the vulnerabilities of these countries. In contrast, countries that had lower leverage and higher savings level were able to escape the global crisis. While concerted efforts have been made through legislation in South Africa to avoid consumer over-indebtedness, a lot still has to be done, especially in relation to unsecured loans, disclosure of rates and debt servicing fees, to significantly tackle the household debt build-up.

RECOMMENDATIONS

From the foregoing, it has become necessary for policymakers and relevant government agencies to approach the credit market with more comprehensive and pre-emptive measures to combat the high level of consumer debt. The current legislation should be revisited to include and improve the provisions that will regulate unsecured lending market, debt servicing fees and insurance costs on loans with the aim of strengthening consumer repayment ability. Also, mechanisms for accelerating the operational effectiveness of consumer credit institutions should be put in place to clear the existing backlog of debt related cases and also to secure timely relief from accumulated household debt. Finally awareness programs for consumer financial education and imbibing a savings culture should be implemented across all categories of consumers to equip them in making better choices and curtail the fall into debt traps.

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ENDNOTES

- i. Section 3.
- ii. Section 12
- iii. 2010 (5) SA 267 (KZP).
- iv. The National Credit Act was promulgated in March 2006 (GG 28619 dd 15/03/06) and became fully operational on 1 June 2007 (Proc 22 GG 28824 dd 11/5/06) in conjunction with the Regulation (Reg Gaz 28864 dd 31/05/06) and threshold determination (GN 713 GG 28893 dd 01/06/06) made by the Minister in terms of the Act.
- v. Section 3.
- vi. Sections 14 and 15.
- vii. Sections 13-15.
- viii. Section 26(1).
- ix. Government Gazette 28864 of the 31st May 2006 Schedule 1 of Chapter 10.
- x. Consumer Credit Law Reform: Policy framework for consumer credit, August 2004.
- xi. Report of the National Credit Regulator and National Consumer Tribunal, p.12.
- xii. FinMark Trust, "Financial literacy Scooping Study and Strategy Project." Final Report prepared by ECIAfrica.
- xiii. FinMark Trust Report, 2004.
- xiv. Section 24 of the National Credit Amendment Act, 2014.
- xv. Section 79(1).
- xvi. Section 129(1) (a).
- xvii. 2010 (4) SA 531 (GNP).
- xviii. 2010 (3) SA 443.
- xix. Section 86(1).
- xx. Section 86(10).
- xxi. 2010 (4) SA 635 (GSJ).
- xxii. Section 86(8)(b).
- xxiii. Section 87.
- xxiv. Section 130(1).
- xxv. Section 86.
- xxvi. Section 127(1) (b).
- xxvii. Section 127(5) (b).

ICT INNOVATION INTO TEACHING OF BUSINESS EDUCATION IN NIGERIAN UNIVERSITIES

Franklin Ohiole Ohiwerei and Janet A. Onimawo
Ambrose Alli University, Nigeria

ABSTRACT

Information and communication technology was recently introduced into teaching and learning of business education in Nigeria universities. The researchers discussed the various components of business education in Nigerian universities, explained various authors perception of ICT innovation into teaching of business education in Nigeria universities. Also discussed were the benefits of ICT innovation, problems associated with utilization of ICT in Nigeria, ICTs innovation and economic activity, international implication of use of ICT as well as international implication of use of ICT in trade. The paper uses historical survey in analyzing and evaluating the views of various authors in an attempt to inform researchers, business educators, and scholars on current reasoning on the issue of ICT innovation in business education in Nigeria etc. Conclusion and recommendations were made such as Nigeria government should embrace ICT innovation into her economy growth rather than oil drive economy.

Keywords: Education, ICT, Business, Innovation, Teaching.

INTRODUCTION

Information and communication technology is indispensable in the teaching and learning of business education in the 21st century. Ohiwerei (2005) opined that ICT encompasses all those technologies that enable the handling of information and facilitate different forms of communication among human actors, between human beings and electronic systems. Esene and Ohiwerei (2005) as cited in Omo-Ojugo and Ohiwerei (2008) stated that business education subjects have not been popular in the Nigerian secondary schools because of the bias against vocational education business education inclusive. Business education encompasses office technology and management education, accounting education, marketing education and computer education in Nigeria educational system. Business education is a unit of vocational and technical education which is usually housed under the faculty of education in Nigerian educational system. The course focuses attention on the pedagogy of teaching and learning of business education courses (Ohiwerei, 2014). ICT has immense potential to motivate and engage students in learning. Innovations in technology can be used in enhancing teaching and learning tools in the classroom in order to facilitate the development of computer related competencies in business education (Joshi and Chugh, 2009). Technology allows students to have control over their learning environment and to act as self-directed learners promoting more active learning.

This paper therefore is designed to address ICT innovation into teaching of business education in Nigeria universities, benefit of ICT innovation, problems associated with utilization of ICT in Nigeria, ICTs innovation and economic activity, international implication of use of ict as well as international implication of the use of ICT in Trade.

ICT Innovation into Teaching of Business Education in Nigerian Universities

Information and communication technology was recently introduced into teaching and learning of business education in Nigerian universities. According to Olakulehin (2007), pedagogy through the application of information and communication technologies has the advantages of heightening the motivation, helping recall previous learning; providing new instructional stimuli; activating the learner's response; providing systematic and steady feedback; facilitating appropriate practice; sequencing learning appropriately and providing a viable source of information for enhanced learning. ICT innovation will help the teacher to transform his/her practices and reasoning set of enabling condition. Teacher use of ICT will influence the teacher pedagogical practice and then nature of teacher ICT use impacts on student achievement. (Al-Oteawi, 2002, as cited in Bordbar, 2010). Innovations in technology can be used in enhancing existing teaching and learning tools in the classroom in order to facilitate the development of computer-related competencies in business education. Technologies allow students to have control over their learning environment and to act as self-directed learning's promoting more active learning.

According to Dahawy, Tooma and Kamel (2005) accounting instructional methods have recently witnessed rapid change in a relatively short period of time. This assertion is traceable to the innovation of information and communication technology that has been introduced into the teaching of business education. Before the mid 20th century, the technology used for accounting instruction consisted of nothing more than chalk and talk. Pacific policy research center (2010) reported hence, new standards for students should be able to do are replacing the basic skill competencies and knowledge expectation of the past. To meet this challenge schools must be transformed in ways that will enable students to acquire the creative thinking, flexible problem solving, collaboration and innovative skills they will need to be successful in work and life. Watson's (2001) in Mikre (2011) stated that ICTs have revolutionalized the way people work today and are now transforming education systems. As a result, if schools train children in yesterday's skills and technologies they may not be effective and fit in tomorrow's world. Watson stated that this is a sufficient reason for ICTs to win global recognition and attention. For instance, ICTs are dependable tools in facilitating the attainment of one of the Millennium Development Goals (MDGs), which is achievement of universal primary education by the year 2015. Kofi Anan, the former United Nations Secretary General, points out that in order to attain the goal of Universal Primary Education by the year 2015; we must ensure that information and communication technologies (ICTs) unlock the door of education systems. This indicates the growing demand and increasingly important place that (ICTs) could receive in education. This is because ICTs provide greater opportunity for students and teachers to adjust learning and teaching to individual needs, society is forcing schools to give appropriate response to this technical innovation.

Pacific policy research center (2010) reported that the partnership for 21st century skills (2009) argues that all 21st century initiatives must focus on both core academic subject mastery and 21st century skills outcomes. In providing recommendations for the implementation of 21st century initiative and strongly suggested (a) developing teacher professional development programmes and workshops that focus specifically on 21st century skills instruction (b) integrating 21st century skills training into teacher preparation and certification programmes. (c) developing on-line professional learning communities to provide support for teachers. (d) invest in ICT and provide professional development opportunities for the faculty of colleges of education that address 21st century skills (f) integrate 21st century skills into both student and teacher standards.

Benefits of ICT Innovation

It is generally believed that ICTs can empower teachers and learners, promote change and foster the development of 21st century skills, but data to support these beliefs are still limited. There is widespread belief that ICTs can and will empower teachers and learners, transforming teaching and learning professions from being highly teacher-dominated to student-centered, and that this transformation will result in increased learning gains for students, creating and allowing for opportunities for learners to develop their creativity, problem-solving abilities, information reasoning skills, communication skills, and other higher-order thinking skills Michael (2005). According to Seki (2008) Science, technology and innovation have become key factors contributing to economic growth in both advanced and developing economies. In the knowledge economy, information circulates at the international level through trade in goods and services, direct investment and technologies (ICT) flows, and the movement of people. Information and communication technologies have been at the heart of economic changes for more than a decade. While Kelleci (2003) in Seki (2008) opined that because of the

pressure of global competition, firms are both increasing the scope of using the technology, especially information and communication technologies (ICT), and try to adopt their organizational structures to the process of knowledge economics.

Ark (2011) opined that rapid technology change in ICT producing industries leading to productivity growth, the effect of capital intensification upon aggregate and sectoral labour productivity growth, ICT spill over effects from total factor productivity gain in industries that make intensive use of ICT. They explained demand side as demand for ICT is key driver of consumer expenditure, it creates new demand patterns that shape social and cultural interactions, which in turn shapes the next step in technology. On distribution of the gains, they stated that gains to consumers determined by consumer surplus, gains to producers determined by producer revenue and distribution between consumers and between producers. Ohiwerei (2014) stated the benefits for teachers, non-teaching staff of office technology and management education as follows: It help teachers to communicate electronically and reduces isolation for teachers working in special educational needs. It gives opportunities to teachers to use multiple technologies while delivering lecture. For the students, it gives opportunity for more students to receive teaching in one centred of course, different centers as well. It improved both staff and students skills for greater understanding on the utilization of ICT. It helps research work as materials already in electronic form are more easily accessible than print materials. The innovation of ICTs into the teaching of business education in Nigeria has in no small way contributed immensely to the growth, the teaching and learning of business education in Nigeria.

Problems Associated with Utilization of ICT in Nigeria

There are still some impediments to ICT innovation as well as utilization in Nigerian Universities system today. Patil (2012) stated the following as limitations of ICT on office technology education:

1. Over-reliance on ICT limits students' critical thinking and analytical skills,
2. Students often have only a superficial understanding of the information they download,
3. Computer-based learning has negative physical side-effects such as vision problem,
4. Students may be easily distracted from their learning and may visit unwanted sites,
5. Students tend to neglect learning resources other than the computer and internet,
6. Students tend to focus on superficial presentations and copying from the internet,
7. Students may have less opportunity to use oral skills and hand writing,
8. Use of ICT may be difficult for weaker students, because they may have problems with working independently and may need more support from the teacher.

Mikre (2011) opined that many conditions can be considered as limitations of ICT use in education. The limitations can be categorized as teacher related, student related and technology related. All of them potentially limit the benefits of ICT to education. Mikre (2011) also reported that teachers' attitude plays an important role in the teaching-learning process that utilizes computers and internet connections. Although teachers' attitude towards use of these technologies is vital, many observations revealed that teachers do not have clarity about how far technology can be beneficial for the facilitation and enhancement of learning. Of course, some teachers may have positive attitudes to the technology, but refrain from using it in teaching due to low self-efficacy, tendency to consider themselves not qualified to teach with technology.

According to Ohiwerei, Azih and Okoli (2013) computers desktop and laptop are still very expensive in Nigeria such that more than 85% of business education students are unable to acquire one for their academic utilization. Because of the present poor economic situation in Nigeria, it is unfortunate however, that government agencies, non-governmental agencies (NGO) corporate organizations and individuals have not in any way been able to assist business education students by donations. There is still high percentages of business education students who are still unable to purchase computers for use. Currently new computer prices range from ₦150,000.00 upwards. This assertion is in line with Joshi and Chugh (2009) which stated that information and communication technology has immense potential to motivate and engage students in learning. Ohiwerei, Azih and Okoli (2013) stated that Nigeria being a developing nation cannot boast of twenty four hours electricity supply to its citizens. The institutions are directly connected to Power Holdings Company of Nigeria, yet no electricity power supplied to the institutions. It is on a sad note that some of the faculties and departments of the institutions do not have generating set of their own and even if they have, there is no fund to fuel the generating

set. Again, some of the Nigerian universities are not able to connect to the world wide web, even if the universities are connected, department of business education where students are to be taught information and communication technology are not connected due to the high costs involved in the connection.

Icts Innovation and Economic Activity

According to Seki (2008) technology and innovation have become key factors contributing to economic growth in both advanced and developing economics. In the knowledge economy, information circulates at the international level through trade in goods and services, direct investment and technology flows, and the movement of people, information and communication technologies (ICT) have been at the heart of economic changes for more than a decade. Seki (2008) continued that multinational firms are a primary vehicle of ever spreading process of globalization. New technologies and their implementation in productive activities are changing the economic structure and contributing to productivity increases in OECD economies. Pacific policy research center (2010) reported that there has been a significant shift over the last century from manufacturing to emphasizing information knowledge services. Information and communication technology is transforming how we learn and the nature of how work is conducted and the meaning of social relationships. Shared decision-making, information sharing, collaboration, innovation and speed are essential in the day's enterprises. At present a lot of successes or failure lies on the ability or inability to communicate, share ideal, opinion, knowledge and using information to solve complex problems determine whether being able to adopt or unable to connect with the new demands and changing situation either able to create and utilize information and communication technology or not.

Partnership for 21st Century skills (2008) stated that jobs also have shifted from manufacturing to services, particularly in higher paid information services and further stated that between 1995 and 2005, the United States lost 3 million manufacturing jobs, according to the US, Bureau of Labour Statistics. In that same 10 years period, 17 million service sector jobs were created. In 1999, the largest sector of the labour force, 45 percent was still in material services, but the proportion of the workforce in information services was not far behind, at 41 percent and this sector has been growing at a much faster rate (Karmarkar and Apte, 2007; Apte, Karmarkar and Nath, 2008). According to Vein (2013) information and communication technology are providing new avenues for job creation that could help tackle global unemployment. For instance, the development of the mobile phone applications industry has created new opportunities for small and medium sized enterprises. A firm that provides a digital application to the apple app store, for example, gain access to over 500 million app store account holders. Marijana and Iva (2015) stated that in order to overcome stagnant and decreasing economic growth, countries have to consider the possibilities offered by ICTs as they now play a catalytic role in several aspects of economic and social life. In fact, technological progress has been driving economic growth since 1990. Over the past 15 years ICT and the Internet have delivered substantial economic growth accounting for 10 percent of GDP growth. ICT plays an important role in facilitating the modernization and improved economic performance of firms in transition countries.

There are three main channels for analyzing ICTs impact on economic activity (EU Commission, 2008): (a) Technological progress in the production of ICT goods and services, which has made productivity growth faster in the ICT sector than in the rest of the economy; (b) Declining prices for ICT goods and services, which stimulate investment in ICTs throughout the economy with immediate positive effects in terms of labor productivity growth. Since the mid-nineties, the distribution of capital has shifted from non-ICT investment to ICT investment in all major industrialized economies; (c) In the longer term, increased use of ICTs, accompanied by the reorganization of business processes, which contributes to efficiency gains ('multifactor productivity growth') in the entire economy.

International Implication of the Use of Ict

ICT is an indispensable global tool for teaching and learning for both developing and developed countries. The difference is that the developed countries have higher and proper utilization of ICTs than the developing countries. Infodev (2013) stated that in some developing countries, ICT training for teachers is based on developing computer literacy which is an important component for integrating ICT in education; however it is noteworthy that effective training should not stop at computer literacy but should model effective teaching

practice. While European Commission (2013) stated that there are many other countries that provided little or negligible teacher training related to ICT in education. For example evidenced from Europe shows that 70% and 65% of students in Lithuania and Romania respectively are taught by teachers for whom it is compulsory to participate in ICT training compared to just 13% or fewer of students in Luxembourg, Austria and Italy in the case of Nigeria, it is on a very low level.

UNESCO – UIS (2014) opined that some countries in Asia varying proportion of teachers have received each type of training. Typically, lower proportions of teachers have been trained to teach basic computer skills or computing i.e. 10% or fewer while the proportions of teachers trained to teach subjects using ICT varies more widely ranging from few in low income countries to the majority in some developed countries (Partnership on Measuring ICT for Development 2014b). Gronlund et al (2010) in Toit (2015) provided an example from the United Republic of Tanzania whereby courses are on offer at the tertiary level to train secondary education teachers on inclusive education. Meanwhile Bangladesh also offers courses on inclusive education but there is no regulation that requires teacher to take these courses which are considered elective. Liu and Nath (2012) postulated that their empirical results overwhelmingly suggest that Internet bandwidth, Internet subscriptions, and Internet hosts have significant positive impacts on export share while all four ICT variables including telecom investment growth have significant positive impacts on import shares in emerging market economies.

International Implication of the Use of ICT in Trade

International trade has an important share in GDP in different countries. Various companies from different countries are looking for new growth opportunities beyond their home country borders. Due to international trade, important sectors of the economies can be stimulated, such as transport and ICT sectors. Thus, international trade can be important for business, due to profits growth prospects, reduced dependence on known markets, business expansion, etc. The increase of international trade over the years has been a result of the globalization process. Thus, both consumers and companies can now choose from a wider range of products and services. Also, globalization refers to the interdependence between countries arising from the integration of different aspects of the economy, such as trade. International trade can stimulate economic growth of countries that are now so interconnected. Currently, globalization cannot be ignored by businesses, due to the opportunities offered by foreign markets Surugiu and Surugiu (2015).

CONCLUSION

In conclusion, the researchers would like to submit here that the use of ICT has not only supported teaching and learning in Nigeria; evidence has also shown that it has also helped other countries like Lithuania, Romania, Luxembourg, Austria and Italy. ICT innovation in teaching and learning of business education in Nigeria universities has misdealing i.e. it has both advantages and disadvantages, though the advantages outweighed the disadvantages in terms of research work in teaching, learning and economy advancement. It equally closed the missing link between teaching and learning which facilitates learning but on the other hand, it is very easy and fast to commit fraud. Finally, ICT innovation has also increased international trade over the year as a result of globalization process. This has led to various companies from different countries looking for new growth opportunities beyond their home country borders.

Recommendations

In consideration of the above, authors recommended as follows:

1. Nigeria government should embrace ICT innovation into her economy growth rather than oil driven economy.
2. Business education lecturers should be sent on ICT regular training.
3. Nigeria government should provide 24 hours electricity supply throughout the country.
4. Nigeria government should encourage foreign experts in ICT to invest in Nigeria economy.
5. Nigeria government to intensify security of life and property.
6. Nigeria government economy should be ICT driven.
7. Teaching of ICTs should start from primary schools and all schools in Nigeria should be linked up with ICT.

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THE IMPACT OF ALLIANCES AND INTERNAL R&D ON THE FIRM'S INNOVATION AND FINANCIAL PERFORMANCE: A THEORETICAL MODEL AND A RESEARCH PROPOSAL

Fábio de Oliveira Paula and Jorge Ferreira da Silva
Pontifical Catholic University, Rio de Janeiro, Brazil

ABSTRACT

This paper is part of a larger research and proposes a theoretical model that describes the relationship among internal and external R&D, innovation performance and financial performance, and the proxies to operationalize these constructs. The proposal of the full research is to test the model separately for Brazilian and European firms. The differences between the two models' results in both contexts will be analyzed in order to propose suggestions to improve the performance of Brazilian firms, especially their innovation performance and the degree of appropriability of the innovation benefits to turn into financial performance.

Keywords: Innovation Performance; Strategic Alliances; R&D; Financial Performance

INTRODUCTION

Extensive literature exists about the effects of innovation performance - IP on firm's financial performance - FP. Many authors (e.g., Cheng & Huizingh, 2014) studied empirically the influence of the firm's level of innovation on FP and found a positive relationship between them. Besides, innovation is essential for firm's survival in today's uncertain environment (Teece, 2007). Another branch of studies examined the sources of innovation, that can be internal and external. Internal sources come mainly from R&D developed inside the boundaries of the company. On the other hand, external sources can be innovations acquired from other firms, merges, acquisitions and collaboration with other players in the industry (Chesbrough, 2003). Many studies examined the relationship between all sources and IP. The relationship between internal R&D and IP is positive in many of them (e.g., Belussi, Sammarra, & Sedita, 2010). Additionally, the relationship between external sources and IP depends on the partner type (Chatterji & Fabrizio, 2014), on the type of knowledge pursued (Pérez-Luño et al., 2011) and on the absorptive capacity - AC of the firm. AC, defined as "the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends" (Cohen & Levinthal, 1990), affects positively the relationship between external R&D and IP. As AC rises with higher levels of internal R&D (Tsai, 2009), internal and external R&D are positively related. In contrast, some papers found a relationship of substitutability between internal and external R&D (Hagedoorn & Wang, 2012).

Another relevant factor for innovation success is the environment in which the company operates. The innovation process and the accumulation of technological capabilities for innovation development occurs in a different manner in developing countries compared to developed economies (Kim, 1997). The National System of Innovation - NSI, defined by Freeman (1989) as "the network of institutions in the public and private sectors whose activities and interactions initiate, import, modify and diffuse new technologies", determines the innovative performance of national firms (Nelson, 1993). Brazil is at the 61th position in the 2014 ranking of the most innovative countries of the Global Innovation Index (INSEAD, 2014). In contrast, European countries dominate the top positions of the list, with the top five countries of the ranking, and 16 countries among the 25 most innovative. This reality requires Brazilian firms to make enormous efforts to achieve positive results.

The study relating IP and FP in Brazilian companies is not very developed. Only since the year 2000 Brazil have a database of innovation activity indicators, and few studies were found investigating the relationship between IP and FP or the relationship of IP with internal and external R&D. Even more rare are studies comparing the reality in Brazil with the reality in developed economies.

This article is part of a larger research. The whole research intends to answer the following research question: **How do internal R&D and external R&D (from strategic alliances) influence IP, how can innovation have a positive impact on firm's performance and what is the influence of the environment on these relationships in the context of Brazilian and European Firms?** Building on the literature mentioned above, this paper proposes a theoretical model that investigates the relationship among internal R&D, external R&D (strategic alliances), IP, and FP to compare the innovation process of firms in Brazil and in the European Union - EU. Further studies will apply the model in both Brazilian and European realities, compare its similarities and differences, and propose ways to improve IP and FP of firms in Brazil.

THEORETICAL BACKGROUND AND HYPOTHESES

The research on innovation in organizations has shown that several factors influence IP. Ahuja, Lampert and Tandon (2008) identified four dimensions that influence innovation efforts and its outputs: i) industry structure; ii) the firm's characteristics; iii) intraorganization attributes; and iv) institutional influence. The R&D strategy influences some elements of the firm's characteristics as far as it defines the sources where the firm will acquire or develop knowledge to generate innovation. Therefore, the choices of the R&D sources, either internal and external, are central for a firm's IP, as well as IP is central for the firm's FP.

External R&D and Innovation Performance

Strategic alliances represent important external sources of R&D. Alliances can be used to develop open innovation that, according to Chesbrough (2003), is "the use of internal and external flows of knowledge to accelerate internal innovation and expand markets for external use of the innovation, respectively". The reasons to invest in innovative collaboration are diverse, such as access to complementary assets, transference of tacit and codified knowledge and spread of R&D costs (Faems, Van Looy, & Debackere, 2005). A positive relationship between external sources of R&D and IP have been found in various empirical studies (e.g., Belussi et al., 2010). Some researchers also have found an inverted U-shape relationship (Duysters & Lokshin, 2011) between external R&D and IP. The positive relationship inverts with high levels of external R&D because of the increasing coordination and monitoring costs to avoid misappropriation (Hallen, Katila, & Rosenberger, 2014). A firm can execute open innovation with seven types of partners: i) suppliers, ii) customers, iii) competitors, iv) consultants, v) private R&D institutes, vi) universities and other forms of higher education, and vii) government and public research institutes (OECD, 2008). According to von Hippel (1988), clients are the most frequent sources of innovation. Chatterji and Fabrizio (2014) detected a positive relationship between the partnership with clients and IP. Un, Cuervo-Cazurra, and Asakawa (2010) found empirical evidences that R&D alliances with suppliers provide better results for increasing IP, followed by the collaboration with universities. Alliances with competitors have a negative impact in their study. Aschhoff and Sofka (2009) found evidences that government incentives have positive effects in the company's innovation. Soh and Subramanian (2014) mentioned the importance of collaboration with universities. All those studies corroborate the open innovation theory and drove the proposal of the first hypothesis.

Hypothesis 1. The more a firm invests in external R&D, the higher the firm's IP.

Internal R&D and Innovation Performance

Internal R&D, which was represented in several studies by R&D expenditures (e.g., Hagedoorn & Wang, 2012) and R&D intensity (e.g., Cohen & Levinthal, 1990), was mentioned in the literature mostly as impacting positively innovation (e.g., Hagedoorn & Wang, 2012). A high level of internal R&D is associated with a high level of research-based innovation, that is often related to the patenting of new technologies (Hall & Bagchi-Sen, 2007). In a longitudinal research with startups, Stam and Wennberg (2009) found a positive relationship between internal R&D and new product development. The authors also found a relationship between R&D

activities and a firm's growth in high-tech industries. Most studies in the field found a positive relationship between internal R&D and IP regardless of the innovation type, driving us to the next hypothesis.

Hypothesis 2. The more a firm invests in internal R&D, the higher the firm's IP.

Moderating role of AC in the relationship between external R&D and IP

Some authors found that internal and external R&D can be complementary or substitutes for innovation development depending on the level of investments in internal R&D. High levels of investments induce complementarity, while low levels induce substitutability. The concept of AC introduced by Cohen and Levinthal (1990) corroborates this relationship. The authors considered that a firm's R&D intensity is critical to the firm's AC. AC is mainly associated with an increase in the positive effect of external R&D on IP in several empirical studies (e.g., Lin et al., 2012). Many researchers have used internal R&D as a proxy of AC and found that it increases the positive effect of external R&D on IP (e.g., Bellamy, Ghosh, & Hora, 2014). Tsai (2009) detected that the effect of AC on the relationship between R&D alliances and IP depends on the partner type and if the innovation is radical or incremental. On the other hand, some authors did not find a positive effect of the interaction between internal and external sources of R&D on IP (e.g., Mowery, 1996). This contradictory results could have been provoked by methodological issues. However, we can observe that most studies focus on developed economies or Asian countries. Because the accumulation of innovation capabilities, including AC, is different for firms in developing countries comparing with firms in developed countries (Kim, 1997), those contradictory results may also have occurred because of country level issues. Therefore, we proposed the following hypothesis.

Hypothesis 3. The higher a firm's AC (internal R&D), the higher is the positive effect of external R&D on the firm's IP.

Innovation Performance and Financial Performance

A positive relationship between IP and FP has been consistently found in the academy. Innovation is essential for firm's survival in uncertain environments (Teece, 2007). When a radical innovation in the industry occurs, performance of the incumbents tends to decrease, whereas new ventures usually pioneer the introduction of innovation (Hill & Rothaermel, 2003). Even if the introduction of a radical innovation that changes industry patterns does not happen, many authors recognized the importance of innovation for performance. Tomlinson (2010) found a positive relationship between product and process innovation and factors that can indicate performance, such as firm size and sales growth. Some authors detected that open innovation activities performed by firms have a positive relationship with customer performance and FP (Cheng & Huizingh, 2014). As today's uncertainty is recognized as continually increasing, with industries rising and others dying all the time in a high product launch speed environment, the hypothesis that IP influences positively FP in certain degree seems reasonable, besides being consistent with the theoretical foundations previously exposed.

Hypothesis 4. The higher a firm's IP, the higher the firm's future FP

The role of the appropriability regime

Teece (1986) explained that the relationship between a firm's innovation level and its FP depends, among other factors, on the appropriability regime - AR, which is the set of mechanisms a firm uses to guarantee that it will benefit from a fair part of the innovation rents. Appropriability mechanisms help firms to protect innovation from imitation (Cohen & Walsh, 2001) and can be classified according to Hurmelinna-Laukkanen and Puumalainen (2007) as: i) nature of knowledge, ii) institutional protection, iii) human resources management, iv) practical/technical means, and v) lead time. The application of appropriability mechanisms can on the one hand increase performance, but on the other hand can be detrimental when it offsets the cost cutting of sharing R&D with partners (Cohen & Levinthal, 1989). However, we consider in this study that they are more beneficial than harmful. Therefore, this paper proposes a hypothesis that a firm's IP and its future FP relationship is positively moderated by the strength of the AR.

Hypothesis 5. The stronger the AR a firm uses to protect its innovation, the higher the positive effect of IP on the firm's future FP.

The influence of the country

The environment has an important influence in all aspects that evolves a firm. The environmental uncertainty may influence the adoption of innovation by firms (Goerzen, 2007) and the motivation to form strategic alliances (Dickson & Weaver, 1997). The innovation process is strongly affected by country differences. For the innovation strategy of a firm to succeed, leading to a satisfactory IP, it must fit the characteristics of the environment in which the firm is inserted and must be able to leverage firm's resources and capabilities (Bell & Figueiredo, 2012). Some authors, studying the innovation process of latecomer firms in developing economies, found that the path for these companies is totally different from the process followed by firms of developed countries (Kim, 1997). Therefore, the choices about strategic alliances, and the balance between internal and external R&D are strongly dependent on the reality of the country where the firm competes. But the country is not only influential because of its economic development stage. The NSI is also of great importance in a firms' decisions about internal and external R&D, IP and consequentially, in its FP. The interaction among the institutes that compose the NSI determines the innovative performance of the national firms. This network of institutions includes the government, with its policies and programs, universities, research institutes and local firms - competitors, clients, suppliers and complementors (Nelson, 1993). In this research, we are trying to capture the differences between Brazil and the EU. We are considering that countries in EU have much more similarities among them in its environmental factors and in its NSIs then they have with Brazil. Therefore, the literature mentioned above drove the proposal of the three hypotheses below.

Hypothesis 6a. The fact that a firm is located in Brazil or in EU affects differently the innovation strategy, represented by its choices of internal and external R&D.

Hypothesis 6b. The fact that a firm is located in Brazil or in EU affects differently its IP.

Hypothesis 6c. The fact that a firm is located in Brazil or in EU affects differently its current and future FP.

Previous financial performance and future financial performance

Finally, the hypothesis that IP has a positive impact in the future FP should consider the possible effect of the current FP in the IP. Firms with a better FP may have more money or shareholders' support to invest more in innovation. So, current FP may be highly correlated to the IP. Also, as long as the past FP is an important factor that influences future FP (Durand, Bruyaka, & Mangematin, 2008), it is important to include a construct representing the current FP in the model to avoid bias. Therefore, we derive our final two hypotheses.

Hypothesis 7a. The higher a firm's current FP, the higher the firm's IP.

Hypothesis 7b. The higher a firm's current FP, the higher the firm's future FP.

Figure 1: Theoretical Model

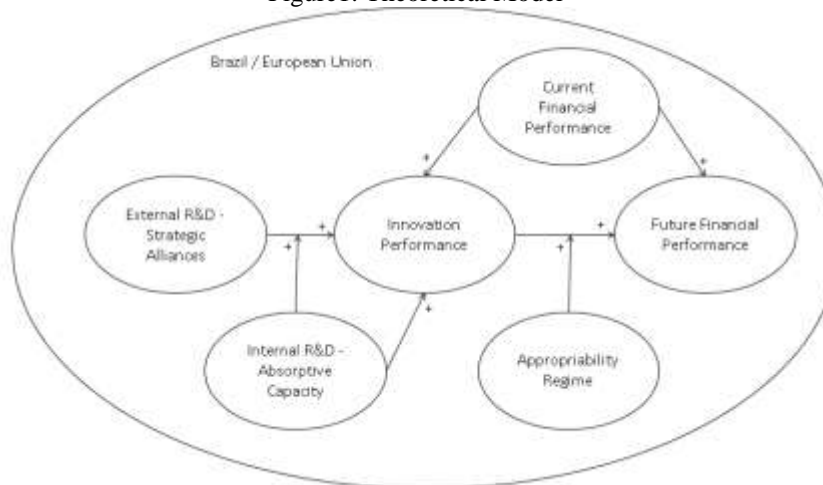


Figure 1 shows the proposed model, that is composed by the following constructs: i) External R&D - Strategic Alliances; ii) Internal R&D – Absorptive Capacity; iii) Innovation Performance; iv) Appropriability Regime, v) Current Financial Performance, and vi) Future Financial Performance.

RESEARCH METHODOLOGY

The data for the full research will be collected from the following databases: i) PINTEC 2011 - Brazilian Innovation Survey (IBGE, 2016a) – survey made by IBGE (Brazilian Institute of Geography and Statistics), will provide the data for the proxies of the constructs Innovation Performance, Internal R&D – Absorptive Capacity and External R&D - Strategic Alliances of the Brazilian firms; ii) PIA-Enterprise 2009 to 2013 - Annual Industrial Survey (IBGE, 2016b) – also made by IBGE, will provide the data for the constructs Current and Future Financial Performance of the Brazilian Firms; iii) CIS 2012 - Community Innovation Survey (EUROSTAT, 2016a) – supplied by Eurostat, will provide the data for the proxies of the constructs Innovation Performance, Internal R&D – Absorptive Capacity, Appropriability Regime and External R&D - Strategic Alliances of the European firms; iv) SBS 2010 to 2014 - Structural Business Survey (EUROSTAT, 2016b) – also supplied by Eurostat, will provide the data for the proxies of the constructs Current Financial Performance and Future Financial Performance of the European Firms;

Table 1 presents the description of the proxies that reflect the constructs for Brazil and EU. All the constructs of the model are reflexive. It is important to observe that the proxies can be different for the models of Brazil and EU because of the different data sources. The construct Appropriability Regime will only be used in the model of European firms because the data for its proxies are available only in CIS 2012, and not in PINTEC 2011. The statistical method that will be used in this research consists in: i) exploratory factor analysis to find the intrinsic dimensions formed by the proxies proposed for each construct; ii) confirmatory factor analysis to confirm that the dimensions that form the constructs are valid, reliable, and effectively describes one aspect of the construct without describing any aspect of the other constructs; iii) multiple-group structural equation modeling to test the hypotheses of the research controlled by industry and firm size.

Table 1: Operationalization of the constructs – Brazil and EU

Proxy name	Brazil / EU	Proxy format
<i>Construct Innovation Performance</i>		
% Turnover from new products / services	Brazil / EU	0 to 100%
Introduction of product innovation	Brazil / EU	Yes / No
Introduction of process innovation	Brazil / EU	Yes / No
Innovative degree of product innovation	Brazil / EU	0) Firm did not introduced product innovation; 1) New to the firm; 2) New to the country; 3) New to the European market (only in EU model); 4) New to the world (for Brazilian model, it is item number 3)
Innovative degree of process innovation	Brazil / EU	0) Firm did not introduced product innovation; 1) New to the firm; 2) New to the country; 3) New to the European market (only in EU model); 4) New to the world (for Brazilian model, it is item number 3)
Radicality degree of product innovation	Brazil / EU	0) Firm did not introduced product innovation; 1) Innovation is incremental; 2) Innovation is radical
Radicality degree of process innovation	Brazil / EU	0) Firm did not introduced product innovation; 1) Innovation is incremental; 2) Innovation is radical
Innovation impact: 1) Improved the quality of goods or services; 2) Extended the range of goods or services offered; 3) Allowed to keep market-share; 4) Extended market-share; 5) Allowed to open new markets; 6) Increased production or service capacity; 7) Increased production or service flexibility; 8) Reduced production or service costs; 9) Reduced labor costs; 10) Reduced raw material consumption; 11) Reduced energy consumption; 12) Reduced water consumption; 13) Reduced the environmental impact; 13) Controlled healthy and security issues; 14) Fit of norms and regulations relative to internal or external market.	Brazil	0) Not relevant; 1) Low; 2) Medium; 3) High
<i>Construct External R&D - Strategic Alliances</i>		

Importance of partnership by partner type: 1) Suppliers; 2) Clients (in EU, clients of private and public sector are separated); 3) Competitors; 4) Firms of the group; 5) Consulting firms; 6) Universities or research institutes; 7) Professional capacitation and technical assistance centers; 8) Test, trial and certification centers; 9) Government (only EU)	Brazil / EU	0) Not relevant; 1) Low; 2) Medium; 3) High
Governmental support	Brazil	Yes / No
Importance (Brazil) / Intensity (UE) of acquisition of external knowledge: 1) R&D; 2) Other external knowledge, except software; 3) Software; 4) Machinery and equipment	Brazil / EU	Importance: 0) Not relevant; 1) Low; 2) Medium; 3) High Intensity: 0 to 100%
<i>Constructs Previous Financial Performance and Future Financial Performance</i>		
Turnover growth	Brazil / EU	Turnover (year) / Turnover (year-1)
Value added growth	Brazil / EU	Value added (year) / Value added (year-1)
Firm growth	Brazil / EU	N. employees (year) / N. employees (year-1)
<i>Construct Internal R&D – Absorptive Capacity</i>		
Internal R&D spending / total turnover (R&D intensity)	Brazil / EU	0 to 100%
R&D training expenses / total turnover	Brazil	0 to 100%
Execution of training activities	EU	Yes / No
% Staff in internal R&D	Brazil	0 to 100%
R&D personnel level of education	Brazil	0 to 1. Formula: (Num. Doctors * 3 + Num. Masters * 2 + Num. Graduates) / total number of R&D staff
% Staff with tertiary degree	EU	0) 0%; 1) 1-4%; 2) 5-9%; 3) 10-24%; 4) 25-49%; 5) 50-74%; 6) 75-100%
<i>Construct Appropriability Regime</i>		
Intensity of the appropriability mechanisms: 1) Patents; 2) Design registration; 3) Copyright; 4) Trademarks; 5) Lead time advantages; 6) Complexity of goods and services; 7) Secrecy	EU	0) Not used; 1) Low; 2) Medium; 3) High
<i>Control Variables</i>		
Industry	Brazil / EU	CNAE 2.0 (Brazil) / NACE Rev. 2 (EU)
Size	Brazil / EU	Number of employees

CONCLUSIONS AND NEXT STEPS OF THE RESEARCH

This paper is part of a larger research and proposed a theoretical model that describes the relationships among internal R&D, external R&D, innovation performance and financial performance and how these relationships are affected by the environment (represented by the country). It also presented the proxies to operationalize the constructs of the model for Brazilian and European firms. The next step of the research is to collect the data from IBGE and test the model for Brazilian firms and afterwards, collect the data from Eurostat and test the model for European firms. The differences between the results of the two models in both contexts will be analyzed and the analysis will generate suggestions to improve the performance of Brazilian firms, especially their IP and the degree of appropriation of the innovation benefits to turn innovation into FP.

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DOES MOBILE BANKING AFFECT CUSTOMER SATISFACTION?: EVIDENCE FROM TURKEY

Ceylan Onay, V. Aslihan Nasir and Abdullah S. Çetin
Boğaziçi University, Turkey

ABSTRACT

Mobile banking in Turkey has significantly accelerated in the recent years and hence constitutes a good example for investigating customer satisfaction in the mobile banking context. The main purpose of this study is to investigate the factors that consumers give importance while using mobile banking, and then we've examined whether these factors affect consumers' satisfaction from mobile banking. For this reason, we've designed an online survey and collected a sample of 206 mobile banking users in an emerging economy: Turkey. After running factor analysis, we've found that "trust & service quality", "convenience & usefulness", "content & variety", "system quality", and "customer support" were the factors that mobile banking users find important. The results also show that all of the aforementioned factors, except "customer support", lead to significant increase in customer satisfaction from mobile banking.

Keywords: Mobile Banking, Customer Satisfaction.

INTRODUCTION

In the past three decades banking has revolutionized from the brick and mortar model into modern banks that can be reached from anywhere and at any time through different channels. New channels help banks to retain existing customers and attract new ones, which is a vital task for financial institutions (Kimball and Gregor, 1995; Thornton and White, 2001). Customer satisfaction is critical for companies to build long term relationships and profitability (Anderson et al., 1994; Patterson et al., 1997). Fornell (1992) states that customer satisfaction not only increases customer loyalty but also decreases price sensitivity, reduces marketing costs and operation costs and more importantly improves company's reputation. Mobile Banking provides users a new way of reaching financial services via their mobile devices and according to a recent report by PwC (2014), it will grow by 64% up to 2016 and online banking by 37%, while branches and telephone banking will fall by 25% and 13%, respectively. In the light of these predictions, the objective of this paper is to identify customer satisfaction determinants in mobile banking in an emerging market setting: Turkey.

Mobile banking channels allow banks to reach their customers beyond both time and place (Laukkanen and Lauronen, 2005). Mobile banking is not only perceived as a new way to improve brand image for the banks, it is also seen as a channel to increase customer retention (Seidel, 2009). However, new technology adoption decisions of customers depend on many different factors (Adams et al., 1992; Agarwal and Karahanna, 2000; Davis et al., 1989; Venkatesh and Bala, 2008). Accordingly, several studies have investigated mobile banking from a technology adoption framework. Technology acceptance models (TAM) show that perceived usefulness and perceived ease-of-use are the main determinants of technology adoption intention (Cheah et al., 2011; Cheney, 2008; Laukkanen and Cruz, 2010; Lin, 2013; Zhou et al., 2010). However, acceptance and usage of mobile payment systems falls behind the expectations in developed economies (Kleijnen et al., 2007; Laukkanen and Cruz, 2010). On the contrary, after 2008 the adoption of mobile banking has been quite fast in Turkey. Banking sector in Turkey went through a consolidation period after the 2000-2001 banking crisis, which brought in new regulations (The Banks Association of Turkey -TBA, 2012). This resulted in highly competitive banking sector, which eventually used the opportunity of mobile technologies to attract new customers. Mobile banking in Turkey started in 2003 and accelerated with the implementation of 3G technologies in 2009. Currently, there are 18 banks in Turkey offering mobile banking services to their customers. Mobile banking usage around the

world increased from 19% to 52% between 2008 and 2011 (KPMG International, 2011), while mobile internet subscribers increased from 396,363 to 6,454,801 from 2009 to 2011 (Information and Communication Technologies Authority of Turkey -ICTA, 2011). According to TBA (2013) number of users that ever used mobile banking increased from 992,017 to 3,594,972. Number of transactions done by mobile banking increases more than 40% a year in Turkey (TBA, 2013). Accordingly, mobile banking in Turkey signalizes a promising future and constitutes a good example for investigating customer satisfaction in the mobile banking context. We try to answer the following question: What are the determinants of customer satisfaction in mobile banking?

While there has been an increasing number of mobile banking studies in recent years, most of those studies focused on mobile banking adoption issues and neglected determinants of customer satisfaction. Choi et al. (2008) examine customer satisfaction factors in mobile commerce in Korea and show that content reliability and transaction process significantly affects customer satisfaction in mobile commerce. Our study will contribute to the literature by examining the factors affecting customer satisfaction in mobile banking in an emerging market setting, Turkey. In this paper, we present our research questions and initial results.

LITERATURE REVIEW

There is a vast literature on mobile banking adoption factors while the studies on customer satisfaction and loyalty in mobile banking are scarce. Adoption studies on mobile banking starts with technology acceptance model (TAM), which is developed by Davis et al. (1989). TAM predicts individuals' technology adoption intentions by perceived usefulness and perceived ease of use. Perceived usefulness is defined as individual's belief that his/her job performance would increase by using new technologies whereas perceived ease of use is defined as the belief that the use of new technology would be free of effort (Shen et al., 2010). Second model introduced about technology adoption is innovation diffusion theory (IDT), which was developed by Rogers (1995). In IDT "the innovation is communicated through certain channels over time among the members of a social system" (Rogers, 1995). IDT tries to determine technology acceptance by compatibility, complexity, observability, relative advantage, trialability. Proponents of this theory have applied IDT to electronic payments, mobile commerce, and mobile banking to understand adoption drivers (Lee et al., 2003; Mallat, 2006; Szmigin and Bourne, 1999; Teo and Pok, 2003). Theory of reasoned action (TRA) is presented as the third technology adoption theory applied to mobile banking. TRA assumes that decisions makers are rationale and they use all available information while making the decision (Igbaria et al., 1995). TRA includes subjective attitudes on the action and individuals' beliefs on each outcome of the decision (Ajzen and Fishbein, 1980). TRA is transformed into theory of planned behavior (TPB) by including perceived control (Ajzen, 1991). Supporters of TRA explain electronic banking and mobile banking adoption by attitude, perceived control and subjective norms (Pikkarrainen et al., 2004; Venkatesh and Davis, 2000; Venkatesh et al., 2003). Customer satisfaction is defined as the evaluation and overall response of customers regarding their experience of the product or service (Oliver, 1992). Service quality and perceived value constructs significantly and positively affect customer satisfaction (Arbore and Busacca, 2009; Jamal and Naser, 2002; Kumbhar, 2011; Levesque and McDougall, 1996; Manrai and Manrai, 2007; Nagar and Rajan, 2005). Customer satisfaction increases with accuracy, functionality, reliability, speed, security, responsiveness, perceived benefits and costs and charges items. Customer satisfaction is also a strong determinant of loyalty, repurchase intention, cross purchases and recommendations (Eggert and Ulaga, 2002; Lam et al., 2004; Mittal and Kamakura, 2001). Research model of our study benefits from but is not limited to earlier work that measure customer satisfaction. We adopt various customer satisfaction constructs from earlier studies into mobile banking context.

RESEARCH METHODOLOGY

Depending on the literature we've identified 24 variables related with the customers' satisfaction from mobile banking (Suki, 2011; Choi et al., 2008; Datta, 2011; Kim, Chan and Gupta, 2007; Swilley, 2010; Laukkanen and Kiviniemi, 2010; Chong et al., 2012; Li and Yeh, 2010; Kim et al., 2009a; Venkatesh and Bala, 2008). Online link of the survey was initially distributed by using researchers' own social networks. Then, respondents were invited to share the survey link further in their own social networks, forums and mailing lists including several companies' mail lists. This enabled us to reach more than a thousand people coming from different industries with different backgrounds. The first part of the questionnaire was composed of demographic questions that

profile the respondents in terms of age, gender, income, education as well as their mobile banking usage experience. The second part of the survey contained questions regarding the determinants of customer satisfaction from mobile banking. At the end we've come up with 336 usable surveys, of which 206 of the respondents (61%) were mobile banking users, whereas 130 of them (39%) were not. The survey site was designed in a way that only mobile banking users could answer all questions. There are 195 male respondents (58%) and 141 female respondents (42%). Of all the respondents 84 of the respondents (25%) are between 18 and 25 years old, 211 respondents (63%) are between 26 and 35 years old, 23 of the respondents (7%) are aged between 36 and 45 years old and 18 of the respondents (5%) are aged more than 45 years old. Majority of the respondents have undergraduate degree (57%). 74% of the respondents have more than 2000 TL (1050\$) income, 40% of the respondents have more than 3500 TL (1800\$) income. In the survey, internet banking usage data is also gathered, which signalizes that nearly all of the mobile banking users are also using internet banking (99%). 57% of the respondents state that they have more than 2 years of mobile banking experience. Mobile banking usage frequency data show that investment, closest ATM query (46%) and (31%) application for credit card or credit operations are the least used services in mobile banking, whereas money transfer (95%), payment (90%) and checking card or account info (98%) operations are the most used ones.

FINDINGS AND CONCLUSION

First we run reliability analysis for the 24 variables and found that the Cronbach's α was 0,932 which is higher than the threshold value of 0,70. Later, we've conducted exploratory factor analysis for this 24 items, and first of all, we've investigated the suitability of the data for factor analysis. The KMO measure of sampling adequacy was found to be 0.919, higher than the minimum acceptable value of 0.5, indicating that the sample size was large enough to factor analyze 24 variables. Furthermore, the Chi-square value of Bartlett's Test of Sphericity, which shows the suitability of the intercorrelation matrix of the 24 variables for factor analysis, was significant at the 0.000 level. Thus, the sample size and the nature of the data are both fit for the analysis. According to the factor analysis results demonstrated in Table 1, a 5-factor solution which explains 66.48% of the total variance in 24 variables was obtained. All items were grouped meaningfully into the factors with all factor loadings higher than 0,5. The first factor, which was composed of privacy, reliability, and service quality related variables about mobile banking, was named as "trust & service quality" and carries a significant importance level for the overall sample. The second factor was named as "convenience & usefulness" because it was comprised of variables such as ease of use, relative advantage, accessibility from everywhere at any time and etc. The third factor, on the other hand, was related with the content offered during mobile banking operations and the variety of the mobile banking services, hence we named this factor as "content & variety". The fourth factor was labeled as "system quality" since it was related with connecting to mobile banking services without difficulty and keep connected without encountering any problem. Furthermore, conveniently designed mobile banking screens were another variable covered under this factor. The last factor was titled as "customer support" since it was composed of variables such as having customer protection policies, having guidance about how to use mobile banking services and etc.

Finally, we try to see whether these 5 factors determine customers' satisfaction from mobile banking. Hence, we run regression analysis, and as the dependent variable we've calculated the mean value for the satisfaction variable, which was composed of 2 items. We got the average of the following two variables in order to compute satisfaction from mobile banking: "Overall, process from access and making transaction via mobile banking application is satisfying" and "I'm pleased that I'm using mobile banking services for my banking operations". Actually, we used 5 point Likert Scale to measure both of the variables, and the Cronbach's α score for satisfaction scale was 0,78. We run linear regression analysis with enter method. The model summary table reports the strength of the relationship between the model and the dependent variable, and large R value (close to 1) indicates a strong relationship. As it is demonstrated in Table 2, our model's R value was 0,77. In addition, R^2 , the coefficient of determination, is the squared value of the multiple correlation coefficient, and in our model 59.5 % of the variation was explained by the five factors that we predicted as the determinants of satisfaction from mobile banking. All factors except for customer support enter the equation with a positive significant coefficient at the 5% significance level.

Table 1: Determinants Affecting Customers' Satisfaction from Mobile Banking

	(Total Var. Exp.-TVE: 66,48%)				
	F1: Trust & Serv. Qual.	F2: Conv. & Useful	F3: Content & Variety	F4: System Quality	F5: Cust. Supp.
<i>Eigenvalues of each factor</i>	<i>10,17</i>	<i>2,01</i>	<i>1,45</i>	<i>1,29</i>	<i>1,03</i>
Privacy on mobile banking is well protected.	,805				
The information provided from mobile banking is reliable.	,800				
The system of mobile banking is reliable.	,788				
Payments made through mobile banking are processes securely.	,602				
The quality of the service I get from the mobile banking is high.	,595				
Mobile banking takes a short time to respond.	,546				
Using mobile banking enables me to accomplish tasks more quickly		,756			
Mobile banking enables me to reach banking services anywhere & anytime.		,694			
Overall process from access of mobile banking to make transaction is easy		,688			
Mobile banking is much more convenient than other means of banking.		,666			
Using mobile banking save capital by reducing costs		,622			
Using a mobile banking application would give me greater control over my credit and debit cards.		,613			
In my opinion, the use of mobile banking services increases my ability to control my financial matters by myself.		,563			
Information about services and operations are always available			,785		
There is a great variety of mobile banking services that meet my needs.			,704		
Current mobile banking services are up to my expectations.			,702		
Services and content I want are always available			,667		
The interactions with the mobile banking are clear and understandable.			,660		
No error message encountered during a transaction in mobile banking.				,805	
Rate of success to log in the mobile banking application is high.				,591	
Overall design of screens offered through mobile banking is constructed to help user's convenience				,505	
Mobile banking firms have a policy on customer protection from transaction mistakes.					,784
I feel that when needed, I will get enough guidance from the bank related to mobile banking services.					,570
There is content specification recommended for me when I access to mobile banking					,561

The factor that has the most explanatory power is convenience & usefulness followed by trust & service quality, content & variety and system quality. The business implications are strong. Our results show that as mobile banking provides more convenience and makes financial services more accessible and easier to manage, customers' satisfaction increases. Trust and service quality also builds customer satisfaction. Hence, it is important for banks to protect privacy, provide reliable information and security. We also show that variety and content of services offered via mobile banking is viewed equally important as the system reliability and design by the customers. In their communication strategies, banks should better to mention convenience of using mobile banking in order to attract more users. Furthermore, just to increase the number of users, banks must update consumers about their privacy statements and security precautions so that users may not hesitate to use mobile banking. The variety of services offered by mobile banks is another crucial indicator of satisfaction from mobile banking, and also banks must care for being clear and understandable during users' interactions with the bank.

On the other hand, customer support does not have any impact on users' satisfaction from mobile banking, and this may be attributed to the fact that this specification was assumed as a default characteristic of mobile banking since it is related with features such as customization of the content. The small sample size is the basic limitation of our study. However, still our research sheds light to the determinants of customer satisfaction in the mobile context and suggest further research avenues such as determinants of loyalty as the digital age makes banking sector more transparent and therefore more competitive.

Table 2: Model Summary

Model	R	R ²	Adj. R ²	Std. Error of the Estimate	Change Statistics				
					R ² Change	F Change	df1	df2	Sig. F Change
1	,771 ^a	,595	,585	,45232	,595	58,82	5	200	,000

Table 3: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	60,165	5	12,033	58,82	,000 ^b
	Residual	40,918	200	,205		
	Total	101,084	205			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), Trust & Service Quality, Convenience & Usefulness, Content & Variety, System Quality, Customer Support

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THE EVOLUTION OF E-WOM: IS IT THE PIXIE DUST OF THE DIGITAL AGE?

Elif Ozturk and V. Aslihan Nasir
Bogazici University, Turkey

ABSTRACT

The main purpose of this study is to shed light on the direction and development of e-WOM as an academic field. For this reason, we've searched two databases, namely, ProQuest and Emerald Research Databases for scholarly published articles that contained "electronic word of mouth", "online word of mouth", "e-wom" or "online wom" at their titles. At the end, we reached to a total of 212 articles. In line with our purpose, abstracts of 212 peer-reviewed articles from 1999 to the end of October 2015 have been analyzed according to a) journal, b) year of publication, c) research orientation (empirical versus non-empirical), d) research approach (quantitative versus qualitative versus mixed), e) research methods used, and f) the subject themes of the articles. It is found that the oldest article about e-WOM was published in 1999, and the majority of the articles were published either by Information Systems or Marketing and Communication Journals. The articles significantly had empirical orientation and utilized quantitative approach. Another crucial finding of our study is that "e-WOM Actors' Characteristics, Types, Profiles, and Attitudes" and "Marketing Strategies and e-WOM" were the most heavily investigated research topics whereas "Organizational Dimension of e-WOM" received scarce attention in the literature.

Keywords: e-WOM, online-WOM, electronic Word of Mouth, Content Analysis.

INTRODUCTION

The second generation of Web (Web 2.0) provides platforms such as social networks, blogs, and forums that enable real-time interaction between users and give the power to consumers to share their opinions about a product or a service. These changes in Internet technology force companies to re-think their marketing strategies in order to survive both in online and offline world. One such example is word-of-mouth (WOM). Arndt (1967) defined WOM as "oral, person-to-person communication between a perceived non-commercial communicator and a receiver concerning a brand, a product, or a service offered for sale". With the advent of the Internet, WOM has evolved into a new form of communication, namely- electronic WOM (*e-WOM*). *e-WOM* has been defined as "any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet" (Hennig-Thurau et al., 2004). *e-WOM* can be accepted as a more modernized version of traditional WOM with its own unique features (Vilpponen et al. 2006). Similarly, Phelps et al. (2004) suggest that *e-WOM* is more influential than traditional WOM because of its certain unique features, such as convenience, speed, one-to-many, many-to-many and the absence of face-to-face interaction. As stated in the literature (Chatterjee 2001; Sen & Lerman, 2007), *e-WOM* covers a variety of media forms and types of web sites, of which online consumer reviews that consumers post on the internet form one of the most accessible and prevalent forms of *e-WOM*. According to Chatterjee (2001), online consumer reviews as *e-WOM* have influenced consumer behavior. Furthermore as stated in the study of Jansen et al. (2009), *e-WOM* is seen as increasingly important by businesses and organizations concerned with reputation management. Consumers can post their opinions, comments and reviews of products on weblogs (e.g. xanga.com), discussion forums (e.g. zapak.com), review websites (e.g. Epinions.com), e-bulletin board systems, newsgroups, and social networking sites (e.g. facebook.com) (Cheung & Lee, 2012). Some researchers find that the number of online reviews is a significant indicator affecting consumers' evaluations of online reviews and the recommended products (Chen et al., 2004; Duan et al., 2008).

According to Chen et al. (2004), the number of consumer reviews is positively associated with sales. Furthermore, Clemons et al. (2006) asserted that positive reviews have a stronger impact than negative ones. In another study, Jeong & Koo (2015) found out that an objective negative online review was rated higher in terms of message usefulness compared to the other types of online reviews. In traditional WOM communication, the credibility of the sender and the message content are known by the receiver, on the other hand, the electronic nature of e-WOM in most applications eliminates the receiver's ability to judge the credibility of the sender and message content which highlights the important theoretical issues of source credibility and user trust (Steffes & Burgee, 2009). Through the dynamic and interactive communication available in Web 2.0 platforms, a single person can take on the multiple roles of opinion giver, seeker and transmitter (Chu & Kim, 2011). A recent report examined the purchase decisions of 20,000 European consumers, across 30 product categories and more than 100 brands, in 2013 and 2014 (McKinsey, 2015a). It is found that the impact of social media on buying decisions is greater than previously estimated and growing fast, yet its influence varies significantly across product categories (McKinsey, 2015a).

It is not only the academia but also the business world that focuses on e-WOM, therefore it becomes crucial to have an in-depth examination of the past studies to understand the trends about this hot topic. Therefore, the main purpose of this study is to shed light on the direction and development of e-WOM as an academic research field. For this reason, we've searched two databases, namely, ProQuest and Emerald Research Databases for scholarly published articles that contained "electronic word of mouth", "online word of mouth", "e-wom" or "online wom" at their titles. At the end, we reached to a total of 212 articles. In line with our purpose, abstracts of 212 peer-reviewed articles from 1999 to the end of October 2015 have been analyzed according to a) journal, b) year of publication, c) research orientation (empirical versus non-empirical), d) research approach (quantitative versus qualitative versus mixed), e) research methods used, and f) the subject themes of the articles.

RESEARCH METHODOLOGY

Content Analysis

With recent advancements in Internet and related technologies, e-WOM becomes a vital notion of marketing environment and both professionals and academics began to contribute and serve the field of e-WOM through the dissemination of their knowledge and ideas in scholarly published journals. Thus, changes and trends that likely have an impact on concepts, processes, and implementation of e-WOM can be determined by reviewing and examining the articles published in peer-reviewed journals. Content of the articles published in these journals can give us an idea about the research orientation types, approaches, and methods as well as research themes that are popular during a given period. To see the evolutionary change in the field of e-WOM, the present study examines the content of articles published in academic journals. Specifically, changes and trends in the scope of research topics over time are examined. Content analysis is a research method that uses a set of procedures to make valid inferences from the text (Weber, 1990). Content analysis manifests the content of a communication in an objective, systematic, and quantitative manner (Kolbe & Burnett, 1991).

Selecting Sample

To understand the trends about and progression of e-WOM over time, in this paper we searched for peer-reviewed articles in scholarly journals at ProQuest and Emerald Research Databases. These databases were chosen since they cover a great variety of journals belonging to different disciplines such as engineering, management, information systems etc., and also these databases carry out international journals that are not only published in USA but also in Europe. The results were filtered according to language and only articles written in English were selected. For the time interval criteria, end of publication date is filtered as 2015 and no constraint was given for the starting date. We've eliminated editorial comments, book reviews, critique articles, articles that were not related with WOM (e.g. WOM for Women) and executive summaries, as well as duplicate articles from our sample. At the end, we reached to a total of 212 e-WOM articles and the oldest article was dated back to 1999.

One of the most fundamental and crucial decision concerns the basic unit of analysis that is needed to possess similar connotations in order for the classification to have semantic validity (Weber, 1990). The theme of articles was therefore chosen as the main unit of analysis in our study. However, we've expanded our research to cover year of publication, journal names, research approaches and orientations, and research methods. The researchers read the title, abstract, research methodology and scanned literature review, findings and appendix of the articles in order to determine the purpose of the study and other related research unit of analyses.

Content Analysis of Themes and Determining the Main Themes

The categorization of specific unit of analyses like research method, research approach, publication year and journal are often relatively straightforward, on the contrary; during the process of categorizing the themes of the articles, a more interpretive approach needs to be taken. At the first step, the researchers reviewed the purpose of the articles to find out common patterns and developed initial themes. After the identification of initial themes, the researchers processed the articles according to their content and matched these to the initial themes. At the end, the researchers developed 40 e-WOM themes from 212 articles.

Two coders, who were PhD students at the Department of Management Information Systems during this research, classified these themes into broader categories. They independently aggregated the themes into a total of 14 broader categories. The categorization of coders is presented in Table 1.

Table 1: Classification of e-WOM Themes by Coders

CODER 1	CODER 2
Conceptualization/ Development of e-WOM	Communication Types, Tools, Methods & Strategies
Consumer Characteristics and e-WOM	Comparison of e-WOM with traditional WOM
Impact of e-WOM on Company Performance	Conceptualizing e-WOM Activity & Measurement
Impact of e-WOM on Customer Buying Behavior	Effects of e-WOM on Customer/Consumption
Marketing Strategy and e-WOM	Influential and Relational Factors of e-WOM
WOM and Organizational Dimension	Management of e-WOM
	e-WOM-Market Introduction, Growth & Other Strategies
	e-WOM Message Content

Selection of Final Categories

In this stage, the researchers evaluated all of the 14 categories that were generated by the coders in the previous stage and developed mutually exclusive and exhaustive final list of 6 main themes which are listed in Table 2.

Reliability Assessment

In this section, three judges with PhD degrees from different disciplines were given two distinct excel sheets. On the first sheet, the list of 40 main themes, which had derived by researchers after the examination of the 212 articles, were presented to the judges. On the second sheet, six main theme categories, which were developed by coders and finalized by the researchers, were given to the judges. Then, the three judges were requested to assign each of the 40 e-WOM themes under the most appropriate category. The agreement level among the three judges is illustrated in Table 3.

Table 2: Final Theme Categories

Final List of Main Themes
1. Foundations and Conceptualization of e-WOM
2. Marketing Strategies and e-WOM
3. New Communication Platforms & e-WOM
4. Organizational Dimension of e-WOM
5. e-WOM Actors' Characteristics, Types, Profiles, Attitudes
6. e-WOM Message Related Issues

Table 3: Agreement Level between Judges

Judges	Number of Matching (out of 40)	Percentage Match Between Pair of Judges
A and B	35	87,5 %
A and C	39	97,5 %
B and C	34	85 %

According to Zimmer and Golden (1988), the probability by chance alone of two judges assigning themes to same category is calculated by the formula which is:

$$P(k \text{ successes}) = \left\{ \frac{N!}{k! \times (N - k)!} \right\} \times \{p^k \times (1 - p)^{N-k}\}$$

This formula is applied for each pairwise agreement and the probabilities of 35, 39 and 34 agreements due to chance are represented as follows:

$$\text{Judges A and B} \quad P(35) = \left\{ \frac{40!}{35! \times (40 - 35)!} \right\} \times \left\{ \left(\frac{1}{6}\right)^{35} \times \left(1 - \frac{1}{6}\right)^{40-35} \right\} = 1.538 \times 10^{-22}$$

$$\text{Judges A and C} \quad P(39) = \left\{ \frac{40!}{39! \times (40 - 39)!} \right\} \times \left\{ \left(\frac{1}{6}\right)^{39} \times \left(1 - \frac{1}{6}\right)^{40-39} \right\} = 1.496 \times 10^{-29}$$

$$\text{Judges B and C} \quad P(34) = \left\{ \frac{40!}{34! \times (40 - 34)!} \right\} \times \left\{ \left(\frac{1}{6}\right)^{34} \times \left(1 - \frac{1}{6}\right)^{40-34} \right\} = 4.487 \times 10^{-21}$$

A z-score is calculated for the probability of obtaining 34 or more matches using formula mentioned below.

$$z = \frac{k - E_k}{\sqrt{np(1 - p)}} \text{ where } E_k \text{ is expected number of matches.}$$

Substituting values for judges B and C:

$$z = \frac{34 - (40 \times (1/6))}{\sqrt{40 \times (1/6) \times (5/6)}} = 11.5966$$

Since a z-score of 2.33 corresponds to an alpha of .01, the probability that 34 themes or more would be assigned to the same categories by chance is very low. Thus, the number of matches achieved for all three pairs of judges is significantly greater than would be attributable to chance alone. Hence, the matches are all significant ($p=.01$) To increase the robustness of this study, Cohen's κ is calculated according to the directions in the study by Grayson and Rust (2001). When interpreting Cohen's κ results, it has to be noted that the results that are closer to 1 indicate higher agreement between the pair of judges.

$$\kappa = \frac{p_a - p_c}{1 - p_c}$$

where p_a is the proportion of agreed on judgments ($p_a = (n_{11} + n_{22} + \dots + n_{77})/n_{++}$); p_c is the proportion of agreements one would expect by chance ($p_c = (e_{11} + e_{22} + \dots + e_{77})/n_{++}$); and $e_{ii} = (n_{i+}/n_{++}) \times (n_{+i}/n_{++}) \times n_{++}$.

Cohen's κ results for the study are as follows:

$$\text{Judges A and B} \quad \text{Cohen's } \kappa = \frac{0.8750 - 0.1906}{1 - 0.1906} = 0.8456$$

$$\text{Judges A and C} \quad \text{Cohen's } \kappa = \frac{0.9750 - 0.1988}{1 - 0.1988} = 0.9688$$

$$\text{Judges B and C} \quad \text{Cohen's } \kappa = \frac{0.8500 - 0.1906}{1 - 0.1906} = 0.8147$$

RESEARCH FINDINGS

In this part of the study, we'll present the distribution of e-WOM articles according to journal published, publication year, research orientation (empirical versus non-empirical), research approach (quantitative versus qualitative versus mixed), research methods used, and the theme categories of the articles. According to Kim et al. (2014, p. 297), "the examination of the public research record allows observation of the trends and patterns in

research, assessment of the directions for conceptual thinking, ..., and attention to focus on what is emphasized and what is ignored in scholarship". Hence, we try to actualize this type of study for the e-WOM research field.

As it is seen in Table 4, *Decision Support Systems* was the journal which published e-WOM articles with the highest frequency among the rest of the journals. In this table, the journals that published less than three articles were covered under the heading of "other". In addition, it is also discovered that e-WOM received interest from the journals that belong to both *marketing* and *information science* disciplines. On the other hand, Table 5 shows that the oldest paper about e-WOM was published in 1999, and as the years passed the number of articles about e-WOM shows an increasing pattern. Particularly, year 2009 becomes a milestone in e-WOM research because since that time the publication trend about e-WOM was always upwards. However, we've to note that since the year 2015 was not finished during the article collection stage of our study, we couldn't see this pattern in this last year. Table 6 presents that the significant majority of the articles employed empirical orientation and moreover, the substantial amount of the articles had quantitative research approach. Table 7 demonstrates that almost one third of the articles had utilized survey as their research method, and it was followed by secondary data analysis. Furthermore, we've seen that there's a tendency to use two or more research methods sequentially within the same article. In this study, we also try to classify the themes of the articles that were published so far and covered in our research. In the previous section, we've already described how we categorized the prior research articles based on their main themes and we also assured the reliability of this categorization with very high reliability scores of Cohen's κ . We've come up with six main themes for 212 articles, and Table 8 exhibits that among the six article theme categories, "e-WOM Actors' Characteristics, Types, Profiles, and Attitudes" was the most heavily investigated research topic with 24,5%, and it was respectively followed by "Marketing Strategies and e-WOM" (22,6%) and "Foundations and Conceptualization of e-WOM" (17%). The least attention grabbing research area was identified as "Organizational Dimension of e-WOM" with 7,1%.

CONCLUSION & DISCUSSION

In recent years, e-WOM becomes a trendy topic particularly among marketing academicians. It is largely attributed to the increased usage of Internet and related technologies as a way of communication. Companies have to think of e-WOM as a way to build beneficial relationships with their customers. This current study is a type of self-reflection research in the field of e-WOM. As stated in the study of Kim et al. (2014), many scholars have recognized the importance of examining published research as a part of self-reflection. This type of research generally based on two main ideas: i) the value of disciplinary self-reflection and ii) the role of the public research record as reflected in journals (Kim et al., 2014). Our research investigated six content characteristics of articles published in scholarly journals that were accessed by using two prominent databases. These six content characteristics are: a) year of publication, b) journal name, c) research orientation, d) research approach, e) research method, and finally f) the themes of the articles. Changes in the aforementioned six content characteristics of journal articles were found across the 15 years. Since the publication of first e-WOM article in 1999, the number of articles increased steadily; however 2015 was the only exception and the reason is that we collected articles till the end of October and therefore we missed articles published in the last issues of the journals. At the end of our study, we've found that there were only a few articles prior to 2005; however, after 2009, the e-WOM literature gains acceleration and this may be attributed to the prevalent usage of online platforms as an effective communication tool between companies and customers. Pure marketing and marketing research (e.g. *European Journal of Marketing* and *Journal of Marketing Research*) journals as well as information science (e.g. *Journal of Electronic Commerce Research* and *Computers in Human Behavior*) journals welcomed articles written about e-WOM. On the other hand, in terms of research orientation, approach and methods, and research themes, researchers should better to consider the following arguments in order to boost their publication efforts. In other words, the followings should receive more attention from the academia about e-WOM:

- studies that concentrate more on non-empirical studies for e-WOM research,
- research that embrace more qualitative research approach (e.g. case studies, in-depth interviews, etc.)
- articles that are composed of alternative research methods (e.g. netnography, social network analysis, etc.)
- the organizational dimension of e-WOM, which covers areas such as "corporate reputation and e-WOM management" or "organizational growth through effective e-WOM" or "impact of e-WOM on e-commerce sales", and finally, studies that focus on e-WOM message related issues, which include but not limited to

“credibility of e-WOM messages”, “characteristics of influential e-WOM messages”, and “e-WOM message language and types of rhetorical methods”. In addition, specific attention should be given to social media and social networks as new communication platforms.

- interdisciplinary research should be encouraged, such as research among scholars from marketing and computer engineering or MIS disciplines must increase, in return, this may lead to the emergence of different publication venues.

Table 4: Article Distribution According to Journals

Name of Journals	Frequency	%
<i>Decision Support Systems</i>	14	6,6%
<i>European Journal of Marketing</i>	8	3,8%
<i>Journal of Interactive Marketing</i>	7	3,3%
<i>JMR, Journal of Marketing Research</i>	7	3,3%
<i>Journal of Marketing</i>	5	2,4%
<i>Journal of Electronic Commerce Research</i>	5	2,4%
<i>International Journal of Advertising</i>	5	2,4%
<i>Journal of Product Innovation Management</i>	4	1,9%
<i>Computers in Human Behavior</i>	4	1,9%
<i>Electronic Commerce Research and Applications</i>	4	1,9%
<i>International Journal of Electronic Commerce</i>	4	1,9%
<i>International Business Research</i>	4	1,9%
<i>Internet Research</i>	4	1,9%
<i>Online Information Review</i>	4	1,9%
<i>Australasian Marketing Journal</i>	4	1,9%
<i>Journal of Consumer Research</i>	4	1,9%
<i>Marketing Science</i>	3	1,4%
<i>Journal of Marketing Management</i>	3	1,4%
<i>Journal of Marketing Communications</i>	3	1,4%
<i>International Journal of Market Research</i>	3	1,4%
<i>Marketing Letters</i>	3	1,4%
<i>International Journal of Organizational Innovation (Online)</i>	3	1,4%
<i>Journal of Cultural Economics</i>	3	1,4%
<i>Journal of Internet Commerce</i>	3	1,4%
<i>Other</i>	101	47,6%
Grand Total	212	100,0%

Table 5: # of Article Distribution According to Year of Publication

1999	2001	2003	2004	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1	1	1	2	3	7	10	16	12	27	29	37	44	22

Table 6: Research Orientation & Research Approach

Research Orientation	e-WOM	Research Approach	e-WOM
Empirical	89,6%	Qualitative	10,0%
Non-empirical	10,4%	Quantitative	84,7%
Total	100,0%	Mixed	5,3%
		Total	100,0%

Table 7: Research Methods Used in the Articles

Research Methods	e-WOM	%
Survey	67	31,6%
Secondary Data Analysis	39	18,4%

Experimental Design	31	14,6%
Case Study	10	4,7%
Model Building	9	4,2%
Systematic Review	7	3,3%
Conceptual Research	5	2,4%
Social Network Analysis	5	2,4%
Model Building & Secondary Data Analysis	4	1,9%
Nethnography	4	1,9%
Experimental Design & Secondary Data Analysis	4	1,9%
Survey & Secondary Data Analysis	4	1,9%
Content Analysis	3	1,4%
Focus Group & Survey	3	1,4%
Experimental Design & Survey	3	1,4%
In-depth Interview	2	0,9%
Other Combined Forms	12	5,7%

Table 8: Distribution of Articles According to Theme Categories

Themes	Frequency	%
Foundations and Conceptualization of e-WOM	36	17,0%
Marketing Strategies and e-WOM	48	22,6%
New Communication Platforms & e-WOM	32	15,1%
Organizational Dimension of e-WOM	15	7,1%
e-WOM Actors' Characteristics, Types, Profiles, Attitudes	52	24,5%
e-WOM Message Related Issues	29	13,7%
Total	212	100,0%

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MOBILE LEARNING ADOPTION AMONG HIGHER EDUCATION INSTRUCTORS: COMPARING ADOPTERS AND NON-ADOPTERS

Fernanda Pina, Jorge Brantes Ferreira, Renata Kurtz, Fernanda Leão Ramos, Pontifical Catholic University of Rio de Janeiro, Brazil

Angilberto Sabino de Freitas, Unigranrio University, Brazil

ABSTRACT

This paper investigates higher education instructors' attitude towards m-learning, focusing on the motives behind their decision to adopt it in their daily activities. Supported by the diffusion of innovations theory, the researchers interviewed both instructors who had already adopted m-learning and instructors who had not. Results suggest that, no matters the difference in perception between adopters and non-adopters, there are three fundamental pillars that allow for innovation in teaching practices: (1) the instructor's personal interest in innovating and changing those practices, (2) institutional support, and (3) government support.

Keywords: m-learning, mobile learning, higher education, instructors.

INTRODUCTION

Information and Communication Technologies (ICT) are a common reality in modern societies, as the increased presence of mobile devices such as smartphones and tablets in people's daily activities shows. Nine in ten Brazilian youngsters have their own cellphone and 20% of them use it to search for information in the Internet. In August, 2014, tablet sales increased 118% compared with the same period in the previous year (NIELSEN, 2014). The use of cellphones and internet access through mobile devices became so important for daily life that the survey for the Brazilian National Research on Households (Pesquisa Nacional por Amostra de Domicílios/PNAD) now include questions about cellphone and Internet usage (IBGE, 2015).

Taking all this in account, many sectors have been attempting to adapt themselves to this trend, and the Education sector follows the same path (Martin-Dorta et al. 2011). You can now observe students using mobile technology in their academic environment. Moreover, Higher Education Institutions seek to update academic practices by developing new teaching propositions (Merhi, 2015). One of these new practices is mobile learning (or m-learning), which has presented itself as an innovation in higher education (Ferreira et al., 2013). According to the authors, mobile learning is a practice that can help people acquire knowledge in ubiquitous ways with the support of mobile technologies. Mobile learning possibilities are countless, and among them we can find: (1) learning anytime, anywhere; (2) contextual learning; (3) connectivity and continuity between different learning contexts; (4) convenience for students; (5) opportunities for autonomy and personalization of content and learning processes; and (6) authenticity and collaboration, made possible by the multitude of converging medias present in mobile devices (Sharples et al. 2007; Ferreira et al., 2013; Kearney et al., 2014).

Considering the advances in mobile technologies, UNESCO supports the idea that instructors should plan to include m-learning among their teaching activities. With that concept in mind, Kurtz et al. (2014) investigated the perceptions of higher education instructors who have not adopted m-learning. Results show that, even when instructors know what m-learning is, it is not perceived as an innovation, which may work as a barrier to its adoption as a teaching practice. Despite that some m-learning initiatives can be detected in Brazilian and foreigner higher education institutions, those are isolated attempts and, ultimately, serve to show the importance

of understanding which factors lead instructors to adopt m-learning and which factors act as barriers. Besides, there are few studies regarding m-learning adoption among instructors. So, considering the existing gap in literature referring to m-learning adoption among higher education instructors, the objective of this paper is to investigate the perceptions of instructors, both who have and who have not adopted m-learning in their teaching activities, aiming to offer a contribution regarding motivational factors and inherent barriers to m-learning adoption.

LITERATURE REVIEW

According to Ferreira et al. (2013), m-learning can be described as a teaching modality that, through wireless digital networks, uses mobile devices, such as cellphones, tablets and smartphones, to facilitate information exchange, instructor-student interaction, content access and sharing and consultation of material anytime and anywhere. Kearney et al. (2014) suggest that the attributes that sustain the m-learning from an educational perspective are personalization, authenticity and collaboration. Personalization is supported by concepts of customization and property. Higher levels of customization allow students to enjoy higher degrees of control over a certain subject throughout a m-learning experience. On the same page, the possibility of personalizing and adapting tools and activities leads to a stronger sense of property. Authenticity promotes collaborative, contextualized and situated learning opportunities. Context and situation are important concepts in engaging students in rich tasks. Students may create their own contexts, with or through their mobile devices. At last, collaboration involves concepts of conversation and data sharing. Through networking with other individuals and groups, students can engage into potentially rich exchanges, sharing information and resources across time and space. Among the factors involved in m-learning implementation processes in higher education that deserve more investigation is the need for instructors to assume a new role (Capretze & Alrasheedi, 2013; UNESCO, 2014). Several studies describe the challenge higher education institutions face in order to stimulate instructors to adopt technological innovations in teaching-learning processes (Freitas & Bandeira-de-Mello, 2012). One way to understand the process is through innovation theory

Rogers' innovation diffusion theory (IDT) is the basis for researches in innovation regarding the decision process involved in the individual acceptance (or rejection) of an innovation and what attributes of that innovation are relevant to that decision (Rogers, 2003). According to Rogers (2003), the process of acceptance of an innovation by an individual occurs in five stages: (1) awareness; (2) attitude formation; (3) decision to adopt or reject it; (4) implementation; and (5) reinforcement or reversion of decision. Regarding the innovation attributes that may affect the decision process, Rogers (2003) suggests that people take into consideration 5 attributes: (1) relative advantage – the degree to which an innovation is perceived as better than the idea it replaces; (2) compatibility – the degree to which an innovation is perceived as being consistent with the existing values, past experiences and needs of potential adopters; (3) complexity - the degree to which an innovation is perceived as difficult to use or understand; (4) trialability - the degree to which an innovation may be tried on before the decision to adopt it, allowing potential adopters to find out how it works and if it can fulfill their needs; and (5) observability - the degree to which the results of the use of an innovation are visible.

Other research that follows this line of study is the meta-analytic study of Kapoor et al. (2014). They investigated adoption and acceptance processes studies in a 15-year period and pointed eight relevant attributes related to Rogers's IDT: (1) Ease of operation – the degree to which an individual believes that using a particular technology is free of effort. It is the opposite of Rogers's complexity; (2) Image – the degree to which an innovation is perceived as to boost personal image or social status; (3) Cost – the degree to which necessary investments are perceived as high or low; (4) Riskiness – a multidimensional construct consisting of six components: performance risk, financial risk, social risk, physical risk, psychological risk, and time loss; (5) Visibility – the degree to which the use of an innovation is apparent; (6) Voluntariness – the degree to which the use of an innovation is perceived as being a free conscious choice; (7) Result demonstrability – the degree to which the results of the use of an innovation are perceived as tangible and communicable. It is directly related to Rogers' observability; (8) Social approval – the degree to which the adoption of an innovation is perceived as an approved behavior by one's reference group. In one hand, ease of operation, image, visibility, result demonstrability, and social approval are constructs positively related to the adoption of innovations. On the other hand, high costs and high risks may represent barriers to adoption in such way that their decrease can enhance the intention to adopt an innovation. Finally voluntariness presents both positive and negative impacts on innovation adoption. It seems that voluntary

introduction of innovations leads to better adoption rates while forced adoptions only leads to resistance (Kapoor et al., 2014).

Lastly, the study of Kurtz et al. (2014) uses Rogers's five innovation attributes as basis to evaluate the perceptions of Brazilian instructors who had not adopted m-learning. Their results indicate that relative advantage (i.e. portability, mobility and connectivity) and compatibility (i.e. previous experience with mobile technologies and e-learning) are perceived as positive by non-adopters while complexity (i.e. adaptation of content for mobile use) was perceived as negative. Besides these three IDT attributes, the study identified other relevant attributes as being fundamental to understanding m-learning adoption process among instructors that have yet to adopt it, such as: (1) m-learning disadvantages (i.e. less instructor-student interaction, mobile phones small sizes); (2) other barriers to m-learning (i.e. increased workload for the instructor, lack of student motivation to use m-learning); (3) need for technological and educational training; and (4) institutional support.

Thus, supported by this theoretical background, our study aims to advance on the work of Kurtz et al. (2014), broadening the investigation with new analyses and including the perceptions of instructors who have adopted m-learning.

METHODOLOGY

In order to address the objective of identifying attributes that enable or act as barriers to m-learning adoption by higher education instructors, 18 university professors were submitted to in-depth semi-structured interviews. Six of the interviewees were adopters of m-learning, and 12 were non-adopters. The non-adopters group consisted of 12 professors who work in the same private higher education institution in Rio de Janeiro. Six of them work exclusively for the institution, whereas the other six teach at the same institution but also have jobs in companies from other market segments. The adopters group consisted of professors identified and selected during the 2014 Games and Mobile Learning Meeting in Coimbra, Portugal. These professors work in different higher education institutions in Brazil or in Portugal. Interviews lasted an average of 60 minutes. Interviews took longer among adopters, who felt motivated to talk about the theme, in some cases reaching two hours in length. All interviews were recorded and afterwards transcribed. Interviews with professors who didn't live in Rio de Janeiro were conducted via Skype. We employed content analysis in order to identify the presence of words and/or concepts within the whole set of interviews, and the relationships between those words and concepts. The categorization process in a content analysis is the sorting of the components of a set, first by differentiation, and then, by regrouping according to analogy and commonality. First, categories were formed based on citations, which are fragments of speech that give empirical support to the analysis, and then these categories were grouped into families (Bardin, 2011). Content analysis was carried out using the Atlas.ti software.

RESULTS

Our analysis included both adopters and non-adopters, and compared both groups, thus allowing the identification of new factors involved in m-learning adoption processes within the interviewees' speech. At first, there was an intentional attempt to find within the professors' speech clues that represented attributes from the works of Rogers (2003) – Relative Advantage, Compatibility, Observability, Trialability, and Complexity – and Kapoor et al. (2014) – Ease of Operation, Image, Cost, Riskiness, Visibility, Voluntariness, Result Demonstrability, and Social Approval. Citations were coded and grouped according to these attributes definitions. Then, new categories, absent both in Rogers (2003) and Kapoor et al. (2014), were identified. The different conceptions, understanding and uses for m-learning present in the speech of the professors show the presence of different categories for each group. Table 1 illustrates categories for each group and how each one is grouped in families, which represent favorable and unfavorable factors m-learning adoption as well as its requirements. Categories in bold are the commonality between the two groups of interviewees, indicating shared perceptions related to m-learning adoption in higher education teaching practices. As we compare the perceptions of the two groups, relative advantage and compatibility categories, two factors that according to Rogers (2003) facilitate the diffusion of innovations, appear to be important factors for both adopters and non-adopters. The relative advantage category had the greatest number of citations, 114 for the adopters and 132 for the non-adopters. Both groups have also highlighted requirements for m-learning adoption as a fundamental issue (68 citations for adopters and 69 for non-adopters), thus forming the third common category between the two groups.

Table 1: Categories and category families distribution among adopters and non-adopters.

Category Families	Adopters	Non-Adopters
Enabling Factors	<ul style="list-style-type: none"> • Relative Advantage – 114 citations grouped in 20 codes • Compatibility – 11 citations grouped in 3 codes • Observability – 12 citations grouped in 2 codes • Trialability – 11 citations grouped in 3 codes • Facilidade de uso – 22 citations grouped in 3 codes • Voluntariness – 12 citations grouped in 2 codes • Result of demonstrability – 12 citations grouped in 2 codes 	<ul style="list-style-type: none"> • Relative Advantage – 132 citations grouped in 14 codes • Compatibility – 22 citations grouped in 4 codes
Hindering Factors	<ul style="list-style-type: none"> • Riskiness – 46 citations grouped in 17 codes 	<ul style="list-style-type: none"> • Other barriers to m-learning – 51 citations grouped in 9 codes • Complexity – 20 citations grouped in 5 codes • M-learning disadvantages – 21 citations grouped in 7 codes
In-order-to-adopt requirements	<ul style="list-style-type: none"> • In-order-to-adopt requirements – 68 citations grouped in 6 codes 	<ul style="list-style-type: none"> • In-order-to-adopt requirements – 69 citations grouped in 9 codes

According to the data, the diffusion of innovations attributes of observability and trialability were not identified within the speech of non-adopters, suggesting that when attributes related to observing and experimenting with can't be perceived, m-learning adoption processes may be hindered. In this case, for the non-adopters group, the whole m-learning introduction and adoption processes are viewed as difficult and unnecessary. Complexity was pointed out as an inhibitor factor by non-adopters. Because m-learning is a new practice for this group, their perceptions regarding its complexity may be affected by the need to develop new skills. Among adopters, complexity doesn't seem to be a concern. For them introducing m-learning practices was a response to the need to adapt classes to the demands of students highly immersed in a digital world. According to these professors, their learning of m-learning came through intentional search for literature and tutorials, followed by experimentation balanced by personal and classroom realities. Besides, several interviewees pointed the existence of advantages and compatibilities between m-learning and their previous teaching practices.

Kapoor et al. (2014) attributes, which work as complements for Rogers' (2003), were present only in adopters' speech, and did not seem to be as significant as they appear to be in Kapoor et al. (2014). Ease of operation is the attribute which appears more frequently. Analyzing the speech of adopters, ease of operation seems to be strongly associated with the ease of adaptation of new, compatible educational practices. Riskiness is an attribute which came to represent the awareness that there will be some obstacles to overcome in order to use m-learning in teaching practices. Adopters have even pointed other essential actors, such as managers, that can contribute to the diffusion of the m-learning in higher education settings. Adopting new ideas, and replacing current practices involves a certain risk and uncertainty (Rogers, 2003), which could be minimized if managers gave support to the diffusion of these new ideas within their organizations. Voluntariness and result of demonstrability attributes showed that there is a need to build awareness and disseminate results of m-learning practices among instructors. Results reinforce the positive effect of voluntariness in non-mandatory adoption processes, as voluntariness is directly connected to the professors' personal interest in opening new paths for their teaching practices based on their students' interests.

Whereas in the non-adopters group nine professors showed ambivalent attitudes and seven openly unfavorable ones, adopters have showed positive attitudes and intention to use m-learning. Although recognizing an inherent risk in adopting m-learning, these professors showed their enthusiasm with the use of m-learning even before effectively adopting it. Broadly speaking, data analysis has identified three fundamental pillars as necessary to support innovative teaching practices: (1) the instructor's interest in innovating and adapting ongoing teaching practices; (2) institutional support; and (3) government support.

Regarding the instructor's interest in innovating, we noticed that this subject was brought up by the interviewees both directly and indirectly. Among non-adopters, both the enthusiasm of some and the disinterest of others revealed how important the instructors' engagement with their teaching methods is, regarding content, students and competences. For these professors, m-learning's perceived requirements illustrate the importance of the instructor's interest in adopting new practices. The codes 'need for technological competence', 'need for pedagogical training', and 'need for a new instructor role' represented 48 of the 68 citations related to the 'in-order-to-adopt requirements' category. Such needs assume the instructor's interest as a premise in order to be met. All interviewees indicated that technological competence and pedagogical training are sought when instructors perceive what can be gained from them, thus developing a personal interest in investing in these improvements. The following illustrates how instructor engagement may enhance m-learning use:

The smartphone should be tapped by instructors to develop educational activities. (Interviewee 7:15)

Adopter's opinions make clear that instructor interest is the start of successful m-learning deployment:

M-learning appeals to me so that I can take advantage of my downtime. (Interviewee 18:18)

Data indicate that, for adopters, there is an awareness of the need for new ways to expand teaching beyond the boundaries of the classroom, and that m-learning may help further content learning:

I want them to have contact, beyond the forty-minute class. The only way I had, was to place the content into their mobile phones. (Interviewee 13:12)

As well as with non-adopters, the 'instructor interest' pillar was perceived as a requirement by adopters, and represented in their 'in-order-to-adopt requirements' category. For them, the need to adapt classes to their students' values is the basis to adopt m-learning:

There is already interaction with students through Facebook. Anyway, I already use the tools so that to begin using the m-learning is relatively natural. (Interviewee 17:17)

In addition to these citations from adopters and non-adopters are the studies of Littlejohn et al. (2010), Christensen et al. (2012), and Martin and Ertzberger (2014), whose conclusions strengthen the notion that instructor interest is an important step, and thus one of the pillars, for the deployment of innovative teaching practices in higher education contexts. In the case of m-learning, being it one of these innovative practices, we expect the 'instructor interest' pillar to represent instructors' motivations, facilitating or hindering m-learning adoption in higher education.

Regarding institutional support, interviewees highlighted that higher education institutions have an important role in setting an innovative environment. According to the professors interviewed, Higher Education Institutions (HEIs) need to understand the actual role of innovations in the classroom, recognizing its part in more effective teaching-learning processes and encouraging innovative practices. All interviewees indicated that institutional support has the power to provide conditions that give their instructors the necessary freedom, encouragement and commitment to adopt new technologies that enable a more assertive content transfer:

Now, such a process must have a much larger infrastructure. The instructor has to know all these tools in addition to knowing the content. So I think the first difficulty might be the institution, or whatever, the group to have this infrastructure to prepare it. (Interviewee 4:37)

Non-adopters diverge in their opinions about the institutional support needed for m-learning practice, but these divergences seem to complement each other. For them, HEIs are decisive in any innovative technology deployment, providing resources, training, and adequate compensation. These professors recognize the importance of developing new teaching practices and the intense use of mobile devices by their students. However, amidst so many exposed needs, these professors specifically highlight the need for institutional support, represented by the category 'in-order-to-adopt requirements' and by the code 'workload increase'. This code shows the role of the institution as a supporter in the adoption process, but at the same time expresses the professors' fear about what consequences the new practices will have on their already established ones.

What can be done in the classroom could be done throughout the week. What is the major problem we have? I teach a subject worth two credits once a week. We only get a weekly meeting. They could interact during the week through the phone, but I cannot keep up with it. (Interviewee 6:25)

For adopters, HEIs must take the responsibility of disseminating innovations and training instructors, signaling what can be gained from classroom innovations, especially in the case of m-learning, as it is linked to interests and habits of students. Adopters indicate that education institutions can and should support deployment and provide aid for m-learning, devoting attention to the expressed needs for institutional support, also pointed out by non-adopters, and planning for the development and implementation of m-learning activities:

Some universities in the United States for example, have classes directly with mobile devices, so much so that questions are asked to the students and they respond on-line, with the instructor knowing the results of student responses in real time. I think that's a very good idea to try to capture the attention of students, my motivation then, was to make students feel attracted to classes. I have noticed that their attention span in class, from year to year, has been dwindling. (Interviewee 17:39)

Added to these needs is the degree of risk perceived by the professors, which inhibits m-learning diffusion and adoption. For them, the perception of any risk, which according to Kapoor et al. (2014) may affect innovation adoption negatively in many aspects (performance, financial, physical and social), leading instructors to believe in the importance of institutional support in order to minimize these perceived risks. Thus, the HEIs should provide the due background aid to ensure the success of m-learning usage.

Abroad [in the US] they gave all the support, structure, there was quite a lot, they gave enough support. (...) Some things were mandatory, for example, you had to use this Blackboard thing there to make interactions with the students, like: Essay delivery has to be via Blackboard. For student interaction there must be at least three discussion forums per semester, you know, there was a couple of rules from the institution. (Interviewee 14:18)

In both discourses (non-adopters and adopters) some factors that are not directly related to the attributes described by Rogers (2003) and Kapoor et al. (2014), represented by category families identified by this study, stand out. These categories suggest contributions related to the institutional efforts necessary to m-learning adoption processes. Although it has not been investigated in the theoretical background, literature regarding institutional support may endorse the accounts that emerged during interviews. According to Akour (2009), universities must align its strategic objectives with its educational and financial objectives, thus providing the best educational environment and tools for students and instructors. Christensen et al. (2012) suggest that educational institutions should use the right tools to introduce changes. According to the authors, it is necessary to promote online courses as complement to face meetings, combining subject content with student actual interests, establish an organizational environment that fosters and prepares the institution to implement innovative practices, and not regulate potentially disruptive innovations. In the face of existing theories and the perceptions of the interviewed professors, institutional support emerges as a pillar that should be considered whenever employing m-learning as an aid to teaching practices.

Finally, regarding government support, only adopters have manifested any opinion. Although restricted, this group's statements illustrate the government's participation in the process of adoption of new technologies in higher education settings. For these professors, dissemination of good practices, accompanied by institutional and government incentives, can arouse the interest of instructors in adopting m-learning:

The government has to make the technology cheap. As it just happened in India. India sold to students a tablet costing us today around fifty reais [Brazilian currency – about US\$ 15,00]. All parents bought. The students then owned the technology and could customize their own devices. (...) (Interviewee 13:39)

It is general consensus that the reporting of results obtained with m-learning shouldn't be restricted only to educational institutions. Governmental institutions can recognize and promote the best practices and facilitate access to mobile devices, backing m-learning implementation with educational theories and adapting it to the needs of instructors and students. Therefore, it is believed that in addition to the goals it sets for higher education, the government can create mechanisms that make this type of teaching friendlier and more relevant, arousing in the students a greater involvement with learning and in the instructors a desire to innovate their practices. However, according to the professors surveyed, government support cannot occur as a result of a

technological fad, as the discourse on digital inclusion has been, but rather as something that is accompanied by a broader project:

The former minister [of Education, in Brazil] has distributed tablets in schools. What was his mistake? He should have made a pedagogical project first. It is not technology just for technology's sake. This we cannot agree with, but now we're trying to catch up. Now we're following the UNESCO recommendations. Because there are UNESCO guidelines also for instructor training. (Interviewee 18:48)

Moreover, there is a fear among instructors that institutionalization could stifle the use of m-learning, thereby limiting the great potential that these technologies can offer to the teaching-learning process:

If I say that it is the government's responsibility, I think it implies institutionalizing, and once institutionalized I do not know to what extent it will be good. Why does the mobile work well? Because it is not a novelty among students. You take advantage of something that they have to reach them in some non-invasive way (...) In Portugal there are manuals, the book and the CD, there are instructors who choose not to use the CD. It is a matter of choice, it is a matter of methodologies, I think it should effectively be taken by the government, because instructor training also comes from the government. (Interviewee 17:67)

According to Christensen et al. (2012), government support should explore ways to gather political influence in order to convince all involved in the process of adoption of new educational practices to cooperate effectively with initiatives that facilitate the deployment of new technologies. For the authors, the government must inspire and test new school frameworks, incubating schools within schools and supporting institutions so that they kindle the involvement of instructors with curriculum designers, seeking new rules and new interface standards. Therefore, we suggest that the government should focus its efforts in establishing governance tools that promote cooperation so all the parties involved can act in a coordinated manner in order to achieve their proposed objectives. Thus, both the speech of adopters and the considerations of Christensen et al. (2012) serve to strengthen the importance of government support as a pillar for m-learning adoption.

Considering all above, it was possible to identify among the attributes suggested by Rogers (2003) and those mentioned by Kapoor et al. (2014), those attributes that influenced the perception of the interviewed professors about m-learning, and hence, about innovation within HEIs, given the due government support. It is also legitimate to recognize the merit of the three pillars that must be articulated in a process to encourage the acceptance and diffusion of m-learning as a teaching methodology in higher education. If instructors cannot see a solid path to a better teaching performance and an improvement in their students' performance in the results obtained using m-learning, actions taken by institutions and public sectors become less important. More than that, we need to alert and educate academics about the educational and methodological aspects of mobile learning to be explored, taking advantage of proximity and mobile technology's incorporation in people's lives, and not just introducing new technological tools in universities.

FINAL REMARKS

The main contribution of this study was the comparison between adopters' and non-adopters' attitudes. Although the two groups showed differences at times, it was possible to detect that professors from both groups addressed the issue of m-learning adoption around a common axis. Therefore, an additional contribution of this study is the proposal of three fundamental pillars, which have emerged from the interviews, as required to support the introduction of innovative teaching practices such as m-learning: (1) the instructors' interest in innovating and adapting their ongoing teaching practices; (2) institutional support; and (3) government support. Despite limitations such as the number of respondents and the typical constraints of in-depth interviews (indirect information, lack of articulation of respondents), we consider these three proposed pillars particularly important because they arise from the respondents speech and establish a clear relationship with the existing literature. We have discovered that both adopters and non-adopters show opinions that allow the association of attributes from Rogers (2003) and Kapoor et al. (2014) to this adoption process. Finally, the authors suggest that further investigations should pursue new research models for adoption of mobile learning in other contexts, attempt to understand the effects of the e-learning in the use of m-learning, investigate the role of resistance in the adoption of innovations, suggest new methodologies for the deployment and implementation of m-learning, and apply mixed research approaches and longitudinal analysis to broaden the understanding of this topic. We believe that

future studies can foster greater insight into the factors that influence m-learning adoption and capture the different perceptions of different respondents over time.

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MODEL FOR ANALYZING FROM AN INSTITUTIONAL PERSPECTIVE FIRM ALLIANCE PORTFOLIOS' IMPLICATIONS FOR INNOVATION PERFORMANCE: FOCUS AUTOMOTIVE SECTOR

Clarice B. Porto and T. Diana L. van Aduard de Macedo-Soares
Pontifical Catholic University of Rio de Janeiro, Brazil

ABSTRACT

In face of increasingly fierce competition, multinationals in the automotive sector are leveraging innovation performance through their alliance portfolios to ensure their competitive advantage. This article proposes a model to help these firms analyse the strategic implications for innovation performance of their alliance portfolios, considering the latter's characteristics. Since these multinationals are subject to different institutional pressures the model emphasizes the importance of adopting an institutional perspective. The model's development was based on an extensive literature review. Propositions were formulated that will be tested with the help of the proposed model in the next stage of the research.

Keywords: strategic alliance portfolios, innovation performance, automotive sector, institutional perspective.

INTRODUCTION

As is the case of most industries, the automotive sector has been greatly affected by the increasingly fierce and uncertain competitive global environment. To retain their edge, leading multinational enterprises (MNEs) and their suppliers have had to reorient their strategies in international markets. Thus, many of these firms have been emphasizing innovation and establishing alliance portfolios or networks with their suppliers to leverage innovation performance and ensure a competitive differential. Multinational automakers are increasingly seeking new markets, especially in emerging economies, to establish their factories. By the same token, new challenges arise related to making the necessary adjustments to these markets as well as also optimizing the performance of partner companies (Jun & Zhiqiang, 2008). The need for foreign investment and technology transfer, or of building technological capacity in new businesses, are other challenges they face (Nam & Li 2012).

Innovation in the automotive industry is not a new phenomenon. This sector has always been characterized by its innovative character and the diffusion of novel technologies and processes it has developed to other industries (Casotti & Goldenstein, 2008). The positioning of the focal firm in its alliance portfolio/network - AP/net, the strength of the latter's ties and its access to partner resources all influence the company's innovation performance (Soda, 2011). But the resources of the different partners in the AP/net can only contribute to innovation when shared by the partner companies (Cui & O'Connor, 2012). Thus, to build competitive advantage through their supply chain, automotive companies are taking advantage of the resources and knowledge of suppliers and customers, and coordinating the flow of products and information throughout the chain (Cao et al. 2010). In order to share information and product/services within the AP/net, it is fundamental for the firm to have adequately developed its governance structure and learning ability. The firm's success in ensuring its competitive edge also depends, to a significant extent, on its ability to understand local regulations, identifying the relevant institutional processes and mechanisms (DiMaggio & Powell, 1983).

In our research, we focused on emerging countries and specifically on Brazil in the case of this article since it is one of the biggest emerging economies and the only BRIC in Latin America.

THEORETICAL REFERENCES

Innovation was defined here in accordance with the Oslo Manual (OECD, 2005) as the development and commercialization of new products/services, processes and organizational solutions. A distinction was made between radical (new products, processes etc. to the firm and industry/market) and incremental (significantly improved products, processes etc.) (Tidd, 2001) innovation.

Since the focus was on MNEs, the firms' strategies were classified according to Harzing's (2000) typology as global (operation in key markets, standardized products/processes, high integration, low local responsiveness), transnational (key markets, high integration and high responsiveness) or multidomestic (low integration and high responsiveness).

Alliances were defined according to Gulati (1998) as voluntary arrangements between companies aiming at exchange, sharing, or co-development of products/technologies/services. They were qualified as strategic when they contributed to the firm's competitive advantage (Macedo-Soares, 2011).

Based on social network theory (Ahuja, 2000), alliance portfolio - AP (Ozcan & Eisenhardt, 2009) - was defined as an egocentric network (Knoke, 2001), i.e. the focal firm's network of direct connections with partners, as well as links between the latter. Below, we explain the institutional theory upon which our study was partly based, presenting the main results of our literature review on the subject.

Institutional theory

In our study we explored mainly the economic and sociological/organizational approaches to institutional analyses. Within the perspective of new institutional economics, Williamson (1995) presented a model for carrying out a structured analysis in three parts. The first concerned the institutional environment, whose set of rules establishes the basis for production and distribution, adjusted through contracts. The second part referred to the organizations' governance that is supported by institutional arrangements between economic units to define how they should cooperate or compete. Finally, the third part concerned the individual. As a proponent of transaction costs theory, the author stressed the importance of emphasizing the governance of contractual relations. Note that when contractual relations are very complex, transaction costs increase with obvious negative impact on innovation performance. However, when the level of trust in the AP/network is high, the risk of opportunistic behaviour diminishes and contracts can be less detailed (Hertwig, 2012).

The sociological/organizational approach focuses on organization-environment relations and institution development processes. Within the new institutional theory, this approach is based on the principle that organizations tend towards a homogenization process as a way of gaining legitimacy and social acceptance. In this sense, if a company is part of an AP composed of renowned companies, indirectly it is recognized as being a reputable company with ethical standards. DiMaggio and Powell (1983) identify this homogenization process as an isomorphism phenomenon that can be understood as a process that forces an organization to look like the others, under the same environmental conditions.

DiMaggio and Powell (1983) present three isomorphic processes: coercive, normative and mimetic. Coercive is characterized by pressures, formal or informal, exerted by powerful organizations upon other ones. This process implies a certain type (resources, legal, etc.) of dependency of an organization upon another. As regards the normative isomorphic process it involves the development of a network of professionals to define and implement a set of standards and working procedures for the organization's different areas. Finally, the process of mimetic isomorphism involving the adoption of successful organizational models of other firms aims at reducing the feeling of risk and uncertainty created by technological challenges and institutional requirements. Benchmarking is a case in point. The pressures and dependency involved in coercive isomorphic processes exerted by the focal firm end up by inhibiting radical innovation, although they may have a positive effect on incremental innovation. In addition, both normative and mimetic isomorphism can be negative for innovation performance.

The institutional issue becomes very important in the case of MNEs since companies within a particular institutional environment tend to seek legitimacy through similar behavioral patterns (Suchman, 1995). As MNEs operate simultaneously in several countries, thus facing different institutional pressures, it becomes an even greater challenge (Kostova & Zaheer, 1999; Westney, 1993). Legitimacy is positive for innovation when the firm strikes the right balance between internal and external legitimacy and thus guarantees stability at industry level (Meyer & Rowan, 1977).

Institutional theory has been an important reference in international studies. In emerging markets, where institutional change tends to be more extensive than in developed countries, there is a significant difference in their institutional infrastructure (Marinova; Child & Marinov, 2012; Peng; Wang & Jiang, 2008). Institutional distance, defined as the relative difference between two countries in terms of their cognitive, normative and regulatory aspects, has a significant impact on MNEs (Kostova, 1999; Kostova & Zaheer, 1999). A large institutional distance between the head-office and the country of the subsidiary or partner increases the relevance of institutional duality where distinct institutional pressures can lead firms to take different directions (Kostova & Roth, 2002). Large institutional distances in the AP/network imply higher transaction costs and increase the complexity of the portfolio's governance structure, with negative implications for innovation performance. Conversely, when institutional distance is small, AP/net governance becomes easier (Marinova; Child & Marinov, 2012; Chan; Isobe & Makino, 2008; Dikova, 2009; Gaur & Lu, 2007).

One should distinguish, moreover, between formal and informal distance. The informal one is related to differences in beliefs and social behavior, originating in the culture and ideology of the countries involved. (Dikova, 2009; Gaur & Lu, 2007). Formal institutional distance, on the other hand, is related to the differences in regulatory aspects of the different business environments (Globerman & Shapiro, 1999). According to Chittoor, Aulakh and Ray (2015) the institutional environment has a moderating role at both the micro level (organizational) and the macro level (country's economy). Their research suggested that when the institutional macro environment is less developed or when companies have access to the business group's infrastructure, the accumulated learning - explicit knowledge - by importing technology, is the main mechanism for stimulating business investments in innovation. However, if the institutional environment is more developed, assimilation-based learning - tacit knowledge - through product market internationalization, is the main innovation factor (Chittoor; Aulakh & Ray, 2015).

Automotive Industry

In the scope of our literature review on APs, innovation, institutional theory and the automotive industry – AI, from 2004 to 2015, in accordance with Villas, Macedo-Soares and Russo's (2008) methodology, only 124 articles were found, of which 28 were considered most /important for our objective. On the basis of their research on network embeddedness and new technologies in the automobile, pharmaceutical and chemical industries, Gilsing et al. (2008) emphasized the need for ensuring a balance between exploitation of new technologies and efficient absorptive capacity. They also noted that these two factors were influenced by the firm's position in the network, technological distance between partners and network's overall density. In addition, they stressed the importance of considering these factors as a whole in order to understand their influence on the creation of new technologies and absorptive capacity. Firms in a central position in the network with small technological distances have better innovation performance. Conversely, firms in a peripheral position have a poorer performance, although initially as the technology gap increases there could be an increase in performance, especially in radical innovation performance. In both cases - central and peripheral positions - intermediate network density revealed to be more effective. High degrees of density could prevent diversity, negatively impacting innovation, due to alliance redundancy. On the other hand, low network density would not favor absorptive capacity.

Regarding the firm's position in the network, as well as the latter's density and complexity, Kim et al. (2011) investigated three types of AI supply chain networks, considering material flows and contractual relations. Their research suggested that companies with high network centrality should focus on developing systems integration capacity, or product innovation, and firms with a very central node in the network have a great influence on the transfer of items through the network, and therefore should be involved in supply risk management. Note that Freeman (1979) had already found that high node centrality facilitated interaction between the other nodes in the network. Soda (2011) also analyzed the influence of the firm's position in the network on innovation performance, based on the assumption that innovation is generated both by the firm's

internal and external resources. Access to the latter would be facilitated by the firm's position in the network. His research suggested that AI firms that occupy a brokerage position in the network fare better in terms of innovation, while those in very cohesive networks do not. Indeed, the broker firm in a sparse network has a more efficient, selective and exclusive access to new resources and information from other companies.

In the scope of their analysis of the impact of alliance portfolio diversity on the performance of firms in the automobile industry, Jiang Tao and Santoro (2010) found that functional diversity had an U-shaped relationship with improved performance, as had been made evident by Goerzen (2007). As AP diversity increases, the options to access new knowledge and capabilities are expanded, generating new opportunities for increased capacity development and value creation. On the other hand, greater coordination complexity and potential conflicts associated with high diversity could generate increased management costs (Jiang et al., 2010). However, Jiang et al.'s research found that there was a strong positive relationship between high diversity and innovation performance in AI firms, suggesting that the benefits of alliances with different partners, such as public, private or not profit ones surpassed their management costs. In particular, they made evident that functional diversity is highly desirable for innovation performance. Alliances in R & D, marketing and manufacturing could provide both exploration and exploitation innovation type opportunities. The balance between exploration and exploitation is critical. Exploration type innovation influences the firm's long term sustainability, while exploitation is important in the short-term. Functional diversity expands market reach, increases value creation and leverages core competencies (Prahalad & Hamel, 1991). On the other hand, the governance of diversity is negatively related to company performance. Many governance forms create a complexity that is difficult to manage and the accumulated knowledge is diluted by a lack of systematic learning (Jiang et al., 2010). The high management costs can be reduced by using previous experience with a specific governance structure that can help the company to institutionalize knowledge and skills, transforming these into organizational routines and operational protocols that can be applied in future alliances (Sampson, 2005).

The analysis carried out by Ferrato et al (2006), from a transaction cost perspective, on the complex inter-organizational relationship between an automaker and twelve of its suppliers, indicated that the dominant governance structure in the case of such a relationship is of a hybrid type, where there is a reduction of transaction costs. It also made evident that the duration of the relationship between an assembler and its supplier, a detailed preparation of the contract, as well as some monitoring of the suppliers on the part of the automaker, all contribute to reducing the perception of a risk of breach of contract.

Avelar and Santos (2010) highlighted three factors that contribute most to increased transaction costs in the relationship between the automaker and its primary suppliers. These were a concern for breach of contract, the existence of specific assets in the transaction costs to monitor relationships and an opportunistic behavior on the part of company managers. They noted that when trust between the automaker and its suppliers and among suppliers increases, transaction costs tend to diminish by improving the efficiency and competitiveness of the supply chain as a whole.

Sturgeon et al. (2009) made evident that the global supply chain displays conflicting forces. On the one hand, the manufacturers seek global supply sources and, on the other, the government establishes local content requirements. Thus globalization has created two categories of suppliers - global and local. In their study of the governance of the supply chain of an assembly plant in Brazil, Torres and Carlo (2012, p.88) found that "the main instruments used are the definition of target-price, quality certification requirements and capacity to deal with orders quickly in keeping with the automaker's technical specifications." The automaker maintains a partnership with 1st tier suppliers, but there is little control over the 2nd and 3rd tier suppliers where transactions are based on price and quality.

The institutional environment shapes the development of product innovation strategies in global supply chains (Bello; Lohtia & Sangtani, 2004). Bryan, Sinkovics and Hiebaum (2014) studied 170 multinational suppliers of AI firms in China and found evidence that the involvement in co-design has an inverted U-shaped relationship with product innovation. They also found that the institutional environment functions as a moderating effect on innovation performance in the relationship between the multinational firm and its suppliers. In the face of great hostility in emerging markets, the multinationals' strategies become more risky and challenging due to the lack of sufficient protection. According to the authors, the protection of knowledge and trust drives greater product innovation. The development of global products (GPD) in Brazil, namely

technological innovation, is related to the way multinationals centralize or decentralize their R & D activities together with their subsidiaries. R & D activities are increasingly carried out through alliances that take advantage of technological advances to spread the costs and risks involved (Hagedoorn, 1993).

Fiat, Volkswagen, GM and Ford adopted a strategy of decentralizing GPD activities where subsidiaries have greater participation in development activities, accumulating skills and technological expertise (Dias, 2003; Consoni & Boards, 2003). GM and Fiat are more decentralized than VW and Ford (Consoni & Boards, 2003). The new players, Renault, Toyota, Honda, PSA Peugeot-Citroen and Daimler-Chrysler had GPD centralized activities at their head-offices, which is justified because of the low scale production and low volume of sales in the Brazilian market at the beginning of their operations in the country. However, as Tables and Consoni (2009) observed some changes are taking place. For example, Renault launched a global model - Sandero, which involved the participation of Brazilian engineers in its America Engineering Center.

In Brazil, after the 1990s, alliances were increasingly established between automakers, auto parts companies and dealers. New organizational arrangements gained ground, such as consortia and industrial parks (Neto & Truzzi, 2009). Through their strategic alliances companies expanded their innovation processes and started to share knowledge and technology with partners in their economic environments (Schuster & Brem, 2015; Beamish & Lupton, 2009; Cassiman & Veugelers, 2006; Teece, 1986). Thus, the competitiveness of AI companies in the country could increase through their alliances and acquisitions, enabling them to access new markets and develop new products, albeit facing new requirements (Freyssenet, 2010).

On the basis of their analysis of 24 alliances between electric vehicle manufacturers in the automotive sector, Sierzchula et al. (2015) found that alliances play a key role in the development of radical innovations that requires access to external resources, particularly in key knowledge areas. Their research suggested that companies have different alliance types according to the area of knowledge (batteries, electric drivetrains, charging, infrastructure and materials). Exploratory alliances were found more frequently in specialized areas, such as R & D and new product development where the company has core competencies. Exploitation alliances were found generally in the early stages of the innovation development process and when manufacturers seek at once the acquisition and commercialization of knowledge, enabling the car to be launched more quickly on the market (supplier and marketing relationships).

RESEARCH METHODS

The literature review was performed by way of an extensive bibliometrical research. Initially, two studies were conducted on international APs and IP, involving four databases (Web of Science, Scopus, Ebsco Host and Science Direct). Multivariate data analysis was carried out to generate co-citation mapping. This was followed by a qualitative analysis of the most relevant articles in terms of identifying significant AP/network attributes for IP (For results of this research, see Macedo-Soares, Turano, Esteves and Porto, 2016).

Next, a literature review was conducted covering the period of 2004 to October 2015, with a focus on the automotive sector and institutional issues. The model proposed in this article was based on this comprehensive bibliographic research as well as several models found in the literature, especially, Macedo-Soares's (2011; 2014; 2015) relational and innovation frameworks, as well as the models proposed by North (1990), Hall and Soskice (2001) and Chittoor, Aulakh and Ray (2015).

PROPOSED MODEL

Several constructs pertinent to institutional factors were included in the reference lists pertinent to the AP/network dimensions – AP/network structure, AP/network composition, AP/network linkage modalities and AP/network management - of Macedo-Soares's (2014; 2015) SNA Innovation *Framework* that we built upon when developing the proposed model.

Notably, in the case of the AP/network structure dimension, we added the following constructs: isomorphic process and legitimacy (internal and external). In the case of the AP/network composition dimension, we added

the institutional distance construct. We also included contractual relations and organizational learning constructs in the AP/network management dimension. On the basis of the focussed constructs and in the light of our literature reviews, 12 propositions were formulated that refer to relationships presented in our model (see Figure 1).

P1: Wide institutional distance between the MNE and the host country or between the MNE and its partners in the alliance portfolio/network creates an institutional duality that has a negative effect on innovation performance.

P2: Small institutional distance, mainly informal, between the MNE and the host country or between the MNE and its partners, in the alliance portfolio/network, can reduce cultural differences and beliefs with a positive effect on innovation performance.

P3: Coercive isomorphism, on the part of the focal firm by imposing its position on the partners in the alliance portfolio/network inhibits radical innovation, i.e. exploration type innovation.

P4: Coercive isomorphism, on the part of the focal firm by imposing its position on the partners in the alliance portfolio/network has a positive effect on incremental innovation, i.e. exploitation type innovation.

P5: Normative isomorphism that stems from professionalization, by creating a common understanding between partners in the alliance portfolio/network limits openness to new ideas and consequently has a negative impact on innovation performance.

P6: The mimetic isomorphic process, when the company seeks to imitate completely its partners in the alliance portfolio/network, not just certain aspects or features, has a negative impact on innovation performance.

P7: When seeking legitimacy through similar behavior due to isomorphism, the company increases its recognition, leading to indirect improvement in innovation performance.

P8: Complex contractual relations in governance mechanisms increase transaction costs, with a negative impact on innovation performance.

P9: Reduced contractual relations in governance mechanisms, mainly due to the existing trust in relationships, reduces transaction costs and positively influences innovation performance.

P10: In developed institutional environments, organizational learning is based on assimilation of knowledge, fostering innovation through internationalization.

P11: In underdeveloped institutional environments, organizational learning is based on knowledge accumulation, favoring innovation by importing technology.

P12: In underdeveloped institutional environments, MNEs' direct investments decrease, with a negative impact on innovation performance.

The model (Figure 1) was constructed considering two fields of analysis. At the top are featured the AP/network dimensions (linkage modalities, composition, structure and network management).for analyzing alliance portfolio/network characteristics. At the bottom we put the institutional context with the constructs identified in the literature review as highly relevant to the analysis of innovation performance. As we focus on MNEs in emerging countries, this is mentioned in the right hand corner of the model.

In the model a triple arrow indicates how the relationship between institutional constructs and dimensions/characteristics of alliance portfolio/networks impacts innovation performance. Innovation performance is to be assessed in terms of product, service, process and organizational innovation. The distinction between radical innovation (exploration) and incremental innovation (exploitation), even if not explicitly mentioned in all propositions, is part of the model, to indicate that it should be taken into account. The black continuous arrows indicate that the relationship between an institutional construct and an alliance

portfolio/network dimension/characteristic impacts positively innovation performance. When the impact on innovation is considered negative in our propositions, the relationship is represented by a red and dotted arrow.

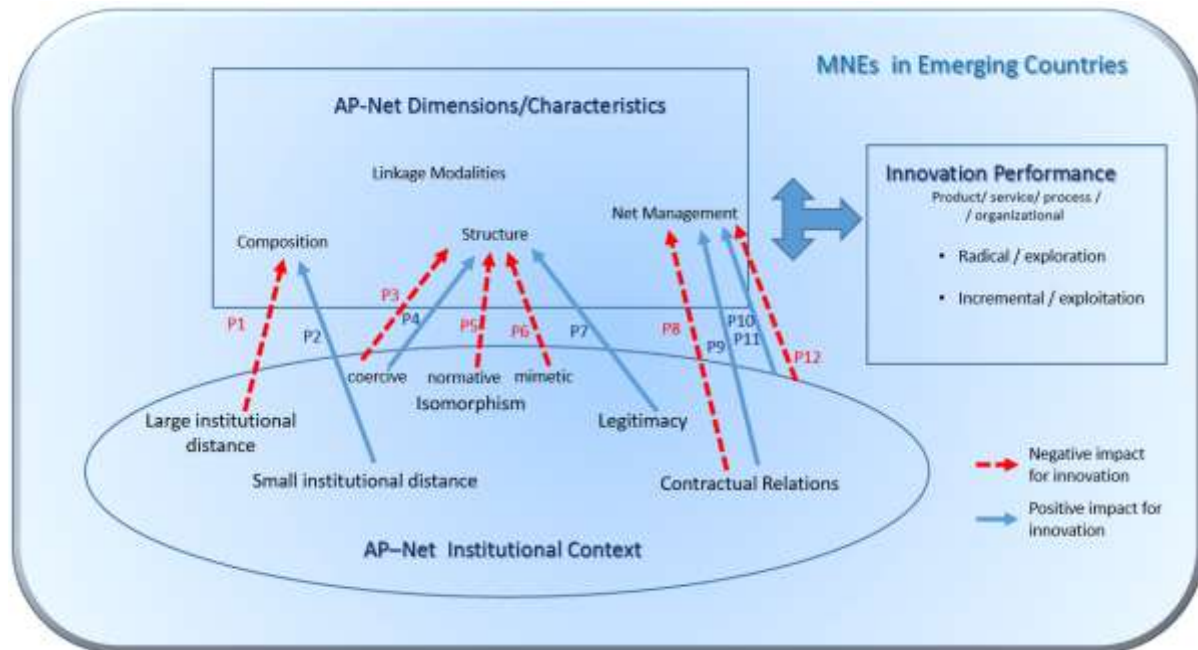


Figure 1 – Proposed Model

IMPLICATIONS, LIMITATIONS AND FUTURE RESEARCH

Despite some limitations, we believe that the research presented in this paper contributes to studies on alliance portfolios/ networks in the automotive sector, by taking into account the institutional issues that have a significant impact on innovation performance especially in emerging economies where firms in this sector generally include in their portfolios alliances with partners from different countries. Since most of our literature review involved bibliometric research, it is believed that the use of more data bases and qualitative analyses of the articles reviewed could help deepen the discussion of our findings. We also recommend testing our model by way of structural equation modeling in the scope of future field research.

Although, still only theoretical, our research can help managers of firms in the automotive industry to become aware of, and analyze, the institutional factors that should be taken into account when leveraging their alliance portfolio/networks with a view to improving their innovation performance. By establishing more trustworthy relationships in their APs, managers can modify their governance structures so as to reduce controls and transaction costs that often have a negative impact on innovation. Increasing the volume of technologically value-added products through innovations in the industry and ensuring lower costs are very important both for auto manufacturers and consumers who can thus benefit from a wider range of cars with novel features at more attractive prices. By understanding how the alliance portfolios/networks of multinational companies in emerging countries, such as Brazil, influence the ability to innovate in the automotive industry, the government could develop public policies that would strengthen the weakest links in the supply chain, reduce institutional distances, and help ensure a balanced foreign trade.

With emerging countries playing an increasingly important role in the global marketplace and the economic difficulties faced by developed countries, it would be interesting in future studies to also consider “reverse innovation”. Govindarajan and Ramamurti (2011) defined reverse innovation as the process in which innovation is first developed in emerging markets and then transferred to developed countries. This usually occurs in the case of alliances established by subsidiaries of MNEs from developing countries with local companies. Innovations involve combinations of new knowledge and new technologies with existing ones aiming at solving local problems of emerging countries in order to reduce costs and add value to products and

services. Another suggestion for future research would be to study in depth the cases of alliance portfolios for innovation of firms of several emerging countries, for example, China and India, which are important players in the automotive sector, and compare these cases' findings with those of innovation-oriented AI firms in Brazil.

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INNOVATIONS FOR INDUSTRY 4.0 IN THE CZECH REPUBLIC

Anna Putnová, Kateřina Novotná
Brno University of Technology, Czech Republic

Michal Putna
Masaryk University, Czech Republic

ABSTRACT

Industry 4.0 is another stage of industrial revolution. Based on digitization and smart links between system components across the entire production chain, this change may be expected to mark the coming decade. Apart from the state-of-the-art technology, computers, and artificial intelligence, good social and economic backgrounds are also needed to effectively adopt the new approaches powered by a comprehensive smart network of production machines. In addition to the technological parameters, the ability to innovate in the social and economic areas will also be crucial to the success of Industry 4.0. This paper is about the need of support for innovations. Although, undoubtedly, only one of the many conditions for the Czech economy to be able to face the challenges and utilize the opportunities of this new industrial phase, this support will be most important for learning and mastering the new workflows in Industry 4.0. Success in adopting this strategy will be instrumental to future competitiveness of the Czech Republic, as an industrialized European country. The paper demonstrates the need of new methods of management, new business policy, the setting of priorities in industry and new approaches to education and the job opportunities created.

Keywords: Innovations, Industry 4.0., Czech Republic

INTRODUCTION

The year 2011 may be seen as the beginning of the Industry 4.0 initiative born in Germany. Even if sometimes called a new industrial revolution, many experts characterize it as a “revolution by gradual evolution” (see for example Mařík 2016). Called the 4th industrial revolution in Europe, this is a new approach to production and service provision characterized by integrated solutions.

„The preceding three industrial revolutions were initiated by an upswing in mechanical steam-driven manufacturing machines, introduction of mass production based on electricity, and use of electronic devices in production, respectively. The current phenomenon is the interconnection of the internets of things, services, and people and the resulting huge amount of data generated by the machine-machine, man-machine, and man-man communication. The production environment is formed by the arrival of a number of other new technologies such as autonomous robots, big data analysis, computer simulation, and virtualization, cloud, additive production (3D printers) as well as augmented reality. These transform whole value chains creating opportunities for new business models while pressing for more flexibility of the current industrial production as well as increased cyber safety and interdisciplinary approaches. The Industry 4.0 initiative is not a mere digitization of industrial production, but a comprehensive system related to many human activities not only in industrial production “SPČR (Union of Industry and Transport of the Czech Republic).

The new industrial technologies have been reflected by all the advanced countries. Efforts to achieve massive automation in the industry can also be observed in the USA. There is an Advanced Manufacturing Partnership 2.0. Call supporting automation in industry.

A 2025 Initiative was launched in China with content very similar to that of Industry 4.0. Big companies in Japan have started an Industrial Value Chain Initiative concentrating tools for new forms of interacting systems. Even if being presented under different names in different territories, the substance of such initiatives is the same. At stake is the new future of production and services using cybernetics and artificial intelligence. The virtual and real worlds will become more interconnected, which is a revolutionary advancement. Such efforts aim to strengthen competitiveness and achieve economic prosperity. In this connection, there is a natural question of how the economies are prepared for such global changes. This paper is concerned with the preparedness of the Czech economy for Industry 4.0. It is based on the assumption that a company with a high innovation potential will better meet the Industry 4.0. requirements of the new technologies and the new way of management. As the Czech economy is closely related to the German one, it is in the Czech Republic's interest to keep up with this initiative.

The performance of the Czech economy and thus also its population's standard of living are strongly related to the industrial output. Industry creates 39.6 % of the Czech GDP and the Czech Republic is the EU's most industrial country (data from 2013). This is considerably more than the world's average proportion, which is 30.9 % (CIA, 2013). According to the 2013 figures, the Czech industry employs 28.7 % of the country's labour force (almost 1.4 million persons), which is the greatest proportion of industrial workers in the EU where the average figure is 16.5 % (Eurostat, 2013). The average wage of workers employed in the industrial sector is significantly higher than the overall average wage (ČSÚ, 2013). The Czech industry is among the traditional drivers of the domestic export, which is important particularly because the 2013 proportion of the export to the Czech GDP was 73 % (WB, 2013) with the production of machines, and transport vehicles (mainly automobiles) constituting 56.5 % of the total export (MPO, 2013), (Putna 2015).

The close economic cooperation with Germany is of vital interest for the Czech Republic. For this reason, too, it is necessary that the Czech industries should react to Industry 4.0 along with the German companies in order to cooperate and trade with them effectively in the future.

METHODOLOGY

The paper uses statistical methods and comparative analysis. It analyzes statistical data from the Czech Statistical Office.

To verify the impact of innovations on the corporate performance and revenue it employs sample correlation coefficient estimating the degree of linear dependence of the X and Y random variables (in this case, X is the number of innovations and Y the innovation-driven revenue by the formula:

$$R_{XY} = \frac{C_{XY}}{S_X S_Y}$$

To learn more about the innovation potential, the Czech companies were chosen according to their innovation activities. The effect of the company sizes, their innovation activities depending on the regions in which they are based were monitored as well as the industry branches with the most innovations and the relationship of innovation types in the Czech Republic. This study was a basis to get an overall view of the innovation potential of the Czech Republic, which will require constant monitoring in view of Industry 4.0. as well as adaptation of the environment after increasing innovation activities.

As mentioned above, Industry 4.0. is sometimes regarded as a revolution by gradual evolution. Innovations and Industry 4.0. both aim to boost competitiveness. Thus the paper will investigate the innovation performance in the Czech Republic making comparisons within the European and even worldwide scope. By analyzing the position of the Czech Republic, it will detect the strengths and weaknesses of the innovation potential as a prerequisite for successfully adopting a strategy for Industry 4.0.

Innovations – a way to Industry 4.0

Before presenting the most competitive economies, let us look at the way they are defined by the official statistics:

Innovations and their structure

In the past, innovations in companies were only regarded as technical changes. However, the managements of modern companies know that effective innovations can also be of an entirely non-technical type. It is worthwhile to recall the development and structure of innovations:

The term innovation comes from the Latin *innovare* meaning to recover. From its meaning it is clear, that it means novelty, newness or renewal in human activity, and for this reason, innovation is a necessary part of the human's life. Innovations in their widest meaning go beyond abilities of quantitative statistical survey, they present improvement in quality of progress of production, ecological and social spheres of the life.

Classification of innovations According to the new conception of innovation by the revised Oslo manual 2005, we have four main type of innovation:

- product innovations,
- process innovations,
- marketing innovations
- organizational innovations.

Product innovations can utilise new knowledge or technologies, or can be based on new uses or combinations of existing knowledge or technologies. The term “product” is used to cover both goods and services. Product innovations include introduction of new goods and services as well as significant improvements in the functional characteristics or user characteristics of existing goods and services. New products are goods and services that differ significantly in their characteristics or intended uses from products previously produced by the enterprises. Significant improvements to existing products can occur through changes in materials, components and other characteristics that enhance performance. Product innovations in services can include significant improvements in how they are provided (for example, in terms of their efficiency or speed), the addition of new functions or characteristics to existing services, or the introduction of entirely new services.

A process innovation is the implementation of a new or significantly improved production or delivery method. This includes significant changes in production techniques, equipment and/or software, as well as minimizing damage to the environment or safety risks. Process innovations include new or significantly improved methods for creation and provision of services.

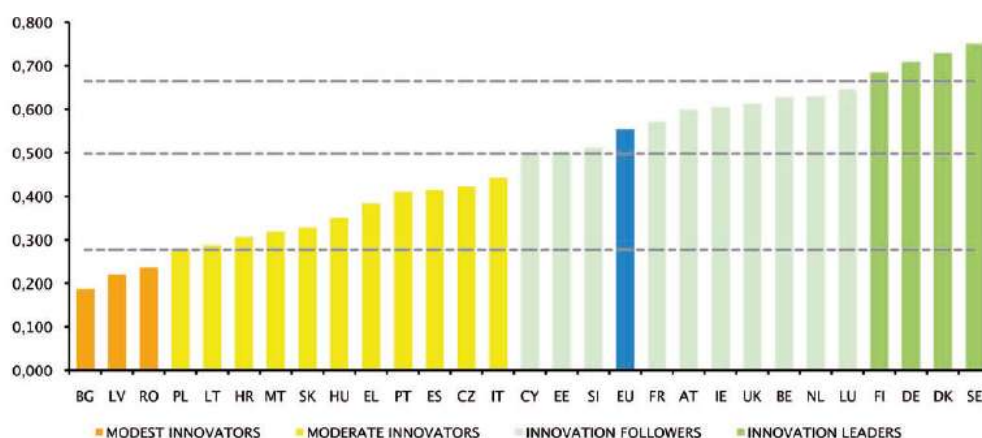
A marketing innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing. Marketing innovations are aimed at better addressing customer needs, opening up new markets, or new positioning of an enterprise's product on the market, with the objective of increasing the enterprise's sales. New marketing methods can be implemented for both new and existing products. Marketing innovations include significant changes in product design that are part of a new marketing concept the enterprise's goods or services.

An organisational innovation is the implementation of a new organisational method in the enterprise's business practices, workplace organisation or external relations. Its aim is to improve the quality of the enterprise's innovation capacity or performance characteristics. Organisational innovations in business practices involve implementation of new methods for organising routines and procedures for the conduct of work.

Source: Czech Statistical Office, abridged)

The innovation index is a long monitored economic factor. Below you can find comparisons in the European and worldwide context.

Diagram 1 - European Innovation Index



Note: Average performance is measured using a composite indicator building on data for 25 indicators going from a lowest possible performance of 0 to a maximum possible performance of 1. Average performance reflects performance in 2011/2012 due to a lag in data availability.

Source: European Innovation Scoreboard (2014, p. 11)

Table 5 - Bloomberg Innovation Index

Rank/Economy	Total score	R&D intensity	Manufacturing value-added	Productivity	High-tech density	Tertiary efficiency	Researcher concentration	Patent activity
1 South Korea	91.31	2	1	39	2	1	6	2
2 Germany	85.54	8	3	32	5	17	14	3
3 Sweden	85.21	5	16	16	9	16	5	8
4 Japan	85.07	3	13	29	5	34	9	1
5 Switzerland	84.96	7	8	3	10	25	13	5
6 Singapore	84.54	17	5	5	13	2	7	24
7 Finland	83.80	4	18	26	23	4	3	7
8 United States	82.84	10	26	8	1	37	21	4
9 Denmark	81.40	6	22	13	21	18	2	10
10 France	80.39	15	39	15	4	12	18	11
11 Izrael	79.81	1	35	35	7	29	1	20
12 Russia	78.85	31	27	18	8	3	27	15
13 Austria	78.45	9	11	14	30	7	11	13
14 Norway	77.07	21	43	1	12	24	8	19
15 Ireland	76.67	24	7	12	25	6	24	22
16 Belgium	76.19	13	23	10	21	31	22	17
17 United Kingdom	74.92	22	44	30	11	9	20	14
18 Netherlands	74.90	18	28	24	15	41	16	9
19 Canada	73.44	23	40	19	17	22	12	26
20 Australia	73.42	14	47	2	16	21	15	32
21 China	72.12	16	15	40	3	50	46	6
22 New Zealand	72.09	28	37	6	24	20	23	16
23 Poland	71.64	36	17	28	14	26	36	21
24 Slovenia	70.72	11	4	17	-	11	17	25
25 Malaysia	69.15	32	6	37	20	27	38	39
26 Italy	67.86	27	19	33	25	43	35	18

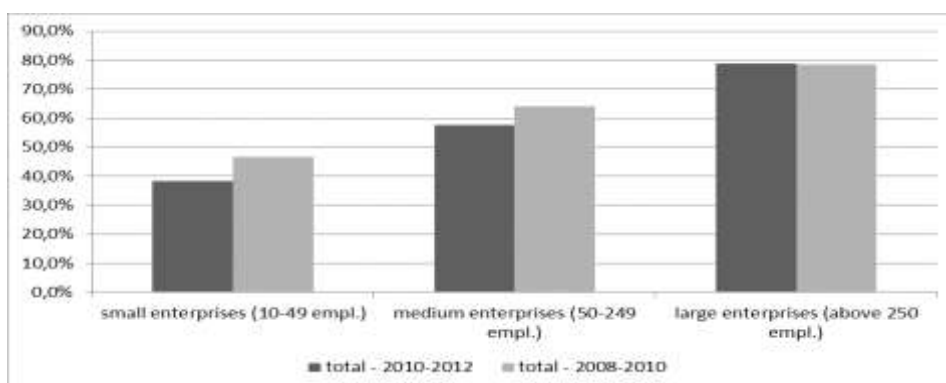
27	Spain	66.81	29	34	7	34	13	31	27
28	Iceland	65.96	12	30	31	-	39	4	23
29	Portugal	65.14	26	36	22	37	23	19	35
30	Hungary	64.66	25	10	44	28	45	33	34
31	Czech Republic	64.32	19	2	42	-	33	26	29
50	Kazakhstan	48.48	50	45	21	-	14	48	30

Sources: Bloomberg, International Monetary Fund, World Bank, Organization for Economic Cooperation and Development, World Intellectual Property Organization, United Nations.¹

RESULTS

We will be concerned with the reasons for this situation. The below diagrams show the number of innovating companies in the Czech Republic involved in innovating activities between 2008 and 2012.²

Graph 1 - Innovating activities of the Czech companies between 2008 and 2012 by size-class



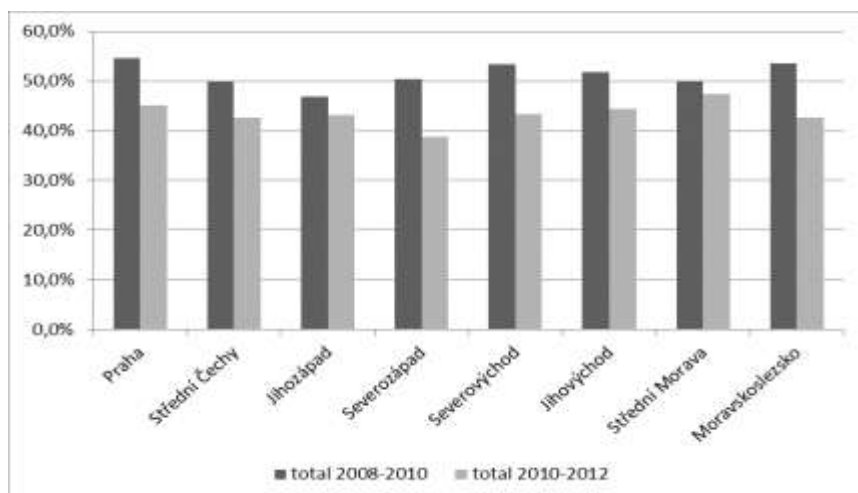
It is clear that the innovation activity either stagnates or decreases. This is an undesirable development, which is at variance with the innovation policy of the government. One of the possible causes can be found in the educational policy.

Graph 2 - Innovating activities of the Czech companies between 2008 and 2012 by regions

¹ Methodology: **R&D intensity**: Research and development expenditure, as % GDP. **Manufacturing value-added**: MVA, as % GDP and per capita. **Productivity**: GDP per employed person age 15+ and 3Y improvement. **High-tech density**: Number of domestically domiciled high-tech public companies – such as aerospace and defense, biotechnology, hardware, software, semiconductors, Internet software and services, and renewable energy companies – as % of domestic publicly listed companies and as a share of world's total public high-tech companies. **Tertiary efficiency**: Total enrolment in tertiary education, regardless of age, as % the post secondary cohort; % labor force with tertiary degrees; annual new science and engineering graduates as % total tertiary graduates and as % of the labor force. **Researcher concentration**: Professionals, including postgraduate Ph.D. students, engaged in R&D per million population. **Patent activity**: Resident patent filings per million population and per \$100 billion GDP; Patent grants as a share of world total.

All metrics are equally weighted. Metrics consisting of multiple factors were rescaled for countries void of some but not all data points. All sub-metrics were weighted equally. Most recent data available were used. Of the more than 200 economies evaluated, 84 had data available for at least six of the seven factors, and were ranked. Top 50 and the metric ranks among them are displayed.

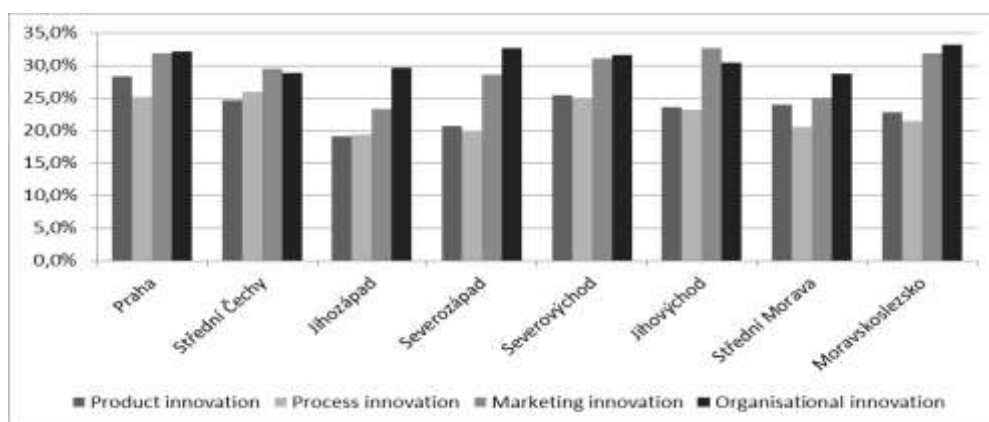
² The last statistics from year 2012



Statistics by place 2010-2012 and 2010-2008. Across the regions in 2008 - 2010 the innovation intensities are very little varied.

The below table shows the innovative activities by sectors in the Czech Republic.

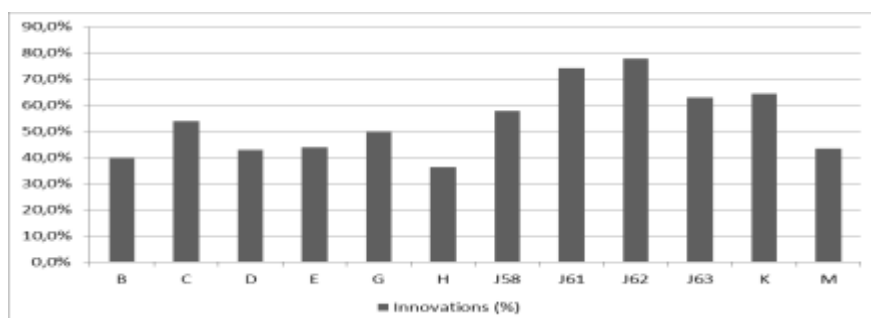
Graph 3 - Innovative enterprises by type of innovations during 2008–2012



In each class by place, the differences between innovation types are not great with marketing and organisation oriented companies being slightly dominant.

The below table shows the innovative activities by sectors in the Czech Republic.

Graph 4 - Enterprises with innovative activities



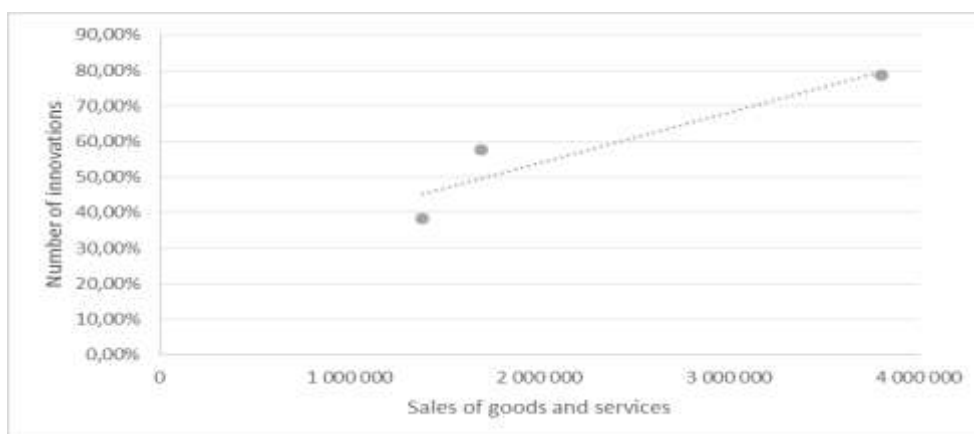
Statistics by sectors 2008-2010. The highest innovation intensity. Sectors J – Telecommunication and IT. The lowest innovation intensity. Sectors B - mining and quarrying and transportation and storage (see appendix).

Table 6 - Correlation between the number of innovations and the revenue in a company

	Number of enterprises	Sales of goods and services	Enterprises with innovative activities
Indicator		Million CZK	%
CZ total	5 449	6 873 368	43,90%
by size-class			
small enterprises (10-49 empl.)	3 001	1 383 413	38,2%
medium enterprises (50-249 empl.)	1 455	1 689 907	57,6%
large enterprises (above 250 empl.)	993	3 800 049	78,7%

Correlation = 0,927522442

Graph 5 - Correlation between the number of innovations and the revenue in a company



The above implies that, in the Czech Republic, the leaders are the large companies. The hypothesis that it is mostly small companies that have an innovation drive has not been confirmed.

It is only good that the Czech Republic's innovation potential is equally distributed. The fact that none of its regions is not significantly lagging behind is good news both for its economy and society. Regarding the future institution of Industry 4.0., this is no doubt an argument that will have to be taken into consideration when launching new structures.

In the light of the innovation structure, it is clear that marketing and organisational innovations slightly prevail, which is good news for adopting the new measures necessary for introducing Industry 4.0.

It is organisational innovations that are of key importance for instituting changes. Industry 4.0 will require fundamental changes in the approach to management, great emphasis on strategic management and diversity management. The correlation between the number of innovations and the revenue clearly points to the fact that economically strong companies are also leaders in innovations. Whether innovations in this case are the cause or the consequence remains to be seen. However gratifying it is that there are no big regional differences in the innovation activities, sadly, it is true that the Czech Republic is lagging behind in innovations. This is clear from its 31st position among the 50 countries on the Blomberg scale and from the fact that it belongs to the 3rd group of countries according to the European Innovation Scoreboard balance score. This should serve as a dire warning for the Czech economy so closely related to the German one.

To keep up with the advanced European countries is a big challenge for the Czech economy. German industry will invest a total of €40 billion in Industry 4.0 every year by 2020. Applying the same investment level

to the European industrial sector, the annual investments will be as high as €140 billion per annum (Koch at al. 2015).

Regrettably, it must be admitted that over the time, the Czech economy has lost its position of a strongly innovative one, a tradition dating from the times before the first world war and between the wars. It should, however, be pointed out that Industry 4.0 does not strictly targeted at a mere technological progress. It will also strongly influence whole society.

Management requirements and changes in the labour market

Industry 4.0 will bring a considerable change in labour organisation, professional structure, and requirements of workers' qualifications. The creative professions will no doubt be much in demand. There will be less need for manual labour while highly skilled workers will be much in demand. As the automation of production is increasing, the work to leisure time ratio will change, too. The amalgamation of the real and virtual worlds will affect not only the labour operations but also the way of spending the leisure time. New professions will come into existence while some traditional ones will lose importance or disappear. According to the Deloitte study, this is also a great opportunity for diversity management. Management will change with strategic planning having a much more prominent role than before.

Changes in the labour market will also necessitate new curricula and changes in the educational system. Each of the preceding industrial revolutions had brought about changes in the life style and had significantly affected the lives of people. We are now at the beginning of a new historical era that will also have impact on entire society. If the Czech economy wishes to keep up with Europe, a financial investment in Industry 4.0, too, will be necessary.

CONCLUSION

This paper sizes up the situation in the Czech Republic in terms of its preparedness for a new industrial revolution called Industry 4.0 focusing on its innovation performance. We believe that it is a strong indicator for the preparedness for adopting and implementing the new Industry 4.0 'revolution'.

„Innovations are regarded as one of the resources of economic growth “ (Hollanders and Arundel, 2005, p. 19). In addition, a more competitive economy is a key factor determining the long-term increase of a country's (potential) product (in Putna 2015).

We cannot agree with the evaluation of the situation as formulated in a study by the Ministry of Industry and Trade (2015), which is overoptimistic in regarding the performance of the Czech economy as rather favourable as compared to other Central and Eastern European countries. We believe that better conditions must be created for the Czech Republic's innovation performance by investing in education, requalification, and support for small and medium enterprises.

As it is, this is a challenge for the Czech Republic, to promote an economic policy preferring technological growth, innovations and support technical education. If the Czech economy wishes to keep up with Europe, a financial investment in Industry 4.0, too, will be necessary.

It is the duty of all those who deal with management both theoretically and practically to take these arguments into account while preparing changes. This has also been the aim of this paper.

APPENDIX

The below table shows the innovative activities by sectors in the Czech Republic between 2008 and 2012.

		Inova tions	Innovations	Innovative enterprises by type of innovations	The most important market for innovative enterprises
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	By size-class	(%)	technological	non-technological	Product innovation	Process innovation	Marketing innovation	Organisational innovation	Regional (within NUTS2)	National (within CZ)	EU countries, EFTA or EU candidate countries	All other countries
B	Mining and quarrying – B /5-9/	39,7%	29,7%	30,4%	16,0%	19,7%	21,2%	20,8%	38,7%	47,8%	13,6%	0,0%
C	Manufacturing – C /10-33/	54,0%	39,2%	42,9%	28,5%	24,9%	29,8%	30,5%	19,2%	49,9%	26,8%	4,1%
D	Electricity, gas, steam and – D /35/	42,8%	28,7%	32,9%	16,8%	21,5%	20,5%	28,1%	73,9%	25,2%	0,9%	0,0%
E	Water supply; sewerage, waste management – E /36-39/	44,0%	24,6%	37,3%	11,6%	20,1%	21,0%	28,7%	69,1%	25,6%	5,3%	0,0%
G	Wholesale trade, without vehicles – G /46/	49,9%	28,1%	44,2%	17,3%	20,1%	36,1%	30,6%	13,7%	79,5%	5,5%	1,3%
H	Transportation and storage – H /49-53/	36,4%	16,6%	32,1%	7,4%	14,0%	18,0%	25,8%	27,1%	50,8%	21,2%	0,9%
J58	Publishing activities – J58	57,8%	46,6%	48,7%	39,4%	27,5%	40,6%	28,3%	14,0%	80,1%	0,0%	5,9%
J61	Telecommunications – J61	74,1%	52,6%	60,3%	39,4%	28,6%	45,3%	40,5%	57,9%	42,1%	0,0%	0,0%
J62	IT activities – J62	77,9%	59,9%	60,6%	50,7%	35,1%	40,5%	53,7%	10,2%	69,6%	12,9%	7,3%
J63	Information activities – J63	62,8%	50,9%	47,6%	41,1%	29,8%	37,9%	42,0%	10,1%	64,5%	20,2%	5,2%
K	Financial and insurance – K /64-66/	64,4%	49,4%	57,4%	37,2%	36,0%	39,3%	50,6%	6,7%	87,2%	5,6%	0,5%
M	Professional, scientific – M /71-73/	43,4%	25,3%	36,5%	13,4%	15,5%	18,9%	26,9%	26,5%	62,8%	8,2%	2,5%

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SMALL RETAILERS' ATTITUDE TOWARDS AND KNOWLEDGE OF THE CONSUMER PROTECTION ACT

Pieter Jacobus van Schalkwyk and Ayesha L. Bevan-Dye
North-West University, South Africa

ABSTRACT

In South Africa, the Consumer Protection Act (68 of 2008) (CPA), was enacted for the purpose of protecting consumers from unethical business activities and to replace existing but outdated laws. For the CPA to have its intended consequences, it has to be generally understood, accepted and applied. This study was undertaken to measure small, independent retailers' knowledge of and attitude towards the South African Consumer Protection Act. The gathered data indicates that although most of the retailers in the sample were not yet familiar with the Act, most were positive about the CPA and recognized the need for greater consumer protection.

Keywords: Consumer Protection Act, Consumer Rights, Small Retailers, Attitude, South Africa.

INTRODUCTION

The fall of apartheid and the end of sanctions heralded a new phase for the South African economy, which experienced doubled economic growth, lower interest rates, a diversification of the production base, new opportunities for foreign trade and a general improvement in living standards (Nowak & Ricci, 2005, p.4). South Africa now had a constitution that protected basic rights such as the right to dignity, freedom of association and freedom from discrimination. However, the rights of consumers were still lacking and South African consumers were still vulnerable to unfair business practices due to the imbalance of power between consumers and retail businesses, as well as service providers (Reddy & Rampersad, 2012, p.7407). Social problems such as low literacy and high poverty compounded these problems, which led government to implementing laws aimed at greater consumer protection (South African Government Gazette, 2004, p.4).

South African contract law, traditionally used to regulate business transactions, was based on the assumption that the parties have equal power to negotiate (Cockrell, 1997). This assumption did not reflect the reality of the situation, given that retailers typically have more power than individual consumers and that standard contracts used by service providers are not open to negotiation (Woker, 2010). These laws were limited to enforcing contracts or payment of damages (Van Huyssteen *et al.*, 2010). Furthermore, the laws were not codified and the different pieces of legislation were not coordinated, they were relatively unknown by consumers and, essentially, did not provide adequate protection for consumers (Woker, 2010). Many consumers lack the knowledge and experience necessary to negotiate fair contracts and this leaves them vulnerable to exploitation, unethical marketing practices and unfair contracts (Reddy & Rampersad, 2012). The Consumer Protection Act (68 of 2008) (CPA) was promulgated to rectify these problems and to codify the law, and provide greater protection to vulnerable individuals. The CPA influences every aspect of doing business, from franchise agreements (Louw, 2011) to marketing (Kirby 2009). The CPA has changed the very foundation upon which the South African markets function, by codifying and, in some instances, replacing existing laws such as South African contract law (Reddy & Rampersad, 2012).

Not all stakeholders are excited about the changes. According to Strachan (2011:18) South African legislation regulating business is already onerous, and that the CPA will add another burden. South Africa is 73rd in "ease of doing business" according the World Bank (2016:234) and red tape for businesses already costs the

South African economy R78 billion a year (Lewis, 2012). Legislation such as labour law, Black Economic Empowerment (BEE) requirements, and South African Revenue Service compliance certificates make it very difficult for small businesses to enter the market according and in a country like South Africa that struggles with high unemployment, more should be done to easy entry into the market for small businesses instead of creating more hurdles (Lewis, 2012)

South African consumers have however welcomed the implementation of the CPA, as is evident from the high volumes of complaints received by the regulatory authority (Parliamentary Monitoring Group, 2011). According to the Parliamentary Monitoring Group (2011), the National Consumer Commission has received an average of 8 000 calls and more than 2 000 e-mails, faxes or letters per month through its call centres. The retail sector has received the highest number of complaints followed by the motor industry, and the mobile and telecommunication sectors (Parliamentary Monitoring Group, 2011). The high number of complaints being received raises an important question - are business wilfully ignoring the CPA or does this lack of compliance stem from an ignorance of the law. According to Knowler (2012a), the reason may be both, smaller shops or retailers are often ignorant of the law, including the CPA and some simply choose to misrepresent consumer rights when it suits them. Because the CPA is open to interpretation in many respects, retailers interpret the law in such a way that favours the retailer at the expense of the consumer (Knowler, 2012a). For instance, certain cellular phone retailers argue that a cellular phone contract does not constitute a sale of a cellular phone and South African Airlines (SAA) have chosen to ignore the CPA and a declaration by the National Consumer Commissioner (NCC) that they should refund consumers for cancelled bookings (Knowler, 2013). Thus both enforcement and awareness remains a problem, and that retailers often act with impunity (Knowler 2012b).

The principle of *ignorantia juris non excusat*; that is, ignorance of the law is no excuse, is not applied in South Africa anymore (S v De Blom, 1997). However, that being said, an obligation still rests on an individual or business owner to familiarise himself/herself with the laws that are applicable to his or her business. Jacobs *et al.* (2010) sums up the situation by stating that whilst retailers face an onerous task in implementing the provisions of the CPA as well as incurring additional costs such as insurance and training staff, ultimately, the CPA will contribute to ending many of the exploitive practices in the market and retailers should, therefore, welcome its implementation.

This study was undertaken to measure small independent retailers' knowledge of and the attitude towards the CPA since awareness and enforcement of the CPA remains a problem, and this prevents many consumers from reaping the full benefits the Act is supposed to provide (Knowler, 2012b).

RESEARCH METHODOLOGY

Participants

The participants of this study were small, independent retailers in the Vaal Triangle, South Africa. Chain stores and franchises were excluded since their policies are not made at branch level and their responses may reflect their knowledge of their own policies rather than accurately measuring their knowledge of the CPA. According to South African law, a small retail business is independently owned, has a total asset value, including fixed assets, of less than R3 million, a yearly gross income of less than R19 million, less than 50 employees (National Small Business Act, 1996) and is a separate and distinct business entity, managed by one or more owners (National Small Business Amendment Bill, 2004). The participants were vetted using the metric of number of employees rather than asset value or gross income because it was assumed that they would be hesitant to divulge financial information.

Instrument

The study used a self-administered, standardized questionnaire that was divided into four sections. Section A dealt with demographical information and included screening questions to ensure that all participants were part of the target population. Section B measured perceived knowledge of the CPA on a six-point Likert scale. Section C measured the small retailers' attitude towards the CPA. This is done using a seven-point Likert scale,

which provided a neutral option for participants who had not yet read the CPA, and thus could not yet have not formed an opinion. Section D of the questionnaire dealt with actual knowledge of the CPA. This section consisted of 20 questions measured on a three-point Likert scale. These questions were adapted from the CPA.

Results

Of the 43 study participants, 33 percent were owners of private companies, 28 percent were sole proprietors, 25 percent were closed corporations and only 14 percent were partnerships. The largest share of the participants were clothing, food and electronic retailers. The sample also included furniture, jewelry, beauty, toys, sports and hardware retailers. Most of the participants were well established, with 46 percent of the participants indicating having been in existence for longer than ten years, followed by 19 percent who indicated being in existence between six and ten years, 26 percent for between three and five years and 9 percent for less than two years. In terms of level of education, 51 percent of the participants indicated their highest qualification as Grade 12 or less, 26 percent a diploma, 16 percent a degree and 7 percent indicated having a post graduate degree. Concerning number of employees, 77 percent of the participants had less than four full-time employees, 16 percent had between five and nine, five percent had between 10 and 19, and two percent had more than 20 full-time employees.

Table 1 presents the descriptive statistics and results of a one sample t-test computed on the captured data using IBM's SPSS program. For the one sample t-test, the expected mean was set at 3.5 given the six-point scale and the level of statistical significance was set at $p \leq 0.05$.

Table 1. Descriptive statistics, t-score and p-value

	Mean	Standard deviation	t-score	P-value
Attitude towards CPA	4.30	1.056	4.72	0.000

As can be seen from Table 1, with a mean of 4.30, the evidence in the sample suggests that small independent retailers have a statistically significant positive attitude towards the CPU. The next step in the analysis was to measure their actual knowledge of the CPU by determining the average percentage achieved, the percentage of participants who achieved 50 percent or above of their responses correct, the percentage who scored less than 50 percent and percentages achieved. These results are reported in Table 2.

Table 2: Actual knowledge of the CPU

		Frequencies	Percentage (%)
In looking at the participants' actual knowledge of the CPA, a disturbing picture emerges. Fewer than half of the participants achieved at least 50 percent correct responses, with the	Mean percentage		46.51
	Participants who achieved 50 percent or above	21	48.8
	Participants who achieved less than 50 percent	22	51.2
	Percentage achieved		
	20%	1	2.3
	25%	2	4.7
	30%	2	4.7
	35%	6	14
	40%	5	11.6
	45%	6	14
	50%	7	16.3
	55%	7	16.3
	60%	3	7.0
	65%	1	2.3
	70%	3	7.0
	Total	43	100.00

average score being 46.51 percent. Just over 26 percent achieved a score of below 40 percent, while 51 percent obtained a score below 50 percent. The majority of participants scored between 35 percent and 55 percent. Close on 42 percent achieved a score between 50 and 65 percent but only 7 percent achieved a score of 70 percent. Not one of the participants achieved a score above 70 percent.

Of the participants, 91 percent understood that contracts must be in easily understandable language, 79 percent of the participants understood that customers may refuse marketing material, and 72 percent of the participants understood that customers may choose to pay the lower price if two prices are displayed on a product. Some of these rights existed before the CPA came into existence, as they could be found in both common law as well as legislation such as the Consumer Affairs (Unfair Business Practices) Act of 1988; Trade Practices Act of 1976; Sales and Service Matters Act of 1964; Price Control Act of 1964; and Merchandise Marks Act of 1941, and it is debatable whether participants' knowledge of these rights are due to actual knowledge of the CPA or rather the result of retail experience and common knowledge. Looking at the questions with lower average scores, many retailers are still unaware of the changes brought about by the CPA. For example, 67 percent of the participants still believe that consumers may be trapped into long-term contracts without the right to renege on such a contract, and 77 percent of the participants were under the mistaken impression that goods may be sold as is, regardless of hidden defects. In addition, 91 percent of the participants were unaware that consumers do not have to pay for unsolicited goods and 84 percent were unaware that network marketing is now illegal.

This indicates that most retailers are either unfamiliar with the CPA or have only a cursory knowledge of the Act. This seems to be at odds with the fact that 88 percent of participants indicated that they are familiar with consumer rights, but is in line with the fact that only 45 percent of the participants indicated have studied the CPA.

Pearson's product moment correlation was then run to determine whether there was any association between actual knowledge of the CPU and attitude towards the CPU. The correlation matrix is presented in Table 3.

Table 3: Correlation matrix

	Knowledge	Attitude
Knowledge	1	
Attitude	.165	1

As is evident from Table 3, while there is definitely a positive relationship between the two, with increased actual knowledge of the CPA relating to an increasingly positive attitude towards the CPA, this relationship is not statistically significant ($p > 0.05$) and has only a small effect size (Cohen, 1992).

CONCLUSION

This paper reported on the results of a study conducted on the attitude towards the Consumer Protection Act (CPA) and the actual knowledge by small retailers. The purpose of the study was to determine whether small, independent retailers had a positive attitude towards the CPA, making it more likely that they would implement the changes brought about by the CPA and whether they had the actual knowledge regarding the CPA that would enable them to implement the law. The study was limited to independent retailers in the Vaal Triangle, South Africa which limited the sample size. It is recommended that future studies should encompass independent retailers from across all nine South African provinces. Determining how franchises implement changes and change their policies to fit new regulations can also help in developing a process to ensure compliance in independent retailers.

Although great emphasis has been placed on consumer education this will fall short of its intended effect if the focus is solely on consumers. Retailers also have to be made aware of retailers' responsibilities towards consumers. This study shows that although retailers' knowledge of the CPA is inadequate and falls far short from their perceived knowledge of consumer rights, they are aware of the need for greater consumer

protection and have a positive attitude towards the CPA. Given the huge penalties that can be imposed for non-compliance, retailers should make every effort to implement the changes. The research shows that they have a positive attitude towards the changes and thus the onus now rests on government to make the CPA available in an easy to understand format to allow retailers, who are generally willing, to comply with the Act.

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ASSESSING THE FACTORS THAT INFLUENCE CONSUMERS' ATTITUDES AND BELIEFS TOWARDS THEIR PURCHASE INTENTIONS OF ORGANIC FOOD PRODUCTS IN SOUTH AFRICA

Selisha Singh and Norman Chiliya
University of the Witwatersrand, South Africa.
Christopher Tarisayi Chikandiwa
University of KwaZulu-Natal, South Africa.
Kudakwashe Chodokufa
University of South Africa, South Africa

ABSTRACT

The primary objective of this research study was to determine factors that influence consumers' attitudes and purchase intentions towards organic food products. Based on the literature review on organic food products, a conceptual model was developed to examine the factors that influence consumers' attitudes and beliefs towards their purchase intentions of organic food product. Factors investigated in this study are knowledge levels of consumers, health consciousness of consumers, the availability of stores which stock organic food products, the price influences and the perceived value and satisfaction gained from consuming organic food products. A quantitative research methodology was adopted for this study. The research made use of a 5-point Likert questionnaire. The researchers were able to collect 230 questionnaire respondents in the Johannesburg area. Structural Equation modelling and Amos were used to analyse the data. Knowledge levels about organic food, availability of stores and perceived value had the most effect on consumers' attitudes and purchasing patterns towards organic food products. The organic food industry needs to pay more attention to occasional buyers and communicate clearly the benefits and health implications in order to attract new consumers.

Keywords: organic food, purchase intention, consumer, consumer attitudes, choice

INTRODUCTION

The organic food market has witnessed an increase in the demand of organic food products among many consumers in many countries today. A vast number of countries are engaging in modern eco-friendly farming methods (Dunn, Bórawski, and Pawlewicz, 2014). Biodynamic agriculture which is commonly known as organic farming came as a result of the World's first organic seminar which was held by Rudolf Steiner and took place at Koberwitz in Silesia, Poland (Dunn et al., 2014). Organic agriculture was defined as a production system that supports the health soils, ecosystems and its people. Organic farming methods depend on ecological processes, biodiversity and mostly make use of farming cycles that adopt local conditions instead of making the use of inputs with adverse effects (Komorowska, 2014). Organic farming can be seen as a production system that largely excludes the use of synthetically compounded fertilisers, growth regulators, pesticides and livestock feed additives in farming activities (Dunn et al., 2014).

The curiosity in the emergence of organic farming began in highly developed countries as a result of social awareness about negative side effects of intensive agricultural production (Komorowska, 2014). In recent decades, many consumers have begun to change their buying habits of everyday products due to the rise in awareness of ethical consumer products (Kavaliuske and Ubartaite, 2014). This has led to many consumers

basing their buying decisions on ethical values by making the choice to choose environmentally friendly products over conventional products.

Marketing experts are trying eagerly to persuade consumers that organic food is the better route to go these days as it is seen to be healthier. Unkovska and Ulkack (2015) group organic consumers into three classifications. Firstly: the organic maximalist. These consumers purchase as much organic food as possible. This consumer group consists mainly of households that will consume a wide and stable array of organic food products. Secondly the organic seeker, these are consumers that purchase an amount of organic food that varies in quantities. This consumer group consist of those consumers who purchase an array of organic food products that depends on a current situation, such as the season and supply. Lastly, the organic box consumer purchases a stable variety of organic food products where positive personal experience is an important influencer.

Lim, Yong and Suryadi (2014) indicate that the organic food market industry still remains a niche market in many countries. As a consumer living in South Africa, it is highly important that one is responsible in taking care of their health and wellbeing. One of the ways in achieving this, is a consumer must recognise the importance of food safety. Food safely plays a crucial role when a consumer wants to adopt a healthy lifestyle. When a consumer is concerned about food safety, they will search for food that does not contain chemical, genetically modified organisms (Kavaliauske and Ubartaite, 2014). The consumer's personal choice of a particular healthy diet which contains mainly organic food products that the consumer wants to be identified in a particular way by others surrounding them therefore leading to some social status associated with the purchase of organic food products (Von Essen and Englander, 2013).Gottschalk and Leistner, (2012:96) state that many consumers seek and show interest in the availability of locally grown food products, reliable, trustworthy information and an easy comparison indicator with non-organic food products. There is a growing demand for organic food products driven by consumers' perceptions and ideas of quality and safety foods and the positive environmental impacts of organic agricultural farming (Thomas, Thomas and Joseph, 2009:30).

This research paper examined the factors that influence consumers' attitudes and beliefs towards their purchase intentions on organic food products. The study explored the knowledge levels of organic food products of consumers', determining whether consumers' are aware of the environmentally friendly farming methods in order to help them live a healthier lifestyle. This research paper examined factors such as health consciousness of a consumer, the availability of stores which stock organic food products, price influences and assess perceived value and satisfaction gained from using organic food products.

PROBLEM STATEMENT

It is important in today's age and time that consumers' in South Africa need to engage in living a healthy lifestyle by being aware of the foods they consume. The consumers are highly encouraged to take into account issues such as food safety, which in turn raises the need for a consumer to show interest in consuming more organically produced food products (Kavaliauske and Ubartaite, 2014). Dunn et al., (2014) state that the emergence of organic farming practises is vigorously expanding in many developed countries. South Africa can be seen as one of the developing countries where the demand for organic food is increasing at a steady pace (Lunn, 2000).

Dunn et al., (2014) raises an issue that the price of organic food seems to be higher than normal conventional food which in result directly affects a consumers' purchasing decision. However, Dunn et al., (2014) further state that an increase in the demand for organic food will lead to a drop in price, which will encourage consumers' to increase their purchasing behaviours of organic food products for a healthier lifestyle.

Larceneux, Benoit-Moreau and Renaudin (2012) mention that organic labels have gained high recognition in many developed countries but organic food products still represent a small part of the total consumption. This raises many issues where marketers are now questioning organic food label efficiency. The main issue is that South Africa needs to develop more farms that practice organic agriculture (Lunn, 2000). In order to develop an organic farm, a farmer needs financial, educational and organisational support. These key

aspects will help spread the knowledge about organic farming and improvements of marketing organically produced food products (Dunn et al., 2014).

Anisimova and Sultan (2014) express that it is crucial for marketers to take into consideration consumer benefits as a factor to brand communication, organic knowledge level and consumer trust of the organic product in order to mediate the influence of consumers' intentions to purchase organically produced food product.

There has been limited published research based on South African consumers' attitudes and beliefs of organic food products. The organic food market in South Africa still remains a niche market. The consumption of organic food in South Africa is still seen to be very slow although it is growing at a steadily pace (Du Toit and Crafford, 2003).

FACTORS INFLUENCING ATTITUDES AND BELIEFS OF CONSUMERS TOWARDS ORGANIC FOOD PRODUCTS

Consumers' knowledge level of organic food products

A consumers' knowledge level comes in different forms. Practical knowledge is knowledge that is instrumental or central to one's work or profession. Intellectual knowledge is seen to satisfy one's logical curiosity. Spiritual knowledge is closely linked to one's religious beliefs. Unwanted knowledge makes up the outside of one's interest, usually accidentally acquired knowledge (Rich, 1997). Acquiring the significant knowledge is a factor that plays and influence on a consumer's awareness and understanding of a certain product or brand (Briz and Ward, 2009).

A consumer's knowledge about food safety is highly relevant for this study. It is crucial that consumers are equipped with the relevant knowledge with regard to appropriate safeguards in the selection and choices of their food. This is largely due to many chemicals and pesticides being used more often than usual to produce food. Food safety requires the activities of proper handling from the production phase all the way to the final consumption of the food product. Previous research shows that at least 20% of consumers do not know how to reduce the risks of harmful conventional farming methods. Food safety knowledge can be obtained through various sources of print media, such as food and health magazines, newspapers and by simply just reading and analysing the food label (Bruhn and Schutz, 1999). Bruhn and Schutz (1999) present the following findings in their research: 90 percent of consumers are confident and knowledgeable when it comes to the safety aspect of organic fruit and vegetables; however 70 percent of consumers showed to be knowledgeable in aspects dealing with organic poultry and beef products. Aertsens, Mondelaers, Verbeke, Buysse and Van Huylenbroeck, (2011) state that knowledge levels play an important role in increasing the consumption of organic food products among consumers today.

H1₀: A consumer's knowledge level of organic food products influences their attitudes and beliefs towards their purchase intentions of organic food.

Health consciousness of consumers

Health conscious consumer can best defined as a consumer who is mindful and concerned about their state of health. Health conscious consumers are generally driven to improve their well-being along with avoiding illnesses. Such practices can be closely linked to physical activity and nutrition (Michaelidou and Hassan, 2008:170). Previous research shows that there are several reasons for the ongoing movements towards purchasing organic food products within literature from the United State of America, Europe, United Kingdom and Australia. One of the main reasons that came across is that consumer's purchase organic food product because they are concerned with their individual and household health. Consumers seek quality and safety food products and many of these consumers are now conscious and taking the environment into consideration when making their food product choices and purchases (Michaelidou et al., 2008). Food consumption patterns of many consumers is changing rapidly across the World as a result of environmental and health concerns. More and more consumers are now becoming aware of the dangerous health hazards associated with processed food

and the intensive farming methods used to produce these food products (Du Toit and Crafford, 2003). Many consumers seek the urgency and need to consume food products that will benefit their health and prevent serious complications with their health that may arise in the long run. Consumers therefore show interest in looking for food products that will provide them with nutritional value to improve the status of their health (Lockie et al., 2002). Food products on supermarket shelves today have become more incorporated with health aspects and therefore this results to consumers being more informed about nutritional value. It is always regarded as better when there is a higher nutritional value added to food product (Du Toit and Crafford, 2003).

H2₀: Consumers are health conscious awareness influences their attitudes and beliefs towards their purchase intentions of organic food.

Availability of stores selling organic food products

Perceived availability refers to whether a consumer feels they can easily obtain or consume a certain product (Vermeir and Verbeke, 2007). Initially in the early 70's, organic food products were only available through direct sale by organic food farmers or in speciality and specific health stores (Gottschalk and Leistner, 2012). The issue regarding the availability of organically produced food products highly impacts and influences a consumer's ability to consume these products. Curl Beresford, Hajat, Kaufman, Moore, Nettleton and Diez-Roux (2013) found out that organic food products are not easily accessible and available in all communities. This affects the consumer's intention to purchase organic food products (Curl et al., 2013).

The availability of stores factor is seen to be a barrier for consumers. Many consumers have to invest their time and effort in searching for supermarkets that stock organic food products. Tsakiridou et al., (2008) state that many consumers are still sceptical when it comes to the quality of organically produced food products. This is due to the lack of the availability of organic produce in many communities. Tsakiridou et al., (2008) mention that the lack of the availability of organic produce due to the insufficient promotion that is being focused on organic food products and the unclear declaration of the organic status. Du Toit and Crafford (2003) however emphasise that most of the major supermarkets in South Africa stock organic food products but the downfall occurs when these supermarkets do not make the effort to promote their availability of organic food products to interested consumers that seek these products. Du Toit et al., (2003) also found that many organically produced food products were only available in speciality and health stores as well as in certain major supermarkets across South Africa. Many consumers spend extra time and effort locating these speciality and health store and therefore. Therefore, the main purchase criteria affecting consumers attitude and beliefs towards their intention to purchase organic food product is the availability factor.

H3₀: Consumers' feelings towards the availability of stores offering organic food products influence their attitudes and beliefs towards their purchase intentions of organic food.

Price influences and perceived price

Many consumers are willing to make the effort and to pay a premium for organically produced food products in order to benefit the environment (Lockie, Lyon, Lawrence and Mummery 2002). Lea and Worsley (2005) state that consumers are constantly interested and willing to pay a premium for improved environmental performance than that of other attributes affecting organically produced food products. Young consumers are shown to be more environmentally conscious but less willing to pay a premium for organically produced food products due to their low purchasing power. However older people are seen to be more health conscious and therefore they are willing to pay a price premium for organically produced food products (Tsakiridou et al., 2008). Tsakiridou et al., (2008) found factors that affect a consumer's willingness to pay a price premium for organically produced food products. These factors consist of quality of the product to deliver on expected expectations and product performance and the trust in the certification of the product and the name brand. Marian, Chrysochou, Krystallis and Thøgersen (2014) found that high prices generate less repeat purchases of organic products than low or medium prices and as well as high prices generate more cross-purchases of organic products than low and medium prices.

H4₀: Prices of organic food products influence attitudes and beliefs towards customer's purchase intentions of organic food.

Perceived value and satisfaction gained from organic food products

Perceived value can be described as the difference between the value the consumer gains from owning and using a product and the cost of obtaining the product. Consumers are satisfied if a product's performance lives up to or exceeds their expectations, which leads to satisfying their specific needs and wants (Ness, Ness, Brennan, Oughton, Riston and Ruto; 2010). Lulfs-Baden, Bolten and Kennerknecht (2009) found out that consumer enthusiasm is a more accurate factor in consumer satisfaction. Consumption of food concerns the satisfaction of basic human needs and is part of everyday life (Gottschalk and Leistner, 2013). Many consumers also regarded organically produced food products to be less appealing but in turn tasted much better than conventional food and consumers felt a sense of satisfaction as they knew they were putting food that contains natural nutrients into their bodies opposed to food that contained pesticide residues and were forcefully grown. Therefore many consumers showed a high level of security in the food they were consuming and therefore lead to high levels of perceived value and satisfaction (Du Toit and Crafford, 2003). Marketers need to make the effort to promote organically produced food products and contain messages that consider psychographics, which include consumers' personal values in the promotion message. Evidence in Gottschalk and Leistner (2012) research study shows that a sense of social identification is one of the most powerful factors influencing the consumption of organically produced food products. Extensive media coverage of the environmental and nutritional topics can be seen to have resulted in an increase in social pressure to buy organically produced food products.

H5₀: Customers' perceived value and satisfaction of organic food products influence their attitudes and beliefs towards their purchase intentions of organic food.

METHODOLOGY

Quantitative research

The study at hand adopted a quantitative research approach. Quantitative studies allow for the examination of data to pinpoint and confirm correlations among variables of interest (Hair, Money, Samouel and Page, 2007). Quantitative research study is known to follow a scientific method usually descriptive in nature and helps the researcher to determine various causal relationships between variables (Berndt and Petzer, 2013). It also allows the data to be interpreted using statistical analysis (Berndt and Petzer, 2013).

Population

The population of the study were residents residing in the City of Johannesburg. The reason the researchers chose Johannesburg was because the researcher finds it convenient to assess individuals who are easily accessible and available. The questionnaires were sent out to 300 respondents from Johannesburg and 230 usable questionnaires were received back.

Sampling Technique

This study made use of the non-probability sampling namely convenience sampling. Non-probability sampling refers to the process where participants have a unknown chance of being part of the sample. It is important to remember that when using convenience sampling, that the individuals who volunteer to participate in the study may differ to those individuals that opt to participate in the study. It must be noted that the use of convenience sampling method allows researchers to get as many questionnaires completed in a fast and economically way (Zikmund, Babin, Carr and Griffin, 2010).

Instrument design

The questionnaire used for this study consisted of three sections. Namely, section A, B and C. Section A included questions aimed at determining whether the consumers have a good or a poor understanding of organic food products in South Africa. Questions sought a respondent's level of knowledge of organic food products, whether they know what the term "organic" implies and whether they are aware that organic products exist in supermarkets. Section B consisted of a series of questions based on purchasing patterns of the consumers. This section addressed the frequency in purchasing organic food, the consumer's preferred shopping places, the type of organic food products the consumer purchases and their specific reasons for purchasing them. Section C gathered information on consumers' opinions and attitudes towards organic food products and organic food prices. A five point Likert scale was used for this section, where 1 represented strongly disagree and 5 represented strongly agree.

Data Collection

Questionnaires were distributed by hand to students who attend the University of Witwatersrand as well consumers in shopping malls where organic food products are available in stores. In order to obtain a representative of respondents, questionnaires were handed out at different times, weekdays, weekends, mornings, mid-afternoons and as well as late afternoons. The researcher will approach consumers as they entered the store.

Table 1 represents the demographic information of the participants. The majority of participants that took part in this study were between the ages of 18 and 29 (35.2%). Participants, with the qualification of an undergraduate degree made up most of the sample size (40%). The sample consisted mostly of female participants (57.4%), who made up for more than 50% of the sample size. Participants who fall under the social class-"middle class" were the largest group of respondents (47%). The majority of the participants, who participated in this study, fell in the category "I buy organic food but not regularly" (42.6%).

Confirmatory factor analysis

Confirmatory Factor Analysis (CFA) aims to confirm if the number of factors or constructs and the loadings of observed or indicator variables on them conform what is expected, based on the theory. CFA is used to check if the indicator variables load as predictor variables on the expected number of factors (Malhotra, 2010).

Table 1: Sample Demographic Characteristics

Age	Frequency	Percentage
18-29 age group	81	35.2
30-39 age group	66	28.7
40-49 age group	35	15.2
50-59 age group	41	17.8
60-70+ age group	7	3.0
Total	230	100%
Qualification	Frequency	Percentage
Matric Certificate	38	16.5
Diploma	68	29.6
Undergraduate Degree	92	40.0
Postgraduate Degree	32	13.9
Total	230	100%
Gender	Frequency	Percentage
Male	98	42.6
Female	132	57.4
Total	230	100%
Social Class	Frequency	Percentage
Lower Class	16	7.0
Working Class	71	30.9
Middle Class	108	47.0
Upper Class	35	15.2

Total	230	100%
Category	Frequency	Percentage
1-I have never bought organic foods and I am not thinking about buying organic foods now	4	1.7
2- I have never bought organic foods and I am definitely planning to buy organic foods in the future	59	25.7
3- I buy organic foods, but not regularly	98	42.6
4- I buy organic foods on most trips to marketplace	69	30.0
Total	230	100%

The model for the attitudes and purchase intentions is a good fit as indicated by the value 2.689, which is recommended to be below 3. The RMR value (0.049) for the model is also indicative of a model fit as the values are below the recommended value of 0.1, according to (Malhotra, 2010). According to (Malhotra, 2010), the GFI value of above 0.9 represents a good model fit. The GFI value (0.838) of the model is slightly below 0.9 but when rounded up, it is 0.9, so we can say that this model represents good model fit. The CFI value is also recommended by (Malhotra, 2010) to be greater than 0.9. The CFI value (0.87) of this model, when rounded up, is 0.9, therefore it is a good fit. With respect to RMSEA, a value below 0.6 represents a good model fit and a value below 0.08 suggest that the fit of the model is acceptable (Malhotra, 2010). Therefore the RMSEA value (0.09) of this model can be seen to be moderately acceptable as it is only 1% more than 0.08. The research constructs which constitute the conceptual model, were estimated by means of reflective indicators. These results have been summarised in table 2:

Table 2: Accuracy Analysis Statistics

Research Construct		Descriptive Statistics				Cronbach's Test		C.R. Value	AVE Value	Factor Loading
		Mean Value		Standard Deviation		Item-total	α value			
AB	AB1	3.41	3.704	0.814	0.711	5	0.784	0.791	0.559	0.516
	AB2	3.33		0.756						0.517
	AB3	4.15		0.696						0.469
	AB6	3.84		0.628						0.889
	AB7	3.79		0.663						0.837
KL	KL2	3.87	3.775	0.706	0.736	2	0.864	0.867	0.859	0.916
	KL3	3.68		0.765						0.832
HC	HC4	3.88	3.975	0.528	0.559	2	0.643	0.646	0.607	0.717
	HC5	4.07		0.59						0.664
AS	AS1	3.96	3.505	0.646	0.659	3	0.709	0.709	0.575	0.554
	AS2	3.7		0.719						0.711
	AS3	3.31		0.611						0.736
PP	PP1	3.27	3.435	0.856	0.842	2	0.571	0.572	0.521	0.646
	PP2	3.6		0.828						0.619
PVS	PVS2	3.45	3.586	0.75	0.754	7	0.808	0.811	0.499	0.527
	PVS3	4.26		0.719						0.668
	PVS4	3.28		0.628						0.645
	PVS5	3.99		0.661						0.558
	PVS6	2.84		0.897						0.762
	PVS7	3.51		0.797						0.583

	PVS8	3.77		0.829						0.56
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AB= Attitudes and Behaviour; KL=Knowledge Level; HC=Health Consciousness; AS= Availability of Stores; PP= Price and Perceived Price; PVS= Perceived Value and Satisfaction CR= Composite Reliability; AVE=Average Variance Reliability *Scores: 1= Strongly Disagree; 2= Disagree; 3=Neutral; 4=Agree; 5=Strongly Agree

The mean values of all the research constructs are around the value of 3 which indicated that the average response for this study, with regard to each variable, was neutral. The mean value for attitudes and beliefs (3.704), knowledge level (3.775), health consciousness (3.975), availability of stores (3.505) and perceived value and satisfaction (3.586) rounds up to the value of 4 which indicates that there were a great number of positive responses, with regard to these variables. This implies many respondents indicated positive attitudes and beliefs towards organic food products. The perceived price and price variable (3.435) rounds down to the value 3, which suggests that this value is also associated with positive responses from participants. The Cronbach's alpha values of each research construct is preferred to be above the value 0.6, as recommended by (Malhotra, 2010). The Cronbach alpha values for attitudes and beliefs (0.784), health consciousness (0.643) and availability of stores (0.709) is above 0.6 which an indicative of satisfactory internal consistency reliability for these measurements. Cronbach alpha for perceived price and price is however 0.571, but when rounded up it is 0.6, so we can say that this variable is a satisfactory internal consistency reliability measurement. Cronbach alpha for the remaining variables knowledge level (0.864) and perceived value and satisfaction (0.808) indicates that a high level of internal consistency is present with values being above 0.8. The composite reliability (CR) values are preferred to be above 0.7 as recommended by (Malhotra, 2010:96). In this model, attitudes and beliefs (0.791), knowledge level (0.859), availability of stores (0.709) and perceived value and satisfaction (0.811) are above 0.7. The average variance reliability (AVE) values are preferred to be above 0.5, as recommended by (Malhotra, 2010). The AVE values for attitudes and beliefs (0.559), knowledge level (0.859), health consciousness (0.607), availability of stores (0.575) and perceived price and price (0.521) are above the recommended value and therefore, indicate that a high level of validity exists among responses pertaining to these constructs. The AVE value for perceived value and satisfaction (0.499) is slightly below 0.5 but when rounded up is 0.5. This suggests that validity does exist, although it may not be of a high level.

Table 3: Inter-Construct Correlations

	AB	KL	HC	AS	PP	PVS
Attitudes and Beliefs (AB)	1.000					
Knowledge Level (KL)	.576	1.000				
Health Consciousness (HC)	.395	.253	1.000			
Availability of Stores (AS)	.408	.464	.282	1.000		
Price and Perceived Price (PP)	.629	.540	.441	.522	1.000	
Perceived Value and Satisfaction (PVS)	.646	.597	.492	.641	.766	1.000

As indicated by Table 3 above, the diagonal elements are greater than the off-diagonal elements in the corresponding rows and columns; therefore this confirms that discriminate validity exists. Structural Equation Modelling is used for the assessment of measurement properties and testing the proposed theoretical relationships. The proposed hypotheses are then either accepted or rejected AMOS software was used for this purpose.

Table 4: Results of Structural Model Analysis

Proposed Hypothesis Relationship	Hypothesis	P-value	Significance	Rejected / Supported
Knowledge Level (KL) → Attitudes and Beliefs (AB)	H1	0.010	Significant	Support
Health Consciousness (HC) → Attitudes and	H2	0.122	Insignificant	Reject

Beliefs (AB)				
Availability of Stores (AS)→ Attitudes and Beliefs (AB)	H3	0.006	Significant	Support
Price and Perceived Price (PP)→ Attitudes and Beliefs (AB)	H4	0.687	Insignificant	Reject
Perceived Value and Satisfaction (PVS)→ Attitudes and Beliefs (AB)	H5	***	Significant	Support

CONCLUSIONS

This study sought to determine the factors that influence a consumer's attitudes and beliefs towards their decision and intention to purchase organically produced food products in a South African Context. Through a survey the researcher tested whether five predictor variables: consumer knowledge levels, consumer health conscious, the availability of stores stocking organic food products, price influences and the perceived value and satisfaction gained from consuming organic food products related positively the outcome variable: positive attitudes and beliefs towards intention to purchase organic food products on most shopping trips.

The results demonstrate the most important criteria affecting consumers' attitudes and buying behaviour towards organic food products in South Africa. Knowledge levels (H1), availability of stores (H3) and perceived value (H5) were seen to have the most effect on consumers' attitudes and purchasing patterns towards organic food products. Findings show and confirm that the price premium factor is a significant barrier. Among the two groups of organic food buyers and non-buyers, the large sized population who engage in organic food purchases on an occasional base tend to lack sufficient knowledge and financial resources to buy more on a regular basis. The organic food industry needs to pay more of their attention to occasional buyers and communicate clearly the benefits and health implications in order to attract new consumers.

MANAGERIAL IMPLICATIONS

Retailers are making the effort to expand and increase their product offerings in order to keep up with quality trends by selling quality food products such as organic food products. Mass supermarkets in South Africa need to begin to develop their organic market by building trust in consumer. This will result in a capitalised market. Padel and Foster (2005) state clearly in their research paper that exploring the gap between attitudes and behaviour, understanding why consumers buy or do not buy organic food products was found out to be one of the main barriers towards consumers having a positive purchase attitudes towards purchasing organic food products. The study indicated that retailers have to increase the knowledge levels of their consumers. Furthermore, not all shops currently sell organic food products. The researchers established that supermarkets must position themselves in a different manner in order to create demand for organic and niche food products.

Limitations

Owing to time constraints, the researchers only managed to collect 230 responses in the Johannesburg area. The sample was collected in the Braamfontein, Sunninghill and Lonehill areas in Johannesburg and thus not representing the entire population of the Johannesburg city.

Future Research

This research paper found out that the knowledge levels of a consumer, health consciousness of a consumer and the perceived value and satisfaction gained by consuming organic food products were the main reasons that influenced a consumer's attitude and beliefs towards their purchase intentions of organic food. Future research must be conducted in order for retailers to create consumer retention and attract more consumers. There are several topics that need to be discussed and explored further.

- How to build trust and increase retail sales of organic food products among consumers.

- The research took place in only affluent areas, the researcher therefore suggests that the research should be conducted in less affluent areas such as Alexander and Soweto.

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GENDER DIFFERENCES IN AFRICAN GENERATION Y STUDENTS' ENVIRONMENTAL BELIEFS TOWARD ENVIRONMENTAL ATTITUDE

Costa Synodinos
North-West University, South Africa

ABSTRACT

The Earth's natural life-supporting ecosystems are under a lot of strain and cannot withstand the copious demands of humanity. This paper investigated if any statistically significant gender difference was present in African Generation Y students' perceived environmental knowledge, perceived environmental responsibility, perceived environmental effectiveness and environmental attitude in the South African context. The methods of data analysis included descriptive measures, correlation analysis and independent sample t-tests. The findings indicated that there was no significant difference in gender for perceived environmental knowledge. However, a significant difference in gender was concluded for perceived environmental responsibility, perceived environmental effectiveness and environmental attitude amongst African Generation Y students in South Africa.

Keywords: Environmental beliefs, environmental attitude, Generation Y, South Africa

INTRODUCTION

It has been pointed out that the Earth's natural life-supporting ecosystems are under a lot of strain and cannot withstand the copious demands of humanity (Christensen, 2013, p.4). As such, sustainable consumption practices must be promoted in order for consumers to rethink the manner in which they procure, consume and dispose of commodities and products. Consumers that display heightened levels of environmental concern and pro-environmental attitudes are more inclined to act in a pro-environmental manner regarding the products they purchase, their method of product consumption and their disposal methods of products (Trivedi, Patel, & Savalia., 2015, p.74; Albayrak, Aksoy & Caber, 2013, p.28). Therefore, the promotion of environmental awareness and concern is imperative to the environmental movement.

In order to curb the ever-present ecological threat, consumers have begun to consider environmental issues when they purchase products (Laroche, Bergeron & Barbaro-Forleo, 2001, p.503). Consumer choice preferences have altered and, as a result, their purchasing patterns are showing signs of product adoption that are recyclable, biodegradable and less harmful to the environment. Furthermore, consumers have grown accustomed to green products to such an extent that they prefer to consume green products over traditional non-green products (Dangelico & Pujari, 2010, p.471; Ottman, Strafford & Hartman, 2006, p.26). This is evident in many studies, as was found by Gupta and Ogden (2009, p.376) who concluded that American consumers were not only willing to purchase green products but they were prepared to pay premium prices for environmentally friendly products such as hybrid cars and energy efficient goods. These results have been replicated in many studies around the world (Rahbar & Wahid, 2011, p.73; Sodhi, 2011, p.177; Kalafatis, Pollard, East & Tsogas, 1999, p.442), indicating that heightened environmental concern and environmental attitude are driving factors for consumers to purchase green products and actively supports green purchase behaviour. Moreover, gender has also played a significant part in the history of environmentalism, concluding varied results. Many studies (Sundströma & McCright, 2014, p.11; Xiao & McCright, 2013, p.16; Wells, Ponting & Peattie, 2011, p.818; Lee, 2009, p.92) suggest that there may be underlying differences in gender attitudes pertaining to environmental

issues. It is these differences in attitudes that need to be further explored to employ successful environmental marketing strategies.

LITERATURE REVIEW

Perceived environmental knowledge

An individual's environmental knowledge encompasses his/her current awareness and knowledge regarding environmental issues (Zsóka, Szerényi, Széchy & Kocsis, 2013, p.27). Furthermore, environmental knowledge refers to the extent of knowledge an individual has regarding the environment and includes their impact on the environment (D'Souza, Taghian & Khosla, 2007, p.71). Regarding the promotion of pro-environmental purchase behaviour, environmental knowledge is necessary to endorse both awareness and concern of the implications a product has on the environment, including the environmental impact of its production process (Latif, Omar, Bidin & Awang, 2013, p.868; Cheah & Phau 2011, p.455-456). Moreover, D'Souza *et al.* (2007, p.71) purport that environmental knowledge includes environmental impact perceptions of individuals. Mostafa (2007, p.449) notes that environmental knowledge is not a singular aspect and embodies various environmental problems, issues, campaigns, causes, solutions and so forth. Based on previous research consumers who exhibit greater sense of environmental knowledge generally tend to have higher levels of environmental concern which in turn may result in pro-environmental behaviour (Almossawi, 2014, p.9; Zsóka *et al.*, 2013, p.127; Polonsky, Vocino, Grau, Garma & Ferdous, 2012, p.243). Various studies have concluded that environmental knowledge directly affects green purchase behaviour in a pro-environmental manner (Marques & Almeida, 2013, p.141; Polonsky *et al.*, 2012, p.254; Wells *et al.*, 2011, p.828; Mostafa, 2007, p.460). According to Ottman *et al.* (2006, p.31) environmental knowledge can be promoted by educating consumers through various platforms, such as placing environmental messages on websites to communicate environmental products as a solution to satisfy the needs of both the environment and the consumer.

Perceived environmental responsibility and perceived environmental effectiveness

An environmentally responsible consumer can be considered an individual that has particular environmental characteristics. Such characteristics include heightened environmental awareness regarding environmental problems, integration of environmentally friendly behaviour in everyday life activities, and consumption of environmentally friendly products from socially responsible organisations (Han & Yoon, 2015, p.24). Responsible environmental behaviour can be viewed as a conscious decision made on the part of the consumer to abstain from partaking in behaviour or consumption of products that may cause harm to the environment. When an individual recognises that their environmental efforts are effective in curbing environmental problems, this is termed *perceived environmental effectiveness* and the likelihood of actively seeking out opportunities to increase this behaviour becomes greater. Additionally, this behaviour may lead to increased environmental concern and a greater propensity to develop pro-environmental attitudes and consumption patterns (Han & Yoon, 2015, p.24; Yahya, Hashim & Ramly, 2013, p.93; Wesley *et al.*, 2012, p.31-32). To achieve this, Wesley *et al.* (2012:34) stress that individuals must truly believe that their individualistic behaviour will create a tangible outcome and that that behaviour will result in a noticeable difference to solving a problem. As a result, perceived environmental effectiveness may produce a more environmentally concerned or conscious individual (Trivedi *et al.*, 2015, p.73).

Environmental attitude

Within the environmental context, environmental attitude is considered an important factor in environmental purchase behaviour. However, consumers' environmental attitude does not always correlate with their environmental behavior and this presents a major obstacle for marketers. Numerous studies have found that individuals are inclined to display positive attitudes towards the environment and endorse pro-environmental actions, some even displaying affection or concern over the environment (*see* Chang, 2011; Rahbar & Wahid, 2011; Sodhi, 2011; Gupta & Ogden, 2009; Laroche *et al.*, 2001), yet visible pro-environmental behaviour

remains absent. The root of this may have something to do with the negative stigma regarding green products' inferior quality, premium prices and lack of consumer effectiveness to change the world for the better – all of which have placed doubts in the adoption of environment friendly alternatives (Chang, 2011, p.19; Ottman *et al.*, 2006, p.25).

Generation Y

The Generation Y cohort, in 2014, comprised 38 percent of South Africa's entire population with 84 percent of this group being African (Statistics South Africa, 2014). This significantly sized African Generation Y group makes them a vital component not only to marketers but also to environmental marketers operating in South African markets. Furthermore, tertiary educated African Generation Y individuals are more attractive as a tertiary qualified individual is more likely to earn a higher income and thus, have a considerable higher amount of disposable income (Bevan-Dye & Surujlal, 2011, p.49). The youth, classified as the Generation Y cohort born between 1986 and 2005, are critical components to the future of the environmentalism movement (Eastman & Liu, 2012, p.94; Markert, 2004, p.21). Recognised as being "born green" Generation Y members have been brought up in a new eco-conscious lifestyle which has been deemed as the norm (Rogers, 2013). These individuals are showing major pro-environmental attributes in their environmental attitudes and behaviour, in some cases even adopting leadership roles in the sustainable marketplace (Rogers, 2013). Various authors (Barton, Fromm & Egan, 2012; Smith, 2012, p.87) suggest Generation Y consumers may prefer to support organisations that incorporate sustainability programmes, provide aid to local communities and actively assist in the conservation of the environment. Findings such as these bode well for the future of the environmentalism movement as today's youthful conscious individual will carry on the environmental legacy to future generations to become environmentalists (Lee, 2009, p.87). As such, understanding the youth's environmental attitudes and ultimately their environmental behaviours is vital as they are society's future consumers, workers, innovators and the future of humankind itself (Kanchanapibul *et al.*, 2014, p.528).

PROBLEM INVESTIGATED

The primary purpose of this study aimed to investigate if any statistically significant gender difference was present in African Generation Y students' perceived environmental knowledge, perceived environmental responsibility, perceived environmental effectiveness and environmental attitude in the South African context.

RESEARCH OBJECTIVES

The following research objectives guided the study:

- Determine African Generation Y students' perceived environmental knowledge, perceived environmental responsibility, perceived environmental effectiveness and environmental attitude.
- Determine the relationship between African Generation Y students' perceived environmental knowledge, perceived environmental responsibility, perceived environmental effectiveness and environmental attitude.
- Determine whether gender differences exist concerning African Generation Y students' perceived environmental knowledge, perceived environmental responsibility, perceived environmental effectiveness and environmental attitude.

RESEARCH METHODOLOGY

Research design and methods

This study made use of a descriptive research design, in which a self-administered survey questionnaire was circulated to a non-probability convenience sample. In order to counteract the limitations of convenience sampling, various demographic questions pertaining to respondents' province of origin, home language and gender were included in the questionnaire. The included demographic questions aided in ensuring that the

sample was representative of the target population. Full-time African Generation Y students, aged in the range of 18 to 24 years, registered at South African public HEIs made the target population for this study. The sampling frame encompassed the 25 registered public HEIs in South Africa. The 25 campuses were thinned out to four HEI campuses located within the Gauteng province. The four chosen HEIs comprised one university of technology, one comprehensive university and two traditional universities. From the initial 500 questionnaires that were distributed amongst the four campuses, 329 completed and viable questionnaires were returned for data capturing.

Sample characteristics

The 329 participant sample represented a relatively even sample distribution between male (42%) and female (52%) participants. The bulk of the participants were in the age range of 18 and 21 (84%). Seven of the nine provinces were represented, with the Western Cape and Northern Cape being the two provinces that were excluded from the sample. Additionally, every South African official language group was represented within the sample.

Measurement instrument

The data collection approach for this study utilised a self-administered questionnaire to gather the necessary data. The structured questionnaire consisted of existing validated scales used in previously published research. To evaluate the environmental beliefs of African Generation Y students, scales from Mostafa (2007, p.472) and Lee (2008, p.579-590) were used in the study. The four scales comprised environmental knowledge (five items), perceived environmental responsibility (five items), environmental effectiveness (four items) and environmental attitudes (seven items).

All scaled responses were recorded using a six-point Likert scale for the purpose of excluding neutral responses. A neutral response as indicated by Pallant (2010, p.10) can be seen as indecisive and redundant. Thus, the scale ranged from 1=strongly disagree to 6=strongly agree. A proposed plan of the intended questionnaire was submitted to the Ethics Committee of the North-West University (Vaal Triangle Campus). The ethics committee deemed that the study was a low/no risk endeavour and the questionnaire was given an ethical clearance number of: Econit-Econ-2014-007. Moreover, a cover letter was attached to the questionnaire informing participants to the nature of the study and also instructed that participation in the study was clearly of the participants own will.

Data analysis

IMB's Statistical Package for Social Sciences (SPSS), Version 23 for Windows was the chosen statistical program to analyse the captured data. Owing that each of the constructs used in the questionnaire contained less than 10 items, the average inter-item correlation coefficient was computed to assert the scales internal-consistency reliability rather than that of the traditional Cronbach alpha as advised by Pallant (2010, p.100). Thereafter, descriptive statistics were calculated to define African Generation Y students' perceived environmental knowledge, perceived environmental responsibility, perceived environmental effectiveness and environmental attitudes. To determine the relationships between the constructs, Pearson's product-movement correlation coefficient was computed on the variables. In order to determine if any significant differences were present between African Generation Y males and females regarding their perceived environmental knowledge, perceived environmental responsibility, environmental effectiveness and environmental attitudes a two independent-sample t-test was conducted/undertaken.

RESULTS

Internal-consistency reliability

To ascertain the internal-consistency reliability of the scales the average inter-item correlation was computed. The results are presented in Table 1 below:

Table 1: Internal-consistency reliability of the measures

Construct	Number of items in construct	Average inter-item correlation
Perceived environmental knowledge	5	0.461
Perceived environmental responsibility	5	0.278
Environmental effectiveness	4	0.242
Environmental attitudes	7	0.475

Spiliotopoulou (2009, p.12) asserts for a construct to have internal-consistency reliability, the average inter-item correlation coefficient value should fall in the range of 0.15 and 0.50. As Table 1 indicates, all constructs fell within the recommended range suggesting that all scales display acceptable internal-consistency reliability.

Descriptive statistics

Various descriptive statistics such as measures of variability, location and shape were calculated across all constructs. The questionnaire made use of a six-point Likert scale ranging from 1=strongly disagree to 6=strongly agree. Thus, higher mean values amongst the sampled African Generation Y students indicate a higher sense of environmental knowledge, responsibility, effectiveness and heightened environmental attitude. Table 2 presents the results of the descriptive statistics.

Table 2: Descriptive statistics summary

Construct	Valid N	Mean	Standard Deviation	Skewness	Kurtosis
Perceived environmental Knowledge	329	4.182	0.916	-0.316	0.084
Perceived environmental responsibility	329	4.578	0.844	-0.497	-0.256
Perceived environmental effectiveness	329	4.309	0.911	0.059	-0.688
Environmental attitudes	329	5.249	0.824	-1.166	0.521

Table 2 demonstrates that the data set is distributed normally as all measured constructs adhered to the acceptable +2 and -2 range. In terms of peakedness, the kurtosis values displayed zero irregularities and thus, the data is deemed as being distributed normally.

Means above three were computed for all four constructs, as Table 2 shows. The highest recorded mean was that of environmental attitudes (Mean=5.249), the second highest recorded mean was environmental responsibility (Mean=4.578). Likewise, environmental effectiveness (Mean=4.309) and perceived environmental knowledge (Mean=4.182) also scored means above 3. The results suggest that African Generation Y students are conducive to favourable environmental attitudes, portray a sense of environmental responsibility, feel as if their actions may have a positive outcome towards environmental conservation and possess at least a minimal sense of environmental knowledge. Positive findings such as these bode well for the sustainability of the South African environment.

Correlation analysis

To determine if there were any significant relationships between perceived environmental knowledge, perceived environmental responsibility, perceived environmental effectiveness and environmental attitudes, the Pearson's Product-Movement correlation coefficient was calculated. The results are presented in Table 3 below:

Table 3: Correlation matrix

N = 329	1	2	3	4
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Perceived environmental knowledge	1			
Perceived environmental responsibility	0.346**	1		
Perceived environmental effectiveness	0.079	0.418**	1	
Environmental attitude	0.160**	0.504**	0.413**	1

**Correlation is significant at the 0.01 level (2-tailed)

Table 3 depicts a statistically positive relationship between African Generation Y students' environmental attitude and their perceived environmental responsibility ($r=0.504$, $p=0.000<0.05$), perceived environmental effectiveness ($r=0.413$, $p=0.000<0.05$) and perceived environmental knowledge ($r=0.160$, $p=0.000<0.05$). In addition, none of the correlation coefficients exceeded 0.90, thus, it can be asserted that there is no concern for multicollinearity between constructs.

Independent sample t-tests

In order to determine if African Generation Y students' perceived environmental knowledge, perceived environmental responsibility, perceived environmental effectiveness and environmental attitude differed regarding gender characteristics, an independent sample t-test was conducted. Table 4 displays the results.

Table 4: Gender differences

	Female Mean N=189	Female Std. Dev.	Male Mean N=140	Male Std. Dev.	t-value	p-value	Cohen's D
Environmental knowledge	4.210	0.921	4.142	0.912	0.664	0.507	*****
Perceived responsibility	4.715	0.819	4.392	0.847	3.471	0.001*	0.40**
Perceived effectiveness	4.429	0.878	4.147	0.932	2.802	0.005*	0.31**
Environmental attitude	5.417	0.694	5.016	0.928	4.473	0.000*	0.50***

* Statistically significant at $p < 0.05$
** Small effect, practically non-significant
*** Medium effect and moving toward practical significance
**** Large effect, practically significant
***** Cohen's D-statistic not calculated as the variable was not statistically significant

As can be seen in Table 4, there is no statistically significant difference between male and female African Generation Y students' environmental knowledge ($p=0.507>0.05$). Conversely, a statistical difference was found between African Generation Y male and female students regarding their environmental responsibility ($p=0.001<0.05$), environmental effectiveness ($p=0.005<0.05$) and environmental attitude ($p=0.000<0.05$). As such, female African Generation Y students display a higher sense of environmental responsibility, perceive their actions as being more effective and display higher favourable environmental attitudes than their male counterparts.

To determine if the differences in environmental responsibility, environmental effectiveness and environmental attitudes are practically significant between African Generation Y female and male students, the Cohen's D statistic was calculated. The results presented values of 0.40 for environmental responsibility, 0.31 for environmental effectiveness and 0.50 for environmental attitude. The results portray a small practical effect for both environmental effectiveness and environmental responsibility that is relatively non-significant. However, environmental attitude signifies a medium sized effect which is on the border of practical significance.

CONCLUSION

This paper sought to investigate if any gender differences were present in perceived environmental knowledge, perceived environmental responsibility, perceived environmental effectiveness and environmental attitudes amongst African Generation Y students in South Africa. All constructs returned satisfactory internal-consistency reliability values and displayed significant positive relationships amongst themselves. The results suggest that both male and female African Generation Y students have positive environmental beliefs towards the environment. Female students display slightly stronger environmental beliefs than their male counterparts. These findings are in line with previous studies from around the world. However, this is not to say that male students do not have a pro-environmental stance. No statistically-significant difference was found in terms of environmental knowledge suggesting that both male and female students consider themselves knowledgeable about the environment and aware of environmental problems. However, perceived responsibility and effectiveness displayed that females perceive themselves as being more responsibly and effective in terms of curbing environmental problems. Finally, females showed a statistical significant difference in their attitudes towards the environment, indicating that they have favourable pro-environmental attitudes.

MANAGERIAL IMPLICATIONS

The current findings of this study present vital information to environmental marketers seeking to explore environmentally conscious consumers in the South African market. Owing to the fact that environmental topics are emotionally sensitive it may be beneficial to target consumers' emotional appeals rather than rational thought appeals. This approach would be highly beneficial towards the slightly less-environmentally conscious male Generation Y consumer. Furthermore, organisations should consider targeting female populations as numerous studies have concluded that females are inclined to be environmentally conscious and thus, more willing to adopt environmentally friendly products. However, this is not to say that males should be disregarded. Increasing male environmental attitudes could possibly lead to pro-environmental perceptions in both their environmental responsibility and environmental problem effectiveness.

LIMITATIONS

As with all studies, this study is subject to particular limitations. The sample was drawn using a non-probability, single cross-sectional approach that only provides a single snapshot in time and lacks the vigour of a longitudinal study. Additionally, the study made use of a convenience sample method as such caution should be taken when generalising the findings to the population.

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THE IMPACT OF THE SOUTH AFRICAN LABOUR-REGULATORY REGIME ON LEADERSHIP DEVELOPMENT IN THE SOUTH AFRICAN NATIONAL DEFENCE FORCE

E. J. van Rooyen, Management College of Southern Africa, South Africa
M.A.W. Prinsloo, Tshwane University of Technology, South Africa

ABSTRACT

Leadership development is an integrated, strategic and deliberate human resources activity, which forms part of many organizations' career management plan. The concept Leadership and its importance in organisations is neither new nor foreign to the management lexicon. Internationally, many management scientists and practitioners have engaged in the research and study thereof and many case examples exist as far as its successful development in organizations. Essentially the concept Leadership Development evokes images of organizations that manage through their strategic, tactical and functional activities, human capital capacity to achieve their unique goals and objectives. Significant, albeit limited research done on the value of leadership development within the South African Defence Force, consistently uncovers its benefits in critical military-functional areas. However, upon seeking to effectively implement such talent management initiatives, it may be prudent to peruse leadership development strategies as a means to achieving goals and objectives in the South African National Defence Force. This paper reflects and reports on a longitudinal research project undertaken among senior managers in the South African National Defence Force to establish the current state of implementation and practice of leadership development and career management. The research project comprises essentially a desktop survey of secondary research, augmented by focused interviews with selected senior officers in the South African National Defence Force. It concludes with suggestions on the way forward, presented for critique and comment.

Keywords: Career management; Combat readiness; Labour regulatory regime; Leadership; Leadership development

INTRODUCTION

Organizational effectiveness is closely linked to the role of a leader, and the way in which such leadership impacts on the work engagement of the people in any organization. As much as military leadership is not often subjected to such scrutiny, modern military organisation has evolved over time, with a prominent shift from the traditional autocratic and directive leadership of the past, to a more participative and democratic style of military leadership of the new age. The South African National Defence Force similarly has to contend with this reality. Strong and appropriate military leadership provides the decisive edge and is the most essential dynamic of operational effectiveness in the South African National Defence Force. As with any military organization, the choice of leaders and methods for educating, training and developing such leaders will have a major impact on the provision of a combat ready force.

The South African National Defence Force as a transforming entity should seek to explore appropriate leadership, command and manage practices that will satisfy the needs and requirements of South Africa's combat forces. Furthermore, the labour-regulatory regime which forms an integral part of the South African democratisation process, forms a foundational part of such strategies. There is however no simple formula for leadership development, especially in an African context, what with fledgling democracies and developmental

socio-economic realities. Leadership is about influence and action; to be truly comprehensive, African leadership theory must surpass the test of local applicability in diverse cultural, geographical, political, economic, and military settings.

LABOUR-REGULATORY REGIME

In view of the aforementioned, the labour-regulatory regime in South Africa may be seen as contributing to this challenge. Since the new democratic Government came into power in 1994 a number of labour-related policy and legislation have been drafted. Examples include the Bill of Rights (as contained in the South African Constitution, 1996), the White Paper on Defence, 1995, the Labour Relations Act, 1995, the Employment Equity Act, 1998, and the Basic Conditions of Employment Act, 1996. These documents all relate to a greater or lesser extent to employee rights and management and the governance of employees in an organisational context. Similarly, such documents pose significant implications for commanders and leaders in the South African National Defence Force as it may be seen to focus overwhelmingly on the rights of subordinates, and thus possibly rendering traditional leadership styles questionable. Concern exists that the status quo will have an impact on the leadership and command efficacy of commanders in the South African Defence Force.

ORGANAZATIONAL EFFECTIVENESS

Organizational effectiveness is closely linked to the role of the leader and the way in which this leadership role impacts on the work engagement of the people in the organization. The levels of interaction and the relationship between employees and leaders can be linked to productivity, commitment and satisfaction in the work environment (Dibley 2009:1) The ultimate challenge for leadership is the ability to transform the behaviour of leaders into organizational outputs of job satisfaction, commitment and collaboration (Kouzes and Posher 2007). Each one of these Acts ensures the basic rights of employees. This empowerment of employees changed the role of the military leaders dramatically. Leadership is important for the South African National Defence Force and procedures should be in place for leadership development whilst a balance should be found between the type of leadership development and the rights and freedom of employees in the SANDF in terms of the new policy and legislation.

PROBLEM STATEMENT

The following problem statement may be presented: The South African Department of Defence does not have an *officially approved* leadership philosophy or policy on which the South African National Defence Force can base their own leadership development policies and practices (<http://scientiamilitaria.journals.ca.za>).

RESEARCH METHODOLOGY

This research project is qualitative by nature and included a secondary scrutiny of secondary information, whilst being augmented with semi-structured interviews as per the below mentioned questions, conducted with key functionaries in the South African National Defence Force. The researcher has developed a questionnaire to obtain information from the South African National Defence Force members attending the Joint Senior Command and Staff Programme (JSCSP) of 2016 at the War College, in Pretoria, South Africa. The South African National Defence Force members who participated in the questionnaire are representative of the corps in the SA Army represented on the JSCSP (South African Army, South African Medical Corpse, The Air force and the South African Navy). The aim of the questionnaire was to determine how career management in the South African National Defence Force is perceived.

The questions posed to the respondents during the semi-structured interviews were:

1. How often do you have a career interview with your career manager?
2. When was the last time you had a career interview with your career manager?
3. Do you get feedback from your career manager regarding your career aspirations as part of career management? If not, what suggestions do you have to improve the system to obtain feedback?

4. Do you know what the organization's plan is regarding with your utilisation within the next 3 to 5 years? Has your immediate supervisor, South African National Defence Force HR discussed this with you over the past 5 years?
5. Are all your requirements for career development met by the employer? If your answer is no, do you have any suggestions on how this aspect could be improved?
6. What is your view of career management in the South African National Defence Force?
7. Kindly indicate briefly how you would like to improve career management in the South African National Defence Force?
8. When and how often do you conduct career interviews with your subordinates?
9. What do you do with the career interviews of your subordinates? Are they processed through the channel of command and do you provide feedback?

It should be noted that since the above questions were merely generated by the researchers to lend essential structure to the interview, the semi-structured format allowed for pursuing additional aspects of relevance and interest.

THE ROLE OF MILITARY LEADERS IN CAPACITY BUILDING OF SOLDIERS UNDER THEIR COMMAND

Commanders in the South African Defence Force should have the necessary skills to be able to motivate and inspire a heterogeneous group of people who has joined the SANDF from different cultures, backgrounds and groupings in South Africa. Whereas in the past a commander was regarded as a strong autocratic leader who would direct the actions of their subordinates, it can now be argued that the commander will have to consider additional knowledge and skills sets to ensure that subordinates will follow their command and that the objectives will be achieved without infringing on the democratic labour-regulatory regime, which promotes the rights of such subordinates.

Khoza (2007:24) argues that South African leadership should be situated squarely in the African context. According to him leadership is dominated by values. It is about Africans anchoring themselves in their own continent; it's history, tradition, cultures, mythology, creative motive; ethos; and value systems. The South African leadership challenge is thus multidimensional and very complex (Swanepoel, 2012:354). However, no matter what leadership commanders exert, they have a responsibility towards subordinates in assisting them with career management in the South African National Defence Force. Career management is not a one way action but it is an action that involves collaboration between the leader (commander) and the soldier. Similarly, all members in the South African Defence Force will not necessarily or automatically become part of chief executive officers, but a career plan should be developed for each member. The function of Human Resources (HR) Management in the Department of Defence/South African National Defence Force includes the provision of HR Strategic Direction and Policy, the development of personnel and the professional management of such personnel. Yet, it is claimed that this function is not executed properly. It should be executed via sub-processes that forms an integral part of acquiring sufficient personnel for the execution of the Department of Defence/South African National Defence Force mandate, managing individuals' utilization and development and finally his/her separation from the organisation.

Due to the exacting nature of the military environment, properly trained/developed and disciplined human resources are not generally available from the private sector, and thus need to be nurtured in a systematic manner, for the specific competencies required in the SA Army, and their careers planned for, in order to meet the human resource needs of the future. This process is complex and needs to be managed with great circumspection in order to meet the required result (DEPARTMENT OF DEFENCE (SA ARMY), 2005, p. 1).

CAREER DEVELOPMENT

Career development is seen as a joint effort between the employee and the organization, and the outcome of the interaction between individual career planning and the organisational career management process. In career

development and transition, the employee is responsible for career planning and the organization is responsible for career development support in the career management process (Schreunder & Coetzee, 2016).

All employees in an organization are not the same in terms of age, interest or acumen and therefore they will not share the same development plan in their career (Schreunder & Coetzee, 2016).

From an organizational perspective, career development is viewed as an ongoing, formalized effort by the organization that focuses on developing and enriching the organisation's human resources in light of both the employees' and the organisation's needs (Byars & Rue, 2004). Career development, from an organisational perspective, is thus a formal approach taken by an organization to ensure that staff with the proper qualifications and experience are available when needed (Zheng & Kleiner, 2001).

Career development in the modern workplace is regarded very differently from the way it was regarded in the past, because the business/operational context has changed so much. Naturally the aforementioned perspective narrated with regards to the South African National Defence Force is relevant. Employers in the modern era have the managerial prerogative to change the content of tasks as the situation demands, and employees can no longer rely on the organization to provide clarity and direction regarding their career paths (Schreunder & Coetzee, 2016).

According to the South African National Defence Force development contextualised, refers to the training and mentoring of uniformed members in order to enable them to improve their performance in the execution of their tasks (SAAO/C DIR ARMY CORP SVCS/D ARMY HR/01/12/12, 2012). Naturally, succession planning form part of the above greater goals of the organisation and involves the recording of potential successors for managerial and other critical positions within the organization. Succession planning can be valuable when long-term organizational planning occurs.

The survey has indicated that 51% of the respondents proffered that they have career discussions or complete career questionnaires annually. 5% of the respondents indicated that they have career discussions or complete career questionnaires every second year. 28% of the respondents indicated that they seldom have career discussions or complete career questionnaires. 15% of the respondents indicated that they had had a career discussion or completed career questionnaires rarely or never.

The SA Army members who participated in the survey indicated that they do conduct career interviews with their subordinates. However, the career interviews are processed through the channel of command but do not have any influence on the outcome of the results thereof. Therefore, the supervisors are in a very difficult situation when it comes to the career management of the subordinates. Some of the strategies implemented thus far include:

Rank-age Strategy

The current service system for uniformed members has unfortunately not provided appropriate mechanisms and enabling support systems to ensure the rejuvenation of the South African National Defence Force's human resource composition through the rapid throughput of young soldiers. The result is that a large number of South African National Defence Force members by far exceed the reasonable rank-age utilisation criteria applicable to a specific mustering or corps. This is one of the main factors why members are not fit for effective operational utilisation and also contributes to stagnation, thereby negatively affecting the South African National Defence Force's deployment potential. In accordance with Human Resource Strategy 2010, the South African National Defence Force must rejuvenate and align its human resource composition with international rank-age norms. To attain the Department of Defence's vision to ensure effective defence for a democratic South Africa, the South African National Defence Force requires young, fit and healthy members who are able to adapt to continuous changes and circumstances within the internal and external military environment. Therefore it has become essential that clear organisational rank-age and age-tenure requirements must be set for uniformed members serving in the South African National Defence Force (DEPARTMENT OF DEFENCE, 2003, p. xi)

The current service system for uniformed members has been in existence since the establishment of the South African National Defence Force on 27 April 1994. This service system has, unfortunately, not provided appropriate mechanisms and enabling support systems to ensure the rejuvenation of the entity's HR composition through the rapid throughput of young soldiers. The result is that a large number of members by far exceed the reasonable rank-age utilization criteria applicable to a specific mustering and/or corps. This may be one of the main reasons why members are not fit for effective operational utilization and also contributes to stagnation, thereby negatively affecting the SANDF's deployment potential.

The majority of the human resources required by a defence force must be young, capable of withstanding physical and psychological stresses. Although the Inherent Rank-Age policy refers to age, it must however be remembered that "inherent requirements" of jobs also look at many other personality traits like skills, knowledge and abilities. Owing to the uniqueness of the military hierarchy and requirements of the rank structure, career possibilities towards more senior levels are progressively more restricted.

Imbalances in ranks, ages and mustering can hamper the mission readiness and capabilities of the Department of Defence. This can also result in serious implications for force preparation and future deployments if the matter is not urgently addressed. An ever increasing deviation from the rank-age criteria of members could impair the mission readiness of the SANDF and also reduce the capabilities of the SANDF to unacceptably low levels. It is therefore essential that young, skilful, medically/physically fit members, who are able to adapt to continuous changes and circumstances within the internal and external environment, are available in the South African National Defence Force.

Career Development Management Process

South African National Defence Force members should have ongoing and fair access to training, which is geared towards achieving an efficient and representative Army. Training and development should support work performance and career development. Properly trained and developed members play an important role in providing quality, cost-effective and efficient services, which are essential to the general well-being of the organisation. Resources utilised for training should therefore be seen as a sound investment in the development of the SA Army human resources as a whole (DEFENCE, 2005, p. 1).

According to SA ARMY OFFICE INSTRUCTION/CHIEF DIR ARMY CORP SVC/ D ARMY HR/049/03/02 dated 25 November 2005, the South African Defence Force must: develop the skills of its members; improve productivity; improve competitiveness of the members; improve the return on the investment in the members; and ensure the quality of training.

It is essential that all role players are committed to achieving the above objectives. Each individual is responsible for his/her own progress and development in the field of training and education. It is therefore the responsibility of each member to familiarize him/herself with the requirements of the post in which he/she is staffed or wishes to be staffed in order to be competent to carry out the duties and gain rank promotion. All members are to ensure that they complete the prescribed military career development programmes as prescribed by the South African National Defence Force's Promotion Policy.

The managers responsible for military career management are responsible for a coherent strategic framework for human resource development, which will ensure the development of an optimal agreement between the needs of the member, the job, the organisation and the environment.

Career Planning

As a sub-part of career management, career planning must be conducted with employees. Career planning can be described as initiative where an individual exerts personal control and agency (initiative) over their career and engages in informed choices as to his or her occupation, organization, job assignment and self-development by conducting self-assessment, formulating goals and developing plans for reaching those goals (Puah & Ananthram, 2006).

The structure of the South African Defence Force is of such a nature that upward mobility opportunities abound, but as the middle management echelons are reached, promotion opportunities become restricted. For this reason career planning pursued by members must be extensively discussed with career managers. During this discussion the career manager on behalf of the employer should be able to inform the member what the organization opportunities are for the member over the next 3-5 years (SAAO/C DIR ARMY CORP SVCS/D ARMY HR/01/12/12, 2012).

Career Pathing

Career pathing is a technique used by organisations to specify the sequence of developmental activities involving informal and formal education, training and job experiences that help make an individual capable of holding more advanced jobs in the future (Byars & Rue, 2004). Career pathing is most useful when used as part of the overall career planning process.

Career pathing is an organizational support practice that can assist individuals in planning developmental activities such as informal and formal education, skills training and job experiences to facilitate their readiness and capability to hold more advance jobs. Traditionally, a career path has been seen as a constant upward movement. However, a career path may also be multi-directional. It may lead sideways (transfer), downwards (demotion) and even change completely (dismissal or retrenchment). In other words, a career path should not only be regarded as a constant upward movement but also as a set of educational or behavioural requirements necessary for a particular employee to become eligible for a possible promotion. There is no guarantee, however, that the promotion will indeed take place (Baruch, 2004).

It is expected of each career manager to pro-actively align the career planning, career development, utilisation and labour market entry enablement of each member in terms of service contract provisions/terms to meet the requirements for each occupational group/mustering. This implies pro-active succession planning to ensure the maintenance of operational readiness, scarce skills retention and normalization of representativeness through the planned inflow of members from the New Service System (SAAO/C DIR ARMY CORP SVCS/D ARMY HR/01/12/12, 2012).

Yet, according to the SA Army career pathing refers to the upward mobility or movement from one position/salary level to a higher position/salary level, provided the member fulfils requirements according to academic qualifications, competencies, skills and functional exposure to progress to the higher position/salary level (SAAO/C DIR ARMY CORP SVCS/D ARMY HR/01/12/12, 2012).

CONCLUSION

In conclusion, the survey has indicated that that the SANDF does not practice career planning, career pathing and career development to the extent where it reflects to a significant extent the regulatory framework imposed by policy and legislation. Career management is largely incidental and not coherent. Yet, it is no doubt a function and activity which is critical for the success of the organization. The South African National Defence Force's policy on career management also stresses the importance of career management and the roles of the career manager, supervisor and the member in terms of career planning, career pathing and career development. From the information gathered during the survey, the South African National Defence Force's career management requirement is not effectively applied.

In order for the South African National Defence Force to have properly trained, developed and professional soldiers, their careers must be systematically planned for. This can only be achieved if every career manager and supervisor (commander) take responsibility with regards to the management of members' careers. The HR-factor in the South African National Defence Force can only be efficiently, effectively and economically managed through proper coordinated career planning, development and utilization by all role players. Leaders should therefore be developed within the context of the new democratic dispensation whilst the organisational requirements in the modern age are adequately addressed.

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RECOMMENDATIONS TOWARDS LOW-COST HOUSING DELIVERY IN THE CITY OF JOHANNESBURG

E.J. van Rooyen and P. Sebola
Management College of Southern Africa, South Africa

ABSTRACT

South Africa continues to face major service delivery challenges in its efforts to accommodate its ever-growing population. Delivery of low-cost housing is among these challenges and the government has post-1994 prioritised this as a focus. In addition, the low-cost housing delivery challenge is exacerbated by the need to reverse the apartheid-type human spatial settlement pattern whilst addressing the unequal provision of services to poor communities. In the case of the City of Johannesburg, which is increasingly experiencing to a growing population consisting of poor South Africans and non-South Africans, the demand for low-cost housing is reaching a critical point. The growth in low-cost housing demand is driven both by in-migration and by organic growth due to various socio-economic factors. Johannesburg is one of the largest cities in South Africa and it serves as the economic hub of the Country. The City is in crisis to speed up delivery of low-cost housing to urban poor and have for the past 20 years attempted various strategies to address this issue. This paper presents the results of an essentially qualitative desktop study, based on secondary research and augmented with primary research by means of semi-structured interviews with key officials and low-cost housing stakeholders in the City of Johannesburg. The study concludes with a number of recommendations, which may be viewed as essential to effectively addressing the matter of low-cost housing provision.

Keywords: Low-cost housing; Spatial settlement pattern; Informal settlements; Backyard dwellers; Sustainable Housing Strategy

INTRODUCTION

The prevailing South African service delivery challenges relate to many historical and current factors and involve foremost political and administrative governance challenges. Such challenges are significantly pronounced in Johannesburg, as the economic hub, and by populous the largest city in South Africa.

Furthermore, the 2016 South African local government elections have resulted in a re-visit by the City of Johannesburg (CoJ) of their service delivery performance and concomitant administration of essential and important services, for example housing provision. The election results have indicated clearly that the electorate are despondent with the general level of services rendered by this metropolitan council.

This article reflects on the Johannesburg housing delivery case and concludes by presenting a number of solutions, which may ease the housing delivery dilemma, and which may by extension also suggest possible solutions to other municipalities, which may identify with the Johannesburg challenge.

PROBLEM STATEMENT

Despite the robust growth in housing expenditure and housing delivery, the City of Johannesburg (CoJ) is increasingly host to a large and growing population of poor South Africans and non-South Africans, a trend that is driven both by in-migration and by organic growth due to factors such as declining household size. The City is in crisis to speed up delivery of low-cost housing to urban poor.

HOUSING IN CONTEXT

According to the United Nations Development Programme about 71 % of South Africans will live in urban areas by 2030, with large metropolitan areas such as City of Johannesburg likely to accommodate a vast number of urban migrants seeking employment.

Delivery of low-cost housing has been a key focus of the African National Congress (ANC)-led government post 1994, as an attempt to reverse the apartheid spatial pattern and address the unequal provision of services to black communities. Despite the delivery of low-cost housing over the past 22 years, there are still a significant number of informal settlements and people living in backyard rooms.

RESEARCH METHODOLOGY

The study conducted is qualitative and exploratory in nature. A case-study research method was used. Merriam, (2002:9) defines a case-study as an intensive analysis of a phenomenon or entity that seeks to describe a phenomenon in an in-depth manner. A case-study approach to this study enabled the researcher to gain in-depth knowledge on the subject matter and to make new discoveries. Although richness in the identification of relevant details is gained through a case-study research method, the researcher was aware of the limitations of the case study method because results could largely depend on the opinions of those interviewed and on the choices made by the interviewer when formulating the questions as well as when collecting and interpreting information.

In this study multiple sources of data are used to enhance validity of the findings. The sources used were: Semi-structured interviews with key role-players in the delivery of low-cost housing, who include senior government officials at the national department of Human Settlements, Gauteng Provincial Department of Human Settlements and City of Johannesburg metropolitan. Furthermore, interviews were conducted with the Director responsible for housing at the National Treasury and Head of Public-Private Partnerships Unit (PPP) in the South African National Treasury. In terms of secondary data, scholarly journals, policy documents, and books relevant to the sector and topic were consulted.

SUSTAINABLE HOUSING STRATEGY

The City of Johannesburg has been awarded a housing delivery accreditation, which allows for the municipality to execute project identification, subsidy budget planning, programme management and planning for housing. However, responsibility for subsidy payment disbursements, financial reporting and reconciliation remains with Gauteng Province Human Settlements department. This accreditation capacity does allow for commissioning and production of project feasibility assessments, monitor quality assurance and programme management, and hereby gaining skills in project cash flow management and contract administration.

IDENTIFICATION OF WELL-LOCATED LAND

Identification of well-located land has been cited as one of the main reasons for delivery of low-cost housing having been constrained. A challenge identified by the CoJ officials in the housing department, during the interviews, is that land closer to areas of economic opportunities is privately owned and there is little interest in releasing it for the purpose of developing low-cost housing. This issue is cited in the **Housing Code (2009)** as one of the challenges in the delivery of low-cost housing. The **Housing Code (2009)** states that the process of identification, acquisition and release of land is a slow, complex process. According to the findings of Planact/Cubes study (2007) the CoJ's challenge is the result of rapid construction of new businesses and high-cost residential properties which have used up a significant amount of underutilised or undeveloped agricultural land, thereby reducing land available for low-cost housing.

Clearly there are contentious views on the issue of land use between the CoJ and the Gauteng province as one participant highlights:

“We do not have the same vision in mind on how the land should be utilized. There is no agreed strategic approach, resulting in continued perpetuation of the apartheid spatial pattern”.

These comments are further reinforced by the fact that the CoJ approached the Constitutional Court of South Africa to rule against the Gauteng Development Tribunal (GDT) a provincial organ of the Gauteng province. The CoJ contended that the powers to rezone land and approve the establishment of townships are components of municipal planning. This function has been assigned to municipalities by the **Constitution (1996)**, read with part B of Schedule 4 to the **Constitution (1996)**.

The CoJ in its adoption of the Sustainable Housing Strategy (2001) committed itself to undertaking a land audit and evaluation to identify all available public and privately owned land. Appropriate land parcels would be selected and all legal requirements be met in order to acquire the land for delivery of housing. In line with this, the CoJ further committed itself to resolving land ownership issues, identifying and resolving servitudes and lastly, co-ordinating title deeds where necessary.

RECOMMENDATIONS

Even though an increase in housing grants has been significant since 2004, the delivery of low-cost housing has not kept pace with this increase. Clearly, in investigating the pace of delivery in the City of Johannesburg, issues of responsibility and accountability have emerged as being exceptionally important. A key issue that needs to be addressed is the allocation of full responsibility to the CoJ to provide housing.

While the housing subsidy grants have succeeded in delivering housing to and secure tenure for large numbers of people who previously lived in inadequate and insecure shelter, there is much room for improvement. An integrated plan is required, involving various government departments at various levels of government, to ensure that housing is delivered in a manner which promotes integrated, sustainable communities and quality housing. Currently housing is the joint responsibility of national and provincial governments, with the National Department of Human Settlements responsible for developing policy and strategy, while monitoring the performance of the housing sector. Provincial governments promote, co-ordinate and implement housing programmes within the framework of national policies. Provinces further approve housing subsidies and projects, and provide support to municipalities in their housing development projects. These factors constitute a barrier to effective delivery. The current system does not give sole responsibility to the municipalities to plan and implement low-cost housing projects. It is necessary to take this fact into account by possibly revisiting current these institutional arrangements.

The existing housing programme was revised when the comprehensive plan for sustainable human settlements was introduced in 2004. The policy shift in the housing programme entailed that adequate housing which will contribute to a sustainable neighbourhood should be provided. Among other things, the policy shift aims to support a functional single residential property market to bridge the gap between the first-economy residential property boom and the second-economy slump creating sustainable human settlements. This implies the following:

- Expanding the scope of the housing mandate to support the entire residential housing market by addressing integration between the primary and secondary housing markets;
- Shifting from product uniformity to demand responsiveness thereby providing maximum flexibility which will enhance mobility of households;
- Engaging the private sector increasingly in the development of low-cost housing – by providing bridging finance, construction capacity and project management;
- Promoting densification and integration;
- Enhancing the location of new housing developments to redress the apartheid spatial settlement patterns; and
- Supporting urban renewal and inner city regeneration.

A few years into the adoption of this policy, a number of challenges have emerged. These include, release of well-located land for low-cost housing in urban cities is slow, a number of projects have been blocked and a lack of integration persists.

Intergovernmental co-ordination:

- The **Constitution, (1996)** establishes housing as a joint function of national and provincial governments, while Schedule 4, part B of the **Constitution, (1996)** assigns municipal competence to functions associated with housing development i.e. municipal planning, storm-water management systems in built-up areas, water and sanitation services, limited to potable water supply systems and domestic waste-water, and sewerage disposal systems.
- Provincial governments promote, co-ordinate and implement housing programmes within the framework of national policies. Funding for housing is administered at provincial level and is released after approval of individual projects at the discretion of the MECs for Housing. As approval of projects at provincial level is not linked to the overall municipal capital programme, the misalignment between infrastructure programmes and housing programmes is exacerbated.
- This location of functions associated with housing development creates challenges at the point of implementation. This becomes evident when municipalities have to plan for integration of these services and when implemented, funding is not available since the anticipated funding has been assigned elsewhere, and in most instances to meet needs other than those of local municipalities.

This complex arrangement of institutional powers and functions requires that funding streams between the different spheres of government have to be properly co-ordinated. Better alignment between the housing subsidy, the Municipal Infrastructure Grant and the Integrated National Electricity Programme could remove some of the main obstacles to the achievement of integrated planning for sustainable human settlements. Policy interventions introduced since 1994 were necessary conditions for the delivery of low-cost housing as these provided a framework for key stakeholders in the housing sector to collaborate on housing delivery issues. However, the policies have not proved to be sufficient for improving delivery, because they require full understanding and proper co-ordination and collaboration among key stakeholders to ensure efficient delivery of low-cost housing. The misalignment among the spheres of government, including the private sector to release well-located land for the construction of low-cost housing has been identified as one of major issues that impacts negatively on the delivery of low-cost housing. The availability of land remains a challenge for housing developments aimed to provide low-income housing. Land which could be utilised for housing development in cities is usually reserved for high-cost housing. Furthermore, identification, acquisition and release of state-owned and private land are very slow processes. The increase in population growth and the decline in average household size that besets the City of Johannesburg, in spite of relatively good delivery, clearly point to the need for increased capacity to fast-track delivery. The increase in the number of informal dwelling provides a good reason for the City to double its efforts to deliver more houses. There is strong evidence to suggest that the inability of the City of Johannesburg not being able to meet its delivery target over the past years is due to a combination of factors i.e. its role in the delivery chain; continued population pressure; and availability of land. It is clear that the responsibility of the City of Johannesburg in the delivery chain should be increased to allow for better planning and timeous execution.

CONCLUSION

The South African housing challenge remains a problem what with the historical imbalances, continuing in-migration of people seeking improved livelihoods and population growth as contributing factors. The City of Johannesburg Metropolitan Municipality is especially impacted upon with by the mentioned housing requirements. Johannesburg succumbs to the in-migration trend because of the perceived opportunities presented by the dynamic city and regional economy. It therefore stands to reason that extra-ordinary solutions need to be found.

By engaging the above-described research and analysis and deducing therefrom conclusions and subsequent recommendations it is postulated that other similarly challenged urban centres may find direction towards resolving their own housing quagmires. The study concludes with a number of recommendations, which may be viewed as essential to effectively addressing the matter of low-cost housing provision, which by itself may form the foundation to further and more in-depth research.

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BACKTESTING BASEL III: EVALUATING THE MARKET RISK OF PAST CRISES IN BRAZIL THROUGH THE CURRENT REGULATION

Marcelo Zeuli and André Carvalhal
Administration and Management Institute/PUC/RJ, Brazil

ABSTRACT

Are the Basel III recommendations, from the Bank for International Settlement's (BIS) Basel agreement, effective to a broad set of financial crises? We analyzed two of the main Basel III agreement's recommendations to a back test: the capital requirements and the Value at Risk (VaR) methodology adapted to incorporate the BIS's Stressed VaR. We tested the currency exchange and the currency exchange swaps contracts with volatility-based VaR methodologies in the 2002.2 Brazilian confidence crisis scenarios. Our results confirm a general consensus among economist that there is no methodology able to forecast crises with a high degree of accuracy. To circumvent either the lack of historical information or the lack optimal window for stress patterns, the Stressed VaR can be calibrated with a historical VIX (Volatility Index, Chicago Board Options Exchange), working as a volatility scale. Concerning innovations we suggest to consider other densities, apart from the standard normal curve. Daily oscillation limits may have a significant role on crisis mitigation.

Keywords: Emerging Markets, Market Risk, BASEL III, VaR, Tail Risk

INTRODUCTION

Would the Basel III agreement, proposed by the Bank for International Settlements (BIS), be effective, if applied to past financial crises? Would those crises be mitigated if the Basel III recommendations were already implemented? Caruana (2010) stated that Basel III generated significant progress in prudential financial regulation since the beginning of the global financial crisis that is the landmark of a new global economic context which imposes major challenges. This text turns the statement “*Basel III: Towards a Safer Financial System*” – title of the technical document from Caruana (ibid.) – to a question and submits two key Basel III agreement's recommendations, minimum Capital Requirements and Stressed VaR to a back test, by emulating their existence at the time of a selected past crisis.

The Basel III agreement has some items considered a radical revision of Basel II, such as new parcels of capital requirements, like the counter-cyclical capital, that takes into account macroeconomic risks. Nevertheless, in another perspective, Basel III is not a new agreement, but rather a set of proposed amendments to the previous agreement, changing the latter measures that were deemed insufficient, either in conception, or in the used metric. Basel III either increases the requirements of Basel II or creates new demands, where the crisis has highlighted the procedures to be either insufficient to control the instability of the financial markets or to avoid the occurrence of more serious crises.

In order to establish a link between Basel III recommendations and the early warning approach (IMF), developed to face a recent past of crises, we refer to the vulnerability concept: according to Blejer and Schumacher (1998), the 1990's currency crises revitalized the search for antecedent indicators of financial vulnerability. The evaluation of the solvency and vulnerability of the financial sector (banks and Central Banks) implies to evaluate the vulnerability and credibility of a country. Their proposed VaR implementation intended to be a general-purpose (market) risk analysis tool.

There are other five initial guidelines. First, Abiad (2003) stated that there is a general consensus among economist that there is no methodology able to forecast crises with a high degree of accuracy. Second, many authors enunciate but not empirically broadly test their proposed methodology. Third, as Blejer and Schumacher (ibid.) stated, a vulnerability analysis should not only deal with traditional operations, but with all assets that compose its portfolio, including the derivatives. Fourth, to validate the capital requirements recommendations it is necessary to verify their effectiveness when applied to currency based assets (highly volatile) from bank's portfolios. Fifth, there is a timeline guideline: the transient characteristic of nowadays Basel III recommendations. From BIS (2011), two excerpts:

(a) *"The Committee is introducing these changes in a manner that minimizes the disruption to capital instruments that are currently outstanding. It also continues to review the role that contingent capital should play in the regulatory capital framework."*

(b) *"The Committee will put in place rigorous reporting processes to monitor the ratios during the transition period and will continue to review the implications of these standards for financial markets, credit extension and economic growth, addressing unintended consequences as necessary."*

Consequently, it is crucial to observe the chronogram of Basel III implementation and its emphasis on the risk weighted assets (RWAs). Table 1 shows the Brazilian road map: the implementation chronogram of the Basel III recommendations for minimum capital requirements, where the key term is the regulatory capital (RC).

Table 7: Brazilian's BASEL III Chronogram (Minimum Capital Requirements)

Implementation Date:	Jan, 1st /13	Jan, 1st /14	Jan, 1st /15	Jan, 1st /16	Jan, 1st /17	Jan, 1st /18	Jan, 1st /19
Core Capital	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
Level I	5.5%	5.5%	6.0%	6.0%	6.0%	6.0%	6.0%
Regulatory Capital	11.0%	11.0%	11.0%	9.875%	9.875%	8.625%	8.0%
Capital Conservation	-	-	-	0.625%	1.250%	1.875%	2.5%
RC + Capital Conservation	11.0%	11.0%	11.0%	10.5%	10.5%	10.5%	10.5%
Counter-Cyclical Capital	-	To 0.625%	To 1.25%	To 1.875%	To 2.5%	To 2.5%	To 2.5%

Source: Brazilian Central Bank (2015).

Three observations outstand. First, since 2005, the aggregated and individual Basel index of Brazilian banks stayed above 15%, as seen in Figure 1. Second, no systemic bank crisis occurred in Brazil at least in the last 60 years (Laeven and Valencia, 2008). Third, the Regulatory Capital percentage of 11% (monthly), is equivalent to 20 days of 0.52% daily variation (see Table 2), a rather small variation compared to the daily volatility of quite a lot finance time series, specially those found in emerging market economies (Bekaert and Harvey, 1997). As an example, for the 30-day term currency swaps (U.S. Dollars/Brazilian Reais), the average standard deviations ranged from 1.55% (from 1999 to 2003) to 1.40% (from 2004 to 2014). Only 29.40% of the daily variations were lower than .52%, from 1999 to 2003, while only 28.48% of the daily variations were lower than .52%, from 2004 to 2014.

The volatility-based risk methods, such as the Value at Risk (VaR), became very popular in the 1990's, departing from the *Riskmetrics*TM document (JP MORGAN, 1996). The financial time series variance is usually modeled with GARCH (*Generalized Autoregressive Conditional Heteroscedasticity*) in order to capture the heteroscedasticity of the conditional variance of financial series, a stylized fact known since Engle (1982) and Bollerslev (1986).

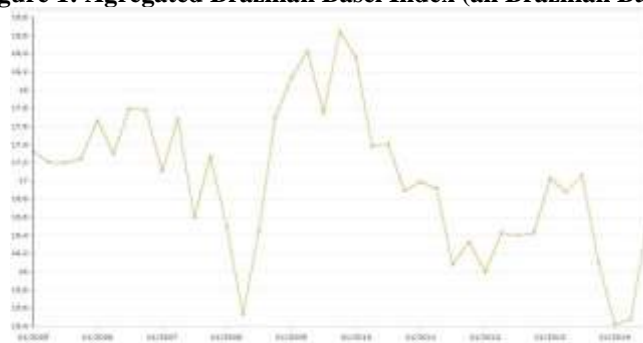
Additionally, financial time series can be also subject to sudden or structural breaks. Consequently, a two-step protocol for volatility modeling is used in this text:

- The unconditional variance levels can be previously determined, for instance, with the ICSS (Iterative Cumulative Sum of Squares) algorithm from Inclán and Tiao (1994).
- The regime-switching feature, either a switching-regime GARCH model (SWGARCH) or a Levy process (with jumps) is incorporated into the volatility-based risk methods.

We developed a retrospective view of some Basel III recommendations as if they were already effective in the recent past. We choose a VaR methodology to evaluate the Brazilian pre-election period of 2002, known as a *"confidence crisis"*. The high volatiles currency exchange rate and mark-to-market currency exchange swaps are examined through empirical tests of a volatility-based methodology. The events of the second

semester of 2002 were especially important, as the currency exchange swaps contracts debts exceeded 40% of the Brazilian internal debt in the end of this year. We evaluate the effect of two of the main BIS Basel III recommendations, minimum capital requirements and Stressed VaR, over currency exchange based assets.

Figure 1: Agregated Brazilian Basel Index (all Brazilian Banks)



Source: Brazilian Central Bank (2015).

Table 2: Daily Loss Limits based on the monthly Regulatory Capital Limits

Monthly ↔ Daily level	Monthly ↔ Daily level	Monthly ↔ Daily level	Monthly ↔ Daily level
8.00% ↔ 0.39%	11.00% ↔ 0.52%	15.00% ↔ 0.70%	17.00% ↔ 0.79%

A main concern is the absence of relevant historical data before June 2002 for currency exchange based assets, since the Brazilian currency floating regime started in 1999.02 and currency swaps contracts grew relevance only from June, 2002. We choose a key counterexample in which the insights can be extrapolated for other possible crisis that may happen in the very beginning either of a new currency (example: the Euro in January 2002) or a new financial factor (our own example: the U.S. Dollars/Brazilian Reais currency exchange coupon, created in August 1999) or even a new financial asset. Consequently, this text intends to contribute to improve the evaluation of the global regulatory recommendations that are part of the Basel III agreement.

The next section is a review of the Basel regulation and financial time series econometrics. The third section comprises the methodology and a brief description of both Brazilian currency exchange based financial series and of the VIX, a candidate for Global Volatility available since January, 1990. The results section comprises the validation of stressed VaR approaches for the chosen scenario, the evaluation of the VIX and the S&P 500 volatility as volatility alternatives (proxies) for the stressed volatility when lacking historical data. The fifth section discusses the results.

THEORETICAL REVIEW

Basel Regulation

The Basel Committee on Banking Supervision was established in 1974 to advise national financial regulators on common capital requirements for internationally active banks, whose membership included representatives from the central banks and prudential regulators of more than 25 nations.

In 1988, the Basel Committee devised the initial Basel Capital Accord, which was a coordinated response to some of the perceived failings of deregulation as banks, in the rush to compete for larger market shares and had rapidly increased their domestic and foreign exposures. At some institutions these exposures were not matched by increases in the institutions' capital bases, leading the minimum capital levels within the global financial system to erode. Deregulation also allowed internationally active banks to take advantage of differences in national treatment of similar assets for capital purposes. These inconsistencies were exploited across jurisdictions in a manner that was producing unhealthy competition and regulatory arbitrage. In short, national standards did not always link capital requirements to actual risk levels and did not always account for exposures beyond those reflected within the balance sheet. Consequently, a regulatory consensus started to build around a set of global standards that would provide guidance on the proper capital levels for internationally active banks, known as Basel II. In 2004, the Basel Committee offered a more comprehensive and risk-sensitive approach to

capital regulation adopting the new framework Basel II, which developed a three “pillars” approach: (1) minimum capital requirements, (2) supervisory review process, and (3) market discipline.

The first pillar, already existent since Basel I, is reported to be the most important — and the most controversial — part of Basel II. Operational risk was added as a third factor for RWAs calculus, followed by a whole revision of Basel I recommendations concerning to RWAs. For accuracy reasons, targeting to match bank’s capital requirements with its risky assets, Basel II provided three methods of assessing credit risk: a basic “standardized” approach and two variants of an “internal ratings-based” approach — foundational and advanced. Under the standardized approach, banks calculate RWAs not only by reference to Basel’s elementary buckets, but also by the external credit ratings from firms like Standard & Poor’s, Moody’s Investor Service, and Fitch Ratings. The two internal ratings-based approaches permit banks to be more sophisticated and rely in varying degrees on their own risk.

The Basel III agreement is often considered an amendment of Basel II. Concerning RWAs, the new agreement recommends a temporary increase for its main item, the regulatory capital; meaning a raise from 8 to 11 percent relative to risky assets from bank’s asset books and defining a permanent increase of capital requirements in charge of two new items: Capital Conservation and Counter-Cyclical Capital, this last concerning to macroeconomic risks.

Williamson (2000) shows that there is a time frame for contracts and a time frame for day-to-day negotiation. This explains why agreements such as Basel I, II and III can be time frame inconsistent with daily economic agents’ activities. This could be a strong and clear reason why the BIS will constantly review its agreements, as explicitly declared in the BIS (2011) document – see the two excerpts exhibited in the introduction section of this text. Minsky’s (2008) theories are invoked every time a new financial crisis occurs. His approach relates economic theory to political, economic, cultural and institutional environments and the need for financial regulations is a way to mitigate the financial instability of a capitalist economy. The main propositions of the financial instability hypothesis create a financial cycle.

While Caruana (2010) stated that Basel III would bring a safer financial system; BIS (2011) indicated the unpredictable nature of future crises. The unpredictable nature (and timing) of crisis can be seen as a plausible link to Minsky’s thought. On the other hand, authors like Cynamon and Fazarri (2008) alleged that the American credit crisis was predictable, as well as Abiad (2003) and Morales and Schumacher (2003) focused on early warning crisis detection.

Financial Time Series Econometrics Review

There are two recurrent stylized facts for financial time series found in the academic literature: volatility clustering and autoregressive conditional heteroskedasticity (ARCH) effects. The theory and modeling with ARCH and Generalized Autoregressive Conditional Heteroskedasticity (GARCH) started with Engle (1982) and Bollerslev (1986). The existence of volatility clusters suggests either an approach under the viewpoint of changes in volatility regimes or an approach under the standpoint of volatility leaps. For a long time it was thought that the stochastic processes associated with the financial series could be modeled through linear processes, almost always by random walk models. According to Brock *et al.* (1992), the most common reasons for deviations from the random walk model, as far as it affects the return of shares, are the volatility clustering and the calendar anomalies (for example, the weekend effect). The volatility clustering has been known for a long time, at least since Mandelbrot (1963).

The ARCH model, developed by Engle (1982), has an autoregressive structure in the conditional variances of the returns. This allows shocks of volatility to continue in time. The conditional variance is a linear function of the square of past innovations. Bollerslev (1986) proposed the GARCH models, in which the volatility of returns depends on the squares of precedent errors and precedent variances. The inclusion of information regarding past variances allows sensibility to the volatility clusters and allows that shocks in returns extend indefinitely in the future. The ARCH and GARCH models were conceived to deal with a single variance regime. By regime is understood that a constant or unconditional level of measure – e.g., average or variance – remains unchanged, so that a change in regime implies a change in level. However, these models only reflect one

series of coefficients for one equation of returns and one equation of volatility. For Diebold (1986 and 1996), and Lamoureux and Lastrapes (1990), the use of GARCH models is subject to error when sudden changes in variance occur, suggesting the introduction either of dummy variables for each change of variance identified ex-post, or procedures to visualize the detection of outliers or levels of unconditional variance, as in Tiao and Inclán(1994).

The introduction of time series subject to changes in regime departs from Hamilton (1989 and 1990), who applied the EM (Estimation Maximation) algorithm for parameter estimation through maximum likelihood estimation (MLE). Hamilton and Susmel (1994), as well as Cai (1994), introduced the SWARCH (Switching ARCH) models, a generalization of the ARCH model of Engle (1982), which allows discrete changes in its level parameters through a Markov process.

In the first specifications found in the literature, the ARCH or GARCH variance was dependent to the entire history of regimes, as seen in Gray (1996). The SWGARCH models combine GARCH with regime switching. Bauwens *et al* (2010) still pointed the dependence on the entire history of regimes. Nevertheless, Haas *et al.* (2004, p. 497) developed models where variances only depend on past shocks and their own lagged values: the path-dependency restriction was removed. This specification is analytically treatable, allows a separation of the process of conditional variance and offers direct parameter estimation through maximum likelihood. Next, we describe the conditional variance equation for the SWGARCH models in equation 1:

Equation 1: Conditional Variance in the SWGARCH Model

The conditional variance equation for the SWGARCH models (k, p, q) is:

$$v_{t,k} = \alpha_0 + \sum_{i=1}^q \alpha_i u_{t-i}^2 + \sum_{j=1}^p \beta_j v_{t-j,k}$$

Residuals: $u_t = \sqrt{v_t} \varepsilon_t$; Either $\varepsilon_t \sim N(0, \sigma_{st})$ or $\varepsilon_t \sim t - student$.

Where $v_{t,k}$ stands for the k-regime variance at period t, $\alpha_0, \alpha_i, \beta_j$ are constants.

A way to deal with diffusion problems is the use of semi martingales, but the procedural structure is very complex. The alternative is the use of Lévy process, additive processes (non homogeneous processes) or the use of models of stochastic volatility with leaps (ORNSTEIN-UHLENBECK). Kim *et al* (2011) tested a distribution based on Lévy's processes, which allows the modeling without resorting to much abstraction. Mandelbrot (1963) was pioneer on the use of stable (or alpha-stable) distributions to model skewness distributions and fat tails. The alpha-stable family is a class that includes several distributions subclasses such as the following: the Gaussian, Cauchy's and Lévy's distribution (also known as inverse Gaussian or Pearson V). The Lévy's continuous stochastic procedure has stationary and independent increments. The Alpha-stable distributions can model the negative skewness and the excess of kurtosis that characterize financial returns. They earned some popularity in the 1960's; nevertheless the interest has decreased, due both to mathematical complexity and huge computing power necessary to implement practical models.

Broda *et al.*, (2013) proposed the Stable mixture GARCH models, incorporating GARCH modeling with stable densities, with a possible incorporation of a Markov switching structure, as done in Haas *et al.* (2004) and prescribed in Bauwens *et al* (2010).

Different specifications for market risk models can be found in the literature, yet the well known Value at Risk (VaR) approach prevails. The VaR can be defined as the possible loss that could occur on a horizon of n days with a small probability. For parametric distributions, according to Jorion (1998, p. 87), "VaR is simply a multiple of standard-deviation of a distribution, multiplied by a factor of adjustment that is directly related to the level of confidence". The simplest and most used procedure to calculate the VaR of a portfolio is the delta-normal method or standard variance-covariance model. The asset price changes are conditionally normally distributed, and the VaR of a portfolio is a linear combination of normal variables and is normally distributed. Dornbusch (1998) and Blejer and Schumacher (1998) suggested the applicability of VaR to macroeconomic questions. Zangari (1997) stated that VaR applies only to stable environments.

Blejer and Schumacher (ibid.) suggested, in complement to VaR, the use of stress tests based on the extreme value theory (EVT). However, the use of stress-testing as a capital adequacy rule has two related shortcomings: (1) only a finite number of scenarios can be examined, yet there are an infinite number of possibilities; and (2) the stress-testing approach usually does not explicitly use the likelihood of the scenarios. Analogous to VaR, these two shortcomings generate the incentive for a firm to increase its catastrophic failure risk without changing its maximum loss. The seminal Stressed VaR approach proposed by Kupiec (1998) incorporates stressed scenarios into the VaR methodology, in order to measure the tail risk. The author shows how assuming multivariate normal distributions for all risk factors leads to automatic consideration of value changes due to the non-stressed factors which are commonly ignored in stress testing. In other words, using data from the 1997 Asian crisis, his conditional Gaussian Stress VaR (95%) approach to stress testing leads to historically accurate estimated value changes for a global portfolio with instruments in the U.S., European and Asian time zones.

BIS (2009) introduced its version of Stressed Value-at-Risk (SVaR): capital requirements based on a continuous 12-month period of significant financial stress, but keep working with the standard 99% confidence interval (one-tailed), 10-day holding period and the normal density. There is little academic literature on Kupiec's (1998) Stressed VaR, like Colletaz *et al.* (2013) and even less on the BIS's SVaR version, as pointed in BIS (2012). Instead, Kim *et al.* (2011) recommend the Average Value at Risk (AVaR) with stable innovations. On the other hand, as an operational example, the Brazilian Central Bank (2014 and 2015) utilizes, in Financial Stability Reports the traditional stress testing.

A candidate to substitute VaR and Stressed VaR is the Expected Shortfall (ES), as proposed in BIS (2012) and reiterated in BIS (2014 and 2016). Unlike VaR, ES is a coherent risk measure, prescribed in Artzner *et al.* (1999). When utilizing the RiskMetrics™ VaR (TSAY, 2010), there is a simple conversion from VaR to ES. For a given upper tail probability p , the expected shortfall, with log returns, normal conditional distribution with mean zero and variance σ_t^2 is described as a VaR function, approximately a 19% increase for $p=2.5\%$ and 14% for $p=1\%$.

Equation 2: Expected Short Fall related to VaR under RiskMetrics™

$$ES_q = \frac{f(VaR_q)}{p} \sigma_t; \text{ or } ES_{(1-p)} = \frac{f(VaR_{1-p})}{p} \sigma_t$$

Nevertheless, the time frame for institutional changes is bigger than a few years (as seen in Williamson, 2010) so that, until 2015, the VaR prevailed as the risk methodology in almost all documents and recommendations from BIS.

Many stock and futures exchanges, including BM&FBOVESPA, require that all operations must be registered and establish some daily limits of oscillation for financial assets. In this case, stressed values can be directly deduced from the daily limits of oscillation, dispensing the search for historical stressed values inputs for stressed VaR. Moreover, when an asset has pre-established oscillation limits, it is possible to use a probability distribution with barrier formula, from Dixit and Pindyck (1994), nevertheless this was not the case for the currency based assets of our sample.

DATA AND METHODOLOGY

Our sample comprises daily data on currency exchange rate (PTAX), Brazilian currency swaps (U.S. Dollars/Brazilian Reais), the S&P500 stock exchange index and the VIX index. The PTAX represents the currency exchange rate between U.S. dollars and Brazilian Reais. The VIX is a volatility index, calculated by the Chicago Board Options Exchange as a weighted blend of prices for a range of options on the S&P 500. The VIX is quoted in percentage points and translates, roughly, to the expected movement (with the assumption of one standard deviation) in the S&P 500 over the next 30-day period, which is then annualized.

In 2002, the internal Brazilian debt comprehended two types of currency-indexed contracts: the currency exchange swaps, negotiated in the BM&FBOVESPA, and the NTN-D (National Treasury Notes, D series). The mark-to-market currency exchange swaps series began in August 1999. The Central Bank currency exchange swaps contracts began to be negotiated in April 2002 with a monthly adjustment of positions. In July

2002, three types of swap contracts were established - SCC, SC2, and SC3 – and two of them (SCC and SC3) were daily adjusted. The number of contracts exceeded 200 on July, 2002 and the total financial volume surpassed US\$ 30 billions. The underlying asset is the spread between the interest rate and the currency exchange rate variation, defined as follows:

- a) The interest rate of interbank deposits (DI), defined as the capitalized daily average of one-day DI rates, calculated by the Central of Custody and Financial Settlement of Securities (CETIP) and verified in the period between the trading day and the day preceding the expiration date;
- b) The exchange rate variation, measured by the offered exchange rate of Brazilian reais per U.S. dollar for cash delivery traded in the foreign exchange market.

The daily adjustment of a contract is the difference between the position “carried over” from the previous day and the market quotation. It is credited to the holder of a long position (buyer), and debited to the holder of a short position (seller). Next, we used the Iterative Cumulative Sum of Squares (ICCS) algorithm to identify the changes in the unconditional variances of the daily returns of the series of PTAX and currency swaps. Then, the daily returns were modeled with regime switching and heteroscedasticity, with the use of the SWGARCH code from Haas *et al.* (2004). Finally, the series were simulated with alpha-stable densities.

The sudden changes in the unconditional variance were evaluated with the ICCS algorithm developed by Inclán and Tiao (1994). Once estimated the change points, the next step was to identify political and/or economical events that could be responsible for changes in the level of unconditional volatility. The temporal series presents a stationary variance over the initial period. A sudden change in variance occurs some time later, possibly caused by some political and/or economic shock. The variance becomes stationary again, at another level, until another sudden change occurs. This process is repeated creating a temporal series of observations with an unknown number of sudden changes in variance.

Equation 3: Equation of Returns

$$\text{Daily return} = R_d = \ln\left(\frac{\text{Index}_t}{\text{Index}_{t-1}}\right);$$

Equation 4: Sudden Changes, Unconditional Volatility (AR/GARCH)

$$AR(1): R_d_t = A_0 + A_1 R_d_{t-1} + u_t; v_t = C + p v_{t-1} + q u_{t-1}^2 + Lev I_{t-1} u_{t-1}^2$$

$$\text{Conditions } \mu_t = \sqrt{v_t} \varepsilon_t; \varepsilon_t \sim t; \mu = 0; \sigma^2 = 1; df = D(t - \text{student}); I_t = 1(u_t < 0); I_t = 0(u_t \geq 0)$$

Where A_0 is constant in the average equation; C is constant in the conditional variance equation; Q is the residuals coefficient; P is the conditional variance coefficient; Lev is the leverage coefficient, and D is the degree of freedom of the t-student distribution that models the return series. After running the GARCH model, the program runs the ICSS algorithm.

With regard to regime switching, the Hamilton's (1990) model was adapted to estimate a 2-state Markov model, with average and variance being variables of a 1-dimension vector. Each series was tested individually. The duration of each regime can be easily derived from the Markov chain properties. Defining D as the duration of a specific regime, S_t the state variable at time t , j a index that stands for the regime j , p_{jj} the probability of staying in the same regime j from time t to $t + 1$.

Equation 5: Expected Regime Duration (calculated by induction)

$$E(D) = \sum_{j=1}^{\infty} j P[D] = (1 - p_{jj}) + 2 \cdot p_{jj} \cdot (1 - p_{jj}) + 3 \cdot p_{jj}^2 \cdot (1 - p_{jj}) + \dots = \frac{1}{1 - p_{jj}}$$

The probability p_{jj} is the permanence in same regime j in consecutive time.

The SWARCH (switching ARCH) models from Hamilton and Susmel (1994) were utilized in preliminary tests, yet discarded on behalf of the parsimony of the SWGARCH models, which were based on Haas *et al.* (2004). Each series was modeled with SWGARCH, nesting a GARCH (1, 1), as seen in equation 6:

Equation 6: Variance Equation for SWGARCH (HAAS *et al.*, 2004)

$$v_{t,k} = \alpha_0 + \sum_{i=1}^q \alpha_i u_{t-i}^2 + \sum_{j=1}^p \beta_j v_{t-j,k} + \xi d_{t-1} u_{t-1}^2$$

Where $v_{t,k}$ stands for the k -regime variance at period t , $\alpha_0, \alpha_i, \beta_j$ are constants.

BIS (2009) recommend a stressed value-at-risk (SVaR), a methodology initially proposed by Kupiec (1998), as in equation 7.

Equation 7: Required Capital calculated through Stressed VaR (BIS)

$$RC_t = \text{Max}[VaR_{t-1}, (3+k_t) \frac{1}{60} \sum_{i=1}^{60} VaR_{t-i}] + \text{Max}[sVaR_{t-1}, (3+k_t) \frac{1}{60} \sum_{i=1}^{60} sVaR_{t-i}]$$

Where: Max, RC, VaR, SVar and k stand for Maximum, Required Capital, Value at Risk, Stressed Value at Risk and a constant defined by the country financial regulator (usually a Central Bank). The original formula from Kupiec (1998) specifies only the last term, without the multiplier (3+k) and an arbitrary number N in place of the fixed 60. The normal innovations densities are the one of a kind prescribed in the BISs's recommendations. While there is a risk of double counting the VaR, for instance, when the present scenario is a stressed scenario (BIS, 2014), during non-turbulent periods, the first term (the volatility parcel already present in the VaR methodology) contributes marginally to the SVaR term, meaning a clear separation between volatility risk and tail risk.

The chosen method to optimize modeling is the MLE (Maximum Likelihood Estimation) with normal and alpha-stable innovations, based on Haas *et al.* (2004) and Broda *et al.* (2013), shown in equation 8 as the negative of the sum of innovations X_t . Alternatively, from Hall and Yao (2003), it is possible to apply a MLE generalization with a GARCH-like approach.

Equation 8: The Normal Log Likelihood and the Stable Log Likelihood

$$\text{Loglik}(X) = -\sum_{t=v}^T [LL(X_t)] + \frac{T}{2 * \log(2 * \pi)}; \text{ simplifies to } \text{Loglik}(X) = -\sum_{t=v}^T [LL(X_t)]$$

The stable densities are defined according to Nolan (1997 and 2015). A random variable X is stable ($\alpha, \beta, \gamma, \delta$) if it has the following characteristic function (than can generate the second moment through a Fourier transform), described in equation 9:

Equation 9: Stable ($\alpha, \beta, \gamma, \delta$) Characteristic Function (to Fourier Transform)

$$E[\exp(iuX)] = \begin{cases} \exp(-\gamma^\alpha |u|^\alpha [1 - i\beta(\tan \frac{\pi\alpha}{2})(\text{sign}(u))] + i\delta u); \alpha \neq 1 \\ \exp(-\gamma |u| [1 + i\beta \frac{2}{\pi}(\text{sign}(u))\ln |u|] + i\delta u); \alpha = 1 \end{cases}$$

Where α, β, δ and γ stand for the characteristic parameter (tail), skewness, scale (equivalent to variance) and location (equivalent to mean). For a normal distribution, the tail value is 2, the skewness is zero, the scale is 1 and the mean is zero.

RESULTS

Currency exchange rate and currency swaps: daily volatility.

In the first step of our test protocol, various changes in the unconditional volatility were detected in all daily returns series. When modeling the volatility with heteroskedasticity and regime switching - either with SWARCH or SWGARCH models — the number of levels implied a non-parsimonious number of parameters. The existence of various regimes of variance, with non-zero transition probabilities between these regimes, is not rejected. However, it is also appropriate to consider the hypothesis of the occurrence of various structural breaks, especially for the case of the huge jumps in the unconditional volatility of the daily returns series in the second semester of 2002, when the so-called confidence crisis occurred.

The high volatility levels of the Brazilian financial series in the second semester of 2002 were mainly determined by the uncertainty related to the Presidential election campaign. Razin & Sadka (2004) identified the presidential elections and the expected change of political and economical regime as being the two triggers of the Brazilian confidence crisis, known as such in spite of the economic fundamentals of the Brazilian were solid. Those triggers are a clear example of the unpredictable nature of future crises, as proclaimed in BIS (2011). According to Meirelles (2004), the Brazilian Central Bank offered currency exchange swaps contracts at the height of the confidence crisis through which the country suffered in the second semester of 2002.

The risk models based on either normal or t-student innovations, using data collected from 1999 to the first semester of 2002, were not able to forecast the jump of the volatility levels since June 2002, when the leftist candidate Lula, willing to calm down the market, launched the manifesto *Letter to the Brazilians*. The mark-to-market currency exchange swaps prices exhibited high unconditional volatility levels from July 26th, 2002. However, those high levels are possibly related not only due to the confidence crisis, but also to the increase in the number of currency swap contracts and to the large volume of conversions from contracts without daily adjustment (SC2) to contracts with daily adjustment (SC3) - an operational issue, rather linked to the operational risk of new terms of contracts than to market risk. The volatility decreased by August 13th, 2002, possibly as a result of the stand-by loan's announcement from the IMF (International Monetary Fund), nevertheless higher than the former levels before June 2002.

While the exchange rate (U.S. Dollars/ Brazilian Reais) rose to almost 4 by October 22nd, 2002, the eve of the second round of the presidential elections; its unconditional volatility levels were the greatest since the beginning of the currency floating regime, started by 1999.2. Table 3 shows the sudden changes in the unconditional volatility of the daily returns of both currency exchange and currency swaps price units (PU, the unit of negotiation of currency swaps contracts) in the BM&FBOVESPA stock exchange. The daily returns of swap prices presented 11 change points in the unconditional volatility. The table shows some political and/or economical events that could be responsible for the changes in the unconditional volatility of the daily series.

Table 3: Sudden Changes, Unconditional Volatility of Currency Swap Prices

Period	From	To	Standard deviation	Possibilities
1	August, 25 th , 1999	October 7 th , 1999	1.20%	Initial phase of currency floating regime in Brazil
2	October 8 th , 1999	May 12 th , 2000	0.73%	COPOM's meeting kept basic interest rate at 19% per year
3	May 15 th , 2000	October 20 th , 2000	0.47%	"Quiet" period
4	October 23 rd , 2000	December 1 st , 2000	1.22%	"Quiet" period
5	December 4 th , 2000	March 13 th , 2001	0.53%	"Quiet" period
6	March 14 th , 2001	December 17 th , 2001	1.59%	Argentina's default, energy crisis, Sep 11
7	December 18 th , 2001	June 3 rd , 2002	0.88%	"Quiet" period
8	June 4 th , 2002	July 25 th , 2002	2.06%	Beginning of Presidential campaign in Brazil
9	July 26 th , 2002	August 6 th , 2002	8.49%	Confidence crisis, swap auctions and conversions (SC2 for SC3)
10	August 7 th , 2002	November 13 th , 2002	2.54%	Election's eve and IMF stand-by Loan
11	November 14 th , 2002	February 4 th , 2003	1.50%	Political transition; beginning of Lula's government

Figure 2 shows that the peak unconditional volatility of the currency swaps prices was almost the same (near 8% on August 8th, 2002) to all currency swaps series. At that time, some currency based assets were set to a maximum daily fluctuation of 7.5%, meaning that the peak volatilities were coherent with some pre-established daily oscillation limits. The currency exchange rate (PTAX) exhibited unconditional volatility levels lower than those of the currency swaps contracts, which are subject to, at least, other two risk factors: interest rates and currency exchange coupon.

Table 4 exhibits the transition probabilities (P1 and P2), unconditional volatilities, regime durations (in days), and expected losses of the daily returns of currency swap prices and currency with two-regime volatility. The daily loss possibilities follow equation 10, which describes a VaR with one-day holding period divided by the mark-to-market asset value:

Equation 10: Expected Daily Loss, from Currency Exchange Swaps Prices

$$\frac{VaR}{Value} = (SF \times MTM_t \times \sigma_{s,t}) / MTM_t = SF \times \sigma_{s,t}$$

where $\sigma_{s,t}$ is the volatility of regime s at day t ; SF is the sensibility factor (2.33 for a 1% significance level); MTM_t is the mark-to-market value of the contracted currency exchange swaps at day t . The main component of a Principal Component Analysis (PCA, based on Litterman and Scheinkman, 1991) is possibly a currency exchange factor, responsible for 96.05 % of the variance over other factors that influence the currency swaps contracts.

Figure 2: Currency Swaps Prices - Daily Volatility (DTM= Days to Maturity)



The results confirm the effectiveness of the Stressed VaR approach from Kupiec (1998) adapted for a two-volatility regime switching model, however they do not shed a light for the BIS stressed VaR, in which the simultaneous use of high and (not very) low volatility parcels can be faced as an over specification.

Table 4: Daily losses for PTAX and Currency Exchange Swaps

Note: Transition probabilities (P1 and P2), volatility, duration (days), and expected losses (VaR/portfolio ratio).

Expiring Days/asset	P1	P2	Low volatility	High volatility	Low volatility duration	High volatility duration	Low volatility daily loss	High volatility daily loss
270	0.9725	0.9644	0.91%	2.83%	36.37	28.10	2.12%	6.59%
300	0.9734	0.9661	0.82%	2.57%	37.54	29.51	1.92%	5.99%
330	0.9734	0.9661	0.75%	2.37%	37.60	29.50	1.76%	5.51%
360	0.9735	0.9661	0.69%	2.19%	37.71	29.52	1.61%	5.11%
390	0.9744	0.9678	0.65%	2.04%	38.99	31.04	1.51%	4.76%
420	0.9758	0.9700	0.61%	1.92%	41.32	33.31	1.41%	4.47%
450	0.9762	0.9707	0.57%	1.81%	42.00	34.16	1.32%	4.21%
480	0.9772	0.9714	0.54%	1.74%	43.84	34.91	1.27%	4.06%
510	0.9785	0.9728	0.52%	1.67%	46.60	36.76	1.22%	3.89%
PCA	0.12	0.04	0.030%	3.163%	1.14	1.05	0.070%	7.369%
PTAX	0.80	0.46	0.007%	3.162%	4.90	1.86	0.017%	7.368%

Evaluating the VIX index as a volatility Proxy

Table 5 shows the alpha-stable distributions for currency swaps, VIX, and S&P 500 series. The daily returns series were submitted to the STBLFIT and STBLPDF functions from Veillete (2010) and to the STABLEFIT function from Nolan (2015), with similar results which exhibit the non negligible probability of occurring the Black Monday volatility (October 19th, 1987), even in the S&P 500 series that ends in September 18th, 1987. The Kolmogorov-Smirnov test rejected the null hypothesis of normality at the 1% significance level for all series.

Table.5: Stable Distributions- VIX, Currency Exchange Swaps and S&P 500

Note: α , β , δ and γ stand for the characteristic parameter (tail), skewness, scale (equivalent to variance) and location (equivalent to mean), respectively.

Series	α	β	δ	Γ	Black Monday Probability (-23%)
VIX (Since January 2 nd , 1990)	1.609991	1.00	0.002524	0.013149	0.187%
Currency Swaps 1999-2003	1.393691	0.2464	0.006498	0.001661	0.733%
Currency Swaps 2004-2014	1.612221	-0.0708	0.006871	9.39E-05	0.432%
S&P (Jan, 4 th , 1950 – Aug. 8 th , 2015)	1.617643	-0.1213	0.004959	0.000183	0.258%
S&P (Jan, 4 th , 1950 – Sep. 18 th , 1987)	1.716187	-0.0949	0.004569	0.000238	0.123%

We then calculate VaR and Expected Shortfall for currency swaps prices based on the VIX index, according to equation 11.

Equation 11: VaR / ES for Currency Swaps, Based on Overall maximum VIX

$$VaR_{p=1\%} = SF \times \sigma_t = 2.33 * 5.09\% = 11.868\% \Rightarrow EShortfall = 13.60\%$$

Where: SF is the sensibility factor (SF=2.33 for a 1% significance level), σ_t is the volatility at day t, and the overall maximum historical daily VIX volatility (until August, 2015) is 5.09%.

The next tables (6 and 7) show that few violations occurred when using a maximum historical daily volatility VIX in the VaR for currency swaps: either only two days, when referring to overall maximum VIX, or only 9 days, when referring to maximum VIX until the analyzed period. Moreover, there is no violation when referring to the maximum Expected Shortfall of 13.60% (equation 2.13) at a 1% significance level.

Table 6: Only two Violations referring to the Overall Maximum VIX volatility

Day	Loss
October 9th, 2008	-12.881%
October 23rd, 2008	-12.648%

Table 7: Only Nine Violations referring to Maximum Historical VIX until Date

Day	Loss	Day	Loss
July 30 th , 2002	-9.59%	September 30 th 2008	-8.54%
October 9 th , 2002	-6.74%	October 9 th , 2008	-12.88%
May 25 th , 2006	-9.47%	October 13 th 2008	-10.91%
August 17 th 2007	-8.72%	October 23 rd , 2008	-12.65%
September 19 th 2008	-8.48%		

The VIX is calculated from S&P500's derivatives. We generated an alternate volatility index based on S&P500 volatility parameterizations. First, we fit the daily returns of the S&P500 index to an ARMA (1, 1)-GARCH (1, 1) model. Table 8 shows the results. The log likelihood value for normal innovations is +56,296.80. The variance level, 8.0625E-07, compared to the GARCH coefficient (0.91), indicate a dependence on historical values. Nevertheless, the persistence - sum of GARCH + ARCH coefficients - is high (99.37%), suggesting changes in the unconditional variance that can be modeled with regime switch models (see DIEBOLD, 1986 and 1996). The log likelihood value for stable innovations is slightly superior to the result for the normal innovations (+55,071.00), while the log likelihood value for GARCH with stable innovations is negative: -16,507.60.

Table 8: S&P 500 Daily Return's GARCH Fit (January, 1950 to August, 2015)

Parameter	C	AR (1)	MA (1)	K	GARCH (1)	ARCH (1)
Value	0.00054663	-0.15823	0.25515	8.0625E-07	0.91022	0.083508
Std Error	7.30E-01	0.080562	0.07882	6.61E-05	0.0022535	0.0017177
T Statistic	74.879	-19.641	32.371	122.030	4.039.206	486.150
Value (Stable)	0.000291			9.42E-06	0.85	0.05
SE (Stable)	0			0	0	0
T (Stable)	Inf			Inf	Inf	Inf

Next, we model the S&P500 index with SWGARCH. The results from tables 9 and 10 show that MLE fitting for alpha-stable densities is very sensible to the volatility levels and, at first, they do not favor regime switching, as some of the single volatility regime GARCH (1, 1) models, with stable innovations, exhibited better results than the switching regime models. Table 4.7 shows the results for the maximum likelihood estimation for the S&P 500 index - from January 4th, 1950 to August 20th, 2015 - with alpha-stable and normal

innovations. The columns L1 and L2 are the unconditional volatility levels, ARCH and GARCH stand for the ARCH/GARCH coefficients, MLE_STBL, MLE_NORM and MLE_GARCH mean, respectively, ARMA (1,1)-SWGARCH (1,1) with stable innovations/two volatility levels, ARMA (1,1)-SWGARCH (1,1) with normal innovations/two volatility levels and ARMA (1,1)-GARCH (1,1) with stable innovations/one high volatility level. All transition probabilities are equal to 50%.

Table 9: S&P 500 return's MLE Fitting (Stable and Normal Innovations)

L1 (%)	L2 (%)	ARCH1	ARCH2	GARCH1	GARCH2	MLE_STBL	MLE_NORM	MLE_GARCH
0.83	2.07	0.10	0.28	0.55	0.96	63,791	29,340	58.812
0.83	1.87	0.10	0.28	0.55	0.96	63,660	29,292	58.619
0.83	1.67	0.10	0.28	0.55	0.96	63,527	29,243	58.424
0.50	1.00	0.28	0.05	0.10	0.82	54,053	8,510	45.700
0.50	1.10	0.28	0.05	0.10	0.82	52,088	8,425	43.358
0.50	1.20	0.28	0.05	0.10	0.82	50,234	8,367	41.193
0.50	1.30	0.28	0.05	0.10	0.82	48,499	8,331	39.203
0.50	1.40	0.28	0.05	0.10	0.82	46,892	8,314	37.384
0.757	1.298	0.77	0.57	0.99	0.99	42,433	18,417	42.682
0.806	2.393	0.76	0.94	0.65	1.00	21,541	25,082	65,258
E-7	0.81	0.99997	0.80268	0.99997	0.99997	176,700	93,256	159,060

Table 10 shows comparative results for the maximum likelihood estimation for the S&P 500 index, daily returns of Brazilian currency swaps (CS, with 30 days to maturity), and the main factor from currency swaps daily return's Principal Component Analysis (PCA, possibly the daily exchange rate between U.S. Dollars and Brazilian Reais); with alpha-stable and normal innovations allowing different transition probabilities. L1 and L2 are the unconditional volatility levels; G1 and G2 stand for the GARCH coefficients of IGARCH modeling; P11 and P22 are probabilities to stay in the same regime in consecutive times; STBL, NRM and GARCH mean, respectively, ARMA (1,1)-SWGARCH (1,1) with stable innovations/two volatility levels, ARMA (1,1)-SWGARCH (1,1) with normal innovations/two volatility levels, and ARMA (1,1)-GARCH (1,1) with stable innovations/one high volatility level.

Table 10: MLE returns fitting (S&P 500 and Currency Swaps).

Series	L1 (%)	L2 (%)	G1	G2	P11	P22	STBL	NRM	GARCH
S&P500	E-06	2	99.86	99.136	0.26	0.29	102,286	70,321	169,723
S&P500	E-06	2	83.08	99.90	0.02	0.88	468,027	12,600	512,243
CS (1999-2003)	E-07	0.1	98.80	99.51	0.81	0.75	25,377	13,008	NaN
CS (2004-2014)	8E-07	1	96.59	98.15	0.20	0.14	22,213	9,175	NaN
PCA	E-3	3.523	99.105%	99.396%	0.20	0.11	26,388	-685	NaN

CONCLUSIONS

This text evaluated the adequacy of two main Basel's recommendations for market risk – minimum capital requirements and Stressed VaR - analysing a past financial vulnerability through the market risk exposure originated from currency exchange based assets. Would the effects of past crises be mitigated if those Basel III recommendations were already implemented? The chosen country and time were Brazil in the eve of the 2002's presidential election. After applying the standard delta normal VaR methodology to the quite high daily return's volatilities; both of the exchange rate (U.S. Dollars/Brazilian Reais) and of the currency swaps prices (from August, 1999 to February, 2003); it is possible to answer upon the effects of the two chosen recommendations.

First, is Stressed VaR effective for crisis periods? The answer is no when there is no recent turbulence to be referenced. In the specific case of the 2002's Brazilian scenario, the number and volume of currency swaps only grew a couple of months before the crisis peak, so that the past does not work as a stress reference. Moreover, the high volatility levels did not sustain for a long period (from the end of July, 2002 to early August, 2002), and might not be eligible for future references. Also, the currency exchange volatility did not follow the currency swaps volatility, since they depend on different factors. Consequently, currency based assets cannot proxy the new asset (currency swaps), which is a strong reason to avoid much exposure from new financial instruments. The BIS SVaR works like a sum of historical VaR and historical tail risk, therefore it is feasible with a necessarily pre-existent historical background, meanwhile capital requirements is a general approach. The stress reference usually works in a window approach, with the moving averages replaced by the window of stress. In the absence of historical data, we suggest that VIX volatilities can be used as an alternative volatility for the Stressed VaR. Besides that, while we follow BIS (2012, 2014 and the definitive document of 2016) which recommend the substitution of VaR and Stressed VaR by the Expected Shortfall methodology; we also suggest that SWGARCH models can be a good alternative to describe the volatility of the financial series, competing with alpha-stable innovations models. In future tests, the transition probabilities between states may vary with time. On the other hand, there is a key advantage for stable-based models, since they do not separate volatility from tail risk, what forcibly occurs when using models based on the standard normal distributions, as usually prescribed in BIS's documents.

Second, concerning Basel III capital requirements: would have been effective in past crises? The answer is a conditional yes, once there is a previous point not much discussed in literature: the daily oscillation limits that, in the Brazilian case, exceeded 8.5% a day in the year 2002 – not to mention the key role of margins calls. Our simulations showed that assets with long term maturity exhibited a 6.59% daily loss (with a duration of 28.10 days), meaning a 13.18% loss in two days. The oscillation limits can play a stop loss role, mitigating crisis effects. In other words, a control over price oscillations should be more effective compared to a macro control over minimum capital requirements. In this view, while the global Basel index rose from 8% to 11% due to the emergent need to quick respond to the financial crisis, the Brazilian banks have operated with a Capital Requirements index above 11% since 1998. Until now, the increase of the Regulatory Capital requirements will be transferred to new Requirements items, such as the counter cyclical capital buffer. However, readers shall take into account the risk of disclosing information in crisis times, when transparency becomes a very sensitive issue, as observed in Eichengreen (2003).

Last but not least, three considerations: (a) market risk offers daily information, apparently an evaluation advantage over credit risk; (b) other risk experiences are scarce in the recent Brazilian history, as no systemic bank crisis occurred in the recent past (50 years, according to Laeven and Valencia, 2008) and (c) the use of past crises deals with just one similarity: high volatility, from different sources.

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THE LIQUIDITY REGULATION VERSUS THE LENDER OF LAST RESORT: A DICHOTOMY?

Marcelo Zeuli and André Carvalhal

Administration and Management Institute/PUC/RJ, Brasil

ABSTRACT

We deal with a supposed dichotomy in the field of banking regulation: the liquidity risk regulation versus lender of last resort (LOLR). Why the financial system needs simultaneously those alternatives? In fact, financial institutions need both: the argument is justifiable for a number of reasons, starting with the portfolio selection approach (Markowitz, 1952). Contextualizing with the international financial crisis and the recommendations from the Basel III agreement, we proceed with four analyses in order to reinforce the argument in face of liquidity shortage risk. First, we evaluate the American and Brazilian low risk/high liquidity assets in light of the Quantitative Easing approach and the low interest rates of American risk free assets. Second, we test a Liquidity Index – the Brazilian Liquidity Index - and verify its relation with other financial and economic variables. Third, we examine the daily returns of assets such as currency exchanges, assets that exhibit a high daily volatile pattern not captured by lower frequency (monthly) databases. Forth, we simulate call options, according to the risk weighted assets (RWA) approach (Basel II/III) for credit, market and operational risks. Call options without maturity, as in Alvarez and Dixit (2014), originated from any kind of lender (not necessarily a LOLR) offer a theoretically feasible alternative/complement to capital requirements, with underlying assets modeled with Geometric Brownian motion.

Keywords: Emerging Markets, Liquidity Risk, BASEL III, VaR, Tail Risk

INTRODUCTION

We deal with a supposed dichotomy in the field of banking regulation: the liquidity risk regulation versus the lender of last resort (LOLR). Why does the financial system need both alternatives simultaneously? In fact, this simultaneity is justifiable by a number of reasons already discussed in Carlson et al. (2015). Moreover, we can rebate this dichotomy by following the portfolio selection approach (Markowitz, 1952) that prescribes diversification for any kind of financial investments. We innovate showing that third alternatives to capital requirements are theoretically feasible as well as identifying that the monthly returns of the Brazilian Liquidity Index is a random walk process, meaning both a constant effort to keep this index at a safer level and a constant search for liquidity alternatives.

In a necessary search for an effective contextualization with the international financial crisis and the recommendations from the Bank for International Settlements (BIS) that constitute the Basel III agreement, four groups of analyses were made concerning the liquidity shortage risk. First, we evaluate the U.S. low risk/high liquid assets and the Brazilian rediscount (which is a kind of perpetual option without legal tender) in light of the quantitative easing approach, the quite low interest rates of U.S. risk free assets (with a quite low yield since 2009) and the absence of systemic crises in Brazil in the recent past. Second, we test the Brazilian liquidity index and verify its behavior and relation with other financial and economic variables. Third, we examine the daily returns of currency based assets that are highly volatile, which means a high probability of market value losses, a pattern that is not captured by lower frequency (monthly) databases. Fourth, we simulate call options, according to the risk weighted assets (RWA) approach of the Basel II and Basel III agreements, for credit, market and operational risks. Call options without maturity, as in Alvarez and Dixit (2014), originated from any kind of lender (not necessarily a LOLR) offer a theoretically feasible alternative/complement to capital requirements,

with underlying assets modeled with Geometric Brownian motion, although more costly than the usual rediscount offered by Central Banks, and not always warranted.

Caruana (2010) stated that the Basel III agreement generated significant progress in prudential financial regulation since the beginning of the global financial crisis, a landmark of a new global economic context that imposes major challenges. The main recommendation for capital requirements is the increase from 8 to 11 percent of the “cushion” required to cover losses from risky assets, allocated in the net worth of the banks and calculated following the risk weighted assets (RWA) methodology – a methodology established since the Basel II agreement. Table 2.1 shows the Brazilian road map for Basel III implementation, where a key term is the regulatory capital (RC).

Table 8: Brazilian’s Basel III Chronogram (Minimum Capital Requirements)

<i>Implementation Date:</i>	<i>Jan, 1st/13</i>	<i>Jan, 1st /14</i>	<i>Jan, 1st /15</i>	<i>Jan, 1st /16</i>	<i>Jan, 1st /17</i>	<i>Jan, 1st /18</i>	<i>Jan, 1st /19</i>
Core Capital	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
Level I	5.5%	5.5%	6.0%	6.0%	6.0%	6.0%	6.0%
Regulatory Capital	11.0%	11.0%	11.0%	9.875%	9.875%	8.625%	8.0%
Capital Conservation	-	-	-	0.625%	1.250%	1.875%	2.5%
RC + Capital Conservation	11.0%	11.0%	11.0%	10.5%	10.5%	10.5%	10.5%
Counter-Cyclical Capital	-	To 0.625%	To 1.25%	To 1.875%	To 2.5%	To 2.5%	To 2.5%

Source: Brazilian Central Bank (2015).

The liquidity concept predates credit, market and operational risk concepts, nevertheless strongly tied to credit and market risk fluctuations that influences bank’s ability to pay its debts. Concerning to Brazil, the Central Bank Resolution 4090/2012 provides for the management structure of liquidity risk. It defines two events. First, the possibility of the bank is not able to meet, efficiently, its expected and unexpected current and future obligations, including those arising from binding guarantees, without affecting their daily operations and incurring significant losses. Second, the possibility of the institution cannot negotiate a position at market price, because of its size in relation to the volume usually transacted or due to any market discontinuity. The financial institutions should consider the liquidity risk in individual countries where they operate and in the currencies to which they are exposed, observing any restrictions on the transfer of liquidity and convertibility of currencies, such as those caused by operational problems or impositions made by a country.

Concerning risky assets, Hagendorff and Vallascas (2013) report a global decrease of the RWA related to total assets. Nevertheless, in spite of the possible global decrease of risky assets, even high liquid/low risk assets do not cease to exhibit a likelihood of high volatilities, keeping the need to risk mitigation and liquidity regulation strongly linked and being permanent concerns, giving space for macroeconomic alternatives. An outstanding example is the quantitative easing policy from the Federal Reserve. In this approach, a Central Bank quantitatively buys financial assets from banks, causing a price increase of financial assets and a simultaneous increase of both broad money and monetary base.

The next section is a quick review on Banking Regulation and Financial Time Series. The third section comprises the data and methodology. The results section has six parts. First, we analyze the volatility and yield of American low risk and high liquid assets, second we test the Brazilian rediscount and third we test the aggregated liquidity index reported by the Brazilian Central Bank. Then, we model the volatility of the daily returns of the exchange rates (U.S. Dollars/ Brazilian Reais and Euro/Brazilian Reais) since they exhibit high daily volatilities (meaning high loss probabilities) not captured by monthly data. Finally, we evaluate a complementary/alternative lending to the capital requirements recommendations from the Basel agreement, in line with the RWA approach: the financial options model, which is evaluated in two steps: (a) European calls implemented with geometrical Brownian innovations; and (b) a perpetual option model, according to Alvarez and Dixit (2014). The text ends with a conclusion section.

BANKING REGULATION AND FINANCIAL TIME SERIES

The Basel Committee on Banking Supervision was established in 1974 to advise national financial regulators on capital requirements for internationally active banks. The first agreement, Basel I, focused exclusively on the credit risk of bank’s assets when calculating risk weighted assets. Believing that the original focus was too

narrow, the Basel Committee revised Basel I by adding a market risk element to the Risk Weighted Assets (RWA) calculation. In 2004, the Basel Committee offered a more comprehensive and risk-sensitive approach to capital regulation adopting a new framework. Basel II developed a three-pillar approach: (1) minimum capital requirements, (2) supervisory review process, and (3) market discipline. The first pillar is reported to be the most important — and controversial — part of Basel II. Operational risk was added as a third factor for RWAs calculation, yet the major contribution was the whole revision of Basel I approach to RWAs. For accuracy reasons, targeting to match the bank's capital requirements with its risky assets, Basel II provided three methods of assessing credit risk: a basic “standardized” approach and two variants of an “internal ratings-based” approach —foundational and advanced. Under the standardized approach, banks calculate RWAs not only by reference to Basel's elementary buckets, but also by the external credit ratings from firms like Standard & Poor's, Moody's Investor Service, and Fitch Ratings. The two internal ratings-based approaches permit banks to be more sophisticated and rely in varying degrees on their own risk.

The Basel III agreement is considered (often) as an amendment of Basel II and is summarized in BIS (2011). It recommends a temporary increase in the regulatory capital following the RWA approach: a raise from 8 to 11 percent relative to bank's risky assets that will be progressively allocated to new RWA items such as the counter cyclical capital buffer. The concepts of liquidity risk and the lender of last resort (LOLR), as seen in Bordo (1990) are older than the fundamentals of modern finance (Markowitz, 1952). They started with Thornton (1802) and Bagehot (1873), who developed the key elements of the classical doctrine of the LOLR in England. Monetary authorities in the face of panic should lend unsparingly but at a penalty rate to illiquid but solvent banks - see also authors like Goodhart (1985 and 1987), which broadened the power of LOLR to also include aid to insolvent financial institutions.

Brunnermeier and Pedersen (2009) presented some take away lessons. First, the liquidity suddenly dries up; fragility in liquidity is in part due to destabilizing margins, which arise when financiers are imperfectly informed and the fundamental volatility varies. Second, the market liquidity and fragility co-move across assets since changes in funding conditions affect speculators' market liquidity provision of all assets. Third, the market liquidity is correlated with volatility, since trading more volatile assets requires higher margin payments and speculators provide market liquidity across assets such that illiquidity per capital use, i.e., illiquidity per dollar margin, is constant. Fourth, the flight to quality phenomena arise in this framework since when funding becomes scarce speculators cut back on the market liquidity provision. Fifth, the market liquidity moves with the market since funding conditions also do.

According to Carlson et al. (2015), the liquidity shortfalls can arise for two very different reasons: *“First, sound institutions can face either runs or deterioration in the liquidity of markets they depend on for funding. Second, solvency concerns can cause creditors to pull away from troubled institutions.”* In other words, using examples from the recent crises:

(1) Central Bank lending may be the best response in the former situation, while orderly resolution (by the institution as it gets through the problem on its own or via a controlled failure) may be the best response in the second situation.

(2) Liquidity regulations are a necessary tool in both situations, because they help ensure that the authorities will have time to assess the nature of the shortfall and arrange the appropriate response, and because they provide an incentive for banks to internalize the externalities associated with any liquidity risks.

According to Tabak et al. (2012), despite the importance of stress testing the liquidity risk, most Central Banks do not publish the results of such tests, perhaps a reflection of the complexity of liquidity modeling and the need for more detailed data (at a higher frequency). While many banks have been conducting liquidity stress tests after the recent global financial crisis, yet not disclosing the results, the Brazilian Central Bank has been disclosing liquidity stress test results since 2009. In a quantitative easing operation, a Central Bank buys specified amounts of assets from financial institutions, which raise the prices of those assets and lower their yield, while simultaneously increase both broad money as well as the monetary base. The standard monetary policy is to buy or sell short-term government bonds in order to keep interbank interest rates at a specified target value, nevertheless turned to be ineffective with the sub-prime crisis. Beyond that, as seen in Araújo et al. (2015), some Central Banks nowadays execute unconventional monetary policy by purchasing risky assets financed by issuing riskless nominal liabilities (reserves), as an additional dimension of policy alongside conventional monetary policy.

The rediscount is a usual tool for restoring liquidity and is composed of two types in Brazil. The first is a refinancing operation and is called “selective rediscount”, which is made by the discounting of securities by financial institutions with the Brazilian Central Bank. The second type, called “liquidity rediscount” or emergency financial assistance, is a line of credit made available to banks. Although they are different modalities, the terms “selective discount” and “liquidity rediscount” have been used interchangeably in the financial market, resulting in a single daily rediscount time series.

In 2002, under the Brazilian Payment System (SPB) reform, new instruments were developed such as: (a) intraday rediscount at zero cost, a mechanism that enabled the necessary real time liquidity to transactions; (b) intraday repo to ensure financial institutions the real time necessary liquidity, although the institution does not have reserve bank account and thus cannot have recourse to intraday rediscount. The deadlines for the rediscount operations were extended and the Brazilian Central Bank was authorized to impose stringent prudential measures to manage financial institutions. The Brazilian Central Bank usually has measures to face the liquidity constraints in domestic and foreign currencies, such as changes on reserve requirements, credit lines in domestic and foreign currency, auctions of foreign currency on the spot market and foreign exchange swap contracts.

The liquidity index (LI) relates the volume of liquid assets available to the financial institution with stressed cash flows. The stressed cash flow disbursements simulate the expected standards, having as parameter the history of past crises. Institutions with LI above 100% have sufficient liquid assets to withstand the stress scenario. Since the methodology simulates a 30-day scenario, where the net assets would have to convert into cash, they are marked-to-market and/or suffer weighting that simulates price reduction in the case of forced sale. This liquidity metric utilizes the same concepts underlying the liquidity coverage ratio (LCR) index introduced by Basel III. The LCR is the ratio of high liquid assets (such as government bonds) and total net cash outflows in a 30-day stress scenario period.

Concerning a quick Financial Time Series Econometrics Review, the common stylized facts for financial time series are volatility clustering and autoregressive conditional heteroskedastic (ARCH) effects: see Engle (1982) and Bollerslev (1986). The existence of volatility clusters suggests approaches either under the viewpoint of changes in volatility regimes or under the standpoint of volatility leaps. Concerning to time series with leaps, Kim et al (2011) provide a quick overview of Lévy processes. A previous identification of possible unconditional volatility levels is taken into account through the determination of the discrete changes in the unconditional variance, which can be investigated with the ICSS (Iterative Cumulative Sum of Squares) algorithm from Inclán and Tiao (1994).

The time series subject to changes in regime grew in relevance with Hamilton’s (1989 and 1990) studies on switching regimes models. The EM (Estimation Maximization) algorithm estimates parameters through maximum likelihood estimation (MLE), and the EM-algorithm can be adapted to non-normal distributions and yields maximum likelihood estimates of the model parameters. In order to model the daily returns of the currency exchange rate, we chose the switching generalized autoregressive conditional heteroskedasticity (SWGARCH) model. According to Haas et al. (2004), SWGARCH models combine GARCH with regime switching, so that the regime variances only depend on past shocks and their own lagged values. However, due to the considerable number of unconditional volatility levels, the SWGARCH modeling can lead to models that lack parsimony. Another way to deal with diffusion problems and leaps is the use of semi martingales, but the procedural structure is very complex. The alternative is the use of Lévy additive (non homogeneous) processes or the use of models of stochastic volatility with leaps (Ornstein-Uhlenbeck). Mandelbrot (1963) was pioneer on the use of stable distributions (or alpha-stable) to model skewed distributions and fat tails. The alpha-stable distributions can model the negative skewness and the excess of kurtosis that characterize financial asset’s returns. They earned some popularity in the 1960’s, yet the interest has decreased since then, due to either mathematical complexity or huge computing power necessary to implement models, or to the success of the Gaussian approach.

The option-modelling alternative for capital requirements consists of insurance-like options to exercise in case of turmoil. Perpetual options may be suitable for unknown crisis timing (see Alvarez and Dixit, 2014). However, according to Christensen (2014), perpetual options are only used as a bound: “*For practical questions*

in financial markets this case is not so important; perpetual options are only used as a bound for finite time problems". We model the underlying assets with the geometric Brownian motion (GBM). According to Hull (2012), the main advantages of GBM modelling are: the expected returns are independent of the value of the process; the process only assumes positive values; the paths show the same kind of pattern as in real prices and the calculations are relatively easy.

DATA AND METHODOLOGY

The main data for this study are: the Brazilian liquidity index (LI), Brazilian rediscount, low risk/high liquid U.S. assets (federal funds and Treasury Bills rate), a global volatility index (VIX), a global housing index, a Brazilian real estate index (FIPE-ZAP price index), U.S. Dollars/Brazilian Reais and Euro/Brazilian Reais exchange rates (PTAX), and macroeconomic variables such as GDP, inflation, international reserves, employment rate, and the Brazilian short term (SELIC) interest rate. The liquidity index for financial institutions, calculated by the Brazilian Central Bank, is the ratio between the total net assets that banks have to honor their obligations and the possible loss of liquidity that banks would be subject under stress scenario. Stressful situations include unexpected deposit withdrawals and sudden changes in the market scenario. The Brazilian Central Bank publishes the aggregate LI for the whole bank sector in the Financial Stability Report (REF), along with a detailed analysis of the liquidity of the financial system.

Concerning individual bank specifications, the LI is the ratio of total liquidity (TL) and the estimated liquidity need for stress situations (NEL). The TL is the amount of liquid assets that each institution can afford to pay its obligations. In other words, the assets transformable into cash the next day, such as government bonds, interbank deposits (DIs), DI-linked certificates of deposit (CDs) and time deposits with maturity up to one day, weighted by coefficients associated with a possible early redemption of these instruments. The LT calculation also considers the balance of other financial assets such as cash, stocks, foreign currencies and investments in gold, funds and foreign bonds. The Brazilian rediscount is a time series of the Brazilian Central Bank website. The positive values mean expansion of the monetary base (releasing loans to financial institutions) and the negative values represent monetary base contraction (the return or loans payments).

Concerning low risk/high liquid U.S. assets, the federal funds rate is the interest rate at which depository institutions actively trade balances, held at the Federal Reserve, with each other, usually overnight, on an uncollateralized basis. The Brazilian equivalent is the SELIC short-term interest rate. The Treasury bills (T-bills) are short-term debt obligation backed by the U.S. government with a maturity of less than one year. T-bills result from a competitive bidding process at a discount from par, which means that rather than paying fixed interest payments like conventional bonds, the appreciation of the bond provides the return to the holder. The source data is the Federal Reserve's website.

The VIX is a volatility index, calculated by the Chicago Board Options Exchange as a weighted blend of prices for a range of options on the S&P 500 index. It works as a referential volatility index in many publications, such as the Brazilian Financial Stability Reports (Brazilian Central Bank, 2015). The Global House Price Index, from The Global Housing Watch (IMF) tracks the developments in the housing markets across the world on a quarterly basis. It provides current data on house prices as well as metrics used to assess valuation in housing markets, such as house price-to-rent and house-price-to-income ratios. The FIPE-ZAP price index database consists of Brazilian real estate rental and sales prices in selected cities. The FIPE compound index covers a weighted index of the seven greatest cities while the FIPE broad index is a compound index of all cities covered. The FIPE-ZAP index considers apartments announcements and takes into account the location, the number of bedrooms and area. The Brazilian macroeconomics variables used in this study were collected from the Brazilian Central Bank database: GDP, international reserves, employment rate, and SELIC interest rate, the U.S. Dollars/Brazilian Reais and the EURO/Brazilian Reais rates (known as PTAX). The chosen inflation rate is the FIPE consumer price index (IPC).

We evaluated the determination of the discrete changes in the unconditional variance of the data with the ICSS (Iterative Cumulative Sum of Squares) algorithm, from Inclán and Tiao (1994). The time-series presents a stationary variance over the initial period. A sudden change in the variance occurs some time later, possibly caused by some political and/or economic shock. The variance becomes stationary again, at another

level, until another sudden change occurs. This process repeats creating a temporal series of observations with an unknown number of sudden changes in variance (see equations 1 and 2).

Equation 1: Equation of Returns

$$\text{Daily return} = Rd = \ln\left(\frac{\text{Index}_t}{\text{Index}_{t-1}}\right);$$

Equation 2: AR/GARCH to identify Sudden Changes in the Unconditional Volatility

$$AR(1): Rd_t = A_0 + A_1 Rd_{t-1} + u_t; v_t = C + p v_{t-1} + q u_{t-1}^2 + Lev I_{t-1} u_{t-1}^2$$

$$\text{Conditions } \mu_t = \sqrt{v_t} \varepsilon_t; \varepsilon_t = t; \mu = 0; \sigma^2 = 1; df = D(t - student); I_t = 1(u_t < 0); I_t = 0(u_t \geq 0)$$

Where A_0 is constant in the average equation; C is constant in the conditional variance equation; Q is the residuals coefficient; P is the conditional variance coefficient; Lev is the leverage coefficient, and D is the degree of freedom of the t-student distribution that models the return series. After running the GARCH model, the program runs the ICSS algorithm. The daily returns of currency exchange rates, both U.S. Dollars/Brazilian Reais and Euro/Brazilian Reais (PTAX), were modeled with a stable package from Veillete (2010), which implements alpha-stable distributions based on Samorodnitsky and Taqqu (1994). The options simulations for capital adequacy had two steps. First, we simulated options with maturity, and then perpetual options. The underlying asset follows a geometric Brownian motion with drifts, as in equation 3:

Equation 3: Geometric Brownian motion for asset V :

$$dV = \mu V dT + \sigma V dZ$$

Where Z is a Wiener process or Brownian motion; μ (the percentage drift) and σ (the percentage volatility) are constants.

Concerning to options with maturity, we used the call options program from Pachamanova and Fabozzi (2010) that implements a Longstaff and Schwartz's algorithm (2001). We calculate the premia aiming at a strike price zero (insurance-like) and spot price being either 5%, the Basel index of 8%, 11% (as the Basel Index adopted in Brazil, since 1998), 14% or 17%. Concerning perpetual options, we use the same capital requirements parameters with no expiration date, meaning no need to predict the crisis timing: it can be exercised in moments of turbulence. We utilized the model proposed by Alvarez and Dixit (2014) which was discussed in Backus (2013), according to Gerber and Shiu (1994) and Ingersoll (1987). Consider an asset pricing in a stationary Markov setting with a state variable x . The ex-dividend value of a claim to the stream of future dividends d might be expressed as proportional to the asset value. The solution has the form: exercise if $V(x_t) \geq V^*$ for some threshold value V^* , and wait otherwise. Equation 4 describes the assumptions and lead to the valuation equation and the optimum value, in equation 5.

Equation 4: The Underlying Asset Assumptions for Perpetual Options

The dividend δ is proportional to V :

$$d_{t+1} + V_{t+1} = e^{\delta} V_{t+1}$$

The future price of the underlying is lognormal:

$$\log V_{t+1} - \log V_t \sim N(k_1, k_2)$$

Equation .5: Valuation Equation and optimum Value

$$V_t = E_t[m_{t+1}(d_{t+1} + V_{t+1})] = E_t[e^{-r} e^{\delta} V_{t+1}] = e^{\delta-r} V_t e^{k_1 + \frac{k_2}{2}} \Rightarrow \delta - r + k_1 + \frac{k_2}{2} = 0$$

Determining the constant a :

$$a = \frac{-k_1 + (k_1^2 + 2k_2 r)^{1/2}}{k_2}$$

Optimum Value:

$$V^* = \left\lceil \frac{a}{a-1} \right\rceil k > k$$

RESULTS

Figure 1 shows the daily fed fund data: rates, and variation. We can visually verify the abrupt decrease of fed fund rates since the sub-prime crisis and simultaneous to the quantitative easing operations. Consequently, quite low levels of unconditional volatilities have prevailed and very low yields: example: regarding T-bills, it takes more than 2,000 years to reach a 25% yield. Table 2 shows the GARCH estimation of the fed fund rates daily

returns: the results indicate that they followed a GARCH (0, 1) process with very low unconditional volatility and almost no innovations from the end of September 2008 to July 2015. Similar results apply for the T-bills.

Figure 1: Fed Funds Daily Data: Rates



Table 2: GARCH Fitting for Fed Funds from September 2008 to June 2015

Note: the coefficients A0 is constant in the average equation, C is constant in the conditional variance equation, Q is the residuals coefficient, P is the conditional variance coefficient, Lev is the leverage coefficient, and D is the degree of freedom of the t-student distribution that models the return series.

Variable	Coefficients	Std Error	T-Stat	P value
A0	0.0000025	0.0000015	172.911	0.0837893
A1	-0.1887614	0.0178334	-1.058.471	0
C	0.0000001	0.0000012	0.07192	0.9426676
Q1	29.166.717	40.602.065	0.07184	0.9427328
P1	0.2041743	0.0286676	712.214	0
LEV	-71.784.611	10.011.919	-0.0717	0.9428413
D	20.071.195	0.1023185	1.961.639	0

Concerning the Brazilian rediscount, the average rediscount from February 14th, 2000 to April 30th, 2015 was R\$ 124 millions (see Figure 2.2), and high volumes of rediscount seldom occurred in Brazil, what is in line with the fact that no systemic bank crisis occurred in Brazil at least in the last 60 years, according to Laeven and Valencia (2008). The Brazilian rediscount daily series was fitted with a Poisson distribution. Table 2.4 shows the probabilities for k=0 to 10 times the average rediscount could happen, according to equation 6.

Equation 6: Poisson Probability for Rediscount Greater than Average Rediscount

$$f(k; \lambda) = \frac{e^{-\lambda} \lambda^k}{k!}$$

The results show (table 3 and figure 2) that the likelihood of a rediscount greater than the average is quite insignificant. In fact, the exceptions are: (a) a peak in December 24th, 2012 (end of the year with an abnormally high cash money circulation); and (b) a turbulent period, from April 22nd, 2002 to August 5th, 2002, which coincides with the unstable Brazilian political scene, in the eve of the presidential election in 2002.

The Brazilian liquidity index (LI) is the ratio between the total net assets that banks have to honor their obligations and the possible loss of liquidity that banks would be subject under stress situations. The aggregated LI for the Brazilian financial system varied from 1.4 (October 2008) to 2.8 (January 2010), with an average of 2.01, much above the critical value 1. The Kolmogorov-Smirnov test rejected the null hypothesis of normality at the 1% significance level. Table 4 exhibits the results for the variance ratio test for a random walk, according to Campbell et al. (1997). The variance ratio test failed to reject the random-walk null hypothesis. A Monte Carlo simulation (with one million combinations) for a geometric mean reverting model confirmed the result, since the

speed adjustment factor for the mean-reverting model was less than 2%. The low p-values mean standard normal probabilities, associated to the critical value. The random walk behavior possibly means that banks continuously compensate the occasional increase of stressed cash flow with more liquid assets.

Figure 2: Daily Rediscount Volume in Brazil



Table 3: Poisson pdf for Multiples of the Average Rediscount (Lambda = 0.1062)

<i>K</i>	0	1	2	3	4	5
Probability	0.8992	0.0955	0.0051	0.0002	4.77E-06	1.01E-07
<i>K</i>	6	7	8	9	10	
Probability	1.79E-09	2.72E-11	3.62E-13	4.27E-15	4.53E-17	

Table 4: Variance Ratio Test for the Liquidity Index and Mean Reverting Model Fitting

<i>P-value</i>	<i>Critical value</i>	<i>Ratio</i>	<i>Average</i>	<i>Volatility</i>	<i>Speed</i>	<i>OLS</i>
0.3216	19.600	0.9035	1.865	5.66%	1.91%	5.566

Figure 3 exhibits the LI, a quadratic polynomial curve fit for LI, the monthly returns and the unconditional volatility levels. The first two series, for graphic scaling reasons, are divided by 10. The curve fit with quadratic polynomial curve ($IL = p1 \cdot x^2 + p2 \cdot x + p3$) has the following coefficients (with 95% confidence bounds): $p1 = 6.646e-005$ (1.105e-005, 0.0001219); $p2 = -0.01553$ (-0.02188, -0.00918) and $p3 = 2.6$ (2.447, 2.753), rather a linear curve, since $p1 \ll p2$, concluding that LI is a random walk with drift process.

In line with the failure to reject the random-walk null hypothesis, a GARCH modelling resulted in rejection for GARCH coefficients, as seen in Table 5.

Table 5: GARCH Fit for the Brazilian Liquidity Index

Parameter	C	K	GARCH (1)	ARCH (1)
Value	18.237	0.0096203	0	0.93413
T-Statistic	877.221	16.178	0.0000	22.496

The volatility levels (from the ICSS program) were 7.42% (January, 2006 to March, 2010) and 4.96% (April, 2010 to February, 2015). The higher level of the first period may be explained by the influence of the international financial crisis.

Table 6 exhibits the stepwise fit regressions for LI with some domestic and foreign variables, showing a possible positive linear relation with the domestic real estate market. As expected, LI has a significant correlation with the Basel index (54.59%). The Basel Index, the household indebtedness to the national financial

system, the global house price index, the currency exchange rate, the monthly inflation and the international reserves are significant at 1% or 5%.

Figure 3: Liquidity Index: Curve Fit, Monthly Returns and Unconditional Volatility

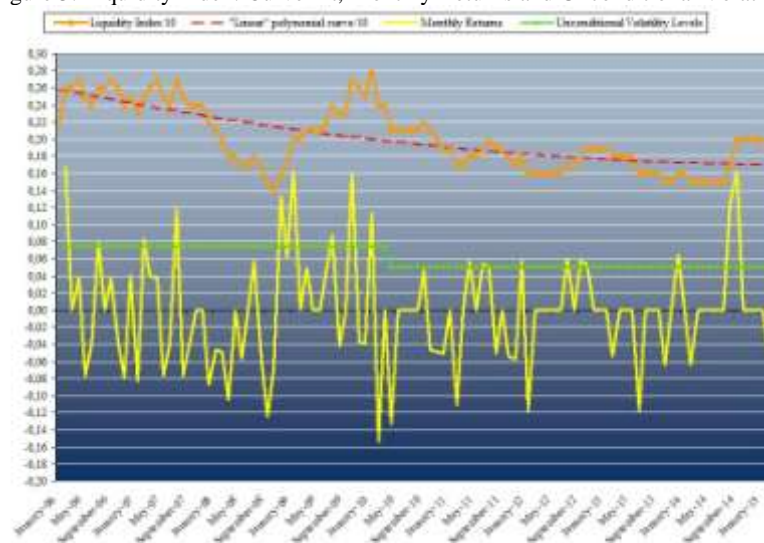


Table 6: Linear Regression between the Liquidity Index and Financial Variables

<i>Variable/Result</i>	<i>Coeff</i>	<i>Std.Err.</i>	<i>Status</i>	P-value
Basel Index	0.1874	0.0306	In	0.0000
Household indebtedness	-0.3736	0.0566	In	0.0000
Household indebt exc housing credit	0.0000	0.1218	Out	0.9964
VIX (monthly)	0.0016	0.0031	Out	0.6047
Global House Price Index (monthly)	0.0554	0.0264	In	0.0409
FIPEZAP	-0.0077	0.0090	Out	0.3937
PTAX	0.593	0.1554	In	0.0000
Rediscount (month-end in balance)	0.0000	0.0000	Out	0.5832
Rediscount (monthly average)	0.0000	0.0000	Out	0.9602
IPC (monthly inflation)	0.0133	0.0055	In	0.0201
New Defaults (SPC)	0.0000	0.0000	Out	0.9083
Employment	0.0174	0.03	Out	0.5647
International reserves	0.0000	0.0000	In	0.0000
SELIC	-0.9274	1.5452	Out	0.5514
GDP	0.0000	0.0000	Out	0.3622

The next figures (4. and 5) show the daily returns and volatility of the U.S. Dollars/ Brazilian Reais exchange rate (PTAX) from 1994 to 2015. The daily returns of PTAX ranged from -9.36% (August 2nd, 2002) to 10.53% (January 15th, 1999), with a 12.82% standard deviation for the entire period. The null hypothesis of normality (one-sample Kolmogorov-Smirnov test) was rejected. More than 50 unconditional volatilities levels were found (see the lower part of figure 2.5) favoring the stable modeling over the SWGARCH modeling.

Next, table 7 exhibits an AR (1)-GARCH (1, 1) modeling for the daily returns of the exchange rate (U.S. Dollars/ Brazilian Reais), considering the leverage effect and t-student innovations, with a high persistence of the GARCH parameters, reinforcing the likelihood of volatility level changes.

As seen in Figure 4.4, the ICSS program returned 55 changes for the daily returns of the exchange rate (U.S. Dollars/Brazilian Reais). Those levels varied from 0.0343% to 5.472%, a ratio of 159.61 highest/lowest levels. The greatest peaks are in January, 1999, August, 2002 and October, 2008. The same procedure was applied to the daily exchange rate Euro/Brazilian Reais, resulting in 24 unconditional volatility levels that varied from 0,557% to 4,215%, a ratio of 7.57 highest/lowest. These various levels and high jumps observed favored

modeling the daily returns of PTAX series with the alpha stable (STBLFIT) function from Veillete (2010), as seen in table 8, in place of volatility switching models.

Figure 4: Daily Returns of Exchange Rate (U.S. Dollars/ Brazilian Reais)

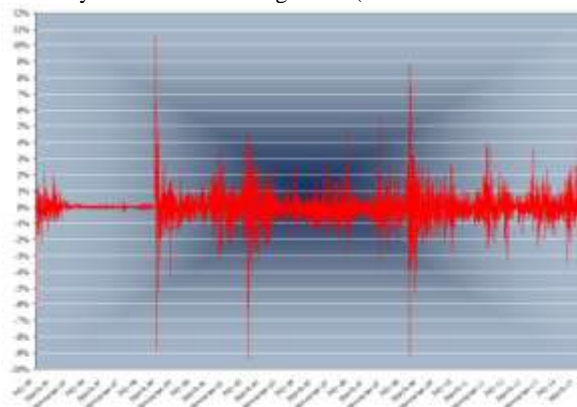


Figure 5: Daily Conditional and Unconditional PTAX Volatility

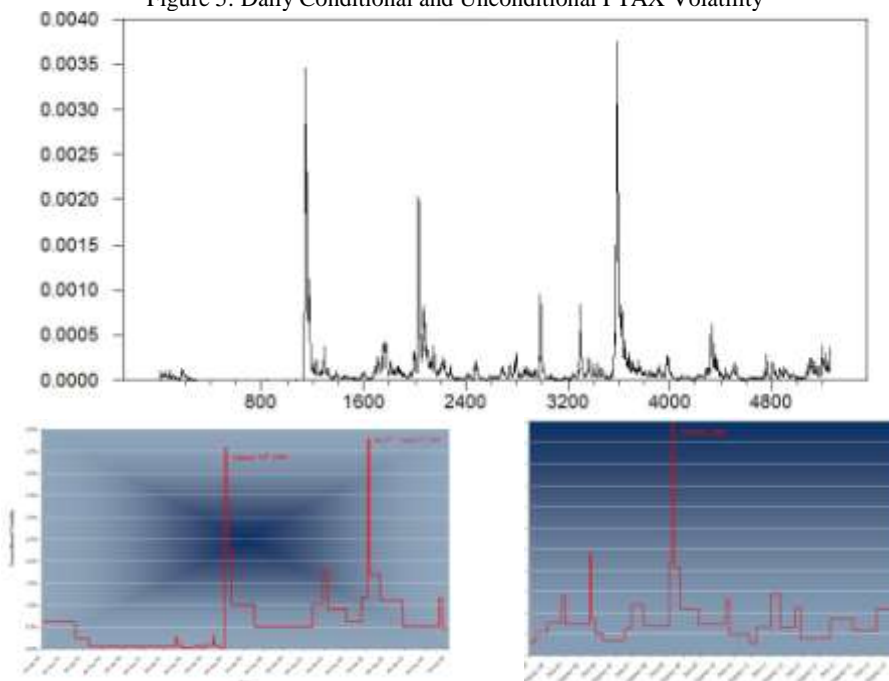


Table 7: AR (1)-GARCH (1, 1) Modeling for PTAX daily returns from 1994 to 2015

Note: The coefficients A0 is constant in the average equation, C is constant in the conditional variance equation, Q is the residuals coefficient, P is the conditional variance coefficient, Lev is the leverage coefficient, and D is the degree of freedom of the t-student distribution that models the return series.

Variable	A0	A1	C	Q1	P1	LEV	D
Coeff	2.53E-04	0.0971	1.95E-09	0.2088	0.871	-0.0982	54.307
Std Error	1.67E-05	0.0141	1.49E-09	0.0159	7.51E-03	0.0175	0.2261
T-Stat	1.519.532	68.955	130.977	1.310.774	1.159.911	-559.772	2.402.418
Significance	0	0	0.190273	0	0	2,00E-08	0

Table 8: Alpha Stable Distribution for the Currency Exchange Rates (PTAX)

Note: α , β , δ and γ stand for the characteristic parameter (tail), skewness, scale (equivalent to variance) and location (equivalent to mean). For a normal distribution, the tail value is 2, the skewness value is zero, the scale is 1 and the mean is zero.

Series	α	β	δ	γ
Ptax July 2004- June 12 th , 2005	1.3216774	0.0018450	0.0033897	-2.72E-06
Ptax 1994-July 2004	0.7565985	0.0169553	0.0016224	0.0002416
Ptax August 2004- June 12 th , 2015	1.6023555	0.2364137	0.0046274	0.0001857
Euro: December 31 st 1998- June 12 th , 2015	1.7013550	0.2143174	0.0057516	0.0003814

Simulating Capital Requirements with Options: Table 9 shows the average time to reach different capital levels (8%, 11%, 14% and 17%) departing from 5%, assuming a geometric Brownian movement in a Monte Carlo simulation with 50,000 combinations. The higher drifts generate higher times to reach the desired capital level.

Table 9: Average Time to Reach Capital Level Departing from 5%

<i>Capital / Drift</i>	<i>-1.1</i>	<i>-0.9</i>	<i>-0.6</i>	<i>-0.1</i>	<i>0</i>	<i>0.3</i>	Average
Average time, M=8%	142.00	97.02	96.19	95.40	97.90	94.19	97.79
Average time, M=11%	195.25	187.83	175.41	180.10	178.58	159.46	180.59
Average time, M=14%	289.46	259.99	252.20	261.12	259.01	194.53	258.38
Average time, M=17%	354.65	345.59	325.28	329.94	328.89	267.29	327.92

Table 10 shows the percentage of simulations reaching a specific level departing from 11%, in a Monte Carlo simulation with 50,000 combinations. We can see that 97.1% of the simulation departing from 11% reached capital levels above 17%, or, equivalently, 2.9% of the simulations never reached 17%. Instead, those simulations are likely to reach the lower levels of 8% and 5%.

Table 10: Simulations Reaching a Specific Capital Level Departing from 11%

<=5%	<=8%	>=11%	>=14%	>=17%
3.49%	23.74%	83.97%	98.75%	97.10%

Table 11 shows the European call prices / asset value ratio per strike value varying from 5% to 17%. The results came from 1,000 Monte Carlo simulations, with each simulation consisting of 50,000 choices. The table shows the threshold values for the call options with maturity, when simulating volatilities from geometric random walks models. For volatilities within the VIX range (from 2.69% to 23.34%), the frequency of call premium/value ratio varies from only 0.186% under 5%, a reasonable cost (when the strike value is 8%) to 60.418% under the excessive cost of 100% (when the strike value is 11%).

Table 11: Call Prices/Asset Value Ratios with Strike Prices Varying from 5% to 17%

<i>Premium / Call/Vo Ratio</i>	<i>5%</i>	<i>8%</i>	<i>11%</i>	<i>14%</i>	17%
Under 5%	0.194%	0.186%	0.216%	0.196%	0.204%
Under 10%	0.828%	0.8%-	0.78%	0.898%	0.846%
Under 20%	3.026%	2.88%	2.966%	2.962%	3.02%
Under 50%	14.89%	14.83%	14.712%	14.834%	14.742%
Under 80%	35.818%	35.69%	35.998%	35.788%	36.022%
Under 90%	46.848%	46.574%	46.662%	46.482%	46.772%
Under 100%	60.282%	60.348%	60.418%	60.306%	60.106%

Table 12 shows (from a Monte Carlo simulation with 50,000 combinations) how much the rediscount financing is less expensive than regular call options, for each level of RWA of capital requirements, from 5% to 17%. The price uplifting, comparing options with the usual rediscount, ranged from 42.04 % (level = 8%) to 55.51 % (ratio =14%).

Table 12: Cost of Rediscount Financing versus Regular Options

Call/Vo= 5%	Call/Vo= 8%	Call/Vo= 11%	Call/Vo= 14%	Call/Vo= 17%
46.54%	42.04%	55.36%	55.51%	55.28%

Simulating Capital Requirements with Perpetual Options: in the case of perpetual options, the lender has capital M available at $t=0$. The company pays the premium at time zero and can exercise the option, paying K when optimal value (M) occurs at time T . By construction, the cost of the perpetual option is greater than the rediscount at a selected interest rate r , as seen in equation 7:

Equation 7: Rediscount costs less than perpetual options

$$p = M - K \Rightarrow NPV(\text{Rediscount} - \text{PerpOption}) = (M - K) * (1 + r)^{-T} - p < 0$$

A series of Monte Carlo simulations evaluated the perpetual options with optimum value M equals to 5%, 8%, 11%, 14% or 17% of capital requirements. The random generated values: the dividend coefficient (set to be less than 5%), the volatility ($K2$) and the interest rate r . The dividend comes from the coefficient dividend δ , from equation 4: $DIV = \sum V_t(e^{\delta} - 1)$

The underlying asset follows a geometric Brownian motion, simulated with 50,000 Monte Carlo combinations, each one with 1,000 time periods. The underlying assets do not reach the desired value in 0.82% of the simulations. In the case where the asset value decreases below the desired M at time T , the sum of dividends and premium covers the difference, however if the underlying asset vanishes (a default situation), this covering occurs only in 61.44% of the cases. Table 13 shows an example of exercise value and premium of perpetual options simulation for risk weighted assets using minimum capital ratios of 5%, 8%, 11%, 14% and 17%, for a tax rate of 4.57%, volatility 23.34% and dividend equal 9.1%. K and P stand for exercise price and premium, respectively.

Table 13: Perpetual Options Simulation Example

K (5%)	K (8%)	K (11%)	K (14%)	K (17%)
1.92%	3.07%	4.22%	5.37%	6.52%
P (5%)	P (8%)	P (11%)	P (14%)	P (17%)
3.08%	4.93%	6.78%	8.63%	10.48%

If dividend is zero, then $a=1$, $k = 0$ and the premium V^* can be 5%, 8%, 11%, 14% or 17%. Again, as shown in table 12, in all cases, the premium of the perpetual option costs more than the rediscount paid by calculating their Net Present Values (NPV based on Koller et al, 2010).

CONCLUSIONS

We evaluated an alleged dichotomy: the simultaneous need for liquidity regulations and for a lender of last resort (LOLR), discussed, for instance, in Carlson et al. (2015). Although the liquidity concept is quite a lot older than the nowadays financial risks concepts of market, credit and operational risks, the main Basel III recommendations for liquidity risk became operational only in 2015, giving rise for this kind of debate.

In a necessary search for an effective contextualization of the question with the international financial crisis and the recommendations from the Basel III agreement, we performed four groups of analysis, described in the results section. We rebat the dichotomy and innovate both by showing that third alternatives to capital requirements are theoretically viable through perpetual options and by identifying that the Brazilian Liquidity Index is a random walk process, possibly meaning that banks continuously compensate the occasional increase of stressed cash flow with more high liquid assets. Concerning US banking regulation policy, the practice of lending as last resort with penalty looks like being out of date: to lend at a low rate is in line with the quantitative easing approach of the Federal Reserve, and the use of rediscount does not work any longer as a warning flag.

Carlson et al. (ibid) stated that “*solvency concerns can cause creditors to pull away from troubled institutions*”. That can be interpreted as: (a) the liquidity is demanded at D-1 troubled day; (b) the key word of the LOLR acronym is LAST and (c) LOLR is connected to centralizing system risk control as in Rochet and Tirole (1996). The coexistence of capital requirements for liquidity risk and last resort lending concerns to: (i) the portfolio selection prevails over any kind of regulation concerns - there is also a small possibility of adding components in this natural two component portfolio; (ii) the coherence of risk measure, as in Arzen et al. (1999) and (iii) the need to use reserves for unconventional monetary policy, as seen in Araújo et al. (2015).

With regard to options with maturity, users need to forecast crisis timing and the higher capital is required the less attractive they are, as seen from the geometric random models used in the simulations. The higher the capital allocated for the risk weighted assets, the costly the option price is, suggesting the existence of a ceiling/exhaustion point for the capital requirements approach: as the proposed options alternative also stay pegged to a percentage level like the capital requirements, another contribution of the option model is to give a general view of impact of the growing capital requirements. This part of the first pillar of the Basel III agreement – which is the most important and most controversial pillar – is directly tied to the increase of the risk weighted assets, leaves less room to alternative models. The perpetual options approach, from Alvarez and Dixit (2014), can be an alternative/complement to the permanently allocated capital when simulating the underlying assets following a geometrical Brownian motion: (theoretically) feasible solutions were found, more costly for borrowers than the usual rediscount operations, and not always warranted.

What if the underlying asset value decreases under the desired strike price at maturity? Simulations show that the sum of dividends and premium covers the difference, but only in 61.44% of the simulations if the minimum value of the underlying asset is unavailable (down valued to zero). In practice, due to the large amount of money involved in real life, the options approach could be applied to smaller banks rather than to the “too big to fail” banks, but also for capital requirements related to market and credit risk. There is always an unavoidable timing problem: reach the capital level on time, a crucial reason not to discard perpetual options as alternative/complement for the liquidity capital requirements prescribed in the Basel III Accord.

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THE "CLEVER LEASING" AS A TOOL FOR INTEGRATION OF TELEMATIC TOOLS IN THE ACTIVITY OF LEASING COMPANIES

Oleg N. Zhilkin and Konstantin B. Mantsurov
Peoples' Friendship University of Russia, Russia

ABSTRACT

Integration of telematic tools into business processes in various sectors of the economy today - the most striking trend in the field of innovation development. Telematics enables significantly accelerate the transfer, processing and analysis of data, allowing faster and more effective decision-making with regard to implementation of the current processes. Leasing of vehicles and special equipment is one of the rapidly developing areas of the introduction of the telematic tools

Keywords: telematic tools, high technology manufacturing, business engineering

INTRODUCTION

Integration of telematic tools into business-processes from completely different sectors of the economy today – is the brightest trend in the field of innovation development. Nowadays the use of telematics allows you to accelerate the transfer, processing and analysis of data greatly. It allows make decisions as for the implementation of the current processes faster and more efficient. Thanks to the interaction of machines (the Internet of things) we can observe the process of habitual tasks change. Primarily telematics aims to accelerate, simplification and automation of the process. Using the capabilities of telematics devices (any device that are capable to remote interaction with each other) innovation-oriented part of the business community receives great advantages over their colleagues-competitors nowadays.

The market of transport telematics is being actively developed within more than 10 years in the Russian Federation. The Federal Target Program "GLONASS" and other government stimulus measures significantly influenced on the development and availability of this technology. Nowadays the satellite monitoring of transport is an important and effective tool for any company with more than 10-15 units of vehicles.

Using the capabilities of the existing platforms of transport telematics, the customer gets powerful toolkit for solving basic logistic tasks and for the control of drivers, contractors, sales representatives in the regions work, the control and accounting of the motor transport services provided by the contractors and related organizations:

- the monitoring of the location and speed of the vehicle;
- the control of compliance of zones and routes control;
- the monitoring of equipment application while off hours and in personal aims;
- the fuel control;
- the transportation planning module;
- an automated compiling of the route documentation;
- an integration with fuel cards;
- an opportunity of remote engine blocking;

- drawing up the reports as for the equipment usage;
- getting an information from the car video-registrar;
- the control of driving style of drivers;
- the confirmation of the task execution fact.

The economic effect from the introduction of the platform comes within 2-6 months. In fact, the services payment of the monitoring systems implementation is carried out from the saving. Therefore the market of transport telematics is the leader among all the Internet of Things (IoT)-markets today.

VEHICLES AND SPECIAL EQUIPMENT LEASING

Let us consider the recess adjacent to these concepts – vehicles and special equipment leasing. In today's economical realities there is such a product as leasing of vehicle and other mobile equipment in Russian Federation that is rather high competitive and sensitive to the changes in microeconomic field. Leasing is the investment tool that helps the manufacturer to make the modernization of the main funds and to get new necessary equipment or other inconsumable objects without involving of its own resources. So called financial rent is a type of financial service, the form of crediting while buying the main funds of the company or very expensive products by individuals. Finance lessor is undertaking to acquire the property of the determined by the finance lessor vendor and to provide this property to the finance lessor ownership and usage.

Vehicles are among the most famous products for leasing. The function when the automobile that was bought is immediately transferred to the balance of the lessee is an important feature of hire purchase for the subjects of commercial law-private. In such a way the leaseholder is able to use the accelerated schemes of depreciation of the main goods and to strive for lesser taxable base. As a rule, the vehicles make 60-70% from total amount of leasing and leasing company.

Rating agency RAEX and United Leasing Association got preliminary results of investigations of Leasing Russian market in 2015. According to the preliminary results the amount of new business (price of goods) following the results of 2015 was about 530 billions of rubles (about 8 billions of USD) (reducing in data in relation with 2014 and makes 22%). The sum of new leasing acts in 2015 were reduced for 20% and made about 800 billions of rubles (12 billions of USD). Leasing data had not been changed a lot and had made 3,1 billions for 01.01.16. (50 billions of USD).

At the moment of preliminary estimation the questionnaires were provided by more than 100 leasing companies. The leader positions in the rate according to the amount of new business (property price) were taken by state-owned companies such as VTB Leasing, “Sberbank Leasing” and “State-owned transport leasing company” correspondingly (RAEX – Expert [Electronic source]). Such huge lowering of amounts of new business increase was undoubtedly based on current economic realities and volatility policy. The higher prices for equipment and lowering in the flexibility in the field of leasing companies' financial risks control led to the considerable demand lowering. Leasing of vehicles and other special equipment, the biggest market sector, has been reduced in 2015 for more than 18%. The state-owned program about promotional autoleasing was the reason for this sector for not to grow even shorter. In spite of this autosector could save the leader position among the amounts of general volume due to the of the beginning of preferential leasing state-owned program for the vehicles of Russian assembly and introduction express-products by finance lessors and making sales for the customers. Now days we can say, that, in spite of the crisis, leasing is a popular product among big and medium businesses so as individual business owners and small businesses. Buying the equipment with the help of leasing is rather comfortable and frequently necessary scheme for the beginning of enterprising activity. Besides, more often even big companies, working in their own recess for many years, need the help that can be obtained by the leasing for their auto park capacity widening in faster and more profitable way. The ability to buy the equipment for leasing gives the opportunity to get and start using necessary equipment even without big investments. The start of equipment usage gives an opportunity to get the profit without paying the whole sum at once. Also taxing consequences of equipment leasing usage are lower a lot than in case of its total buying and its setting at the enterprise's balance (Federal law “About financial rent (leasing)”). The companies are not just buying equipment for leasing. More often the whole auto parks are being bought with 10 to 100 cars at once and even more. Also such amounts of equipment can be transferred through the whole territory of the Russian

Federation on behalf of one customer or Management Company with branched network. But the services of financial rent are used not just by private companies but also by state-owned companies, SUEs, and Municipal educational centers, for example in 2015 according to the results of auctions for the financial rent of the traffic-municipal equipment, State-Financed Institution of the city of Moscow “Automobile roads” and CJSC “Sberbank” joint two state-owned acts of leasing.

The enterprise gets about 1,8 thousands of pieces of equipment. The price to join leasing is 14,3 milliards of rubles. The State Funding is provided by Moscow bank JSC “Sberbank Leasing”. Within the scope of leasing projects Moscow will get more than 600 tractors with hinged equipment, more than 280 sweeping-cleaning machines, more than 230 different loaders with hinged equipment, more than 210 combined machines with reagent distributor, and also vacuum cleaners, road cutters, steamrollers, compressors, excavators and other vehicles. The equipment is bought to realize the sub-program “Keeping the yard territories” of the state-owned program of Moscow “House” for 2012-2018 (Memorandum for PC “Sberbank – Leasing” projects realization).

“SBERBANK LEASING”PROJECT & RUNOVO IMP MCEM SELLING

The leasing term is five years. The whole park of traffic-municipal equipment will be delivered to Moscow till the end of the year. The first deliveries will be completed in March. The machines are to be used at the territory of all administrative districts of the capital within the scope of needs ensuring SBA “Houser” and accomplishing other tasks of city-owned economy. From 2013 “Sberbank Leasing” has already transferred more than 3,4 thousands of pieces of municipal equipment to SBA “Automobile roads”. The price for the first three projects was more than 12 billion rubles. The delivered equipment is successfully used for different parts of work of living-municipal and road complexes in Moscow. In such a way it is evidently that leasing companies are extremely attractive for telematic operators within the scope of partnership in the field of placing its own advancement canal and the realization of the products for one or another consumer segment and they are not competitors, they even stimulate the sellings of each other. JSC “MCEM” is one of the biggest telematic operator in Russia. “Smart leasing” is one of its projects which implemented jointly with “Sberbank Leasing” - one of the biggest leasing companies in the Russian Federation. The total leasing data of daughter company “Savings Bank” at the territory of the Russian Federation makes 369 billion rubles.

Strategically the interaction between JSC “MCEM” and leasing company is provided through the platform of administration Runovo IMP. Runovo IMP is an intellectual system of administration of transport sources which aim is to make analytics and optimization of business-processes in the field transport control and logistics that helps to administrate the business more effectively, helps to organize the work of the transport enterprise more correctly and provides more prompt access to the critically important key-indicators of the effectiveness, transport monitoring and to the reports about costs for auto park exploitation. Runovo IMP implementation gives the opportunity to the business owner to provide the automatization of auto park and to form the administrative program by the auto transport resources of auto park. JSC “MCEM” presupposes 3 schemes of interaction with leasing companies

The selling of equipment and hidden installation.

Technologically service is provided in the following way. Telematic operator draws up a contract with leasing company. The contract foresees the creation of unique software for leasing company at the basis of Runovo IMP platform and supplying of specialized telematic equipment as well. The distinctive feature of such equipment is hidden installation and anti-vandal implementation. Such kind of equipment is fitted with equipment panel of the automobile (while installation it is masked) and obtains the following functions:

- The estimation of the motor work period
- The determination of the leasing object’ location coordinates
- The control of the speed and route
- The ability of remote motor blocking

The ability of telematic information transferring to such bodies as EMERCOM and MIA.



Figure 1. The scheme of equipment MCEM selling – Sberbank-Leasing
Source: Internal data and investigations of JSC “MCEM”

Later, after the equipment installation the leasing company is able to provide its own direct services taking into account data, coming from the device, at its own convenience. This decision is primarily aimed to reduce the driving away risks, improperly usage and violations at the region of exploitation. The usage of telematic is offered in this example to make safe the object from thefts and destruction. It helps leasing company to reduce expenses for inner investigations, for work of exit control agents and penalties (the fee for brigade starts from 20 000 rubles for twenty-four hours work).

Equipment selling to the client of Leasing company

This scheme of interaction helps to use “Sberbank Leasing” as a trading agent to spread goods and services of JSC “MCEM” among its clients (both current and new). In this particular case Runovo IMP platform is running through the accreditation in the company “Sberbank Leasing” in order to understand acceptable data for monitoring and control means usage and becomes the part of recommended supplier list of leasing company.

Thereby we offer our clients the decisions of JSC “MCEM”. The leasing company gets additional costs within the limits of agency percent under the contract. This service is realized in the following way. Telematic operator draws up the general contract with leasing company. Later, leasing company offers goods and services of JSC “MCEM” to its clients such as the selling of navigational-telematic equipment, additional equipment, introduction of telematic platform and further services. After drawing up the contract between JSC “MCEM” and the Client, “Sberbank Leasing” gets agency commission for its efforts to attract the client. Besides, the leasing company has an opportunity to get telematic object information that was provided for the customer as well.



Figure2. The scheme of equipment MCEM selling – Client ‘Sberbank Leasing’

The program ‘Smart Leasing’

This solution is joint product of ‘Sberbank Leasing’ and JSC ‘MCEM’. Complex telematics solution is installed on the customer's equipment on the ‘turn-key’ basis before transmitting it to the client. Installing is totally paid by leasing company and the system cost and user's maintenance is included into the leasing payments. The client, who has made a decision to take advantage of the option, receives preferential conditions for leasing from ‘Sberbank Leasing’ or revision of the contract terms directed on the decreasing rates for accurate driving, discipline leasing payments for non-high mileage or based on any other telematics data.

Availability analysis function and driving style evaluation has psychological influence on the driving culture and reduce the accident rate. In turn, ‘Sberbank Leasing’ receives innovative product capable of receiving telematics data for all customers and increase the leasing portfolio (due to the cost of system implementation).

There is an additional marketing opportunity to turn in their favor new customers and retain old ones. Positioning ‘Sberbank Leasing’ as a company, which is interested in the success of its customers, and proposes them to introduce innovative technologies that significantly influence on the cost of maintenance the car fleet. Solution ‘Smart Leasing’ includes:

- The control of leasing object location
- The control of leasing object transportation fact
- The control of leasing object maintenance fact
- The control of leasing object maintenance conditions (area of using, mode of using)
- Operative warning of internal affairs bodies in case of emergency
- Significant reduction of the collecting agents services' charges
- Appearance of an innovative product in the line of suggestions
- Conducting joint PR- actions aimed to attract new consumers

- Formation a positive image of an innovative company for “Sberbank Leasing”, for which benefits of their clients are important



Figure 3. The scheme of realization the program “Sberbank Smart Leasing”

The prospect of reducing insurance premiums and insurance rates for the program "Smart Leasing" (Pay - as - you drive). Submitting favorable leasing conditions for customers of JSC "MCEM" working with Runovo platform, mass mailing and realization share on the occasion of the joint program. Consequently, by application of telematics technologies and forming services "Smart Leasing" the project participants receive the following managerial effect:

1. Telematics operator:
 - Increase revenue;
 - Get a new selling channel;
 - Extends the range of products;
2. Leasing company:
 - Reception of a new product in its line;
 - Reception of updated information about the location of equipment;
 - Expansion of the customer database;
 - Increase of leasing portfolio;
 - Increase customer loyalty;
 - Automation of management decisions process;
3. The customer of leasing company:
 - System of satellite monitoring of transport "turn-key";
 - Preferential conditions for leasing;
 - Decline of outgoings for car fleet maintenance

CONCLUSION

Today the internal regulations for cooperation of GS "MCEM" with “Sberbank” form for a successful implementation of this project. The project office is opened. Group of companies "MCEM" was one of the first

that had started to implement the project of telematics tools implementation for leasing companies. Business idea of the project is the development of the market for new customers of leasing companies with the joining of at least 12 000 monitoring objects to navigation-information services of GC "MCEM" for the first three years. The above-described scenarios and volumes of market allow optimistically evaluate perspectives of cooperation between the institute of leasing and telematics technologies.

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GENERALIZATION OF THE RESULTS OF THE ANALYSIS: SYNTHETIC EVALUATION: INNOVATE, INTEGRATE AND MOTIVATE

Anna N. Zhilkina
State University of Management, Russia

ABSTRACT

The paper is devoted to synthesize assessment the financial condition of the enterprise on the basis of the findings in different ways when evaluating a variety of objects. What factors have improved the financial statement, which worsened. What indicators are needed to work to normalize the situation.

Keywords: Corporate finance management, financial analysis, enterprise financial statement synthetic evaluation.

INTRODUCTION

When a synthetic assessment takes into account the lack of its own working capital for fixed and circulating productive assets? Horizontal synthetic evaluation of the financial standing of the enterprise is based on the method of financial analysis and financial analysis of the object? Vertical synthetic evaluation of the financial standing of the enterprise is based on the method of financial analysis and financial analysis of the object? What is the appointment of the general synthetic evaluation? What are the differences between the vertical, horizontal and common synthetic assessment of the financial condition of the company? Can be a negative value of the balance of payments in the assessment of liquidity (solvency) of the enterprise? For what purposes is determined by the marginal value of a lack of money and material circulating assets for short-term obligations? What is the correlation between the financial analysis criteria objects? What is the correlation between the basic objects of financial analysis? Can the same "cause" the deteriorating situation on the different objects, and why? Thigh are the questions, that need the answers.

RESEARCH APPROACH AND METHODOLOGY

The company financial statement can be described by the following characteristics [1. Zhilkina, 2015, 2. Zhilkina, 2005; 3. Zhilkina, 2008]: Finance stability; Liquidity; Probability of bankruptcy; Financial results and its structure, Structure and effectiveness of capital investment, Structure and efficiency of the assets.

The concept of a synthetic assessment of the financial condition of the enterprise

To summarize, accurate conclusions, characterizing the objects of enterprise financial condition, elimination of random findings, taking into account the linkages indicators is a synthetic assessment of the financial condition of the company. Its purpose is to identify the most significant quantitative and quality characteristics of the actual values of financial indicators that determine the company's financial statement.

During the synthetic evaluation of the financial condition of the company formulate general conclusions about the state of the objects of financial analysis and financial condition of the enterprise as a whole, the problems identified in the financial condition of the company, the reasons for them, and caused the reserves to resolve them. General conclusions on the state of the object of the financial analysis should show the dynamics of the financial condition of the company.

Their three types of synthetic evaluation are applies: graphic, tabular and ratio . If you want to summarize the findings of one of the objects of the financial analysis is carried out horizontal synthetic evaluation, the generalization of the findings within a single method of assessment applied vertical, which are summarized in the final overall synthetic evaluation

The synthetic assessment is consists of four elements:

General conclusion about the actual state of the analyzed object of financial analysis or financial condition of the enterprise in whole;

The problem is either an imbalance of assets and liabilities, either low or declining effectiveness;

Reasons have ranked in terms of their importance in descending order;

Opportunities (solutions to the problem in order to improve, stabilize the situation), ie definition of reserves growth or stabilization.

Consider conducting horizontal evaluations on a synthetic example of conditional enterprise and the results of analysis of individual objects in different ways.

Synthetic assessment of financial stability (solvency). The aim is to formulate a synthetic evaluation of the general conclusion about the state of financial stability (solvency) of the enterprise, identifying the main problems and the available reserves to resolve the identified problems. Formulation of a general conclusion, clarify issues and identify the reserves permit financial stability problems (solvency) of the company for the financial analysis of the graphical, tabular, and a ratio ways, will be reflected in the table. 1.

Table.1: Synthetic assessment of the financial condition of the enterprise

The object of the financial analysis	Assessing the financial condition of the enterprise, resulting in the analysis			Horizontal synthetic assessment
	by graphic way	by tabular way	by ratio way	
1	2	3	4	5
1. Finance stability				
2. Liquidity				
3. Probability of bankruptcy				
4. Financial results				
5. Assets				
6. Capital				
Vertical synthetic assessment				Common synthetic assessment

The general conclusion derived graphical, tabular, and a ratio of financial stability analysis methods of the enterprise - the solvency of the enterprise for the period under review - down: acceptable low solvency replaced insolvency.

The problem of financial stability (solvency) of the enterprise is defined.

Graphic method demonstrated, due to which there was a deterioration of financial stability (solvency) of the enterprise: the main changes to the indicators column B - increased the value of stocks (W), mainly due to growth in the quantities "of raw materials "and" work in progress.

Ratio way to give information about the fact that only 41% of the reserves provided by a permanent working capital.

Tabular method allowed to set the absolute value of the lack of the main sources of formation of reserves to cover, which is equal to 1 675 thousand.

Marked available reserves for possible positive resolution of the situation, which gives information on the dynamics of the indicators.

This build-up of the sources of borrowing - long-term loans and short-term loans, the reduction of the value of raw materials in stock, and the cost of production in progress.

The results is shown in Table. 2.

Table 2. Synthetic assessment of financial stability of the conditional enterprise

The object of perfection	Assessment of ability to pay, resulting in the analysis of			Synthetic evaluation
	by graphic way	by tabular way	by ratio way	
Financial stability (solvency)	Financial stability (solvency) of the enterprise for the period decreased: at the beginning of the period, the company had a low capacity to pay is permissible, but on the end of the period, the company is insolvent. The deterioration may have occurred due to a sharp increase in the share of stocks at the end of the period is not confirmed by the growth of normal sources of fixed and circulating productive assets	The negative dynamics of financial stability (solvency) of the enterprise is allowed to the low solvency of insolvency due to a lack of basic sources of formation of reserves. It requires immediate formation of finding sources for repayment shortage in the amount of 1 675 thous. Rubles.	Reduction of financial stability (solvency) of the enterprise by the end of the analyzed period, which led to the insolvency of the enterprise, as security stocks of permanent working capital at the beginning and end of the period did not correspond to the normal restrictions and was respectively 72 and 41%	The general conclusion: financial strength (solvency) of the enterprise for the period under review declined - acceptable low solvency of the company changed to insolvency. Before now there is a real threat to suspend production. The problem is to cover only 41% of stocks permanent working capital and lack of normal sources of fixed and circulating productive assets. The reason - a sharp rise in unfounded "Stocks and VAT" at the end of the analyzed period. Reserves of increase of financial stability is the growth of extra sources of funding, reducing the value of raw materials in stock, reducing the cost of production in progress

CONCLUSION

Summarize all thig we can say, that in purpose of innovate, integrate and motivate one must

Know

- differences between vertical, horizontal, and common evaluation of the financial condition of the company;

- identify indicators of vertical, horizontal and common synthetic assessment of the financial condition of the company;
- the procedure of synthetic assessment of the financial

be able to

- to compare the findings, issues, causes, reserves, obtained by different methods in the analysis of each entity of the financial analysis;
- to compare the findings, issues, causes, reserves, resulting in every way in the analysis of different objects of the financial analysis;
- to compare the findings, issues, causes, reserves, obtained by different methods in the analysis of different objects of the financial analysis

must have

- skills formation horizontal synthetic evaluation criterion object of the financial analysis;
- skills formation horizontal synthetic evaluation of basic objects of financial analysis.

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INNOVATION SCORECARD: PRINCIPLES AND THEORETICAL BACKGROUND

Ondrej Zizlavsky, Maria Reznakova
Brno University of Technology, Czech Republic

ABSTRACT

The paper proposes on the basis of literature review and empirical research an original management control system approach to assessment of innovation performance on a micro-level suitable for Czech business environment, called the Innovation Scorecard. Since only few recent studies provide an attempt to develop a balanced framework for innovation, the core of this conceptual framework is based specifically on project management, Balanced Scorecard, input–process–output–outcomes model and Stage Gate approach. The basic structure of the Innovation Scorecard is first presented before its phases are discussed. In addition, the Innovation Scorecard framework provides a set of factors and for each factor a set of inspiration metrics to choose from or be inspired by.

Keywords: Innovation, performance measurement system, management control, innovation scorecard

INTRODUCTION

Efficient and complex measurement systems are essential and crucial to the success of innovations. Therefore measuring the performance and contribution to value of innovation has become a fundamental concern for managers and executives in recent decades (Keressen-van Drongelen and Bilderbeek, 1999). Many studies have been written aimed at discussing the issue and suggesting possible approaches to performance measurement, innovation and R&D management literature (e.g. Bassani et al., 2010; Chiessa and Frattini, 2009; Merschmann and Thonemann, 2011; Wingate, 2015). Authors have concluded that multiple integrated measurements of output need to be utilized, owing to the complexity of the concept to be measured (e.g. Hauser and Zettelmeyer, 1998; Hauschildt and Salomo, 2007; Utunen, 2003; Werner and Souder, 1997).

The paper continues research activities and publications (Zizlavsky, 2013; 2014; 2015) and thereby closes long-term empirical research carried out in Czech manufacturing industry in 2009–2015. The purpose of the paper is to propose on the basis of desk research and empirical study a management control system approach to the assessment of innovation performance on a micro-level suitable for the Czech business environment – called Innovation Scorecard. It specifically extends the work of Kerssens van Drongelen et al. (2000) and Pearson et al. (2000) by integrating popular innovation management frameworks, the input–process–output–outcomes model (Brown, 1996) and the Stage Gate approach (Cooper, 1998), with the Balanced Scorecard (Kaplan and Norton, 1996a).

In doing so, paper has the following unique outcomes: (i) key insights and tools derived from the latest academic research, consulting companies' publications and practitioners' experience; (ii) a road map to developing a management control system called Innovation Scorecard and (iii) a list of concrete innovation metrics to choose or be inspired from.

LITERATURE REVIEW

What criteria should be selected for an innovation performance measurement system (IPMS)? Werner and Souder (1997) reviewed the literature from 1956 to 1995 on techniques for measuring innovation performance. They concluded that integrated metrics that combine several types of quantitative and qualitative measures

which are the most complex and costly to develop and use are the most effective. They viewed the choice of innovation measurement metric to be based on needs for comprehensiveness of measurement, the type of innovations being measured, the life stage of an innovation effort, the available data and the perceived information cost/benefit. Schumann et al. (1995) proposed a quality-based approach to innovation performance measurement that viewed innovation as a process. Their framework encompassed people, process, outputs and consequences linked to a market-driven objective.

The pioneering proposal put forward by Kerssens-van Drongelen and Cook (1997) is based on the argument that all the output measurements utilized in the literature and in practice can be placed under one or several of the following five high level parameters: (i) cost (efficiency), (ii) quality, (iii) time, (iv) innovatory capacity, and (v) contribution to profits, and that these high level parameters can in turn be aligned with the stages of Innovation Scorecard. Quality corresponds to the perspective of the customer, cost (efficiency) and time to the perspective of the internal processes, innovatory capacity to the perspective of learning and growth, and contribution to profits to the perspective of financial results.

A study by Hart et al. (2003) examines the evaluation criteria which are used most frequently by different manufacturing companies in the UK and the Netherlands. They selected 20 evaluative criteria. These criteria were allocated to four dimensions: (i) market acceptance (e.g. customer acceptance, customer satisfaction, revenue growth and market share), (ii) financial performance (e.g. break-even time, margin goals and profitability goals), (iii) product performance (e.g. development cost, launched on time and product performance) and (iv) additional indicators (e.g. technical feasibility and intuition).

METHODOLOGY OF INNOVATION SCORECARD DESIGN

The starting point is an analysis of the state of the art of performance measurement and management control techniques in order to devise the framework proposed for the innovation process. This has been done by means of a review of the bibliography and by discussion with academics experienced in innovation management. With this approach obtaining a very high degree of consensus on the best way to measure each of the variables included in each dimension of proposed Innovation Scorecard is expected.

In the performance measurement literature, a wide range of performance measurement system (PMS) design processes is described (e.g. Azzone et al., 1991; Kaplan and Norton, 1993; Neely et al., 1996). These processes have been developed both jointly and severally, from theory and practice, by both academics and practitioners. Some have remained as theoretical models whereas others have been extensively tried and tested through application in commerce and industry. To develop a PMS, Neely et al., (1996, p. 425) suggest the following procedure:

- 1 Decide what should be measured.
- 2 Decide how it is going to be measured.
- 3 Collect the appropriate data.
- 4 Eliminate conflicts in the measurement system.

Points 1 and 2 are considered in this paper. Points 3 and 4 are not included in the following explanations because these steps are specific for each company. To be able to conceptualize a performance measurement system for innovation and to decide what needs to be measured, a common understanding of innovation is necessary (see Zizlavsky, 2013).

Categorizing PMS Design Process

However, there have been very few attempts to compare and contrast the different performance measurement design processes. Bititci et al. (2000) attempted to compare the characteristics of different frameworks, processes and systems using practitioner requirements as the criteria but this approach did not fully distinguish between frameworks, systems and processes, nor did it attempt to create a categorisation.

Categorising the performance measurement design processes described in the literature is not an easy task. Some are no more than a brief description of a series of tasks (e.g. Sink, 1986); others are descriptions of single tools (e.g. Eccles and Pyburn, 1992) whilst a few are complete processes (e.g. Bititci et al., 2000; Neely et al., 1996). In addition some are consultancy techniques that are only partially published (e.g. Kaplan and Norton, 1996b). However the literature does provide sufficient information to attempt a categorisation. The first theme that is immediately apparent from the literature is that the procedures are not the same. In fact the underlying bases for developing the PMSs are very different.

The Procedure

From the literature three distinctive procedures can be discerned: (i) needs led, (ii) audit led and (iii) model led.

- 1 The needs led procedure is a top down procedure for developing performance measures where the customer, business and stakeholder needs are severally or jointly identified and used as a basis for the development of performance measures. In this approach the measures are designed to monitor the companies' progress towards achievement of these needs. Examples of this approach include the different processes for designing the Balanced Scorecard (e.g. Kaplan and Norton, 1993; Kaplan and Norton, 1996b; Neely et al., 1996; Niven, 2014).
- 2 The audit led procedure can be considered more of a bottom up approach to the design of a PMS, starting with an audit of the existing performance measures. The information collected is then used to challenge the status quo and as a basis for amending the existing performance measures. Examples of this approach include the Performance Measurement Questionnaire (Dixon et al., 1990).
- 3 The model led procedure uses a prescribed theoretical model of the organisation as a rationale for designing the performance measures that should be deployed.

The Approach

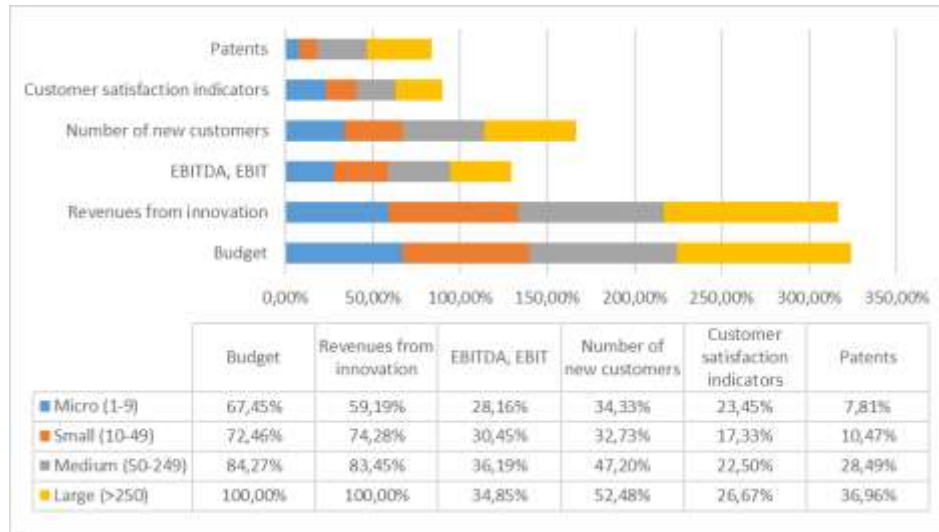
There are two distinct types of approach that can be identified in the literature: (i) consultant led and (ii) facilitator led approaches.

- 1 The consultant led approach is where the majority of the work is undertaken by an individual (or group of individuals, usually consultants) almost in isolation from the rest of the management team. The approach is typified by a small number of workshops, well-spaced in time, where the work of the consultant is reviewed. Between the workshops the consultant undertakes his or her work. An example of this is the approach of Kaplan and Norton (1993).
- 2 The facilitator led approach is different in that the majority of the work is undertaken by the management team together in facilitated workshops. Consequently the management team's role is not restricted to critiquing work done by others. The role of the facilitator revolves around eliciting information from the assembled group, structuring the debate, probing the assumptions and if necessary, challenging the decisions made. An example of this is the later approach to developing balanced scorecards (e.g. Kaplan and Norton, 1996a; Neely et al., 1996; Niven, 2014).

CURRENT SITUATION IN THE CZECH REPUBLIC

What metrics do Czech companies use within IPMS? This was examined in Czech manufacturing innovative companies in 2013–2015. A questionnaire-based survey was implemented to gather information and determine the real state of solved issues of performance measurement and management control of innovations. In total 354 completely filled questionnaires were collected from target population which consists over 11,000 manufacturing companies. There, focusing on companies implementing IPMS (281 in total) a detailed analysis investigated the application of evaluation techniques, metrics and tools. The questionnaire focused on the 16 core project-level evaluation metrics of innovation performance. This set of metrics was formed after the literature review of the most frequent innovation management control tools (Carenzo & Turolla, 2010; Davila et al., 2013; Niven, 2014; Skarzynski & Gibson, 2008). The innovation performance measurement tools were divided into two groups; financial and non-financial. The results of Top 3 metrics from each group are shown in Figure 1.

Figure 1: Metrics applied in innovation evaluation (Research 2013–2015, n=281)



Most of the surveyed Czech companies measure the results using financial indicators, although the majority of managers in these companies also feel that non-financial indicators should be used to monitor the undertaken innovative efforts and projects. The managers should rely more on non-financial indicators than on the financial ones because these indicators provide a better assessment of progress in real time and of the probability of success. The Balanced Scorecard (BSC) seems most appropriate for introducing a complex system of measuring innovation performance for an entire company (e.g. Donnelly, 2000; Werner and Souder, 1997). Although its original idea focused on business strategy it can be applied to any company process including innovation.

Nonetheless the introduction of a comprehensive BSC system, although its philosophy is simple and logical, is too challenging for Czech SMEs – in terms of time, organization, and finance. The empirical evidence demonstrates the low adoption rate of the Balanced Scorecard (Zizlavsky, 2015). Most Czech companies, especially medium and large, monitor performance of innovation by using specific financial and non-financial measures but without any logical link between them. In other words only a small number of companies, especially large ones and those having different perspectives, actually understand the importance of the cause-and-effect relationship between metrics. In addition, after overcoming the barriers and reluctance of the managers to communicate more detailed information about their systems of innovation evaluation, these systems proved not to be very appropriate, while being biased in favor of financial indicators.

While a company may not choose to adopt a formal BSC management system, it can learn and use the key concepts. The BSC helps managers to implement strategy through the development of an integrated set of relevant financial and non-financial measures. Authors therefore advise integration of selected features and indicators of the BSC and to create one's own specific Innovation Scorecard that would best capture the factors and metrics of innovation activities of the individual company is suggested. The selection of the relevant indicators must be tailored to the company as each innovation is unique, specific, and intended to bring competitive advantage and company growth (e.g. Donnelly, 2000; Hart et al., 2003; Hauser and Zettelmeyer, 1997; Vahs et al., 2010).

Because of the characteristics and specifics of Czech business environment discussed above, the Innovations Scorecard is based on “the needs led” and “audit led” procedures and the “consultant led” approach. It is based on BSC methodology, where balance is the equilibrium between operative and strategic (short-term and long-term) goals, required inputs and outputs, internal and external performance factors, lagging and leading indicators, and also the already mentioned financial and non-financial indicators. Each measurement is part of a chain of cause-and-effect links

INNOVATION SCORECARD

The basic structure of the Innovation Scorecard draws on Horvath's (2016) long-term experience with the implementing of the BSC and involves the following phases: (i) defining innovation strategy; (ii) setting strategic goals; (iii) constructing a relationship of cause and effect with the help of a strategic map; (iv) the choice of metrics; (v) establishing target values. In content these five phases collectively form an integrated whole (see Figure 2). This gives rise to a sample approach, conceived in the form of concrete instructions for the process of implementing the Innovation Scorecard.



Figure 2: Innovation Scorecard implementation (modified from Horvath and Partnes, 2016)

Due to the scope of the paper this section is focused only on the design of conceptual innovation performance measurement framework. Therefore, it is based on the presumptions that:

- 1 The company has already defined its innovation strategy (e.g. Kerssens-van Drongelen and Bilderbeek, 1999; Pearson et al., 2000; Skarzynski and Gibson, 2008; Tidd et al., 2005; Vahs et al., 2010).
- 2 The company has already set performance goals and fine-tuned the balance (e.g. Kaplan and Norton, 1993; Skarzynski and Gibson, 2008).
- 3 The company has already established its innovation business model (e.g. Davila et al., 2013; Tidd et al., 2005).

Following the Stage Gate model by Cooper (1998; 2008), the input–process–output–outcomes model (Brown, 1996), PMS design rules (e.g. Neely et al., 1996) and the methodology of Innovation Scorecard, the innovation process can be divided into distinct stages and should be separated by management decision gates. This means an effective as well as an efficient approach, so that the new product can be moved from idea to launch in a systematic way.

Every stage is preceded by one gate. At each stage information is gathered to reduce project uncertainties and risks which is then evaluated at the following gate. Gates represent decision points with deliverables (what the innovation team brings to the decision point) and must-meet/should-meet criteria where the company can decide if it will proceed with the innovation project or if it is to be stopped, held or recycled. Thus gates are also referred to as “Go/No-Go check points” where a decision to invest more or not is made (Cooper, 1998; 2008). At the gates below-average projects should be stopped and resources should be allocated to other promising projects.

By comparing models of the innovation process (Zizlavsky, 2013) and for the original purpose – to create a simple IPMS framework for the Czech business environment – five distinct evaluation gates are selected: (i) idea screening; (ii) project selection; (iii) innovation preparation and market test; (iv) analyzing market test results, after-launch assessment; and (v) post-implementation review (see Figure 3). Each of these phases is important for the success of innovation.

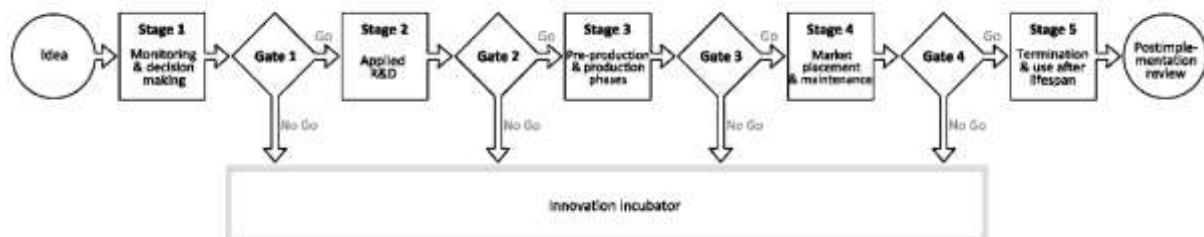


Figure 3: Modified Stage Gate process (Cooper, 1998, p. 108) according to innovation process (Žižlavský, 2013, p. 5)

Gate 1: Initiation Phase – Measures for Ideation

Gate 1 consists of measurement inspiration related to activities which are devoted to identification of ideas for innovation projects. This phase is divided into factors which depend on whether ideas are actively generated or collected from existing resources, as well as if they originate from internal or external stakeholders. Therefore idea screening is the first of a series of evaluations of whether the idea is according to the strategy of the company. It begins when the collection of inventive ideas is complete.

This initial evaluation cannot be very sophisticated as it is concerned with identifying ideas that can pass on to the applied R&D stage to be developed into concepts and can be evaluated for their technical feasibility and market potential. The influence of innovation ideas is generally still very unclear and technical or economic success is therefore difficult to estimate. The typical innovation killer is a question like “How profitable is this new opportunity?” Of course, asking detailed questions about profitability is not wrong but many companies tend to ask this question very early – at a stage when it is impossible to answer it. The first things a company should ask when evaluating a new idea are:

- How radical is the idea?
- How big or how important could it be?
- What kind of impact could it have on customers, on the competition, on the whole industry?
- How big is the potential market?
- Would customers actually want it?
- How much would they care about it?

In other words, the evaluation criteria should initially be focused on assessing the upside – how interested the company should be in a new idea, how hard it should work to push the idea forward, and how committed it should be.

Gate 2: Development Phase Measures for Applied R&D

The project proposals which are considered best are chosen and innovation projects are started for proof-of-concept and prototype development. At Gate 2 the project is re-evaluated based on the criteria of Gate 1 and additional variables such as market potential. At the end of the inventive phase in the innovation process the company may have a list of many projects that senior management would like to complete. Each project may (or may not) possibly require different degrees of innovation. If current funding will support only a few projects, then how does a company decide which of the twenty projects to work on first? This is the project selection and prioritization process. Consensus criteria and methods for assessing each candidate project against these criteria are essential for rational decision-making.

At this early stage the investment appraisal methods are still not applied since they require much more detailed information on the time of occurrence of input values. The estimate is limited to a basic comparison of investment costs and the revenue and growth potential of the market addressed, augmented by risk-related statements. The cost sheet is to provide an idea of the financial and organizational expenses to be expected. Questions to consider in Gate 2 are:

- How feasible is this?
- How mature is the technology?
- Do we have the resources, the competencies, the capabilities to make it happen or can we get them somewhere else (through partnerships)?
- Do we have the distribution channels to bring this to the market?

At the end of this applied R&D stage the product is finally developed physically. The result of this stage is a tested prototype. Apart from technical and qualitative aspects it is important to involve the customers or users for feedback in order to better understand their unmet and unspoken needs and problems and benefits sought in the innovation. Economic data and plans, e.g. production and marketing plans, are reviewed. Based on this in Gate 2 the product is tested again for overall operability. This includes testing the product in the market. Cooper (2008) suggests field trials, pre-tests or test markets in order to assess customers' reactions and calculate approximate market share or revenues.

Gate 3: Production phase – Measures for Realization

Choosing the right projects is only half of the way to ensure a company's long-term competitiveness. Even if the right innovation projects are selected it remains important to assess whether the execution of every single project is successful. More precisely companies face the challenge of measuring the performance of innovation projects. As questions of feasibility from the previous gate get resolved, the final questions to start asking are those that concern business model economics:

- Can we actually make it profitable?
- What sorts of revenue might this idea generate?
- What are the costs involved?
- What sort of margin can we put on this?

Therefore the planning phase is used to prepare and develop innovation concepts. These concepts build the framework for the values to be considered in this phase. Forecast, potential revenues from products and services and OPEX form the basis for the calculation. Depending on the nature and design of the innovation, revenues can be broken down into detailed reference values such as customer groups or sub-segments. Gate 3 assesses the product a last time before its launch. In order to assure performance of innovation projects a number of tools can be applied such as milestone trend analysis, project reporting, project status analysis or cost trend analysis. Another tool which can be applied is target costing. This strategic cost management allows the entire life cycle of product and influencing the performance of innovation project in the early stages of product development to be considered.

Gate 4: Commercialization Phase – Measures for Innovation Execution (Short-term Assessment)

The specified product concepts are launched on the market using traditional marketing tools and on the basis of the product launch processes in the commercialization phase. At Gate 4 the product is assessed once more. Actual performance is compared to forecasts. Internal accounting provides cost and service allocation and forecasts as basic information for this phase.

The innovation profitability analysis focuses on individual products, service offers, product bundles, dedicated customer segments and sales areas in this phase. There is already a clear idea of production costs and willingness to pay, enabling detailed data to be recorded. As the data pool improves, the relationship between innovation and origin of cost gradually becomes clearer. Specifically the level of detail and the specific nature of the data make it easier to allocate innovations. Cost accounting becomes increasingly helpful and offers more precise information, especially with regard to OPEX and the determination of flat rates.

Company accounting and the company's planning systems provide a wide range of tools in this phase with which both cost and revenue-related planning and control can be achieved. In the measurement, the project-induced revenues must be compared with capital expenditure over time. Data for the forecast revenues and investment costs should be agreed with the product owners. For interconnected and network products this is difficult since there are generally several product owners. Financial mathematics provides above all the net present value method as a dynamic investment appraisal method. Under this method, payments received and made over the product life-cycle are compared and discounted to their present value. Corporate earnings and innovation risk are controlled using the specified interest rate.

Gate 5: Post-implementation Review (Long-term Assessment)

The post-implementation review is a process that after an appropriate interval follows completion of the innovation project and is a comprehensive review of the completed innovation. The aim is a factually accurate and precise as possible analysis of the actual implementation of the innovation project in all phases, and after comparison with the plans the identification of all the factors that resulted in deviation of the project from the fulfilment of the original goals. Organizationally it is advisable to make the post-implementation review part of

the management of the company innovation processes, by which better preconditions for its implementation are created.

The post-implementation review thus becomes a key element in control feedback, which makes possible the incorporation of the results into further projects, so becoming also the first ex-ante input in future projects. We can therefore see the post-implementation review as a learning process, the results of which translate into the success of further innovation projects and so also into the future prosperity of the business.

The post-implementation review is not primarily intended for the evaluation of the degree of success or failure of an innovation project and the assigning of responsibility for any such failures but rather for the determining of the key causes leading to the non-achievement of the original goals. For this reason it is important to pay just as much attention to analysis of projects which in terms of value creation and company growth were actually more successful than planned. Uncovering the causes of such results can help in setting up the future innovation control in such a way as that the company can focus precisely on those factors that support its success.

CONCLUSION

The paper is based on current knowledge in the area of innovation management and management control and on specific conditions in today's business environment. It summarizes the issues of managing and measuring the effectiveness of the innovation process. It identifies and explains from a theoretical perspective shortcomings in today's approaches and offers possible solutions. This work builds on knowledge from significant professional authors, summarizes it and tries to develop it further.

The paper continues research activities and publications and thereby closes long-term empirical research carried out in Czech manufacturing industry in 2009–2015. It was necessary to study the individual definitions, processes and means of measuring and managing innovation performance as available in the current state of scientific thinking. This review phase was oriented to the study of especially foreign and Czech professional literature as found in books, articles in journals, information servers and the databases of libraries, universities and other organizations.

Empirical research has outlined a number of metrics; various methods and performance measurement frameworks for innovation process evaluation that exist in Czech manufacturing companies. Most of the surveyed Czech companies measure the results using financial indicators, although the majority of managers in these companies feel that also non-financial indicators should be used to monitor the innovative efforts and projects undertaken.

On the basis of this literature review and an empirical study in Czech manufacturing industry, a management control system approach to innovation performance measurement suitable for Czech business environment called the Innovation Scorecard was proposed. This paper dealt with evaluation of innovation in five phases of the innovation process based on a modified stage gate model. Moreover, at each gate the Innovation Scorecard framework provides a set of factors and for each factor a set of inspiration metrics to choose from or be inspired by. Major implications relevant to academics and practitioners stem from this study.

First, the work has implications for the field of business performance measurement. From a managerial viewpoint, the Innovation Scorecard may provide useful guidelines for focusing attention and expending resources during the entire innovation process. It is argued that the informed use of evaluation metrics as guideposts for increased managerial attention and the identification of problems may help management to prevent drop-and-go-errors in their innovation efforts. Managers may compare and contrast findings from this study with their own innovation practices and, by doing so, enrich the knowledge pool upon which they draw to make well-informed decisions. Second, the research can aid practitioners, since it provides organisations with new insights and findings which managers can translate into the context of their own companies. Specifically, companies know that with a clear innovation strategy they can be more innovative, improve innovation processes and achieve better financial results.

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SOMETHING FOR NOTHING IN THE DIGITAL AGE? STRATEGIC MANAGEMENT AND THE MANIPULATION OF ‘FREE’ IN THE INFORMATION MILLENNIUM

**Guillaume Desjardins
Laval University, Canada**

**Anthony M. Gould
Gulf University for Science and Technology, Kuwait
Laval University, Canada**

**Kathleen Park
Gulf University for Science and Technology, Kuwait
Massachusetts Institute of Technology, USA**

ABSTRACT

During the industrial age—the era before the Internet—the notion of receiving something for free was a well-established aspect of commercial life. In this former era, an offering could be freely given because it was: nearing its expiration or discontinuation date; being offered as a sample to whet customer appetite; serving as a loss leader; or pursuant to the razor and blade business model, where two elements must exist together to achieve utility. In the digital age—the era of the worldwide web and the information millennium—new sectors have emerged influenced by increasingly sophisticated platform and modular-based technologies. Such new sectors partly define the modern epoch and enable organizations to strategically apply notions of ‘free’ toward present and prospective customers in a distinctive—and sometimes disingenuous—way. Using the telecommunications sector, software and smartphones as exemplars, we identify and explore new strategic meanings and applications of ‘free’ and illuminate their managerial and ethical implications.

Keywords: Internet age; industrial age; digital age; free; strategic shift; economic era; information millennium

THE CHANGING STRATEGIC MEANING OF ‘FREE’

The key idea of the article is that the meaning of the word ‘free’, as used in commercial endeavor, has been broadened in the digital age to more fully embrace new kinds of business strategy considerations. Insofar as generic approaches to planning are concerned, mainstream frameworks/theory have not typically directly incorporated notions of ‘free’—that is, giving something away as a purposeful and planned manifestation of creating and sustaining competitive advantage. Although there have been—mostly accounting-based—conceptions regarding when it makes sense to provide items for free (which are discussed in an overview given in the article’s introduction), there has not been a strategy-related contingency view of free—when and when not to provide items for free in a multi-firm competitive arena. The proposed article views this omission initially through the prism of history (e.g., Arrow, 1975; Williams, 1998), arguing that there had not needed to be a contingency strategy-related conception of ‘free’ until the arrival of the digital age. In earlier epochs, giving

items freely was not part and parcel of competitive positioning and hence a relatively more marginal strategic consideration (Allen, 2009). A key reason that giving something freely was formerly not part of the strategic planning process was that offerings in the earlier epochs were not modular in the sense that they currently are.

Hence, in the past, offerings were not typically bought as a series of transactions. Relevant examples of this phenomenon from the 20th century include transistor radios and cathode ray TVs. By contrast, contemporary items such as tablets and smartphones are not purchased as a complete and functional unit as was previously the case with roughly equivalent earlier items. Rather, these kinds of devices are increasingly modular. This attribute makes it (exponentially) more difficult for consumers to accurately analyze what constitutes overall value. More specifically, modern consumers—compared with their 20th century counterparts—are relatively less likely to be able to analyze in a comparative sense the value/utility of modular elements of an overall offering. In circumstances of such growing information asymmetry (which is inevitably associated with growing modularity), the idea of giving one element of an offering away for free takes on – arguably for the first time – a different kind of strategic relevance. It leads to questions such as: what element(s) of an offering should be the free element(s)? Should the offering be touted as being “for free” (or at a very reduced cost) or should a vendor make clear that only one/several of the elements is “for free?” How does a vendor manipulate elements of an offering so that certain of such elements seem salient (as a prelude to offering such elements for free—or at a reduced cost—and thereby exploiting information asymmetries)? In this article we propose to present and defend a view that can be used to address such conundrums.

STRATEGIC MANAGEMENT MODELS

In this paper we argue that in the modern digital economy, as compared to the previous economic epochs, it has become more difficult to disentangle the various elements of an offer. Vendors emphasize the word “free,” yet information asymmetries have increased such that clients and customers are less able to discern the underlying cost and value structures in product bundling. We use the word “free” in quotes to connote the inherent paradox. Free has never really been “free”—“there ain’t no such thing as a free lunch” (TANSTAAFL) has been a phrase codified in economics for decades—but we emphasize how “free” differs in the digital age.

Anything offered for “free” must generate a net positive economic return, or the free offering could not be sustained. Yet we assert that notions and manifestations of “free” have changed in the digital age in ways not always apparent—or even necessarily favorable—to consumers. For instance, as an example of a digital era offering, Adobe pdf reader is “free.” Adobe devised the proprietary “portable document format” (pdf) as a means of capturing and communicating texts across various operating systems. Adobe offered the reader download widely and repeatedly for free to promulgate the pdf standard. Where in fact is the net economic benefit? Readers can obtain from Adobe additional conversion and annotation features—for a direct fee to the consumer. MS Word and other Office programs now include a “free” pdf conversion feature—although at a cost: Microsoft pays Adobe for licensing and access, and the amount paid by consumers for MS Office now reflects that additional expense. The bundling is more implicit than with smartphone and wireless telecommunications examples, but linkages nevertheless occurs in the combination of Adobe with Microsoft and in the complementary “free” reader and “subscription” conversion and annotation package. Given that “free” has never really meant free (without cost)—but as an illusory concept has existed for millennia in human commercial and personal interactions—how does the meaning and implementation of “free” vary in the digital age compared to previous economic eras? In summary therefore, the article interprets a broadening of the concept of free as moving the idea (free) from being a mere tactical enticement and/or afterthought to being a strategic lever, especially relevant for consumer-oriented, high-use, cutting-edge, technology enabled industries such as telecommunications. Hence, in the modern era, a more sophisticated and planning-oriented analysis of when things should be given away for free (or at reduced cost) is necessary (Liu, Au, & Choi, 2014; Pujol, 2010; Schenck, 2011; Shampanier, Mazar, & Ariely, 2007).

This article’s broader/elaborated focus on the idea of ‘free’ is contextualized within a more general debate about the contemporary need to revise and update some management theory in response to rapid-paced technological innovations and heightened competition, which are shaping commerce (Derfus, Maggitti, Grimm, & Smith, 2008). Much orthodox strategy theory (e.g., Porter’s ideas about generic strategy) (Porter, 1980, 1985, 2008; Porter & Heppelmann, 2015) was conceived during the pre-Internet era. These models came largely as a

reaction to the distinctive technology and trading arrangements of the industrial age. In this respect, contemporary strategic models may be viewed as a legacy of the former era (Downes, 2009; Downes & Nunes, 2014). They were developed during the industrial age epoch and now should be revised and updated for the digital age. Part of such a refurbishment involves incorporating a more sophisticated consideration of when offerings should be given freely (Ghosh, 1998).

MODERNIZING RESEARCH ON MODELS OF ‘FREE’

The article is directed at a key target group: scholars thinking about strategy and in particular revised strategic models (Haas, Criscuolo, & George, 2015; van Knippenberg, Dahlander, Haas, & George, 2015). We recommend changes to core industrial-age strategy conceptions in a way taking account of new strategically-relevant phenomena, such as elaborated platforms and modularity (Langlois, 2002; Sanchez & Mahoney, 1996; Schilling, 1998, 2000). It introduces a new way of thinking about the concept of free. The notion is elevated from an industrial-age tactical consideration (Hess & Gerstner, 1987; Noble & Gruca, 1999)—largely derived from accounting/book keeping considerations—to being viewed as part of a comprehensive and distinctively digital-age matter of strategy designed to evoke a complex, ongoing exchange relationship (Cialdini, 1984/2006) in response to an initial offer. It focuses on smartphones and the telecommunications industry (Beniger, 2009; Gould & Desjardins, 2015) as the modern exemplar of this more nuanced bilateral exchange.

Our audience is strategic management and organization scholars who study issues related to consumer perceptions, competitive advantage and changes in economic epochs. We are drawing from and contributing to the research streams on the meaning of free goods, perceptions of value, and transitions in economic eras. Our perspective uniquely suggests that “free” exists in the intersection of product platforms and modularity with value and utility. In the digital age, with the continued blend of physical and virtual realities—e.g., smartphones and wireless service contracts, recording artists in concert and streaming video downloads, and retailers with product deliveries from online ordering—that free requires new conceptual parameters for what is seemingly paid or unpaid. Our perspective uniquely suggests that the notion of free has changed in articulation and implementation, and we hence provide novel insight into a simultaneously historic and evolving issue that free has never really meant free—which has been widely understood in economics and human nature—yet continues as a commercial legerdemain.

Because telecommunications is an exemplar case, inductive reasoning may be used to draw conclusions about a variety of distinctively digital age sectors. This means theorists interested in such other new sectors will find the paper relevant. The article goes to some lengths to guide readers through issues of application of inductive reasoning principles.

Despite being about somewhat obscure ideas that come largely from the arena of philosophy of technology (e.g., platform technologies and modularity, etc) (Langlois, 2002; Schilling, 2000) and the fact that we use a high-tech industry as its exemplar case, we have provided basic principles for the understanding of the strategic meaning and use of free in the digital age. Our work is thus of interest to scholars pursuing theory development and new models whether in strategic management or in related management or organizational domains.

A NEW MODEL

In describing influences on the emergence of the digital age, we have examined ideas such as platform technologies and modularity (Baldwin & Clark, 2000). Although these notions are somewhat obscure, we address them where practicable from a philosophical rather than technical perspective. We make the case that distinctively digital age industries exist (e.g., Chang, Walters, & Wills, 2015; Park & Chen, 2007; Ross, 2012) and are associated with the giving away of apparently valuable elements—ostensibly for free—but in a way that is in fact associated with a new kind of strategy. We have provided examples that are well known and ubiquitous (e.g., smartphones, apps and wireless providers) (Abolfazli, Sanaei, Gani, Xia, & Yang, 2014; Phonescoop, 2015; Sager, 2012; Urban & Sultan, 2015) toward enhancing strategic management scholarship and propagating a new model and understanding of ‘free’ goods and services for the digital age.

CONTRIBUTIONS AND IMPLICATIONS

The key idea of this article is important conceptually and has strategic and practical implications. The conceptual importance arises because of the emergence of a new post-industrial economic era—the digital age—and the birth of new industries as well as the reconfiguration of existing industries under the influence of technology and innovation (Silberschatz & Tuzhilin, 1996; Simon, 1962). Theory about competitive positioning was developed during a *milieu* when the functional possibilities afforded by technology were constrained in circumscribed ways although such frameworks are being revised (Sanchez & Mahoney, 1996; Tapscott, 2015; Teece, 2010; Worren, Moore, & Cardona, 2002). A thought experiment illuminates the nature of this kind of constraint and reveals how certain conceptions – intuitively at least – seems wanting. For example, consider a transistor radio, a late industrial-age consumer electronics device. Various derivatives of these gadgets may have been able to be placed – largely without ambiguity – in one of the quadrants created by Porter on the business strategy grid defined by his two axes (target market and type of advantage). The same cannot be so easily said of a smartphone. One reason for this is that certain elements of an enabled smartphone are typically offered for ‘free’ or very reduced price (often including the phone itself). In summary therefore, we elucidate a unique—and hitherto largely unexplored—aspect of strategy, and one impacting well-established and influential theory.

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CLASSIFICATION OF TWEETS INTO MARKETING MIX 4C ELEMENTS VIA SEMI-SUPERVISED LEARNING

Ahmet Onur Durahim and Gülşah Yılmaz
Boğaziçi University, Turkey

ABSTRACT

In this study, automatic categorization of Twitter microposts into 4C's of Marketing Mix elements is attempted to be accomplished via semi-supervised learning approach. In this approach, unsupervised learning, where a huge number of unlabeled data is used, is used in conjunction with supervised learning, where a comparatively very small number of labelled data is used. In order to do so, first of all, word embeddings extracted via application of the unsupervised word2vec learning model to 400 million tweets are used to train a classifier alongside a small number of labelled dataset. Labelled tweets are annotated by marketing experts who annotate each tweet as belonging into one or more of the 4C's of Marketing Mix elements. Then, this classifier's performance is tested by utilizing 10-fold cross validation where the accuracy obtained greatly exceeds the random guessing. It has been shown that overall recall and precision values obtained are found to be 0.55 and 0.58, respectively.

Keywords: 4C Marketing Mix, semi-supervised learning, word2vec, Twitter

INTRODUCTION

The advancement of technology has transformed the way consumers exchange information. There are many platforms, such as social media websites and blogs, that consumers convey their information and experiences about various products and services to other consumers or organizations. In fact, most of the people today are sharing their opinions or information online through the internet. Therefore, in the current environment, people can reach and access any information from wherever they are globally, since internet facilities have spread rapidly in every corner of the world. Through the internet, people can access information in different formats such as feedbacks, reviews, news articles, social websites comments, posts, web form, web pages, and email (Paltoglou & Thelwall, 2013). In the present days, individuals prefer electronic information over the traditional, hard or manual copies due to their easy accessibility. Many consumers have written reviews about various products and services, and their features using various online platforms. Therefore, it is easy for other consumers to find such opinions by collecting and analyzing these reviews from any location with an internet access. These reviews may influence consumers' buying decisions of different products (Schindler & Bickart, 2005). On the other hand, organizations have the opportunity to identify the strengths and weaknesses of their products or those of their rivals through the reviews. Traditionally, organizations used to get consumer feedbacks through surveys, questionnaires, and interviews, but this has changed dramatically (Singh et al., 2014). Today, summarizing and analyzing the customer opinions expressed online plays a very crucial role in marketing.

Currently, social media has become a conventional way where consumers express their opinions. Among the social media websites, Twitter distinguishes itself as being an online platform to openly access real-time updates on any event or news. It had more than 500 million users who provide more than 400 million tweets every day in 2014, Assefa (2014), but today, the number of tweets per day created by Twitter's users has fallen to 300 million tweets per day where there are 300 million active user (<http://uk.businessinsider.com/tweets-on-twitter-is-in-serious-decline-2016-2>, <https://about.twitter.com/company>). One notable feature of the

microblogging service is that some occurrences that the users are interested in may produce unexpected increase of the mentions about products or services. Finding out the trigger that results in such a social trend can assist marketing professionals in quickly identifying issues related to the products/services being reviewed by the consumers. In other words, marketing professionals have an opportunity to monitor and gain a benefit from the unparalleled volume of conversations from the consumers, which are happening in social media platforms (Singh et al., 2014; Vazquez, et al., 2014).

The information from social media websites like Twitter can be classified in terms of it belonging to the well-known 4Ps of marketing mix elements. The conventional framework of marketing mix comprises 4Ps: product, price, place and promotion (McCarthy & Brogowicz, 1981). In a similar study to ours, (Vazquez, et al., 2014) have tried to come up with a classifier, which given an unseen tweet, categorizes it into one of the 4P elements.

As the marketing literature evolves, this 4P mix has been adapted to various domains. Current marketing techniques have shifted their focus from the product to the customers. This has led the customers to increase their demands and expectations from companies. Beaumont (2010) believes that it has made customers seek new communication strategies that enhance convenience, are easy, and low cost. In this respect, a new form of marketing mix has emerged, called 4C, and marketing strategies include the use of elements in this mix which are Cost, Convenience, Communication, and Customers. Organizations and companies therefore, are required to adopt these elements to establish the unique marketing point and brand image that will make their products and services more competitive.

Identifying these 4C elements in the tweets created by the customers is very crucial because it gives companies valuable information regarding what the consumers are talking about and what they think about their products/services or of their competitors'. This classification is useful not only to marketing professionals, but also for advertising campaigns or public opinion analysis in which research on people's behavior is paramount (Vazquez, et al., 2014).

Marketing Mix Elements

According to Borden (1964), the original marketing mix was made up of a 12 element set namely: pricing; channels of distribution; product planning; personal selling; branding; advertising; packaging; servicing; promotions; physical handling; display; fact finding and analysis. The Borden's version was later redefined by McCarthy (1964) into four elements or 4Ps of marketing. The 4P's comprises of price, product, place, and promotion.

Customer Centric Model

The 4P model focuses more on the producers while ignoring the consumer elements. Because of its producer centric nature, this model has been criticized by number of scholars in their studies. For example, (Rafiq & Ahmed, 1995) found out that there exists a high level of dissatisfaction with this model. As far as the customers are concerned, the 4Ps model has no relation to customers, making it void in explaining how consumers perceive products/services, (Gronroos, 1994; Dixon & Blois, 1983). According to Lauterborn (1990), for a marketing plan to be successful, it has to be customer centric rather than producer centric. Lauterborn redefined the 4Ps into 4Cs that concentrated on the customers' views of product/service marketing. The 4Cs model comprises of Customer needs, Cost, Convenience, and Communication.

Since the time of Borden to this date, the concept of marketing mix has undergone a number of changes. Marketers can now focus on the either 4Ps or 4Cs models which are producer and customer centric, respectively when creating a marketing plan for their products. The emphasis is given to 4C model in this study which is applied to better understand customers using its four constituent variables.

4C's of Marketing Mix: The 4Cs of marketing mix as proposed by Lauterborn (1990) are; Customer needs, Cost, Convenience, and Communication. The 4C concept solely addresses the customers' needs (Miller, et al., 2002). The four elements as proposed in the 4C model are discussed as shown below.

Customer need/solution: The customer buy products/services to satisfy their needs. They will only buy products that are likely to solve their problems. By “problem”, we mean the needs and preferences of the consumers. Consumers’ decision to purchase is based on the perceived level of satisfaction the product/service offers to them. According to (Wolcott & Arroniz, 2006), the term solution refers to “*a customized, integrated combination of products, services and information that solves a customer’s problem.*” Customers want to purchase solutions to their needs/problems instead of buying products or services. Considering this customers’ concept, the marketers should first understand the customers’ problems before embarking on developing solutions to them Sawhney (2004). Customer solution is an important approach since it provides products/services as required by the customers. Based on this concept, customer solution assist to design customer centric solutions in terms of products and services.

Customer Cost: Customer cost concept refers to an inclusive approach that considers the total cost a customer has to incur in order to buy goods or services. Although the price is an important component of cost, it cannot be referred as the total cost for a product or service. Price is only one part of total cost of a product. The consumer has the additional costs of transportation, usage, and eventually disposal of the product. Together, these costs are referred to as the total cost. In contrast to price, which is a producer-oriented concept, total cost focuses on the consumer and includes costs incurred in all of the steps of the overall consumption process. Prices are always fixed by sellers while the total cost incurred by customers includes all the other costs associated with the product/service besides the price. In most cases, additional costs incurred forms an important component of the products or services hence should not be ignored. The traditional 4Ps models had shortcomings in recognizing this essential fact that has been addressed under the 4C model. Thus, price of a product shows the seller centric view while customer cost represents the buyer centric view.

Customer Communication: In marketing, communication is one of the most important promotional elements. Communication involves communicating the products/services that have been created by an organization to the target market (Kotler & Keller, 2006). Marketing communications is used to support the marketing plan by enabling the potential buyers to understand and differentiate between products. Effective marketing communication gives a company a competitive edge over its competitors, Shimp (2000). Marketing communications provide information that helps markets in giving their brands a comparative advantage over other brands in the market, Keller (2008). However, the communication approach adopted by a company/organization should be customer focused. The customer communication should be two-sided and include all the strategies desired by customers from any company. All promotional activities used to communicate with the customers should be remodeled based on the promotional strategies and customer needs. The Customer Communication element offers a framework to enhance product promotional activities based on customers’ point of view.

Customer convenience: The customer convenience concept refers to a redefined form of place dimension as presented under the 4Ps marketing mix. The place concept of 4P is explained as the availability of the products and services to the target market/customers (Kotler, et al., 1999). Likewise, the customer convenience approach is based on the concept that customers should be provided with convenience while they buy/use products and services. The customer convenience concept is developed on the fact that customers value the convenience they acquire instead of product or service availability. For instance, with the increase in the use of internet and phone orders, customers do not need to leave their houses to purchase, which is why such things as e-commerce have been so successful. In short, Customer Convenience element of the 4C marketing mix is based on the customers’ view of the place concept under the 4Ps.

RELATED WORK

As a result of the extensive presence of internet and the growing use of social media websites such as Twitter and Facebook, scholars are getting more interested in the online social network research and analysis. A number of studies related to the Twitter textual data analysis has been conducted. For instance, tweets created by the people were gathered from Twitter to predict stock prices by many scholars. Zhang (2013) evaluated the effectiveness of different machine learning techniques on putting up a negative or positive sentiment on a Twitter corpus. In this study, supervised machine learning methods such as Maximum Entropy, Naïve Bayes,

SVM, among others are used and their accuracy performance were compared. In addition, this study provides insights on the correlation between stock prices and Twitter sentiments, and identifies which phrases in the tweets are correlated to changes in stock prices. It was done by conducting a post analysis of tweets and price changes, Zhang (2013). Another study conducted by (Vu et al, 2012) has also focused on stock price prediction using Twitter. They harnessed features from tweets to get public mood associated with four companies for predicting the daily price movements of these companies' stocks (Vu, Chang, Ha, & Collier, 2012). As a result of the diversified nature of textual information provided on Twitter, different analyses like election results prediction (Soni & Mathai, 2015), automatic crime prediction, stock prediction (Pennacchiotti & Popescu, 2011; Soni & Mathai, 2015), sentimental analysis on movie reviews (Mulkalwar & Kelkar, 2012), and public opinion on a TV show (Pak & Paroubek, 2010) have been conducted.

Other studies have also focused on how consumer behavior can be identified through user-generated content. Marketing professionals need to know and understand the content of social media conversations and be able to assign them to different categories for daily activities such as marketing mix elements and consumer decision journey stages. Vazquez, et al. (2014) used user-generated content from various online platforms to identify consumer behavior. The classifier that they have constructed to categorize tweets with respect to 4P Marketing Mix elements has achieved an overall precision of 0.75, recall of 0.37, and F-measure of 0.5. (Wu & He, 2011), and (Ramanand et al., 2010) studied the task of determining the wish to purchase in user-generated content. (Ramanand et al., 2010) also applied linguistic patterns to determine two unique types of wishes; sentences that show purchasing interest, and sentences that make a suggestion regarding an existing product. The reported recall and precision values for this study were 57.8% and 86.7%, respectively for purchase, and 48.5% and 62% for suggestions. In connection with the (Ramanand et al., 2010)'s work, (Wu & He, 2011) suggested that the existence of some modal verbs can be assumed to indicate wishful sentences. These authors came up with a classifier for the identification of "non-wish sentence" and "wish sentence" by applying mined linguistic patterns based on the modal verb set. Recall and precision values reported in this study were 96% and 47%, respectively.

Different approaches have been used to analyze tweets created in various styles. The most popular approach is the use of machine translation techniques, where a bag-of-words (BoW) document representation is used as the basis of these techniques. According to Assefa (2014), the BoW approach obtains a specified input text and pulls out the raw words as features that are independent of one another. Most of the studies related to online social networks such as Facebook and Twitter, use a BoW approach with features like ngrams (i.e., unigrams, bigrams), part-of-speech information, etc. along with different domain-specific, specialized features such as hashtags, emoticons, and many more (Alec et al., 2009; Read, 2005). Bag-of-words uses the occurrence of each word in a tweet as a feature.

Another popular approach is the Word2Vec approach of (Mikolov et al., 2013), which offers an effective execution of either the continuous bag-of-words or skip gram model architectures that creates vector representations of the words learned (Rong, 2014). It is critical to note that these representations are employed in natural language processing applications. The application takes the corpus text as input to provide word vectors as output. It helps in developing the vocabulary from the data it trains on, and then understands the vector representations of those words. According to Rong (2014), the development of the word2vec architecture has played a critical role in identifying the correlation between words and their meanings. According to (Mikolov et al., 2013), Word2vec is defined as a powerful tool applied in enhancing the understanding of the semantic meaning and relationships of words. Word2vec is a set of defined learning algorithms that enable networks to understand the activities of words in corpus.

RESEARCH METHODOLOGY

First of all, in order to identify 4C's of Marketing Mix elements on Twitter, we collect tweets in English that mention about 10 selected brands and their specific products given in Table 1. So as to achieve the objectives of this research, that is, to classify tweets into the elements of the 4C's of Marketing Mix effectively, we utilized the word2vec model as outlined in (Godin et al., 2015), based on 400 million tweets.

Table 1. Brandnames & Products for which the tweets are collected

Product & Brand	
Apple Iphone	Audi
Apple Ipad	Mercedes
Apple Macbook	Volkswagen
Samsung Galaxy	BMW
Samsung TV	Google Nexus

In the Godin's study, in which on word2vec model has been utilized, a huge number of raw tweets were collected within a period of 300 days (between 1/3/2013 and 28/2/2014) with the use of the Twitter Streaming API. After sorting the tweets to remove all the non-English ones using the tool known as micropost language classifier of (Godin et al., 2013), the raw English tweets were reduced to 400 million. The tokenizer tool that was used in Ritter et al. (2011), was used to preprocess the 400 million tweets. Besides, replacement tokens were applied for mentions, URLs, and numbers on both the 400 million tweets and the challenge dataset that had been collected. The hashtags used in the tweets remained unchanged because by changing them the data could lack accuracy and reliability.

After defining the word2vec model, we went further to create a tweet dataset which is used to train and test a classifier where the tweets are labelled considering the 4C of the marketing mix elements. The dataset comprises of 704 tweets in total. The tweets used in the two datasets were extracted from Twitter using Twitter Archiver tool, a Google add-on that downloads tweets into a Google Spreadsheet based on filters such as hashtags and language, where the tweets contain a mention to one of the selected brands. In order to obtain the labelled dataset, three marketing experts annotated each tweet as belonging to one or more elements of 4C's of Marketing Mix. All of the annotations were later rechecked by a reviewer who has a strong background and vast experience in computational linguistics. In regards to the labelling of the tweets under the 4Cs of Marketing Mix, the following instructions were provided to the annotators and reviewers to guide them;

- **Customer:** All the tweets that represent the customers seeking solutions to the problems they are facing were classified under this concept. However, the tweets that are analyzed had demonstrated that the customers were interested in problem solving solutions rather than in products and services. For example: *"It's important to have something that gets you out of bed every day—like a twin-turbo V8. #AudiRS7 <https://t.co/zLvnL0ydxM>"*.

- **Cost:** All the tweets referring to the total cost incurred by the customers rather than price itself. Such tweets had to include the total cost required to buy the products for use. For example: *"on the bright side I can have a new mobile tomorrow hooray! Probably an iPhone 6 or 6s. Depends on cost. Xx"*.

- **Convenience:** All the tweets that demonstrated the essence of offering convenience to the customers while they are buying/using the products and/or services. The customer convenience concept is developed on the fact that customers value the convenience they acquire instead of product or service availability. An example of convenience related tweet is: *"**Stock just in! ** Our #AudiQ3 #Quattro #SLine is now available! Book your test drive here! <https://t.co/9ymeRND9vG> <https://t.co/lZi5IRM5Tg>"*.

- **Communication:** All the tweets referring to the customer communication have to focus on the two-sided communication, i.e. customers' desires and promotional strategies to meet their desires. For example: *"Does anyone have the iPhone 6S? If u do, is the phone strong, or does it need a really protective case? (The screen, mainly)"*.

As a result, a total of 704 labelled tweets were obtained in the dataset. After defining the model and gathering the labels for the tweets from the annotators, the next phases were the training of the model and its evaluation. The model training has two phases. In the first step, we used the same look-up table containing per-word feature vectors that is constructed in (Godin et al., 2015) through the application of word2vec model on the preprocessed dataset of 400 million tweets. In the second step, we applied 10-fold cross validation to obtain reliable accuracy results from the generated classifier. To effectively conduct this activity, we applied a Random Forest classifier proposed by Breiman (2001). Random Forest classifier was chosen simply because of its faster

training speed and high performance which is relatively insensitive to parameter values, but other multiclass classification algorithms could have also been used.

RESEARCH FINDINGS

This section mainly outlines evaluation of the results after analyzing the tweets. We have effectively evaluated the performance of Random Forest classifiers in regards to classification of each tweet that related to 10 brands given in Table 1, in accordance with the 4C's of Marketing Mix element. We obtained an overall recall and precision values of 0.55 and 0.58, respectively. From the figures obtained, Customer element had the lowest accuracy results of 0.07 for both recall and precision. The Communication classifier recorded a lot of positive examples, giving this class better results. Communication element recorded 0.53 for recall, and 0.56 for precision.

Although, the accuracy results in terms of recall and precision should be improved, emphasis should be given on automatically classifying and filtering user-generated content from social media in terms of 4C Marketing Mix elements. Nevertheless, the results are very encouraging and satisfactory for elements such as Communication.

CONCLUSION

To summarize, we have presented a new analysis of tweets in terms of their belongings to one of 4C Marketing Mix elements. While conducting this analysis we have used word2vec model developed in Godin et al (2015) which was instrumental in enhancing quick generation of powerful words that integrated over 400 million Twitter microposts. Additionally, a Random Forest classification was employed and it has achieved an overall recall and precision of 0.55 and 0.58 respectively. A lot of work because of the novelty of this study remains to be done including its adaptation to others languages and the research on possible methods to improve the overall precision and recall values. In addition, more relevant unlabeled tweets could be collected and used to extract word embeddings through the application of word2vec model. Lastly, we also plan to include more brands in order to make the system more robust.

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MOVING THROUGH THE DIVERSITY OF INTERNATIONAL CULTURE: THE EXPATRIATION OF PROFESSIONALS

Edmir Kuazaqui
ESPM – Escola Superior de Propaganda e Marketing
UNIP – Universidade Paulista, Brazil

Terezinha Covas Lisboa
UNIP - Universidade Paulista
Faculdade INESP, Brazil

ABSTRACT

The productive and economic globalization made the migration of businesses and companies around the world possible, highlighting the need for human capital transfer to other countries. This process requires that the enterprise have adequate planning and management, in order to achieve the expected business results and the performance of their staff. It is necessary that the expatriation process is compatible with the profile and reality of these employees. In this way, the focus of this article deals with the skills and knowledge of employees and their perceptions as to the process. Through in depth qualitative research - focus group, we identified contributions as to aspects related to the need for adaptability to the culture, the importance of family ties and friendship that contribute to a more sustained performance in foreign lands.

Keywords: *Expatriation, Skills, People Management, Internationalization of Companies, Multiculturalism.*

INTRODUCTION

With the advent of the reality of opened markets and the need for companies to expand, people and professionals felt the need to emigrate to other markets in other countries. More than a necessity, the ability to work in other foreign markets and the ability to develop business in international scenarios has become an important competitive advantage for companies and professionals, in view of the fact that the domestic market is not always able to offer great opportunities for professional development, nor the creation of new businesses. In addition, positive international experiences usually present an institutional value for businesses and professionals.

There was a time when the expansion of a company was generated solely from the domestic market to the international one; the foreign market offers potential opportunities for business and in this way, the professional should go after them and make them tangible and operational. An international move -expatriation - covers both benefits for the company as well as for the professional involved. In general, professionals can look for professional development through career plans as well as moving on to other companies that provide better working conditions. Since often companies choose to grow by going after international experiences, it is natural that their employees adopt this growth as well. Thinking in this way, this article initially seeks to discuss the reality of markets opened and the strategic possibilities for expansion. Then, the discussion will be around professional skills and, finally, as a subject of articulation, the reality of the expatriation of executives, where mainly the administration will permeate the entire discussion and analysis.

The expatriate differs from a tourist in view of the length of time of their stay, but primarily for the objectives of the trip. While the tourist sometimes wants to obtain more knowledge and experience through visits to natural and transformed attractions, through data and information obtained from informal surveys; the expatriate needs to have previous consistent knowledge and a commitment to formal responsibilities so as to obtain the best results. Therefore, there are greater commitments between expatriates and the company. This expatriate differs as well with the one who wants to get a new job in another country. Expatriation involves a labor link with the company of origin, and not a professional looking for an activity for work through governmental and non-governmental entities, as in the case of the Cuban doctors in the Medical Program of the Brazilian Government.

Professionals must have certain qualities, skills and competencies that can contribute to the progress of the individual and the business. The graduates of degree courses in Business Administration have had specific contents required to exercise their profession, as well as other crosscutting and complementary issues that allow for contextualization with the environment. Post-graduate courses as well as other courses can provide expertise in specific areas of knowledge, but not always the formation and incorporation of personal and professional skills. Among the different skills needed for professional development, there are specific skills when it comes to international markets. Even undergraduate courses in International Relations and those, which also involve Foreign Trade, have important content for the internationalist, but they lack in Administration training. The competence for moving through international cultural diversity stems from the premise that the individual has training – knowledge – and certain skills, capabilities and operational, technical and strategic knowledge, properly articulated in the cultural differences of each region. For the development of this article, aside from bibliographical and documentary research, we used in-depth qualitative research, involving expatriated professionals, which resulted in content analysis. In summary, this article seeks to guide those who wish to move into international cultural diversity, in order to make the countries into scenarios where they can apply their knowledge and personal and professional skills.

METHODOLOGY

We did not use a quantitative aspect since the objective of the present study is not the statistical descriptions of the units of analysis - expatriates, as well as their developments related to frequency, for example. In addition, there is a great diversity of the components of the universe, be it by the companies surveyed as well as the sectors involved. On the other hand, we decided for a qualitative aspect, using the a deep qualitative method, focus group, in order to obtain reasons and deeper contents about the process and its consequences for the individual who suffers the expatriation process.

According to Strauss and Corbin (1998, p. 31):

... the descriptive details chosen by a story teller generally are consciously or unconsciously selective, based on what he sees or hears or considers to be important. Although the description should always convey reliability and portray images, it must also persuade, convince, express or arouse passions.

In this way, we identified through discussions with the Human Resource areas of ten of the largest Brazilian companies located in the city of São Paulo, ten executives that participate effectively in professional activities outside their country of origin. Qualitative in-depth research – semi-structured interviews, were carried out with the authorization of the respective companies, and at their work place in order to obtain impressions about the experiences of the process of expatriation. Starting from the impressions of the interviews, we moved on to another in-depth qualitative research, identified as focus group. According to Morgan (1997), this method is recommended when one wants to amplify data collection, interpretations and qualitative analysis, being necessary to restrict to smaller discussion groups, in order to obtain focus and management orientation as well as follow the discussions. Through an association that brings expatriates together, thirty people who live in the city of São Paulo and have gone through the expatriation process were identified. Starting from periodic telephone and e-mail contacts with a group of thirty people, a meeting came to be with these ten executives in order to obtain, through a sequence of questions, deeper impressions about the expatriation process, as well as its personal and professional consequences.

The analytical tools, according to Strauss and Corbin (1998, p. 92) enable for a codification based on concepts and from the more specific to the more general or abstract, or in other words: the codification, although it is based on concepts and fundamentals, requires a certain level of abstraction according to two properties and dimensions. The set of questions consisted of five open-ended questions, involving the academic degree, the adaptability of the professional and their families to the local culture, the experiences conquered and the skills acquired. From these questions, the use of questioning, as one of the analytical tools and discussion among the members of the group, enabled for a set of results that we incorporated into the end of this article.

MOVING IN CULTURAL DIVERSITY

A company when deciding their strategies for sustained growth should not only understand the development of their businesses in a commercial way, although it is one of the guiding control principals for the success or failure of a strategic plan. They should understand that this growth should be organized in a systemic way, evolving with each step. In accordance with Prahalad (1998), the pursuit of continuous improvement is what should guide the need of businesses to evolve and grow where there is the employment and development of their internal human talents. Based on this philosophy, companies seek to evolve together with the development of their human and intellectual capital, taking advantage of it in their different organizational phases of the same business segment as well as others from the necessity of competitive repositioning. Extending this philosophy, one cannot consider the domestic market as the only option for growth and business for several reasons. Dicken (2010) emphasizes that the new order that underlies globalization is related to the economic, political and cultural order, where governments and corporations are performers who provide products and services at a global level. Thinking in this way, it does not depend on the origin of production, but essentially, where the final consumer is. Companies within this panorama should preserve their local corporate identities; however, they should seek expansion through the sustained growth of their operations in new international environments. This growth involves the management of economic, financial and human resources that should integrate with its different stages.

The financial resources should ensure the necessary investments for the establishment of new branches and subsidiaries, as well as the necessary capital for the maintenance (working capital) of its operations. One understands then, that the company should have a funding source that usually rises from its activities in the home environment and subsequently raised by the increment of the activities of the new business unit. There is a need for a provision of funds to guarantee part of the internationalization process and later a return on the capital invested. The economic resources ensure that production processes are maintained in order to meet the new demands. Such resources, in conjunction with the financial ones, which can also be obtained in a global way, if well scaled with the marketing and evaluation analysis, they can ensure that the supply and demand are balanced. However, good people management is a way to hone this balance relationship in order to improve the strategies and performance of international business. Oliveira (2009) defines people management well as a methodology that provides management support of the professionals who work in the company, closely related to their results. It involves the identification, analysis, maintenance and dismissal of employees. This maintenance involves the analysis, evaluation and investments needed for the improvement of these employees. This management is directly contextualized with others such as knowledge management and core competences. However, the companies are not always properly prepared for the construction and consolidation of these strategic responsibilities, be it for the complexity of its deployment and management, as well as the perception of its strategic need.

The managements that support the evolution and innovation of the company and its internal public are distinct however, convergent. The strategic guidelines for the consolidation of the internal corpus organization are the responsibility of the company, bringing the identity and personality of the company toward the market and positioning it accordingly. Therefore, it is necessary to identify and manage the psychographic profile of its strategic group of collaborators, in order to adjust and balance it with the necessary skills to support the internationalization process. These same companies are inserted within a political-legal and business environment, including from the labor point of view. Fleury (2007) states that labor relations can be defined as dynamic collective work arrangements involving capital, labor and society. They can also be categorized as micro social (involving the company), meso social (involving the influence of mediation agencies, economic

sectors and production chains), macro social (involving the State and its respective public policies), global or hyper-macro (considering the markets opened after globalization) in accordance with the dynamic and social effects. These levels mold the rights, duties and responsibilities of the companies towards the expatriates and should not be understood as barriers or simply limits, but particularities that should be properly analyzed and weighed on the scales as to the need to leave their countries. Another fundamental point lies in the cultural differences that exist between nations or even companies. The term cannot be interpreted in such an airtight and closed way, because it is a very complex subject. Hence, the author of this chapter prefers not to conceptualize the term in a strict manner, but to discuss the concept and indicate how it can influence the cultural characteristics of a society. It derives essentially from the experiences and the particular history of each population.

There are many claims about Japanese culture, many of them related to nationalism, their traditions and behavior that have been built and solidified since the days of the Samurai and influenced by the impacts of World War II, forcing a certain level of Westernization. However, the values remain solid and they are reflected even in their overseas descendants, who have adapted to new cultures, but preserve their main guiding values. Chinese culture also transcends the historical values, but it presents itself in a more closed manner when coming up against different cultures. On the other hand, Brazilian culture presents a more evident multiculturalism, resulting from the mixing of ethnicities, being then more open and less focused. In contrast to the culture of a society, corporate culture involves perceptions about a particular company, product or service from the point of view of the market that it meets. It can present a mix of the environment source of its founders, but commercially speaking it must have a well-defined position, stemming from the construction of a differentiated persona. According to HSM Management (2008):

Among the various definitions of "corporate culture", one is particularly instrumental: it is about a combination of values, beliefs, behaviors, symbols and rituals that every company will incorporate over time. A combination that builds the identity and the business climate, unites people and, to a great extent, influences in their performance ... the culture describes and governs the way the shareholders of the company, its directors and employees think, feel and act.

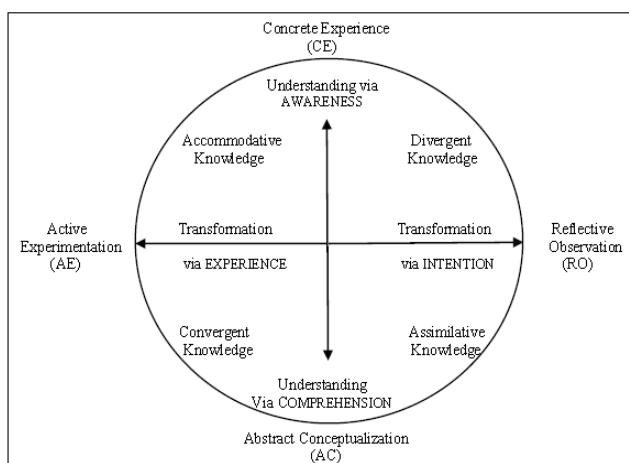
The corporate culture should be the mere reflection of the market where the company wishes to operate. In this way, the term culture from the point of view of the different markets also involves the set of values, beliefs, behaviors, symbols and rituals of the people who, if they are well aligned, there will be synergy and the respective company-market interaction. However, everyone knows the scenario that international markets have their distinct particularities. Although the strength of the company can reside in its original corporate and cultural image, sometimes it has the support of a good international marketing program, and well-adapted human talents can deepen the bonds of strategic relationships. Njan e Levine (2012) understand that decision making in expatriation processes mainly involves economic matters on the part of the company. However, other factors, particular to each company, situation and even the multicultural environment, should be taken into consideration, charting a common sense in order to adapt the expatriation process objectives as well as all the parts involved. In this respect, the salary cannot be treated anymore as the main motivating force for internal employees of a company, although its absence could demotivate the team. A well-structured career plan with a view for career development, challenges to be placed before the team as well as the identification of the personal life cycle of their internal collaborators, facilitates the expatriation process.

The professional life cycle stems from of the premise that every individual has certain achievements and their respective salaries, which change and influence the motivational aspects of each challenge. A young person will tend to have greater motivation early in his/her career, as the result of the perspective for success. On the other hand, a financially stabilized adult can opt for safer activities, undertaking less according to risks and effort to be rendered. The essential thing is the constant challenge and new ways of visualizing human assets, and how to motivate them according to their characteristics and peculiarities. An important point of emphasis that can be a motivational propulsion spring is the existence of cognitive and emotional links that generate commitments between the parties, in addition to those contractual ones. Qualitative links are more difficult to apply, because they express management maturity beyond management complexity. Barlow and Maul (2001) state that:

Emotions influence all aspects of rational life: model memories, influence perceptions, dreams, thoughts and judgments – and behaviors ... Emotions are more than mere cognitive processes and, in fact, more than just feelings.

At first, the professional, starting from the attention to his/her basic needs that stem from their work rights, such as employment and salary, there must be the awareness of liking what they do as well as having, most importantly, their ability and work results properly valued. The company, when identifying such situations, should promote actions that strengthen this situation and create bonds for greater relationships. More than using internal marketing strategies that require timely feedback, the actions can and should be individualized in order to meet specific demands of the internal public, highlighting potential talents. With that, part of individual productivity will arise from specific actions of the company. It is important to stress that this practice must be properly inserted into the company's strategic planning, forming, in this way, its organizational culture. Still citing the same authors (2001; p1) “*emotional value is the economic value of feelings*”. Emotional value management involves a series of actions that can be linked to public relations, as well as depending on the sensitivity of their managers. One of the crucial and difficult to analyze points is the question of fairness in the actions and the empowerment and employeeship capabilities of those involved; otherwise, actions can become biased and reflect negatively on individual and group results. Within an integrated and holistic vision, everyone is responsible for the results, as well as the management for their respective processes. A point to consider is the structural and philosophical need to incorporate business pedagogy in all of the processes of the company, and as the focus is the internal public, individual and collective experiences can be considered as real corporate assets.

Figure 1-Structural dimensions of the experiential learning process.



Source: Cridal (2003).

This reality is directly related to the knowledge and skills relevant to each individual and how the company and the environment where they coexist can influence the results of this relationship. The Figure 1 model developed by Kolb and presented by Cridal values the environment as the environment for exchanging experiences. People have different experiences from their academic training as well as family, professional and social experiences that allow for a unique view of the world from their interpretations. Therefore, it then becomes the responsibility of the individual and their endogenous motivation to seek ways to improve their knowledge and content necessary for their professional achievement. On the other hand, starting from its strategic planning, its positioning and corporate culture duly declared in its mission and vision, the company should identify, select and maintain its organizational talent aligned with its growth strategies. As well as shaping and motivating its internal staff to incorporate its guidelines and philosophies in order to facilitate the internal motivations of the framework of its inside employees.

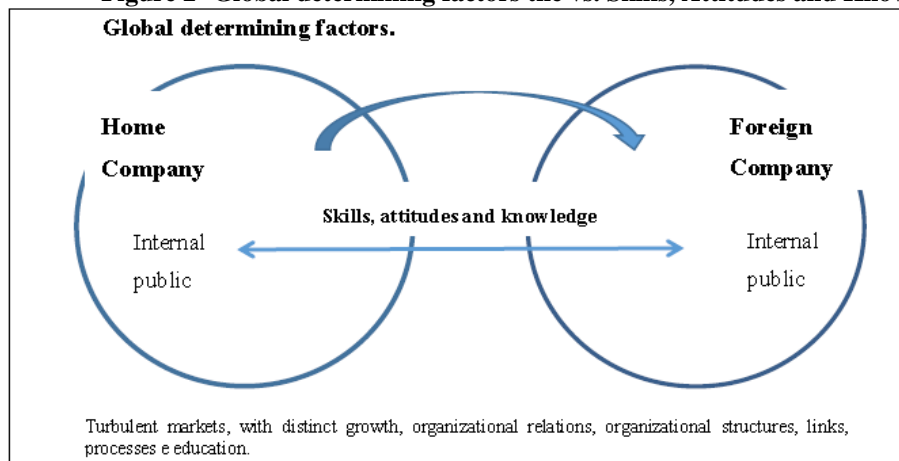
Learning will then occur on two levels – personal and corporate, the latter being with the structure and resources required in order to incorporate the necessary skills, including those of cultural nature. More than just bureaucratic and operational jobs, nor simple consulting and training jobs to be employed, this process involves the use of a continuous learning process, so as not to rely only on theoretical techniques and those already used

for teaching and corporate education, but the inclusion of innovative practices that make the difference between knowing and knowledge. This vision is directly related to the assumptions of active learning, in order to incorporate new content that add to what the professionals is experiencing. On the other hand, culture, as an intangible phenomenon, brings the identity of a collective belonging to each region and, thus, justifying the application of active learning and of monitoring to follow up on the development of their organizational talents in comparison to the business results.

The identification of cultural differences and behavioral reflexes of the target region then becomes evident. Each region – country, city or territory – has evolved from its ancestors and migration and immigration movements that have helped build what is considered as being the current predominant culture. With all these factors, one understands that the internationalization of professionals should not occur in an isolated and situational manner, but in such a way as to systematically contribute to the development of the genesis of the company. Cultural differences do not boil down simply to the applications of international marketing, because they influence considerably the relationships and strategic links that can lead to strong negotiations between the different stakeholders involved. Multicultural management deals with the management relationships of companies in foreign environments, taking into account the origin of the head office and the environment where it develops its activities. It involves managing their internal staff, and the way they relate to international environments. Multicultural management takes into account the differences between different types of behavioral orientation. Within this perspective, a monochromic orientation takes into account a linear and more rational way of thinking, where this way of thinking is built in parts such as in the case of the British, Americans and Japanese.

On the other hand, a polychromic behavioral guidance takes into consideration that reasoning can break down the usual steps, intensifying, or not, the actions; as a pointed examples, we have the “Latinos”, and especially the Brazilians. Other factors, such as nationalism and societies that are more directed at collectivism and individualism, influence in the manner in which the companies carry out their operations. A company cannot rely on only of its products and services, nor on its marketing strategies, although they can be assertive. Its evolution in business essentially depends on its skills. According to Prahalad and Hamel (1990), the core competences must serve as guides for the markets they intend to serve as well as their respective strategic parameters. These core skills must be those identified by the company as market influencers where they wish to operate. Amatucci (200) presents the global administrator training skills and their determinants, categorizing them as training skills in competency, attitudes and knowledge, in detriment to the worldwide determining factors, such as the turbulent and complex growth, the organizational relations, and the structure of the organizations, the links, the processes and the education. These factors help shape and develop skills, maturing the company and its strategic management models.

Figure 2- Global determining factors the vs. Skills, Attitudes and Knowledge.



Source: Interpreted from Amatucci (2000).

Knowledge cannot be considered as definitive but aggregated to a continuous search without a specified end, which can be achieved through academic, business and personal means. One has to identify what the best means for obtaining them are. In general, companies can select their employees from solid screening programs, and provide them with different professional development programs involving training, coaching and mentoring, for example. Skills can be seen as the use of individual knowledge for solving problems as well as creating new ideas. In many cases, it is considered as the ability to do something and usually related to processes of the company. On the other hand, attitude is the posture adopted in the face of a determined situation, and may involve ethical and moral, personal and corporate issues. These three elements make up what is considered to be known as human competence.

Companies, in order to diagnose and indicate changes in the profile of their workforce, can make up a checklist of questions that might identify the different internal profiles and mold them according to the prevailing needs. This is a formal process, but one that requires dynamic feedback, that allows for identifying deviations and the implementation of new ideas and solutions. Skills can be categorized as a result of training as well as individual:

- Training competences take into account those in which the individual and the company can have control over the formation and consolidation starting from learning techniques. It is considered as a benchmark for those wishing to compete in a significant manner in international markets. On the other hand, the international market offers a dynamic that changes and transforms scenarios very quickly, aside from the reality that all markets have traits and particularities that must be properly identified, measured, analyzed and implemented accordingly.
- Individual skills constantly evolve from the various challenges faced. Working in turbulent international markets as well as the possibilities of new experiences and responsibilities can add significant transformations to the professional profile of the individual. Knowing, applying and positioning oneself in adverse situations will improve this professional's level.

In general, expatriation, through access to new markets and experience, provides an individual with an important intellectual increment that is transmitted to the other employees and consequently to the company. Companies incorporate this knowledge into their strategies in order to obtain better results. The competitive environment extends the results of this knowledge, repeating the actions and causing significant sectorial improvements and, with this, the gains coming from the internationalization become evident and go from simple economic results to important social consequences. In summary, to move within international cultural diversity means that the professional will really be moving along a large bustling avenue, with different vehicles traveling in different directions. The important thing is to get to the destination in the best and quickest way possible, obtaining the best results with the fewest resources. Although there is heavy traffic, the driver should be the responsible one for maintaining the cruising pace.

EXPATRIATION AS A CORPORATE NEED

Initially, the company must have the skills and resources needed to enter the international market successfully. It comes from a thorough diagnosis, highlighting its strengths, weaknesses, threats and opportunities of the environment in which the company is inserted as well as the market where the company will carry out its business. The introduction of new units in overseas markets can be conducted by consultancy agents located in the desired country, having the participation of executives in the direct management of the new international unit or having the participation and contribution of employees from the company's country of origin. In this third alternative, the company understands that it may have greater control over the different stages of internationalization, centralizing, in some way, the decision-making process. In addition, these employees already have a bond and identification with the company, its values, products and services, making their relationship more committed. The expatriation of professionals has become a constant from the year 2000. There are no official expatriation figures in Brazil, because it depends on personalized strategies of each company, as there is no interest in disclosure on their part. However, one is aware that since then, there has been a great demand for consulting services in the sense of assisting companies in taking a group of their employees

overseas. In addition, international and business trips vary as to their length; whereas expatriation-related ones take into account a greater length of permanence, meaning to live and socialize in a different society.

Expatriation is not an isolated process, quite to the contrary: it depends on other company activities. Positioning in the classical internationalization strategies, companies can opt for different actions that can result in the need to have a body of collaborators in the target country. Generally speaking:

- Indirect export is used when the company does not have a significant volume of business, but needs to market its products in foreign markets in order to meet specific demands as well as "test" new international markets. In Brazil, one can use the services of a commercial importer and exporter as well as a trading company. In both cases, the technical and operational expertise of sub-contractors carries a lot of weight, being that the commercial side is carried out on the part of the company. The experiences can lead to necessary reflections from a marketing, economic, financial and people point of view.
- With significant volumes of business, experiences and with the vision of long-term business, companies can structure a foreign trade area to meet specific demands in partnership with the financial area. The suppositions achieved through the indirect exports phase can be tested and validated, as well as constructing others. At this stage, there is a need for professionals with certain technical, operational and commercial content in the international area. It is recommendable that, at this stage, in addition to a foreign trade manager and his/her supporting staff, the presence of the trader, the main one responsible for researching, negotiating and selling the products of a company. With this structure, the company assumes the responsibility for making the business deals happen.

Therefore, in general, starting from positive experiences in international markets, the company may opt for other strategies that will contribute singly or in groups, to the internationalization of their business. The other strategies derive from their goals and strategic needs and can be the international franchises, mergers and acquisitions, joint ventures and direct investment. Each one of the strategies requires management and control intensity, influencing the quality of the personnel involved. In a general way:

- International franchising requires a group of professionals who can make the contact, negotiate and the start up the new business after having identified the ideal partner. The division of responsibilities is evident, where most of the technical and commercial issues will be the responsibility of professional expatriates and the operational issues with the business partners. In this way, it is important to identify the profile of the partners in order to obtain business synergy. Later, with the consolidation of the franchised units, less frequent or even indirect monitoring is possible.
- Acquisitions and mergers require a larger and better group of employees, having the need for incorporating other partner-collaborators, because of the increase in the complexity of the operations and responsibilities involved. Generally, as seen in actual cases such as the entrance of Santander in Brazil, there is a plan so that the management of the company acquired is gradual, where the power and management will be incorporated in accordance with the maturity of the acquired company towards the new owners. Acquisitions and mergers are usually the result of long negotiations and articulated policies;
- On the other hand, a joint venture requires shared management, usually on a higher strategic and tactical level. The operational issues are usually under the responsibility of local partners, where great emphasis is the search for synergy and productivity at all levels of the company. Looking for a partner, of the same business segment, in other international environments means, in short, that part of the results of this new category of the company is distributed, but divided in such a way that the local partner has specific responsibilities, minimizing the risks of the operation. As examples, Brazilian companies that looked for a joint venture in the Chinese market assessed that the choice of this strategy was justified due to the significant and complex characteristics of the Chinese market environment.
- Finally, a direct investment requires more prompt and forceful interaction, since, unlike the previous strategy, there is no sharing of responsibilities. They are directly related to the expertise and sensitivity of the team involved, where the great challenge is to understand how the business works in completely different environments from those that we know. In a direct way, however, the acquisition of assets can provide considerable gains, once they have acquired a structured company with an attractive market. This structure involves departmentalization and an organizational chart, which facilitates management as well as its optimization.

The expatriation of professionals can derive from various reasons, in addition to the specific strategies related to entering and operating in international markets, contextualized with rational and even emotional needs:

- It can be derived from the company's own needs or from the market where it develops its activities, being a normal praxis for the transfer of professionals to other international environments. Companies that work with foreign trade and international commerce and marketing often need for their professionals to obtain business results from overseas trading;
- Companies, according to their growth needs, can opt for the internationalization of their business and in this way expand their network of internal and external collaborators as well as deepening their strategic management capacity. Sometimes, the expansion of branches in other markets is generated from the participation of trustworthy collaborators and which enables for a safer decentralization of power (at least from the point of view of the main manager);
- Market opportunities in different economic sectors can be reasons for expatriating professionals, where an outstanding professional is usually assigned to researching, analyzing, evaluating, and beginning the process of obtaining new business.
- Sometimes, the owners of the companies wish to internationalization for personal and emotional reasons, acquiring status.

Some authors show a more romantic view about the process of expansion into international markets, but in general, all businesses seek to get better business results. According to Nunes, Vasconcelos and Jaussaud (2008; p. XVI) "*... expatriation can be seen as a strategy connected to a people management model that aims to develop in the executives and managers of the organization personal competencies for the so called "global" executive.*" With the monitoring of constant travel and international experiences, the company - as long as it has a good competitive memory - can enhance its human content and consequently its international business management quality, thus influencing the level of the results. This environment can encourage creativity, entrepreneurship and even innovation, because the expatriates gain autonomy in their actions and have a new vision of the world, especially from the business point of view. According to Caligiuri and Kolakoglu (2007) international mobility is directly related to the strategy groups – local, central and global, the latter being the focus of our study. Local companies have their main focus on the domestic and central market, although with possibilities for international operations, they maintain management control in the home office. According to the authors, the larger the strategic scope, the more the professional needs to have dexterity in his/her intercultural adaptation, gradually reducing the importance depending on the development objectives or even technical order. The greatest challenge for companies is to operationalize their growth actions with the development of their human capital stemming from the aggregation of new knowledge and experiences. It becomes very reductionist to categorize professionals as domestic, international, or as even global, executives. A professional profile may differ because of specific contents to be applied in certain situations, but there are general contents or even technical and operational ones that can be applied in other situations and environments. Otherwise, the presence of the categorized professional in an international scope will only have added value in international corporate expansion processes.

THE MOVE AS A PERSONAL NEED AND A PERSONAL DEVELOPMENT PROCESS

One of the main features of this competence is the ease of the individual in acquiring the ability to be mobile and interact with the environment. Mobility requires certain characteristics and dexterity that the individual should possess to ensure his/her presence and contribution to the environment where he/she will be involved. Thinking in a more businesslike manner, the move is directly related to the concept of expatriation, which is intimately related to the formal and legal contract of a professional with a company, the move being within a determined deadline and a clearly defined objective, differentiating here from the individual and psychographic needs in the search for new cultural experiences. However, even with a formal link, the differences between environments, including those of cultural order, can influence the performance and results of the expatriates. The individual should have some characteristics, like having the desire to know new cultures, new experiences and possibilities of making the moves when they occur.

In this way, although obvious, he/she must be fluent in the language, or the ability to communicate, as well as financial and economic resources or even sponsors who can provide for their survival in other markets. Although there is the company's participation in the salary process, being in another country can mean to the expatriate, the possibility of knowing new cultures and experiences, this being a bright point in the process. Working in other markets implies in the reality of living in different environments from those of the expatriate's origin, where relationships are already formalized and accepted. In new scenarios, there is the need for a gradual building of relationships, which are usually related to the professionals. The socialization process should be gradual, involving his/her professional peers and then expanding to other different audiences. Therefore, the company should plan socializing activities for their expatriates, in order to enhance the attention of those involved as well as deepen the bonds of social and even affectionate relationships. On the side of the expatriate, he/she should look for his/her space in order to feel more comfortable, improving and realizing more clearly his/her role within the context of the company. The professional expatriate has as assumptions that one must have tools that help both personally and professionally. Computer technology provides a series of tools and instruments that support the daily work activities, as well as communication and socialization. The affinity with these tools and instruments makes work more contextualized with the reality of the expatriate's country of origin.

Other elements involved are related to the salary, experience transfer and intellectual capital that give companies a justifiable reason to migrate to external markets. A transversal point which should be examined refers to legal and labor issues. Assuming it is a Brazilian employee, the job will be governed by Law 7,064 of 1982 that covers workers hired or transferred to provide services abroad. There are a number of rights listed in this law. There are other forms of salary for the available time. The rights that the employee will benefit from in such cases are various, for example: a) a base salary plus additional for the move; b) after 2 years, annual holidays in Brazil, at the company's expense; c) bearing the expenses for returning home (provided there is no just cause for dismissal); d) the duration of the time of transference will be computed to the time of service of the employee for all purposes of Brazilian legislation, among other things. Hofstede (2001) states that competences are developed from cultural experiences that involve factors such as attitudes, skills and knowledge, where the need for an intercultural communication is proposed. That enables for the exchange and development of these experiences between the professional and the environment. On the other hand, it is important to note the micro social level (evidenced before) where the contract will be signed (a rule of International Law). The Superior Labor Court, when canceling docket 207, abolished the place of execution of the work, therefore, the place where the employment contract will be signed, will give the real outline for the rights that the worker will benefit from. In the case of a Brazilian, if the contract has been signed in Brazil, he is entitled to all rights provided for in the above-mentioned law; on the contrary, the law of the place of employment will have to be considered. A very relevant point in the research developed by the authors refers to the cultural adaptation that in part can be measured, but not always understood as a whole, because the expatriated individual has rights and obligations undertaken before the company where he works as well as his family and dependents. In this way, although there can be a culture shock, a quantitative research cannot always provide solid data and information; on the other hand, participants do not have always availability and interest in participating in in-depth qualitative studies thus limiting to exploratory studies.

Authors such as Black and Mendenhall (1991), Caligiuri (2000) and Stahl and Caligiuri (2005) present studies on the behavior of expatriates in relation to contact with new cultures, where the new distinct situations in the target location can influence the behavior of the professional as well as their emotional and social relationships. These are sometimes the reasons detailed on the occasion when the professional leaves the company. In this way, aspects related to different cultures should be taken into consideration, mainly from the point of view of each individual person. One understands that moving through international cultural diversity, in addition to the factors exposed, is the ability of the individual to be resilient when facing new environments and challenges. Rutter (2012) declares that resilience arises from adverse situations and not always amenable to foreseeing and subsequent planning. The situations occur according to the dynamics of the different persons involved. Being an endogenous factor, this resilience must be overcome by the individual him/herself. Tanure (2006; p. 26) states that "the way in which an executive positions him/herself before the differences, anchors him/herself in their own culture, since, they are influenced by it", where the view of the world and all the result of its construct is placed in check when comparing and confronting the differences between the parties involved. The professional may feel embarrassed or even reduced if their cultural beliefs come into collision with those of others. If the way we understand the environment is sometimes what guides our decisions and actions and can

characteristics as our competitive edge in business, this same dominant mode designated by the market, as mindset might be seen with certain disapproval, since it represents a one-sided view of the process.

RESULTS OF IN-DEPTH QUALITATIVE RESEARCH

One of the identified items was the differences between previous experiences on expatriation from those who undertook it for the first time. The previous international experiences strengthen the feeling of security of the individual in relation to the aspects of mobility and development of activities in the foreign country, as well as the adaptability to the local culture. The fluency of the language, being related to the destination country and not necessarily to the knowledge of the English language, contributes significantly to the integration of the individual into the business environment as well as the foreign society in general. The presence of family or even friends contributes significantly to the equilibrium of emotional variations. On the other hand, it was verified that companies do not always incorporate benefits relating to the transfer of family members, or even of objects - such as furniture - in expatriation procedures, because they consider them additional charges as well as not necessary for the good performance of their employees on foreign soil. Many companies as well as professionals have the understanding that expatriation is a form of professional enhancement and the decision to emigrate to other countries can usually create some form of social conflict.

For those who have had the first experience in expatriation procedures, some of these claim an initial enthusiasm, relating primarily to the company's placing confidence in the professional and in his/her results. On the other hand, because this initial feeling because it is accompanied by a number of uncertainties arising from the possibility of diminishing results and lowering performance, since it is about the same company, but with different variables because he/she is performing professional activities in another environment, where some variables may yet be unknown. In some cases, the involvement with the professional activity in foreign lands was superior in terms of time, since the expatriate has, up to that time, no other social ties that might divert him/her from an activity, as well as a way to compensate for their weaknesses and fragility. A very convergent point was that although the expatriation process involves the extension of a company in another country, this country does not always have the same behavioral characteristics mainly in terms of skills, capabilities and attitudes required by the home company. This situation involves a greater and stress generating individual adaptability that companies cannot always accurately measure, bringing emotional consequences to the expatriates. Autonomy was the term highlighted by expatriates as its main contribution to the process. According to expatriates, they noticed that the level of security in the transition and even in the thinking about and developing their personal activities and mainly their professional ones increased significantly, making them more skilled and active professionals, with resourcefulness behavior and stronger relationships, with the capacity of migrating in different situations wherever they were. In general, one understands it to be a necessary contemporary process for the growth and sustainability for business and enterprises. On the other hand, we understand that not all the professionals involved - be they those who manage or are effectively expatriates - have the sufficient and necessary experience and maturity to carry it out appropriately, and in this way, generate some form of conflict.

CONCLUSIONS

With the intensification with different foreign cultures, businesses and people had to adapt and shape their profile as well as their content in order to make their actions more competitive in international markets. With this reality, the export and the import of professionals has increased in recent years, causing benefits and consequences for both parties - companies and individuals. The expatriation process involves a series of items to be addressed, in addition to those required for the legal mobility of the professional. Sometimes, it is the decision that family members can accompany professionals in accordance with the estimated length of permanent residency. Therefore, the influences the well-being of loved ones brings consequences to the expatriate's profile. The life story of families is sometimes built with materials and elements from other origins. Although it is not normal, there are cases of people who need to take with them, aside from their personal belongings, furniture and pets. There is then, available to the expatriates, outsourcing companies that can provide services of this nature. The development of computer technology in the last decade has facilitated communicability between parties, improving or at least updating in real time professional, personal and family situations that aid in mitigating

circumstances in expatriation situations. The mere fun and socialization provided by these different means of communication can be a mitigating factor for the possible stress caused by moving to different environments.

From qualitative research with companies and professionals related to the expatriation process, one can highlight that the issues related to professional adaptability are intimately linked to their professional growth prospects and individual and collective challenges, where they are wrongly encouraged by the companies through financial goals. Sometimes, the satisfaction itself in implementing a new business as well as opening a new unit can be an interesting and motivating challenge. The prospect of new scenarios and challenges can be established as motivating agents that can lead to resilience, which can be defined as the individual capacity to adapt to the environment and its challenges. The resilience presented by Grotherg (2005) discusses the need for mutual interacting challenge on the part of the individual, transforming it into a continuous process. Explaining in a more organic way, we can affirm that resilience is an individual behavior trait and is always related to human growth and development. In addition, it is from the intensity of this trait that the individual will be prepared for coping directly with the barriers and difficulties encountered.

Moving in cultural diversity requires skills, capabilities and competencies, in addition to the logical professional knowledge, which is basically what drives companies to invest in their human capital. In addition, the employment bond and trust with the country of origin are the main factors that lead companies to look in their internal staff for assistance with the internationalization process. On the other hand, the professionals should invest in their knowledge, in order to articulate their actions with those of the companies where they are developing their professional activities. With the intensification of expatriations, participation of the international work force in the everyday life of the companies will become a normal process, wherever they are located. This study does not intend to present a checklist of how companies and professionals should behave, but to generate reflections on each case and point out solutions and consistent recommendations. Companies must not understand that the process is only the result of a simple investment, but a result of a policy and strategic guidance. As international markets are different, it is possible, but not recommendable, an attempt to massify the concepts and applications of expatriation of internationalist professionals.

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EXPLAINING NON-USERS' INTENTION TO USE E-BOOKS: AN EMPIRICAL INVESTIGATION

Daniel K. Maduku
University of Johannesburg, South Africa

ABSTRACT

Electronic books (e-books) have emerged out of recent technological developments that are aimed at making it easier for consumers to access reading material. However, e-book producers face an uphill task in garnering rapid acceptance of this technology owing to user apathy. This study sought to understand the factors that influence non-users' behavioural intention to use e-books. A proposed conceptual model which posited direct effects of performance expectancy, effort expectancy, social influence and facilitating conditions on non-users' behavioural intention to use e-books was empirically tested with data obtained from 171 non-users of e-books in South Africa. A structural equation modelling technique using Smart PLS was used to analyse the data. The results of study identified performance expectancy, social influence and facilitating conditions as critical factors affecting non-users' behavioural intention to use e-books. Surprisingly, effort expectancy was insignificant. The implications of this findings on strategies aimed at reducing non-users' resistance towards e-book acceptance are highlighted.

Keywords: E-books, behavioural intention, non-users, South Africa

INTRODUCTION

Recent developments in the digitisation of media have led to the transformation of books into digital formats that can be read on hand-held devices. Books in these digitised formats that can be read on hand-held devices are known as electronic books (e-books). E-books are thus defined as “as a digitalized form of some or all printed books or as one produced completely in the digital environment, which can be viewed and accessed on any portable device like computers or specially designed e-book readers” (Önder, 2011). Electronic books (e-books) have thus piggybacked on technological developments that seek to make life easier for consumers. As consumers become accustomed to the use of e-books, their demand for this new platform grows; and e-books have become an integral source of revenue for the publishing industry (Jung, Chan-Olmsted, Park & Kim, 2012)

Driven by the diffusion of hand-held devices, competitive pricing strategies among suppliers of these devices, and the growing availability of content in e-format, sales have seen healthy growth patterns in most advanced countries. Statistics of the Association of American Publishers (2015) reported that the total trade in e-books increased from USD 1,510.9 million in 2013 to 1,582.0 million in 2014. In the UK, e-book sales went up 10.5% between April 2013 and April 2014 (Digital Publishing News, 2014). The e-book market in South Africa is relatively small: it constitutes only two percent of the total book sales (PwC, 2013).

Previous studies have emphasised the effectiveness of e-books in enhancing the learning process of students (Beetham & Sharpe, 2013). Thus the use of e-books in the classroom has become commonplace in recent years (Beetham & Sharpe, 2013; Nelson, 2008). E-book publishers are keen, therefore, to capitalise on the burgeoning use of e-books in the classroom to increase the acceptance of e-books among students; particularly in the institutions of higher learning (Ifenthaler & Schweinbenz, 2013; McClelland & Hawkins, 2006). Understanding current non-users' perceptions of the usability of e-books is important to developing strategies that will convert their apathy towards the technology into interest, culminating in acceptance and use of the technology (Cassidy, Martinez & Shen, 2012). In spite of this, most e-books research to date has focused on e-book users and overlooked non-users – those who might not be using the technology from personal choice, or

lack of awareness, or limited access to hand-held devices (Cassidy *et al.*, 2012). This study attempts to address this research gap by seeking to understand perceived factors that influence e-book use intention among non-users in South African institutions of higher learning. The findings of this study will present important implications for practitioners.

LITERATURE REVIEW

E-books are electronic versions of printed books (Carreiro, 2010). Unlike printed books, e-books possess unique features that include search options, cross-reference functions, and multimedia features (Rockinson-Szapkiw, Courduff, Carter & Bennett, 2013; Schomisch, Zens, & Mayr, 2013). Moreover, e-books come with a lot of built-in interactive features, such as built-in dictionaries and pronunciation manuals. They also incorporate video, animation, audio, or interactive simulation (Nelson, 2008).

Quite a number of models have been developed to analyse and understand what influences users' acceptance of information systems. Noticeable among these theories are the Theory of Reasoned Action (TRA – Fishbein & Ajzen, 1975), the Innovation Diffusion Theory (IDT – Rogers, 1983), the Technology Acceptance Model (TAM – Davis, 1989), the Theory of Planned Behaviour (TPB – Ajzen, 1991), the Model of PC Utilisation (Thompson, Higgins, & Howell, 1991), and the Unified Theory of Acceptance and Use of Technology (UTAUT – Venkatesh *et al.*, 2003). The UTAUT resulted from an integration of eight existing models that specify four factors – performance expectancy, effort expectancy, social influence, and facilitating conditions – as key determinants of the acceptance and use of information systems (IS). This theory has proved to be more effective than any of the models before it, as it is capable of explaining a higher variance (70%) in behavioural intention.

Given this higher explanatory power, this study makes use of the UTAUT in explaining non-users' behavioural intention towards e-book use in South Africa. Thus this study posits performance expectancy, effort expectancy, social influence, and facilitating conditions as direct factors explaining non-users' behavioural intention towards e-books.

Performance expectancy (PE) denotes users' perception of the ability of IS to accomplish a given task (Venkatesh *et al.*, 2003). Thus those who do not currently use e-books will be more inclined to adopt the technology if they perceive it as useful to their reading demands. Indeed, PE has demonstrated resilience in explaining user acceptance of IS in a variety of contexts (Martins, Oliveira & Popovič, 2014; Tan, Chong & Lon, 2010). For example, in a study conducted to explain internet banking acceptance among Portuguese consumers, Martins *et al.* (2014) found that PE has a significant effect on users' intention towards the system. Accordingly, the following hypothesis is formulated:

H1: PE will have a significant effect on non-users' behavioural intention to use e-books.

Effort expectancy (EE) represents the degree of ease associated with the use of IS (Venkatesh *et al.*, 2003). Perceptions about ease of use are directly and positively associated with the behavioural intention to use (Martins *et al.*, 2014; Zhou *et al.*, 2010). Non-users would likely develop a positive behavioural intention towards e-books if they saw that they did not require intense mental and physical effort. Thus the following hypothesis is proposed:

H2: EE will have a significant effect on non-users' behavioural intention to use e-books.

Social influence (SI) reflects the impact of the opinion of the most important people on potential users of IS. Empirical evidence (Chang, Liu & Chen, 2014; Hsu & Lin, 2008; Li, 2013) has emphasised that most people use technology in order to 'fit in', to conform with the expectations of those who are important to them. Researchers have found a positive relationship between social influence and behavioural intention to use IS (Bastiaenssens *et al.*, 2014). Consequently, the following hypothesis is proposed:

H3: Social influence will have a significant positive effect on non-users' behavioural intention to use e-books.

Facilitating conditions (FC) signifies users' perception about the availability of organisational and technical infrastructure support to help them use IS (Venkatesh *et al.*, 2003). Prior studies have repeatedly shown

that users are likely to adopt and use IS when there is ample organisational and technical infrastructure support (Chen & Chang, 2013; Chong, 2013). Non-users' perception about the availability to them of their own resources, as well as external support services, will have a significant influence on their behavioural intention to use e-books. Hence the next hypothesis:

H4: Facilitating conditions will have a positive effect on non-users' behavioural intention to use e-books.

RESEARCH METHODOLOGY

This paper is based on a larger research project on e-book acceptance among South African students. The emphasis of this paper is on non-users of e-books. Data for the empirical testing of the proposed research model was obtained through a survey of 171 respondents by means of a structured questionnaire. The study took place among students at five tertiary institutions in the Gauteng Province of South Africa. Gauteng was chosen for this study because of its cosmopolitan mix of people. The views of residents of Gauteng are generally considered to be representative of the wider South African population because they come from the diverse socio-economic, cultural, and racial backgrounds of the larger South African population (Maduku, 2014; Mpinganjira & Mbango, 2013).

Students from two independent colleges and three public universities in Gauteng were approached to participate in the study. A non-probability sampling technique in the form of quota sampling was used to ensure that respondents from different population groups in terms of gender, age, race, economic status, level of studies, and type of institution (independent and public) were included in the sample.

The questionnaire used for the data collection had two main sections. The first section posed questions to obtain the respondents' demographic information, and to discover why they did not use e-books. The second part of the questionnaire included measurement items for the constructs used in the study. The items used in measuring these constructs were selected and adapted from previously-validated scales. All the items used to measure PE, EE, SI, and FC were adapted from the study of Ventakesh *et al.* (2003). A seven-point Likert scale with anchors ranging from 1 ('strongly disagree') to 7 ('strongly agree') was employed to measure each item.

The Statistical Package for Social Science (SPSS) and Smart PLS software were the main statistical programmes used to analyse the survey data.

RESULTS AND DISCUSSION

Sample characteristics

The descriptive statistics of the respondents who participated in the study are presented in Table 1. The results show that the survey saw a higher female (57.9%) participation than male (42.1%) participation. The results further indicate that the overwhelming majority (90%) of the respondents were between the ages of 18 and 25 years, whereas those above the age of 25 comprised only 10% of the respondents. Given these figures, it may be safe to say that the participants in the study are relatively young. In terms of education, over two-thirds (75.4%) of the respondents are undergraduate students; the rest are postgraduate students. Respondents were also asked to report on their economic status. The descriptive statistics presented on Table 1 show that the majority (67.3%) of the respondents indicated that they come from an average economic background, whereas only 4 respondents (2.3%) reported being from an affluent background. Thus participants in the study are mostly from an average economic background. Of the participants of the study, 134 (78.4%) have access to devices that can enable e-book use while 37 (21.6%) do not have access to such devices. Thus many participants of this study have access to devices that can enable e-book use. Respondents were asked to indicate why they are not currently using e-books. Most (29.3%) respondents indicated that they did not know about the availability of e-books. Moreover, 42 (23.2%) of the respondents indicated that they still liked the idea of holding, feeling, and smelling printed books. Knowledge about how to use e-books is also a significant barrier to its use, as 19.3% of the respondents gave this as a reason for their non-use of e-books. Trust of the contents of e-books was not a major obstacle to its use among non-users, as only 2.2% of the participants gave this as their reason for not using e-books.

For producers and marketers of e-books to be successful at winning non-users over to become users, designing marketing programmes that seek to create a massive awareness of this technology and of its usefulness, while emphasising its user-friendly capabilities, may be good strategies to overcome users' resistance to e-book use.

Table 1: Descriptive statistics of the sample

	Frequency	Percentage
<i>Gender:</i>		
<i>Male</i>	72	42.1
<i>Female</i>	99	57.9
<i>Age</i>		
18 – 20	58	34.1
21 – 25	95	55.9
26 – 30	5	2.9
31 – 35	8	4.7
36 – 40	1	.6
41 – 45	1	.6
46+	2	1.2
<i>Academic level of study</i>		
<i>Undergraduate</i>	129	75.4
<i>Postgraduate</i>	42	24.6
<i>Economic status:</i>		
<i>Poor</i>	10	5.8
<i>Below Average</i>	23	13.5
<i>Average</i>	115	67.3
<i>Above average</i>	19	11.1
<i>Affluent</i>	4	2.3
<i>Access to devices that can enable e-book use</i>		
<i>Yes</i>	134	78.4
<i>No</i>	37	21.6
<i>Reasons for not using e-books</i>		
<i>I am not aware of the availability of e-books</i>	53	29.3
<i>I do not know how to use e-books</i>	35	19.3
<i>I do not trust the contents in e-books</i>	4	2.2
<i>I do not know where to find e-books</i>	26	14.4
<i>Using e-books is expensive</i>	21	11.6
<i>I like the idea of holding, feeling and smelling printed books</i>	42	23.2

The analysis of the research model was conducted with the aid of Smart PLS 3.0, a Partial Least Squares Structural Equation Modelling (SEM) software (Ringle, Wende & Will 2005). The PLS concurrently assesses the psychometric properties of the measurement model and calculates the parameters of the structural model.

Measurement model

The assessment of the measurement model was based on the Confirmatory Factor Analysis (Hair *et al.*, 2010). The validity of the measurement model was assessed on the basis of convergent and discriminant validity. The convergent validity of the measurement model was assessed using factor loadings, Cronbach's alpha, composite reliability, and average variance extracted (AVE). The thresholds for the factor loadings, Cronbach's alpha, composite reliability, and AVE are 0.7, 0.7, 0.7, and 0.5 respectively (Fornell & Larcker, 1981; Hair *et al.*, 2010; Nunally & Bernstein, 1978). As presented in Table 2 and Figure 1, the factor loadings for all the items except one (FC1=0.699) were above 0.7. The Cronbach's alpha values ranged from 0.786 to 0.914. Moreover, all the estimates for composite reliability are above 0.8, while the AVE for all the constructs is above 0.5. Thus the results show good convergent validity.

Table 2: Results of confirmatory factor analysis

Construct	Item	Loading	Cronbach's alpha	Composite reliability	Average Variance Extracted
PE	PE1	0.853	0.882	0.919	0.740
	PE2	0.896			
	PE3	0.811			
	PE4	0.879			
EE	EE1	0.839	0.914	0.94	0.795
	EE2	0.914			
	EE3	0.913			
	EE4	0.899			
SI	SI1	0.906	0.906	0.941	0.842
	SI2	0.925			
	SI3	0.922			
FC	FC1	0.699	0.768	0.847	0.582
	FC2	0.767			
	FC3	0.704			
	FC4	0.869			
BI	BI1	0.816	0.838	0.892	0.674
	BI2	0.745			
	BI3	0.876			
	BI4	0.842			

To assess discriminant validity, the approach recommended by Fornell and Larcker (1981) was followed. According to those authors, discriminant validity is said to be present when the square roots of the AVEs are higher than the correlations among the constructs. From Table 3, it can be seen that the square roots of the AVEs are indeed higher than the correlations among constructs, thus providing support for good discriminant validity.

Table 3: Discriminant validity

	BI	EE	FC	PE	SI
BI	0.821				
EE	0.583	0.892			
FC	0.503	0.586	0.763		
PE	0.537	0.741	0.405	0.86	
SI	0.614	0.614	0.511	0.479	0.918

Note: Diagonal values are the square root of the AVE of each construct; values below the diagonal are Pearson correlations coefficients.

Structural model

Upon obtaining good validity for the measurement model, the hypothesised relationships between the constructs were tested using Smart PLS. The results of the structural model analyses are presented in Figure 1. The results show that PE ($\beta = 0.225$, $p < 0.001$), SI ($\beta = 0.361$, $p < 0.001$), and FC ($\beta = 0.173$, $p < 0.01$) have significant effects on the behavioral intention to use e-books, thus providing support for H1, H3, and H4. The relationship between EE and behavioral intention is insignificant.

DISCUSSION AND IMPLICATIONS

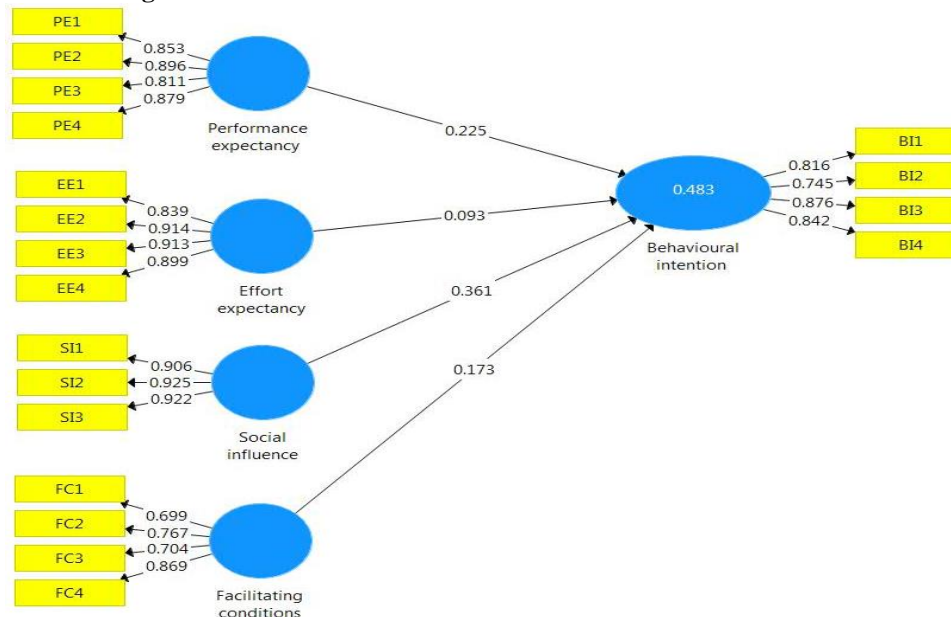
The fact that PE is a significant predictor of behavioral intention towards e-books means that the perceived benefits for non-users are crucial to their behavioral intention to start using e-books. This finding is consistent with previous findings that have consistently emphasized the direct influence of PE on behavioural intention (Martins *et al.*, 2014; Zhou *et al.*, 2010). Thus for producers to succeed in encouraging the acceptance of e-books by current non-users, the benefits that the technology brings to the reading needs of their target market need to be emphasized.

Moreover, the study found that SI significantly impacts on non-users' behavioral intention to use e-books. This finding supports that of earlier studies that have identified SI as a key driver for technology acceptance

within various use contexts (Chang *et al.*, 2014; Hsu & Lin, 2008). In fact, in this study SI provides the highest explanation ($\beta = 0.361$) for non-users' behavioural intention. In an effort to overcome non-users' resistance to e-book use, producers might have to identify the people who could significantly influence the decisions of their target market, and use those people to promote e-book technology vigorously to non-users.

The impact of facilitation conditions on non-users' behavioural intention to use e-books is also found to be significant. This outcome corroborates the findings of earlier studies that have established a significant link between facilitating conditions and the acceptance of technology (Chen & Chang, 2013; Chong, 2013). Certainly, non-users will not be persuaded to start using e-books when they perceive the availability of resources and other support systems to be either inadequate or non-existent. So providing adequate support systems that will facilitate e-book use, and frequently communicating the availability of these support systems to their target markets, are important strategies that e-book producers could implement to overcome non-users' inertia in using the technology.

Figure 1: SEM results of the measurement and structural models



The findings of this study also contribute to the literature on innovation acceptance studies from the perspective of non-users in a developing African country, which is rather meagre.

Although this study presents important managerial implications, a number of limitations have implications for the generalisability of the results. First, the study used a non-probability sampling procedure and a relatively small sample size. Thus the generalisability of the study's findings to the wider population needs to be treated with caution. The data for the study was obtained from students in the Gauteng province of South Africa which, despite its cosmopolitan nature, is largely urbanised. The findings of this study might not apply, therefore, to e-book non-users in the rural areas of South Africa. A probability sampling procedure that generated a large sample size from different parts of South Africa is recommended in an effort to improve the generalisability of the findings to the entire population.

Appendix 1: Constructs and measurement items

Constructs	Measurement items
Performance expectancy (PE)	Using e-books enables me to read more quickly Using e-books makes it easier for me to obtain information Using e-books makes it convenient for me to read anywhere at any time Using e-books enables me to have easy access to books
Effort Expectancy (EE)	I find it easy to use e-books

	Learning how to use e-books is easy for me It is easy for me to become skilful at using e-books My interaction with e-books is understandable
Social influence (SI)	People who influence my behaviour influence me to use e-books People who are important to me influence me to use e-books People who are in my social circle influence me to use e-books
Facilitating conditions (FC)	I have the necessary resources to enable me to use e-books. My reading environment supports me to use e-books Assistance is available when I experience problems with using e-books Using e-books is compatible with my life
Behavioural intention	I intend to start using e-books I will prefer using e-books to printed books I plan to start using e-books frequently I will encourage my colleagues to start using e-books

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NARRATIVES OF EMPLOYEES VISITING TSHWANE MALL WHO EARN ABOVE AND BELOW AN ESTIMATED LIVING WAGE

Molefe Jonathan Maleka
Tshwane University of Technology, South Africa

ABSTRACT

The purpose of the study was to identify the narratives of employees visiting Tshwane Mall who earn above and below an estimated living wage. The data and literature suggest that employees who earn below an estimated living wage are not satisfied in their jobs and that their quality of life is not good. The wage comparison between them and top management revealed that the wage differences are substantial. The data also revealed that those who earn higher than the estimated living wage are satisfied in their jobs, and their quality of life (QOL) is good, because they can afford to buy food and save money. In terms of the literature, it is argued that the South African scenario does not fit in with the neo-classical labour economics theory, which states that when wages are low, employers will hire more people – in fact, the opposite is true in South Africa, because there is evidence to show that in the past two decades, the unemployment rate has been averaging 25% and workers are paid minimum instead of living wages. The research approach was qualitative, and convenience sampling was used to select two hundred and five (n=205) participants. The major finding is that employees earning below the estimated living wage cannot afford to save, and they go to loan sharks to obtain loans to buy food and clothes. Recommendations for future research and implications for the government and employers are also made.

Keywords: Living wage, job satisfaction, quality of life, employee comparison

INTRODUCTION

The living wage or employees' wages is determined by applying classical economic theory, which suggests that if employees are paid lower salaries, then more of them will be hired (Bendix, 2015). However, in South Africa, where employees are still earning a living wage below the poverty line, the unemployment rate has been 25% on average for almost two decades (Bendix, 2015). The South African scenario does not seem, however, to support the classical economic theory, and there is evidence to show that employees who earn low wages are not satisfied in the workplace (Levy & Venter, 2015).

Social scientists in New Zealand, using regression analysis, found that there was a peak where respondents viewed a living wage to be fair (Carr, Parker, Arrowsmith & Jones, 2015a). In South Africa, a study showed that an estimated living wage of R12 000 was viewed to be fair, and would enable low income workers to live in dignity, as well as to improve their quality of life (Maleka, 2016). While both studies produced salient quantitative findings using curve estimation to predict the relationship between household and hourly rates and fairness, social capability, QOL and employee comparison, they did not provide the narratives of employees regarding living wages. Thus, the research question is the following: What are the narratives of employees visiting Tshwane mall who earn below and above an estimated living wage?

THEORETICAL FRAMEWORK

A living wage can be defined as the is a remuneration that enables an employee to afford a good quality of life, enable them to afford basic needs and made them to be satisfied (Carr, Parker, Arrowsmith & Haar, 2015b). Other scholars argue that it should be calculated using the consumer price index or inflation rates (Anker, 2011),

and demand and supply labour economic principles (Bendix, 2015). The International Labour Organisation (1930) Convention number 26 is not prescriptive in terms of how a living wage is calculated, but it states that once it has been agreed upon through a bargaining process, it is binding. The other way of calculating a living wage, which had been impugned, is that it should be based on the family structure (The Treasury, 2013).

Research has been conducted to establish the relationship between wages, job satisfaction, QOL and employee comparison. Herzberg (1968) found that there was no relationship between job satisfaction and salary, but employees were satisfied if their supervisors gave them support and encouraged teamwork. On the contrary, Taylor claimed that wages had an impact on job satisfaction (Watson, 2012). Judge, Piccolo, Podsakoff and Rich (2010) argued that employees who earn high wages are satisfied because they can afford basic needs and live a good quality of life. In South Africa, wage comparison research shows that the wage differences between low income workers and chief executive officers (CEOs) are significant (Van Eeden, 2014). It has been found that “the CEO’s salary was still 44.24 times the salary of the lowest pay worker” (Massie, Collier & Crotty, 2014, p:28). Studies comparing employees on the same level show that white employees earn higher salaries than their black counterparts (Seekings & Nattrass, 2005), and they will be dissatisfied if they discover that their fellow employees on the same job grade level earn more than them (Maleka, 2015).

From the above discussion, it can be deduced that by using advanced statistical techniques, social science researchers have managed to determine what employees view as a living wage. It can also be argued that the classical economic theory is not valid in the South African context, because even though employees are not earning a living wage and are paid low wages, the employment rate is still high. The purpose of the study was to obtain the narratives of employees visiting Tshwane mall who earn above and below an estimated living wage.

RESEARCH METHODOLOGY

Research approach

In order to answer the research question in this study, the qualitative approach was used (Creswell, 2014) and the epistemology of the study was interpretivist (Lincoln & Guba, 1985). In terms of the latter, the researcher’s aim was to use narratives to provide a better understanding of the views of employees visiting Tshwane Mall who earn above and below an estimated living wage.

Population and sample

The population or units of analysis in this study were low income and middle income workers visiting the Tshwane Mall, and the sample consisted of 205 individuals. The convenience sampling technique was used. In terms of the latter, most of the participants in the study were males (n=112) and the wages (n=93) ranged from R50 000 to R1500. Furthermore, participants had different occupations (i.e. teachers, plumbers, domestic workers, cleaners, real estate brokers). Three (n=3) of the participants were unemployed, and as a result they could not answer the following question: How well does your wage work for you? Forty-six (n=46) employed participants also did not answer this question. These were the employees of SMEs who participated in the study: car wash (n=2), street vendors (n=3) and coffee retailer (n=1).

Data collection and interview protocol

To collect primary data, an interview protocol was used. It comprised two biographical information questions i.e. gender and whether or not they speak English at home and questions on their living arrangements. There were themes that emerged from the following open-ended question: How well does your wage work for you? Piloting was conducted on ten (n=10) participants in October 2015. During the pilot study, it emerged that most participants were reluctant to answer questions relating to their wages. Even though the questions were not rephrased, the research assistants were trained to encourage respondents to answer the questions. During the data collection phase (i.e. from November 2015 to January 2016), 200 out of 205 participants wrote their narratives about the impact of living wages on their job and life satisfaction.

Data analysis

Data was analysed manually, and text reduction was done because there were many comments made by respondents. In this regard, the researcher followed the six steps suggested by Creswell (2014). Data was coded by the researcher and another scholar from Massey University. The researchers met with each other in February 2016 in New Zealand where they discussed and agreed on the themes. This process is known as inter-coder agreement (Bless, Higson-Smith & Sithole, 2013). The themes that emerged from the data were job satisfaction, quality of life and upward comparison.

Trustworthiness

The researcher adhered to the following criteria of trustworthiness, as suggested by Lincoln and Guba (1985): **Credibility:** peer debriefing was conducted on the 12th February 2015 at the Massey University Psychology department, and through valuable inputs from scholars, the researcher was able to compile this paper. Credibility was also enhanced by reporting the comments of respondents verbatim. **Transferability:** analytic generalisation was achieved through thick description, and the researcher is convinced that the results of the study could be applicable to other similar contexts. **Dependability:** the researcher explained all the steps followed to collect data and the questions asked, and it is envisaged that other researchers who follow these steps will reach the same conclusion. **Objectivism:** the data was sent to Prof Carr in New Zealand to do an audit trial, in order to ensure that the researcher was objective when presenting the results.

Ethical considerations

No participants were forced to participate in the study. Furthermore, when they completed the questionnaire, they were not obliged to provide their names or email addresses, and their participation was voluntary. In the next section, only what the participants said is reported.

RESULTS

The themes that emerged from the data are shown in the tables below:

Table 1: Job satisfaction

Themes that emerged	Sub-themes	Household wages/income	Verbatim quotations
Job satisfaction	Wage and effort	R10 000	"I was going to be satisfied if I was getting what I put effort for and overtime."
		R1500	"The wage is not enough for the job and the effort I put to this job."
	Psychological and physiological wellbeing	R45000	"Compared to what I used to earn, now I am stressed free."
		R1800	"I can afford groceries and rent. I have to borrow transport money most of the time."
	Pay satisfaction	R11000	"I am satisfied with what I am earning. This payment allows me to pay my rent and buy my own stuff every month. . " "I was going to be satisfied... I work

		R6500	for nothing.”
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Table 2: QOL

Themes that emerged	Sub-themes	Household wages/income	Verbatim quotations
QOL	Affordability	R11000 R2000	“It works well for me; I can afford couple of things in my life.” “Rent, society (investment club) and electricity is what I can afford, but I am always running short.”
	Empowerment	R22 000 R4500	“Pays for basic stuff and a little bit of entertainment.” “The wage is not good as far as my budget is concerned”
	Family responsibilities	R10 000 R2000	“My salary works well for me. I can please my family with money I get every month. I can make some savings from my basic salary.” “I always go to mashonisa (i.e. loan sharks) to borrow money to buy food ad clothes for my children.”

Table 3: Employee comparison

Themes that emerged	Sub-themes	Household wages/income	Verbatim quotations
Employee comparison	Qualification	R8000 R2500	“The amount itself that I get every month is not that bad, but comparing it with the qualifications I have its nothing.” “My pay doesn't provide enough for my family so I am not happy with the money I earn, but I cannot blame them because I am uneducated”
	Upward and horizontal comparison	R2500 R1500	“People holding higher positions are earning higher salaries than ours” “Comparing to other restaurants, payment and safety is not enough.”

DISCUSSION

The purpose of the study was to obtain the narratives of employees visiting Tshwane Mall who earn above and below an estimated living wage. Overall, the study findings confirmed the finding of international and national

research that wages affect job satisfaction (Watson, 2012), QOL (Judge *et al.*, 2010) and employee comparison (Carr *et al.*, 2015a; Maleka, 2015).

This study had some limitations. Firstly, there were no follow-up questions to the participants' responses, as they only wrote their narratives and gave the research assistants their completed questionnaires. Secondly, the researcher could not do triangulation with companies' wage policies, because the research was conducted in the market place. Lastly, this study used a cross-sectional design. However, it can be argued that this study contributed significantly to the body of knowledge, by providing insight into the views of employees visiting Tshwane Mall who earn above and below a living wage. The literature review showed that there is no similar study that has been conducted in South Africa prior to this study.

Recommendations for future research

Future research should focus on conducting a qualitative study using either face-to-face interviews or focus groups. Another study could also be conducted in an organisation, so that a business case can be developed.

Implications for employers and government

Government will experience problems in the future because most employees cannot afford to save, and some of them are embarking on behaviours that will keep them trapped in poverty. Employers who pay employees below the estimated living wage might suffer productivity and performance losses, because they have disaffected workers. There is evidence that shows that dissatisfied employees organise themselves outside the bargaining structures and embark on violent protests to demand a better wage. In South Africa, mine employees who demanded a living wage of R12 500 per month were killed at Marikana in 2012 (Dlangamadla, Jika, Ledwada, Mosamo, Saba & Sadiki, 2013).

In conclusion, the researcher is aware that this study's findings contradict neo-classical theory, which is based on using macro-economic factors to determine the wage level. The researcher also realises that neo-classical theorists and business management scholars might oppose the study findings and argue that if the estimated living wage is implemented, organisations might not be profitable. In this study, through evidence from the narratives and literature it was proven that wages have an impact on job satisfaction, QOL and employee comparison.

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AN AWARENESS OF HEALTH RISKS OF TUCKING CELL PHONES IN BRAS AMONG SOUTH AFRICAN YOUNG WOMEN: A PILOT STUDY

Adejoke C. Olufemi, Andile Mji and Murembiwa S. Mukhola
Tshwane University of Technology, South Africa

ABSTRACT

A rapid growth in world population and advancement in technology has resulted in increased manufacture of several devices especially in the telecommunication industry. One of such devices is the cellular phones. As the world population increases exponentially, there is a commensurate demand for these devices. Consequently there has been so much debate about the health effects of these devices. A major concern being raised about these devices is their radiofrequency (RF) emission which when exposed to on a daily basis for a long period of time has potential of causing different health problems the most dangerous of which is cancer. Studies conducted in different parts of the world have reported for instance that women are in the habit of keeping their phones inside their bras either for safety purposes or easy access. However in South Africa, there is a dearth of studies addressing this issue. Hence, the purpose of this study was to firstly investigate if this risky practice also exists among South African women and also to check if they are aware of the potential health risks or risk factors associated with keeping or tucking these cellular devices in their bras. This study specifically focused on young women from three different higher institutions of learning in South Africa. Data was collected by means of interview. Being a preliminary study, the researchers were only able to interview one participant each from three institutions. Out of these participants, one person from each school responded that they have kept or keep their phones inside their bras making it a total number of three participants in all. Each of these students were in their final year of study and their ages ranged between 21 and 36 years. The finding of the study revealed that these young women all keep their cell phones inside their bras. Responses from these participants indicate that this risky habit might also be prevalent amongst South African women.

Keywords: Awareness; Health Risks; Cell phones; Young women; Health Education

INTRODUCTION

There has been a rapid increase in the production and acquisition of various handheld electronic devices due to their usefulness and escalating world population. As a result of this, there has been a great concern by medical and health professionals all over the world about the possibility of these devices influencing human health adversely due to the manner in which they are utilized. One of such technological devices among many others that are likely to cause serious problems to human health is the cell phone. This because our bodies are conductors of electricity and whenever a cell phone rings, radiation is emitted from the antenna and any soft fatty tissue part of the body that is in close proximity easily absorbs the radiation (Environmental Health Trust, 2016). It is reported that in every country, more than half of the population own a cell phone (Naeem, 2014). Specifically it was pointed out in a recent study of the United Nations that, approximately 6 billion of the worlds' estimated 7 billion people use mobile phones (United Nations Centre, 2013). It was further estimated we have more people on the earth that have access to cell phones than access to toilets (United Nations Centre, 2013). Although, these devices are very good and have many advantageous uses and benefits, they also have numerous disadvantages.

A number of studies have been conducted generally about the use of cell phones and health (Ciq, & Naziroqlu, 2015; Wdowiak, Wdowiak & Wiktor, 2007; Zhao, Lin, Zhou & Zhao, 2014; Wenner, 2008). It is important to note that though the cell phone itself poses no problem, the way people use and handle them could result in an increased risk of developing certain diseases such as cancer (Environmental Health Trust, 2016). Apart from investigations of their impact on human health, researchers have also examined their effect on other living organisms. For instance, a group of researchers conducted a study by putting cell phones around some honey bees for a certain period of time. They found that exposure to radiations from these cell phones produced biochemical changes in these organisms (Kumar, Sangwan, Badotra, 2011). Researchers have also studied men that carried cell phones in their pockets. They found that radiation from the cell phones affected their sperm counts thereby affecting their fertility due to close proximity to the reproductive organs (Wdowiak, Wdowiak & Wiktor, 2007; West, Kapoor, Liao, Chen, Bailey & Nagourney, 2013).

Similarly quite a number of medical researchers have also reported that some women have this habit of tucking cell phones inside their bras just for convenience and easy access to these devices. They continue to do this due to their ignorance on its adverse effect on their health (Environmental Health Trust, 2016). However, some studies have reported a relationship between exposure to radiation from cell phones and breast cancer in women. For example, a group of researchers conducted a study to investigate an association between human exposure to extremely low frequency electromagnetic fields (ELF-EMFs) and breast cancer from 2000 to 2007. The study revealed that ELF-EMFs might be a risk factor contributing to the development of breast cancer in the women studied (Zhao, Lin, Zhou & Zhao, 2014). In all these studies, young women are mostly reported to be involved in this harmful behaviour globally. For instance, in the US, a study was recently conducted with four young women that were between the ages of 21 to 39. It was reported in this study that these women were diagnosed of having breast cancer. (West, Kapoor, Liao, Chen, Bailey & Nagourney, 2013). These researchers concluded that this negative health effect was due to the fact that these patients always kept their phones in their bras; a position in which it rested directly against their breasts for many hours daily. This made them develop lumps in those areas of their breasts where the phones were kept. It was further reported that none of these young women had any family history or known risks of breast cancer (West, Kapoor, Liao, Chen, Bailey & Nagourney, 2013).

A similar study in the US also reported a case of a twenty one year old lady who for five years kept her cell phone in her bra at least 12 hours a day. A conversation with this very young lady revealed that she found it more convenient keeping the cell phone in her bra than in a purse. Thereafter, she developed a small lump in her breast and was later diagnosed of breast cancer, (Inside Edition, 2015). Based on all these studies, one cannot not really draw conclusions or infer that the cell phone is the cause of cancerous cell growth. However, one may safely conclude from these studies that tucking cell phones in bra is associated with the development of cancer later in life. This is because all the people diagnosed of breast cancer, the tumors or lumps were all located within the area of breast tissue where the cell phones were directly placed, and not in other parts of the breasts (West, Kapoor, Liao, Chen, Bailey & Nagourney, 2013). Based on all these unpleasant cases, it is important to note that long term exposure to radiation emissions from cell phones could be dangerous to health and well-being. These claims have been supported by the International Agency for Research on Cancer (IARC) who reported that human exposure to the radiation emission from cell phones might possibly be carcinogenic to humans (IARC, 2011).

The matter of women tucking cell phones inside their bras according to several reports is already a big issue in many other nations like US and UK. However, in South Africa, it is not really seen as a big issue yet and as a result of this only few studies have been conducted with regards to this issue. Having read about what is happening in other nations and observation from South Africa, the authors of this present study have decided to research into this area by first conducting a pilot study. The purpose of this pilot study is to therefore find out if this habit of putting cellular phones inside the bras is also prevalent among South African women specifically among the young ones. This study will specifically focus on young people for now. This is because the highest users of cell phones all over the world are the young people and children and may be more vulnerable to any form of hazard than the adults (West, Kapoor, Liao, Chen, Bailey & Nagourney, 2013). The pilot study may later or further translate into a larger study probably in all the provinces of the nation. The intention is to begin to create awareness as early as possible among South African women about the health risks of keeping or tucking these cellular devices in their bras before it becomes a national health challenge. If one waits till it becomes a prevalent health issue in South Africa as it is the case in several other nations, it is possible that a lot of damages

could have been done to the health of many of our women especially the young ones who are going to be the next generation of leaders. Hence the ultimate aim of this study is to create an awareness of this health problem in order to nip it in the bud.

METHODS

This study employed a qualitative approach by means of one on one interview and literature review (document analysis). The study, being a pilot study was conducted among few young women in only one city in Gauteng Province of South Africa.

Participants

Participants for this study were only three female students from three universities in Gauteng province of South Africa. One student participated from each of the universities. The intention of the researchers was to interview more participants in the study but unfortunately only one out of the people interviewed responded that they tuck their cell phones inside their bras. The participants were purposively selected because the study only focused on women.

DISCUSSION AND CONCLUSION

This study sought to find out if South African women tuck cell phones inside their bras. Responses from the three participants of this study provide preliminary evidence that South African women might also be involved in this detrimental habit. The result of this study is in agreement with several other studies that have also been conducted around the world (Inside Edition, 2013; Pilny, 2015; Zhao, Lin, Zhou & Zhao, 2014). For example a study conducted in the Southern California, US revealed of a young active woman who on a daily basis for more than six years tucked her cell phone into her sports bra (Environmental Health Trust, 2016). Also, there is a similar report about a twenty one year old lady who for five years kept her phone inside her bra (Inside Edition, 2013).

It is to be noted that long term exposure to emissions from radiation from cell phones according to several reports could be dangerous. Therefore it is advised that prolonged contact with the body be avoided as much as possible. This is because soft muscles close to where the phone is normally kept absorbs radiation and might after a long time result in various health problems. This is not limited to women or young people alone but every cell phone user all over the world.

It is also to be realised and brought to the attention of everyone that even the cell phones manufacturers usually place a warning in their manuals telling people to avoid putting phones close to the body. Unfortunately many people after buying the phones are too lazy to read the manuals. Therefore they do contrary to the instruction that has been stated in the manual. It is necessary to first look into the manual and read when these devices are newly bought. This makes people aware and helps them to be careful of the way they use the devices.

RECOMMENDATION

As it has been constantly reported about young people that this harmful practice or act is mostly common among them, it's recommended that the government should begin to create all forms of avenues such as awareness campaigns, seminars and workshops. These will help them to be informed as early as possible about the dangers and possible effects of these devices as it has been mentioned earlier that many people are ignorant this issue.

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STRATEGIC GROUPS OF MULTINATIONAL AUTOMOTIVE FIRMS IN BRAZIL: IDENTIFYING OPPORTUNITIES IN THE MIDST OF A CRISIS

**Clarice B. Porto, Maria Luiza C. A. Pinho, Fábio de O. Paula and T. Diana
L. van Aduard de Macedo-Soares**
**Pontifical Catholic University of Rio de Janeiro/Business School – PUC-
Rio/IAG, Brazil**

ABSTRACT

The Brazilian automotive industry is undergoing a serious crisis due to market uncertainties and the country's economic recession. This crisis intensified in 2015 when sales plummeted, impacting production and causing an increase in the number of layoffs by automakers, while also affecting the performance of the entire production chain, including suppliers at various levels, in addition to utilities and consumers. However, it is precisely in times of great crisis that, despite the risks, opportunities may arise. This article presents results of research that aimed to identify the opportunities that the key strategic groups of firms in the automotive industry in Brazil could exploit, with a view to mitigating some of the challenges the industry is facing and thus ensure their competitive advantage.

Keywords: Strategic Groups; Automotive Industry; Brazil

INTRODUCTION

The automotive industry has always had a very significant impact on national economies, generating thousands of jobs and huge revenues. However, severe turbulence in the past twenty years has shaken this industry, forcing manufacturers and part suppliers to reorient their strategies in international markets. Emerging countries, that had been neglected, became the industry's support base, both in terms of manufacturing operations and as a consumer market, thus providing new opportunities and undermining hitherto established beliefs (Mørh et al., 2013). The end of the last century was marked by the opening up of the automotive market in Brazil, starting a cycle of automaker facility installation. Almost twenty years later, the international financial crisis led the Brazilian government to adopt public policies, such as tax exemptions and incentives for innovation in the sector that generated a new cycle of plant facility installation, involving both manufacturers and auto part firms (Almeida; Cario; Mercy & Guerra, 2006). However, after a period of strong growth, the Brazilian auto industry faced yet another serious crisis, which began in 2014 due to market uncertainties and the country's economic recession (Welle, 2015).

It is common knowledge that it is precisely in times of crisis, despite the risks, that opportunities may arise. By differentiating themselves from the majority - transforming the crisis into an opportunity - companies can increase their chances of survival. In the 1960s, President John Kennedy mentioned in a speech that the Chinese word for "crisis" is composed of two characters, one representing danger and the other opportunity. Although crisis in Chinese means a lie, his message is nonetheless true (Câmara, 2016). This article presents results of research that aimed to answer the following four questions:

- 1) Which are the key strategic groups of multinational firms in the automotive industry in Brazil?
- 2) What are the automotive industry's real and potential opportunities and threats?

- 3) How can the key strategic groups take advantage of the opportunities and threats to sustain or enhance their competitive advantage?
- 4) What are the lessons and managerial implications of this analysis, for both the leading strategic groups and other firms in the automotive industry in Brazil?

This article is organized as follows: i) introduction; ii) theoretical references; iii) research methodology iv) results; v) discussion and final considerations.

THEORETICAL REFERENCES

In today's complex, uncertain and globalized markets, management practices should be strategically oriented towards exploiting potential opportunities that could mitigate threats and thus ensure the firm's competitive advantage. Strategic management is defined by Barney (1996) as the process by which strategies are chosen and implemented. Macedo-Soares (2002) affirms that strategy gives coherence and direction to an organization's actions and decisions, especially to leverage and allocate resources and skills needed to sustain its performance, considering the opportunities and threats of the macro environment and its key actors. The firm's strategy is appropriate when it exploits these opportunities while neutralizing threats by leveraging its strengths and reducing its weaknesses (Barney, 1996). In the literature on strategy, several typologies for characterizing a strategy have been proposed to help carry out strategic analysis, including those put forward by the positioning school, precisely, Porter's (1980) that we adopted in our research. The latter considers three generic strategies: Differentiation, Total Cost Leadership and Focus (focus - differentiation and focus - cost). Companies that do not clearly define their strategy are classified as stuck-in-the-middle, and tend to have a lower performance (Porter, 1980). For characterizing strategies we also used Fahey and Randall's (1998) constructs, namely, strategic scope (product, geographic, customer) and competitive positioning. To identify the industry's macro-environmental (political, economic, demographic, social and cultural, environmental) opportunities and threats, we built on Austin's (1990) constructs, and for those pertinent to strategic actors - when assuming their respective roles of rival, customer, supplier, new entrant and substitute - we used Porter's (1980) constructs.

Strategic Groups

The structure of the global industry can be understood in terms of strategic groups, i.e. groups of firms with similar strategic profiles, in terms of business scope and commitment of resources (Cool & Schendel, 1987). Studies of strategic groups have been carried out since the 1970s, highlighting the relationship between strategic profile and firm performance. Hunt (1972) and Caves and Porter (1977) defined a strategic group as a group of companies that face common threats and opportunities that are different from those faced by other companies in the industry. Barney (1996) defined a strategic group as a group of companies that have similar strategies, act similarly and are likely to face similar sets of threats and opportunities. By acting jointly within the group, companies create difficulties for other companies of different groups as well as mobility barriers (Caves and Porter, 1977). The performance of firms from the same strategic group tends to be similar, which increases the rivalry within the group. To achieve competitive advantage in this case the firm has to have resources with distinctive and difficult-to-imitate features. According to the Resource-Based View (RBV) these resources can be tangible (financial and physical) and less tangible, i.e. knowledge-based, notably skills and competences not only of people, but also those embedded in technology and organizational processes. Competencies can be distinctive (i.e. different from those of competitors as perceived by customers, thus constituting a competitive advantage) and essential (shared with competitors, but necessary for business) (Barney, 1996).

Nohria and Garcia-Pont's (1991) study of the auto industry in the 1990s considered that the following constituted significant strategic capabilities of strategic groups: relative size of the company; relative market share; scope of the product line; technological sophistication of production; relative organizational capability and relative labor cost. It is very important to identify the strategic groups in an industry because it enables a more effective identification of the different types of opportunities and threats faced by firms in that industry according to the group they belong to, as well as sources of differences in firm profitability and overall firm performance.

Brazilian Automotive Industry

Over the years the automotive industry has always been considered a driver and catalyst of important innovations and therefore a key sector of countries' economies. Between 2005 and 2015 vehicle production in the world increased from 66.6 million to 89.1 million units (OICA, 2016) and car sales grew by approximately 35%, reaching a level of 89.1 million vehicles, despite the various economic crises - regional or local - which occurred during this period. This growth was strongly based on entry into new markets, either as new players or in new vehicle segments. The automotive industry found attractive markets for its expansion in the so called BRIC countries; while this industry in the latter and the 'rest of the world' accounted for 30% of world profits in 2007, in 2012 it accounted for almost 60% (Mohr et al., 2013).

In Brazil, the turning point in the automobile industry occurred in 1990, with the opening up of the Brazilian market to vehicle imports (Silva, 2007). Subsequently, various tax incentives were provided for the production of popular cars and cars with ethanol-powered engines that had a positive impact on domestic sales (Carvalho, 2005). In Latin America, the industry registered significant growth between 2005 and 2013, with sales rising from an initial level of 3.1 million units to 6.3 million at the end of this period. However, sales fell back to 4.5 million units in 2015. In this context, Brazil is Latin America's leading market followed by Argentina. However, Brazil faced a significant decline in sales which plunged 27% between 2014 and 2015 (OICA, 2016). Indeed, growth in this country was strongly affected by its economic and political crisis as from the beginning of 2015. In addition to the roll back of tax incentives, automakers have faced strikes and demonstrations against layoffs that became necessary due to the sharp decrease in sales (Diário do Carro, 2015). With the economy slowing, new car registrations dropped 24.03%, while vehicle production fell by 19.37%; the number of people employed in the auto sector also decreased from 125,977 in 2014 to 114,336 in 2015, or a decline of 9.25% (Anfavea, 2016). According to industry experts, the performance of the automotive sector may worsen further in 2016 (Siani, 2016).

RESEARCH METHODOLOGY

The research universe consisted of twelve automakers in the Brazilian automotive industry that have factories in the country and are members of Anfavea - National Association of Automobile Manufacturers -, which together have accounted for over 90% of the market over the past 5 years. The following manufacturers were selected: Citroen, Fiat, Ford, General Motors (GM), Honda, Hyundai, Mitsubishi, Nissan, Peugeot, Renault, Toyota and Volkswagen (VW). Data were collected from databases provided by Anfavea - Statistical Yearbook of Automobile Industry and the Brazilian Automotive Guide - and Fenabreve - Market Data records for each year from 2010 to 2014. In addition to these databases, we used the results of the consumer satisfaction survey conducted by J. D. Powers (2015). (Note that the latter has even been used by the automakers themselves as indicators of their market performance). Using Fahey and Randall's (1998) constructs, we drew on Nohria and Garcia-Pont's study (1991) to adapt the variables they employed to the reality of the Brazilian automotive industry with the help of specialists from this industry.

Dependent Variables

The following automaker performance variables constituted the dependent variables used in our research: i) Market Share in 2014 (MS) - relative shares in sales (by unit) of cars and light commercial vehicles; ii) market share growth (MSG) - percentage growth in the relative shares of sales (by unit) of cars and light commercial vehicles from 2010 to 2014; iii) Sales growth (SG) - percentage growth of sales (by unit) of cars and light commercial vehicles from 2010 to 2014.

Independent variables

The independent variables were selected in keeping with Fahey and Randall's (1998) constructs. Note that for all variables we used consolidated information for the five year period investigated (2010-2014).

- *Product scope*: i) Entry vehicle (EV) - dummy variable referring to whether the automaker offers at least one popular car for sale; ii) Offer Breadth (OB) - sum of the quantity of categories of items for which the automaker offers options; iii) Product positioning and brand image (PPO) - position of the automaker's best-selling models in the sales ranking; iv) Percentage of Automobiles (PA) - the ratio between car sales and total sales (cars + trucks).

- *Geographic scope*: i) geographic coverage (GC) - Total dealerships across the country (average between 2010 and 2014);

- *Customer Scope* - i) General Satisfaction Index (GIS) - index generated in J. D. Powers's (2015) research, that measures satisfaction on purchase; ii) Services Satisfaction Index (SSI) - Index generated in J. D. Powers's (2015) research which measures satisfaction with after-sales services;

- *Competitive Positioning* - i) Number of plants (NP) - average between 2010 and 2014; ii) Local Development Platform (LDP) – dummy variable (1 to 3), in which 1 represents no local development, 2, and 3, respectively, medium and high levels of development; iii) productivity index (PI) - Number of employees / total vehicles manufactured; iv) Focus (FO) – percentage of sales of the best-selling model in relation to the total number of units sold.

Table 1 shows the descriptive statistics of the 14 variables used in our study. The variable Productivity Index (PI) did not exhibit a normal distribution; therefore, it underwent an Ln transformation to fix this problem.

Table 1: Descriptive Statistics for dependent and independent variables

Variable	Min	Max	Mean	Standard Deviation
Entry Vehicle (EV)	0	1	-	-
Offer Breadth (OB)	4	13	7,83	2,92
Product Positioning (PPO)	1,00	12,00	6,50	3,61
Percentage of Automobiles (PA)	66%	100%	88%	10%
Geographic Coverage (GC)	24,40	580,80	271,70	169,08
Number of Plants (NP)	1,00	3,40	1,93	0,95
Local Development Platform (LDP)	1	3	1,92	0,90
Ln (Productivity Index (PI))	0,02	0,09	0,04	0,02
Focus (FO)	23%	51%	38%	8%
General Satisfaction Index (GSI)	0	5	2,67	1,56
Services Satisfaction Index (SSI)	2	5	3,25	0,97
Market Share (MS)	1%	21%	8%	7%
Market Share Growth (MSG)	-52%	113%	22%	55%
Sales Growth (SG)	-54%	145%	31%	69%

Methods

Identification of strategic groups and performance differences

The analysis was conducted with the help of SPSS 22 software. First, we applied a Z-transformation to all the variables. Next, we verified the normality of the dependent and independent variables, because this is a fundamental assumption for all the statistical techniques used later on. To correct any absence of normality we applied the natural logarithm. Subsequently, we carried out an exploratory factor analysis to reduce the number of strategic variables that were initially 11 in number. As there were few cases for the number of variables, we ensured that the Measure of Sampling Adequacy – MSA was well above the acceptable minimum of 0.5 and the Bartlett Test of Sphericity (Hair et al., 2006) was significant at 0.05. Variables with low individual MSA were

removed from the analysis to provide such indexes. The resulting number of variables were chosen by analyzing the scree-plot (Hair et al., 2006). We then carried out an orthogonal VARIMAX rotation (Hair et al., 2006) to maximize the presence of each original variable in the resulting dimensions. The resulting dimensions were named in keeping with the strategic variables that weighed more than 0.7. After the factor analysis, we conducted a k-means cluster analysis. This analysis groups the cases around predefined theoretical centroids for a fixed number of groups. The theoretical centroids of each of the five groups classified according to Porter's strategy typology were defined on the basis of the quadrants of each one of the strategic dimensions found in the factor analysis, calculated as a summated scale of the strategic variables with weights above 0.7 for each factor. To ensure a significant distinction among strategic groups, MANOVA (Hair et al., 2006) was applied among the centroids of the resulting groups, so as to ensure that they would be statistically different. Finally, ANOVA was applied for each of the performance variables to test whether the average performance of at least one group was different. Both the MANOVA and the ANOVAs were tested with a significance of 0.05. Post hoc analysis was carried out for the performance variables with significant differences so as to identify which groups performed better than others.

Data collection for Question 2

As regards the capture of data and information for identifying the opportunities and threats of the strategic groups of firms in the automotive industry in Brazil, we based ourselves mainly on a documental investigation. The latter focused on the automobile companies' websites and specialized automotive industry websites, journals and magazines, as well as articles and studies of firms and associations such as ANFAVEA, McKinsey&Company, AMPEI and Interbrand.

RESULTS

1) Which are the key strategic groups of multinational firms in the automotive industry in Brazil? After applying the Z transformation of the strategic variables pertinent to identifying the strategic groups in the industry, we performed the normality tests. These revealed that all variables were normal with a significance of 0.01, except the Productivity Index (PI). In the case of this variable, we applied a natural logarithm transformation, which has proved to be effective for the correction of normality. Thus, all analyzes as of this point replaced the PI variable by $\ln(\text{PI})$.

Next, we performed an exploratory factor analysis to reduce the number of strategic dimensions. In this analysis, the strategic variables Percentage of Automobiles (PA), Focus (FO) and General Satisfaction Index (GSI) exhibited individual inappropriate MSAs and were excluded to ensure the overall adequacy of the model. The final model, with eight remaining variables had a MSA of 0.753 and the Bartlett's Test of Sphericity was adequate to the significance level of 0.05. The scree-plot method also presented an adequate solution with three factors, which, after VARIMAX rotation, were described as follows:

- *Factor 1 (Breadth)*: Entry vehicle (EV) = 0.873, Offer Breadth (OB) = 0.725, Product Positioning (PPO) = - 0.843, Number of plants (NP) = 0.810; Geographic coverage (GC) = 0.821.
- *Factor 2 (Innovation)*: Local Development Platform (LDP) = 0.855
- *Factor 3 (Service Quality)*: Services Satisfaction Index (SSI) = 0.928

The first factor has a strong relationship with product scope and geographic scope, where variables that indicate wide Offer Breadth have a high positive weight and variables that indicate greater Focus have a high negative weight. Therefore, this factor was labeled *Breadth*. The second factor had great weight in terms of the variable Local Development Platform, so the factor was named *Innovation*. The third factor focused on the Services Satisfaction Index variable and was named *Service Quality*. After creating the summated scales to calculate factors for the k-means cluster analysis, we defined the matrix with the theoretical centroid for each group according to Porter's typology for classifying strategies (see Table 2).

The strategic groups *Differentiation* and *Focus - Differentiation* exhibited three theoretical centroids in the matrix because we considered that the firm could have a focus on innovation, on services, or on both. Our cluster analysis did not identify automakers with *Total Cost Leadership* or *Focus - Cost* strategies. The group with *Differentiation* strategies included five companies, and the group with *Focus - Differentiation* strategies had

four companies; three companies were *Stuck-in-the-middle*. Table 3 shows the composition of each group. The MANOVA we carried out for comparing the centroids of the three resulting groups confirmed that the strategic groups were different with a 0.05 significance.

Table 2: Matrix with the strategic groups' theoretical centroids in accordance with Porter's (1980) typology for classifying strategies

Strategic Groups/Factors	Breadth	Innovation	Service Quality
Total Cost Leadership	Q3	Q1	Q1
Differentiation	Q3	Q3	Q3
	Q3	Q3	Q1
	Q3	Q1	Q3
Focus – Cost	Q1	Q1	Q1
Focus – Differentiation	Q1	Q3	Q3
	Q1	Q3	Q1
	Q1	Q1	Q3
Stuck-in-the-middle	Q2	Q2	Q2

Table 3: Composition of strategic groups based on Porter's typology (1980)

Total Cost Leadership	Differentiation	Focus - Cost	Focus – Differentiation	Stuck-in-the-middle
-	Fiat	-	Citroen	Hyundai
-	Ford	-	Honda	Peugeot
-	General Motors	-	Mitsubishi	Toyota
-	Renault	-	Nissan	-
-	Volkswagen	-	-	-

After identifying the firms in the different groups, we carried out an ANOVA for each one of the performance variables to test whether there were significant differences in performance between the groups. We found no significant differences in Market-Share Growth (MSG) and in Sales Growth (SG), with a 0.05 significance. For the variable Market Share (MS), the null hypothesis of equality of means regarding this variable between the groups was rejected. Post hoc analysis found that the Market Share of the *Differentiation* group was statistically higher than that of the *Focus - Differentiation* and *Stuck-in-the-middle* groups. In fact, no significant difference was found between the latter two groups.

2) What are the automotive industry's real and potential opportunities and threats?

On the basis of our documental investigation, we identified the sector's most important macro- environmental factors and analyzed their strategic implications – opportunities and threats – for the firms focused, at both country (Brazil) and industry levels. The most important ones are summarized in Table 4.

As Table 4 makes evident, political, economic and environmental factors have the greatest impact on firms in the automotive sector in Brazil. Notably, the "Incentive Program for Technological Innovation and Densification of the Productive Chain of Motor Vehicles" - INOVAR AUTO - launched in 2012, by the Brazilian government, and which offers tax breaks for companies that can produce vehicles with lower fuel consumption, represents a significant opportunity for such companies by lowering their production costs. This program's main objective is to enhance the sector's competitiveness by improving the technology and safety of cars produced and sold in Brazil (ANPEI, 2014). However, it also creates a threat because it is available to all automakers, and therefore can increase rivalry between competitors and facilitate new entrants that offer differentiated technology (Sambiase & Marcondes, 2015). Investments by automakers in new plants that increased their installed capacity have led in several cases to overcapacity, since there were no economies of scale (DANA, 2016). Moreover, the program has not benefitted the whole value chain and especially the auto parts sector needs to be strengthened not only to meet local demands but also for export purposes (Valor, 2016).

Table 4 – Opportunities and Threats of Macro-environmental Factors at Country and Auto Industry Levels

Factors	Country Level	Industry Level	Opportunities	Threats
Political	<ul style="list-style-type: none"> - Tax reduction policies, such as cut in the IPI, used in recent years to encourage the purchase of vehicles and thus boost the economy. - Political instability and corruption scandals 	<ul style="list-style-type: none"> - Government policy of supporting the development of domestic industry. - INOVAR AUTO 	<ul style="list-style-type: none"> - Significant investments in auto plants (total of approx. U.S\$ 35 Bill for 2013-2018 (Kutney, 2014). - Reduced costs through tax cuts for companies that produce vehicles with lower fuel consumption (AMPEI, 2014) 	<ul style="list-style-type: none"> - The mandatory use of a percentage of national items in the production of vehicles protected the industry for over 20 years but reduced its efficiency and competitiveness on the world market (Botelho, 2002), accounting for the fact that the prices of Brazilian vehicles are among the most expensive in the world (Kutney, 2014). - The main sources of funds in Brazil are the BNDES and the headquarters of companies that have problems raising the necessary funds in the current economic situation. - Fear of contracting long-term debt. - The INOVAR AUTO program that is available to all automakers could increase rivalry and favor new entrants (Sambiasi, Marcondes, 2015) - Generation of overcapacity
Economical	<ul style="list-style-type: none"> - The large number of firms (200.000) and employees (1.5 Mi.) in the auto industry in Brazil account for its significant impact on the country's economy (ANFAVEA, 2016) - There is a direct relation between the auto industry and the country's exchange rate 	<ul style="list-style-type: none"> - New vehicles are sold through long-term financing, and with the increase in interest rates, the purchase of a new vehicle will no longer be as attractive as that of a used one. - Embedded technology 	<ul style="list-style-type: none"> - Increase in the exchange rate reduces the attractiveness of imported vehicles. - Pioneers in embedded technology attract new customers 	<ul style="list-style-type: none"> - Fuel price impact - Increased inflation impacts financing conditions. - Increased costs due to investments in technology that customers cannot do not perceive as adding value.
Demographic	<ul style="list-style-type: none"> - Demographic growth and aging population 	<ul style="list-style-type: none"> - New potential customers - The cost of vehicles in Brazil is still considered very high, although the average number of vehicles per capita (5.3 in 2012) is well above that of other countries (e.g. Argentina (3.6) and Mexico (3.6)) 	<ul style="list-style-type: none"> - Introduction of price positioning that allows access to the various population groups 	

		(Kutney, 2014)		
Social & Cultural	- “ Brazilians perceive cars not merely as a means of locomotion” but mainly as a “machine of freedom, energy, conquest and power” (Luchezi, 2010). The car also has a role as social differentiator, since those who own a car are considered “superior” and are viewed as being better off than those who do not (Di Roná, 2002).		“Desire” for perceived greater freedom motivates the acquisition of a vehicle.	
Environ mental	- Greenhouse gas emissions - Urban mobility	- Direct impact on all stages of the vehicle’s life cycle. - Expansion of technical vehicle inspections regarding safety and emissions all over the country	- Company policies for input reduction, from energy to waste generation and search for less polluting substitutes - The supply of affordable electric and lower fuel consumption vehicles constitute opportunities for existing firms and new entrants to conquer the market.	- Restrictions on circulation of vehicles to favour urban mobility. - Governmental investments in public policies that favour public transport and alternative means of transport. - The immediate result of regulations to restrict greenhouse gas emissions drives up costs of firms in the automotive sector.

Embedded technology, such as intelligent systems, is also an opportunity for automakers, especially for those who develop partnerships with suppliers seeking to add value in alternative powertrain technologies and innovative solutions for safety and “infotainment” (information and mobility systems). But it is critical that this technology meet the demands of the market and that its cost is not passed on to the final price of the vehicle (McKinsey, 2014).

The automotive industry directly impacts the environment through all stages of the vehicle’s life cycle. Several companies have announced policies to reduce the use of inputs, from energy to the generation of waste and have sought less polluting substitutes such as VW’s “Think blue factory”. The technical inspection of vehicles that check safety items and emissions is already a reality that represents opportunities for the incumbents and new entrants in the automotive industry that produce electric vehicles or with lower fuel consumption rates at affordable prices. One way of reducing investment costs and boosting the innovation needed for the development of vehicles that emit less greenhouse gases, such as electric or hybrid vehicles, is the establishment of strategic alliances between manufacturers as well as between the latter and selected suppliers (McKinsey, 2014). Regarding the identification of opportunities and threats created by the strategic actors (Porter, 1980) and their performance in the automotive industry, we summarized our findings in Table 5.

Table 5 – Opportunities and Threats of Actors/Strategic Roles in the Automotive Industry

Actors/Strategic roles	Characterization	Opportunities		Threats	
		Real	Potential	Real	Potential
NEW ENTRANTS	Analysis at domestic industry level				
-Economies of scale	In the automotive industry it is essential to optimize production platforms; on the other hand, the need to offer a greater variety of models requires customization.			x	
-Product Differentiation	Differentiated products or products that allow for customization		x		
-Consumer Switching Costs	Durable goods, such as cars, are generally kept by their owners for at least three years. When they decide to replace these with new cars, a few tend to be loyal to a specific brand. However, the various options available allow for greater choice that may lead customers to change brands.			x	
-Technological Property	Discovery of clean technologies and electric vehicles at affordable costs.				x

-Capital Requirements	There have been significant investments in new plants for local production; in addition import tariffs are limiting the entry of new automakers. However, new plants have been installed, benefitting from government incentives (ICMS exemption). Thus, the automotive sector continues to be an attractive market for new automakers.			X	
-Access to distribution channels	Integrated manufacturer networks owned by large economic groups increase switching costs and inhibit access to the necessary distribution channels.	X			
-Learning curve cost advantages	Installation costs are high, even if new manufacturing technologies help to reduce entry constraints associated with the necessary learning curve.	X			
-Cost advantages from access to raw materials	In the auto part sector's supply chain, only a few suppliers are responsible for the greater part of market demand, even though new companies are an opportunity			X	
-Governmental regulation barriers to entry	Nonexistent			X	
-Expected retaliation	Historically, the auto industry in Brazil has always been an oligopolistic market		X		
RIVALRY					
-Quantity and characterization of rivals	Rivalry has been growing since the entry of Honda, Hyundai, and new Asian American manufacturers that have directed their investments towards Brazil.			X	
-Pace of industry growth	Vehicle per capita has increased dramatically over the last 10 years, motivating the arrival of new producers. Recently, however, negative economic growth has reduced market demand, forcing layoffs.			X	
-Fixed or storage costs	High			X	
-Characteristics of product differentiation	Low			X	
-Brand Identity	High	X			
-Switching Costs	High			X	
-Concentration	Diminishing over the years as new competitors enter the market.			X	
-Complexity of information	Low			X	
-Strategic commitment	Brazil is perceived to be a strategic country for the incumbent automakers. Increase in capacity has been publicized.			X	
-Exit barriers	High			X	
CONSUMER BARGAINING POWER					
	Final Consumers from the perspective of the automotive industry.				
- Consumer concentration	Low	X			
-Volume of acquired products/services		X			
-Customer Switching Costs versus Company Switching Costs	Low	X			
- Volume of buyer's information	High			X	

-Substitute products/services	Public transportation is scarce and inefficient, a specific license required for motorcycles	x			
Price sensitivity	High - Prevailing prices are high compared to world markets.			x	
Product differentiation	Potentially high with the offer of embedded technologies and connectivity		x		
SUPPLIER BARGAINING POWER					
-Input differentiation	Low	x			
- Supplier Switching Costs	Medium, directly depends on item's added value (example motor)	x			
- Availability of input substitutes	Low			x	
-Supplier concentration	High			x	
-Volume purchased importance for supplier	High	x			
Raw materials importance for buyers	High			x	
Input impact on cost or differentiation	High			x	
SUBSTITUTE PRODUCTS					
<u>a) Public Transport</u>					
-Cost/Performance Ratio of substitute products	Low, however, with potential of long term improvement				x
-Consumer's propensity to substitute products	Reduced propensity due to the quality of currently offered products	x			
<u>b) Motorcycle</u>					
-Cost/Performance - Ratio of substitute products	Excellent			x	
-Consumer's propensity to substitute products	Medium			x	
<u>c) Bicycle</u>					
- Consumer's propensity to substitute products	High – considering sustainability issues. Reduced because of the climate, infrastructure and region's topography.				

The great variety of models, engines, accessories and connectivity has been the driving force of the automotive industry, increasing the number of models for various consumer profiles. In the 2000s vehicle manufacturers have shown great interest in expanding their offerings of models to meet the requirements of all market segments and the number of available styles (e.g. sedan, wagon, hatch, adventure), power-train (motor and transmission), paint-and-trim (vehicle color and interior color and trim) in addition to factory options such as ABS, air conditioning, among others (Scavarda; Barbosa & Hamacher, 2005). Vehicle manufacturers are thus seeking opportunities to serve new segments and even customers in new age brackets, by launching for example the VW's UP model that was positioned as the first car of the "youth" market.

In the entry and value segments, the pace of new model introduction tends to stabilize due to profitability pressures. Indeed, to obtain a profit it is necessary to produce larger volumes on fewer platforms. In the premium segment there are still niche markets that offer opportunities; however, the introduction of new options on the same platform increases complexity. It is up to manufacturers to manage this complexity effectively, controlling costs, avoiding cannibalization, and ensuring that differentiation is aligned with

customers' preferences, thus requiring automakers to develop new global platform strategies, including modular concepts. According Vanalle and Salles (2011, p. 238) it "is noteworthy that the automotive industry is undergoing major changes in the relationship between companies in the value chain. The younger plants were built according to a pattern of greater foreign supplier participation - the so-called Industrial Condominium and Modular Consortium "(Vanalle & Salles 2011, p.238). This transformation is fundamental to building collaborative associations that improve the performance of products, in terms of either reduced costs or the development of differentiated items. Suppliers do not constitute a threat to the industry; on the contrary, in this context they represent an opportunity.

DISCUSSION

3) How can the key strategic groups of firms in the automotive industry in Brazil take advantage of the opportunities and threats to sustain or enhance their competitive advantage? As the strategic Differentiation group composed of Fiat, Ford, GM, Renault and VW, has a wide range of products, it exploits effectively the opportunity to serve consumers in the most diverse segments and follow their life cycle as they evolve towards superior categories of vehicles. All the firms in this group have hatch, sedan, SW and SUV models, although most have classes of vehicles within the same category. VW, for example, has small, compact, medium and large vehicle in the sedan category. The wide range of products offered by this group also inhibits rival automakers, restricting competition to certain segments and product categories.

By having a bigger volume and number of models, the firms in this group have great bargaining power over suppliers, which constitutes an opportunity in that it enables them to obtain differentiated conditions for the different models, which add significant value. Note that this group offers several models with embedded technology as a result of having local development platforms and partnerships with suppliers. It also has a wide geographical coverage, an opportunity that neutralizes the threat of the entry of new competitors in markets where its brands are already present, in addition to fostering proximity to customers from different regions of the country which can be crucial when the time comes to change their vehicle. Within this group, Fiat has the highest number of dealers - 644 in Brazil; Renault has the lowest geographical coverage - 266 dealers distributed throughout the country. In addition, the brand identity of firms in this group enables them to exploit industry structural opportunities more effectively than their rivals. After years of being second in the ranking of most sold vehicles, Fiat, in 2014, took first place, which had previously been occupied by VW. Being highly ranked among MMV obviously contributes to the company's image, influencing consumer preference. In 2014, GM was in third place, Ford in seventh and Renault in tenth.

By contrast, the Focus - Differentiation group, formed by Honda, Nissan, Citroen and MIT, concentrate their sales on a few models. This provides the firms in this group with economies of scale, with obvious cost advantages in the acquisition of raw materials that allow them to charge attractive lower prices and thus inhibit new entrants and be more competitive in their niche. Note that even in market conditions where this group competes directly with the Differentiation group, it has an advantage because of its higher price elasticity. In addition, the brand identity of the Focus - Differentiation group contributes to exploiting industry structural opportunities more effectively and neutralizing threats from less important rivals, especially those from China who do not yet have a very positive image.

FINAL CONSIDERATIONS

4) What are the lessons and managerial implications of this analysis, for both the leading strategic groups and other firms in the automotive industry in Brazil? Since the installation of the first automaker in Brazil until the opening up of the domestic market, the auto industry market experienced significant changes. However, the three companies that pioneered this market - Ford, GM and VW - implemented Differentiation strategies that, to a great extent, enabled them to sustain their leadership position (largest market share). FORD, with its strategy of launching new models, was the one that lost less market share and FIAT, despite being a follower, introduced radical innovations (alcohol-fueled vehicles) which enabled it to join the group. An interesting finding of our study was the inclusion of Renault in the Differentiation group. Despite being a late entrant into the market, it adopted a similar strategy to existing competitors, adopting product development and a local technology

development platform. It also acquired a markedly similar brand image, with its models ranked among the Top 10, and thus enabling it to achieve a prominent position in the Differentiation group.

An important challenge for the automakers in the Differentiation group with the biggest market share is to make sure that the differentiation strategy adopted will enable them to minimize the negative effects of the current economic crisis in Brazil. The sales data for the first quarter of 2016 confirm that GM, VW and Fiat still maintain their leadership and are developing new options. Fiat for example, plans to launch Fiat Mobi 2017 that will replace Fiat Mille. The new Fiat compact hatch has an attractive modern structure and design, and is available in six versions, from the most basic to the most complete, in to order to fulfill the requirements of very different customers. The new model, which was developed (created, planned and produced) by Brazilians, has several connectivity features and its name evokes mobility. Another major challenge faced by automakers in Brazil is digital demand. Digital channels are now the main source of information for customers when buying a new car. The next step will be online purchase, which will threaten the existing dealer structure. Consumers also seek to combine mobility and communication (Mackinsey, 2014). Our study revealed that firms in both strategic groups – Differentiation and Focus - Differentiation – are aware of this trend. Citroen was the winner of the “Year 2015 Website award”, which is part of the Car of the Year awards, promoted by *Auto Esporte* magazine. The features evaluated at each website are design, usability, level of information, speed, ease of contact and interaction with social networks and car configuration tools (Auto Esporte, 2014). Fiat was the “2014 Website winner.

Concern about carbon dioxide emissions has driven manufacturers to invest more in e-mobility, such as electric and hybrid cars, including batteries and light technologies. However, the transition to these types of vehicles will occur slowly, with research indicating that, in 2020, conventional fuel will still power more than 90% of car engines (Mackinsey, 2014). While these changes occur, automakers are also investing in other forms of sustainability. Nissan, won the 2016 Green Brand Award, sponsored by *Auto Esporte* magazine, to develop new nature preservation technologies (Auto Esporte 2015). In 2014, Ford, Toyota, Honda and Nissan were elected the world's greenest companies, according to the Interbrand's Best Global Green Brands ranking. 2013 saw the release of more than 36 new hybrid and electric cars were launched, as well as greater efforts to ensure sustainability of the production process and several environmental initiatives. In 2014 Ford overtook Toyota, as a result of numerous alliances with universities, automakers, coalitions, NGOs and other entities to improve collective understanding of climate change (Auto Esporte, 2014b). There is a consensus among several studies on the subject that embedded connectivity has become increasingly important and represents a huge opportunity for companies that invest in it and a threat to the others that neglect it (Mackinsey, 2014; SIMEAD 2016; BINS, Interbrand, 2015). Consumers increasingly want cars equipped with hazard warnings, traffic information services and a host of infotainment and safety features. A promising area for profits through differentiation is the development of vehicles that provide the driver with all sorts of services, such as tourist information and assistance using the radio, smartphone and the Internet (Mackinsey, 2014).

Limitations & Recommendations for Future Research

Although our research had several limitations, we believe that these do not invalidate our findings. One limitation concerned the variables investigated because of the difficulty of accessing information on the industry. Companies are not listed on the Ibovespa, which hampered the collection of accounting data to use as a proxy for performance. Access to industry managers to answer questionnaires or take part in interviews proved to be quite difficult, especially in the country's current economic crisis when firm executives prefer to keep a low profile. The fact that there are relatively few firms (12) in the auto industry in Brazil also somewhat affected our application of factor analysis techniques and cluster analysis. For this reason we took special care when conducting the statistical tests to verify the validity of the methods used, leading us to exclude some strategic variables from our analysis. As it is also important to take a global perspective in the case of the auto industry, we recommend that future research extends our study to strategic groups in the automotive industry of other BRICS, as well as of other countries in Latin America, to compare our findings regarding these groups' strategies in the light of this market's global opportunities and threats.

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INFLUENCE OF PERCEIVED ATTRACTIVENESS AND PERCEIVED ENJOYMENT ON GENERATION Y STUDENTS' ADOPTION OF MOBILE GAMES

Costa Synodinos, D.G. Price and Ayesha L. Bevan-Dye
North-West University, South Africa

ABSTRACT

In South Africa, mobile gaming revenue currently amounts to R5.6 Billion and is growing at more than double the rate of the revenue generated by traditional console video games. The purpose of this study was to determine the influence of perceived attractiveness and enjoyment on Generation Y students' propensity to adopt mobile games in South African. A self-administered questionnaire was used to collect data from a convenience sample of 502 students registered at the campuses of three higher education institutions. The captured data was analysed using descriptive measures, correlation analysis and structural equation modelling. The findings suggest that both perceived attractiveness and enjoyment have a significant positive influence on Generation Y students' attitude towards mobile games, which, in turn, has a significant positive influence on their intention to play mobile games.

Keywords: Mobile games, adoption drivers, Generation Y, South Africa.

INTRODUCTION

In South Africa, mobile gaming revenue currently amounts to R5.6 Billion (Statista, 2016) and is growing at more than double the rate of the revenue generated by traditional console video games (PWC, 2015, p.117). Despite the rapid growth rate of mobile games, there is a lack of published research on what drives a consumer to play mobile games in South Africa. Similarly, only a handful of studies have been conducted in other countries (Liang & Yeh, 2010, p.187-196; Liu & Li, 2010, p.890-898; Ha, Yoon & Choi., 2007, p.276-284).

According to Statista (2016), the typical mobile gamer in South Africa falls into the Youth category. Currently, the Youth are labelled as being members of the Generation Y cohort, a cohort that includes individuals born between 1986 and 2005 (Markert, 2004, p.21). At 38 percent, members of this cohort make up a substantial percentage of the country's population (Statistics South Africa, 2015, p.9), thereby rendering the cohort a desirable target market (Bevan-Dye & Surujlal, 2011, p.49; Leung, 2009). As such, the study reported in this paper focused on determining the factors that influence Generation Y university students' adoption of mobile games in the South African market.

LITERATURE REVIEW

Video games refer to a form of interactive entertainment, whereby images produced by a device such as a computer are controlled electronically by a user. The purpose of video games is to create a pleasurable, educational or entertaining end-value for a user, which is obtained by completing certain objectives set out in the video game (Glass, 2007, p.25; Granic, Lobel & Engels., 2014, p.67). The earliest video game dates back to the early 1970s (Kent, 2001, p.65). Video games were an instant hit among consumers and the industry grew rapidly (Hsu & Lu, 2005, p.1643).

The introduction of mobile telephony in the 1990s saw an important development in the industry, with the creation of mobile gaming (Kaasinen, 2005, p.6). It was the Nokia mobile telephone brand that decided to tap

into the success of video games, by creating video games that were pre-loaded on their hand-held mobile telephones. This led to the creation of one of the first mobile games, known as Snake, which was a video game where the player manoeuvres a line that grows in length, with the line itself being a primary obstacle (Walton & Pallit, 2012, p.354). Snake went on to become a great success and led video game companies to explore the possibility of creating more technically advanced games for mobile devices (Ha *et al.*, 2007, p.276).

In South Africa, a report published by Pricewaterhouse Coopers (2015, p.122) indicates that nine of the top ten downloaded applications are mobile games, with highly-successful mobile games such as Candy Crush and Clash of Clans at the top of the download charts. Furthermore, the same report (p.115) reveals that despite console video games being in the Southern African market longer, mobile games are growing much more rapidly. As such, video game development companies have shifted much of their focus to mobile game development, with 126 mobile games currently in development after 67 were already released in 2014 (MGSA, 2015, p.1-21).

Limited research conducted outside of South Africa suggests that perceived enjoyment and perceived attractiveness are salient predictors of mobile games adoption (Tao, Cheng & Sun., 2009:929; Ha *et al.*, 2007:284).

Perceived attractiveness, in the context of mobile services, refers to how the overall design of the service is found to be attractive by the user (Tao *et al.*, 2009:944) and perceived enjoyment refers to the extent to which the engagement with a mobile service is found to be enjoyable (Hsu & Lu, 2007:1647). When looked at from a mobile games perspective, the attractiveness of the mobile game is determined by how appealing the graphics and design are to a consumer, with perceived enjoyment being how fun it is to play a mobile game for the consumer.

RESEARCH OBJECTIVES

The purpose of the study was to determine the factors that determine South African Generation Y students' adoption of mobile games. In particular, the study endeavoured to test whether behavioural intentions towards mobile games is a four-factor structure comprising perceived mobile game attractiveness, perceived mobile game enjoyment, attitude towards mobile games and behavioural intentions towards mobile games and to determine the influence of perceived attractiveness and enjoyment of mobile games on Generation Y students' attitudes and behavioural intentions towards mobile gaming.

RESEARCH METHODOLOGY

Sampling method

The sampling frame for this study comprised the 26 public registered South African higher education institutions (Higher Education in South Africa, 2015). Non-probability judgement sampling was utilised to select three campuses, one belonging to a traditional university, one to a university of technology and one to a comprehensive university from the sampling frame. Thereafter, the 600 questionnaires were distributed equally between the three campuses to students who agreed to take part in the study.

Measurement instrument

For the purpose of this study, a structured, self-administered questionnaire was designed to gather the requisite data. The questionnaire included three sections, namely Section A, which contained demographic questions, Section B, which contained questions on the drivers of mobile game adoption and Section C, which contained questions on attitudes and behavioural intentions towards mobile gaming. Scales from the literature were adopted for use in this study and included perceived enjoyment (3 items) and attitude (3 items) from Liu and Li (2010, p.894), perceived attractiveness (3 items) from Tao *et al.* (2009, p.26) and behavioural intention (3 items) from Agarwal and Karahanna (2000, p.693). Scaled items were measured on a six-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (6). Prior to distribution, the questionnaire was submitted to the

Ethics Committee of the Faculty of Economic Sciences and Information Technology at the North-West University (Vaal Triangle Campus) to gain ethics clearance. The proposed study was deemed as a low/no risk study and given the following ethical clearance number: ECONIT 2016-005. This ethical clearance number also appeared on the cover letter of the questionnaire.

Data analysis

The collected data were analysed using IBM's Statistical Package for Social Sciences (SPSS) and Analysis of Moment Structures (AMOS), Versions 23.0 for Windows. In order to determine the internal-consistency reliability of the scales, Cronbach's alpha was used, where it is recommended that a scale needs to return a Cronbach's alpha coefficient value of ≥ 0.60 in order to be reliable (Hair, Black, Babin & Anderson., 2014, p.90).

The relationship between the latent factors proposed for inclusion in the model were measured using Pearson's Product-Movement correlation coefficient in order to determine the nomological validity of the model and to assess if there were any obvious multicollinearity concerns. Statistically significant relationships between pairs of latent factors in a model are indicative of nomological validity (Malhotra, 2010, p.321) and evidence of serious multicollinearity occurs when factors correlate above 0.80 (Field, 2009, p.224).

Structural equation modelling was conducted by specifying a measurement model and structural model. The reliability and construct validity of the measurement model is measured by computing the composite reliability (CR) and average variance extracted (AVE) as well as the standardised loading estimates. CR values of ≥ 0.70 indicate composite reliability. Standardised loading estimates and AVE values of ≥ 0.50 indicate convergent validity, while a square root value of the AVE that exceeds the correlation coefficients is indicative of discriminant validity (Hair *et al.*, 2014, p.618-620).

Model fit was measured using the root mean square error of approximation (RMSEA), and standardised root mean residual (SRMR), where values of ≤ 0.08 are indicative of good fit, together with the comparative fit index (CFI), incremental fit index (IFI) and Tucker-Lewis index (TLI), where values of ≥ 0.90 suggest good model fit (Malhotra, 2010, p.732-733). In addition, the chi-square is reported on, where a significant statistic suggests poor fit. However, the chi-square is known to become highly sensitive with larger sample sizes (Hair *et al.*, 2014:579) and, therefore, more attention was placed on the other indices. The level of statistical significance was set at $p \leq 0.01$.

RESULTS

From the 600 questionnaires distributed, 502 usable ones were returned, giving a response rate of 84 percent. Table 1 provides an overview of the sample participants' demographic information.

Table 1: Sample characteristics

Demographics	Sub-groups	Percent (%)	Sub-groups	Percent (%)
Age	18-19	36		
	20-21	42		
	22-23	17		
	24	5		
Gender	Male	49		
	Female	51		
Home province	Eastern Cape	3	Kwazulu-Natal	8
	Free state	7	Limpopo	13
	Gauteng	54	Mpumalanga	10
	North-West	4	Northern Cape	1
			Western Cape	0
Ethnic group	African	87		
	Coloured	3		

Indian/Asian	2
White	8

As seen in Table 1, the distribution of male (49%) and female (51%) participants in the sample was almost equal, with most of the participants (78%) ranging between the ages of 18 and 21. The sample also contained participants from each of the country's provinces, with the exception of the Western Cape. Moreover, the sample also included participants from the four main ethnic groups found in South Africa.

Cronbach's alpha values were then computed to assess internal-consistency reliability and a correlation matrix was constructed to assess nomological validity and multicollinearity, as reported in Table 2.

Table 2: Correlation coefficients and Cronbach's alphas

	1	2	3	Cronbach alpha
Perceived attractiveness				0.83
Perceived enjoyment	0.614**			0.82
Attitude	0.602**	0.589**		0.79
Behavioural intention	0.534**	0.575**	0.690**	0.82
**Correlation is significant at the 0.01 level (2-tailed)				

From Table 2 it is evident that there is nomological validity and that there are no serious concerns of multicollinearity. Following this, structural equation modelling was conducted.

The specified measurement model was assessed by looking at the standardised loading estimates, the error variance estimates, CR and AVE values, as reported in Table 3.

Table 3: Estimates for measurement model

Latent factors	Standardised loading estimates	Error variance estimates	CR	AVE	√AVE
Perceived attractiveness	0.805	0.648	0.807	0.584	0.76
	0.806	0.650			
	0.676	0.457			
Perceived enjoyment	0.703	0.494	0.802	0.576	0.76
	0.784	0.615			
	0.787	0.619			
Attitudes	0.827	0.683	0.900	0.750	0.87
	0.878	0.771			
	0.882	0.779			
Behavioural intentions	0.843	0.711	0.929	0.815	0.90
	0.956	0.914			
	0.905	0.819			
Correlations	F1↔F2: 0.701	F2↔F3: 0.672	F3↔F4: 0.741		

F1↔F3: 0.683 F2↔F4:0.653

F1↔F4: 0.593 F2↔F4:0.653

According to Table 3, all CR values exceeded 0.70, indicating composite reliability. In addition, with all standardised loading estimates and AVE values above 0.50, there is evidence of convergent validity and the square root value of the AVE exceeded the correlation coefficients, so there is also evidence of discriminant validity (Hair *et al.*, 2014, p.618-619).

While a significant chi-square value was returned, the other fit indices of the measurement model suggest good model fit with a SRMR of 0.042, a RMSEA of 0.068 a GFI of 0.95, a IFI of 0.97, a CFI of 0.97 and a TLI of 0.96.

A structural model was then specified to test whether Generation Y students' attitude towards mobile games has a significant positive direct influence on their behavioural intentions towards mobile games and whether the perceived attractiveness and enjoyment of mobile games have a significant positive indirect influence on their behavioural intentions towards mobile games via their significant positive direct influence on attitudes. The results of these hypothesised paths are reported in Table 4.

Table 4: Standardised regression estimates and *p*-values

	Estimates	<i>p</i> -values	Results
Attitudes → Intentions	0.762	0.000	Significant
Perceived attractiveness → Attitudes	0.409	0.000	Significant
Perceived enjoyment → Attitudes	0.411	0.000	Significant

The results in Table 4 indicate that Generation Y students' attitude towards mobile games has a significant positive direct influence on their behavioural intentions towards mobile games ($\beta = 0.762$, $p = 0.000 < 0.01$) and that the perceived attractiveness ($\beta = 0.409$, $p = 0.000 < 0.01$) and enjoyment ($\beta = 0.411$, $p = 0.000 < 0.01$) of mobile games have a significant positive influence on their attitude towards mobile games. In terms of the squared multiple correlation coefficient, attractiveness and enjoyment explain 57 percent of the variance in Generation Y students' attitudes towards mobile games, which, in turn, explain 58 percent of the variance in their behavioural intentions towards mobile games.

While a significant chi-square value was once again returned, the other fit indices of the structural model suggest good model fit with a SRMR of 0.054, a RMSEA of 0.074 a GFI of 0.94, a IFI of 0.97, a CFI of 0.97 and a TLI of 0.96.

MANAGERIAL APPLICATIONS

Marketers should consider the influence that attractiveness and enjoyment have on mobile games adoption among consumers, and adapt their marketing strategies accordingly. For instance, marketing campaigns could focus on the entertainment one derives from playing a particular mobile game, as well as how good the graphics of that game complement the enjoyment factor. This will help create a positive attitude and further drive mobile game adoption. Moreover, game developers and designers should focus their creative talents on building a game that is centred on enjoyment, more so than any other factors previously focused on in mobile game development. However, game designers should ensure that the game they create has an eye-catching appeal to consumers as well, not just in graphics, but in the overall design and features of the game.

CONCLUSIONS

The main aim of this study was to investigate the influence of perceived attractiveness and perceived enjoyment on Generation Y consumers' propensity to adopt mobile games in South Africa. The insights gained from consumer behaviour studies may provide researchers, marketers and game development companies with a clearer understanding of what influences Generation Y consumers' attitudes and behavioural intention towards mobile games.

In line with previous research (Liang & Yeh, 2010, p.187-196; Liu & Li, 2010, p.890-898; Ha *et al.*, 2007, p.276-284), the findings of this study indicate that attitudes towards mobile games has a statistically significant positive influence on Generation Y students' behavioural intention to play mobile games. Furthermore, this generational cohort's attitude towards mobile games is positively influenced by the perceived enjoyment and perceived attractiveness of a mobile game. Thus, if a mobile game is fun to play and has an appealing overall look, a consumer is more likely to respond positively and adopt that mobile game.

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